

## REFERENCEDOCUMENT

INCLUDING THE ANNUAL FINANCIAL REPORT



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The different parts constituting the Annual Financial Report are identified in the content by the pictogram AFR

## REFERENCE DOCUMENT

including the annual financial report

2015



This document is a free translation of the French language reference document that was filed with the *Autorité des marchés financiers* (the "AMF") on 4 April 2016. It has not been approved by the AMF. This translation has been prepared solely for the information and convenience of English-speaking readers. No assurances are given as to the accuracy or completeness of this translation, and the Group assumes no responsibility with respect to this translation or any misstatement or omission that may be contained therein. In the event of any ambiguity or discrepancy between this translation and the French reference document, the French reference document shall prevail.

In accordance with the general regulation of the *Autorité des marchés financiers*, notably article 212–13, the French language version of this document was filed with the *Autorité des marchés financiers* on 4 April 2016 with visa number D.16-0263. This document may only be used in connection with a financial operation if it is completed by a prospectus which has received the visa of the *Autorité des marchés financiers*. This document has been prepared by the issuer under the responsibility of its signatories.

Pursuant to article 28 of European Commission (EC) rule no.809/2004, this reference document incorporates by reference the following information:

- the consolidated financial statements for the year ended 31 December 2014 included in chapter 4
  of the reference document granted visa number D.15-0231 by the Autorité des marchés financiers on
  30 March 2015, as well as the statutory auditors' reports related thereto;
- the consolidated financial statements for the year ended 31 December 2013 included in chapter 4
  of the reference document granted visa number D.14-0221 by the Autorité des marchés financiers on
  27 March 2014, as well as the statutory auditors' reports related thereto; and
- a comparative analysis of the 2014 consolidated financial statements and the 2013 consolidated financial statements included in chapter 4 of the reference document granted visa number D.15-0231 by the *Autorité des marchés financiers* on 30 March 2015.

Parts not included in these documents are either not relevant for investors, or covered elsewhere in this reference document.





BOSTIK, A MAJOR ACQUISITION IN ADHESIVES



## **SUCCESSFUL** TURNAROUND



### **STRONG FINANCIALS**



EBITDA MARGIN 6,2% **13.8%** 

DIVIDEND €0 **1.90**(1)

GEARING

STABLE BELOW 40%



### **VERY INNOVATIVE**

5<sup>TH</sup> YEAR IN A ROW IN THE THOMSON REUTERS
TOP 100 « GLOBAL INNOVATORS »

## PROMISSING PORTFOLIO OF INNOVATIONS

in new materials and sustainable solutions



### **INCREASINGLY RESILIENT**

**BOSTIK ACQUISITION** 

**VINYLS DIVESTMENT** 

High Performance Materials sales:

x2 at €3.4 bn

**CYCLICAL BUSINESSES** 

56% 29%

ARKEMA
INNOVATIVE CHEMISTRY

2005-2015



### **RESPONSIBLE**

TOTAL RECORDABLE INJURY RATE<sup>(2)</sup>
11.3 1.5

GREENHOUSE GAS EMISSIONS

-64%

VOLATILE
ORGANIC COMPOUND
EMISSIONS

-43%



### GEOGRAPHICALLY REBALANCED

Sales

**EUROPE** 

57% 38%

ASIA ×2.5

NORTH AMERICA 25% 34%

<sup>(1)</sup> Dividend proposed to the annual general meeting of 7 June 2016.

<sup>(2)</sup> Total recordable injury rate per million of hours worked.

## AN AMBITIOUS STRATEGY

### **ACCELERATE**

growth in High Performance Materials

% OF SALES (2020e) BY SEGMENT



**High Performance** Materials



Industrial Specialties

Solutions

**BOSTIK EBITDA** (in €m)

158

2014



2. the geographic rebalancing

% OF SALES (2020e) BY REGION



**Europe** 



North America



Asia and rest of the world

STRONG FOCUSES

3. **MAINTAIN** the emphasis on

operational excellence

Objective of €100m savings

in fixed and variable costs between 2015 and 2017

**STRENGTHEN** 

 business portfolio through a targeted M&A strategy

3 acquisition priorities:

Adhesives • High Performance Materials

Acrylic downstream

**Divestment of** non-core businesses

**INNOVATE** in sustainable development

€100m to €200m of new sales long-term

in composites

## **STRONG FINANCIALS**

### **KEY FIGURES**

### Elements of the income statement

(In millions of euros unless otherwise mentioned)	2015	2014	Variation
Sales	7,683	5,952	+29.1%
EBITDA	1,057	784	+34.8%
EBITDA margin (in %)	13.8%	13.2%	-
Recurring operating income	604	447	+35.1%
Net income – Group share	285	167	+70.7%
Adjusted net income	312	246	+26.8%
Net income per share (in euros)	3.87	2.53	+53.0%
Adjusted net income per share (in euros)	4.23	3.72	+13.7%
Dividend per share (in euros)	1.90 (1)	1.85	+2.7%

### Elements of the balance sheet

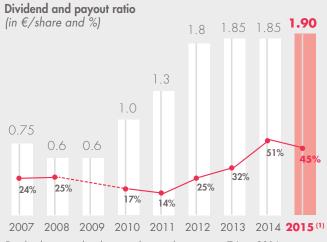
(In millions of euros unless otherwise mentioned)	2015	2014
Shareholders' equity	3,949	3,573
Net debt	1,379	154
Gearing (in %)	35%	4%
Capital employed	6,466	4,565
Working capital on sales (in %)	14.6% (2)	16.1%
Net provisions (3)	907	751

### Elements of the cash flow statement

(In millions of euros)	2015	2014	Variation
Cash flow from operating activities	858	507	+69.2%
Free cash flow (4)	442	21	x21
Capital expenditure	431 (5)	470	(8.3)%

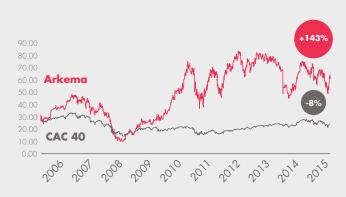
- (1) Dividend proposed at the annual general meeting on 7 June 2016.
- (2) Working capital on sales as defined in section 4.1.7 of this reference document.
- (3) Provisions net of non-current assets as defined in section 4.1.7 of this reference document.
- (4) Cash flow from operations and investments excluding the impact of portfolio management.
- (5) Excluding capital expenditure related to portfolio management as defined in section 4.1.9 of this reference document.

### **SHAREHOLDER RETURN**



(1) Dividend proposed at the annual general meeting on 7 June 2016.

## Share price performance since Arkema's stock market listing (18 May 2006)



## THREE BUSINESS SEGMENTS



### **High Performance Materials**

HIGH VALUE
AND INNOVATIVE SOLUTIONS

- Products with exceptional properties and performance
- Leadership positions in high-growth niche markets
- Strong innovation capacity
- Close proximity with customers

### **Industrial Specialties**

GLOBAL PRESENCE IN INTEGRATED INDUSTRIAL NICHES

- Leadership positions and world-scale industrial sites
- Unique know-how in complex industrial processes
- Global markets with strong growth outlooks





### **Coating Solutions**

SOLUTIONS FOR DECORATIVE PAINTS, INDUSTRIAL COATINGS AND HIGH-GROWTH ACRYLIC APPLICATIONS

- Global presence, strong positions, world-scale sites and recognized technology in acrylics
- Comprehensive offer of solutions for paints and industrial coatings
- Strong integration downstream of acrylics

### MAIN ORIENTATIONS

- Pursuing Bostik's growth strategy
- Doubling specialty molecular sieves production capacity in France (CECA)
- Accelerating the development of Technical Polymers in new energies and lightweight materials
- Strengthening innovation focused on megatrends

### **KEY FIGURES**

in millions of euros	2015	2014
Sales	3,358	1,730
EBITDA	506	314
EBITDA margin	15.1%	18.2%
Recurring operating income	354	213

### MAIN ORIENTATIONS

- Pursuing the ramp-up of the thiochemicals platform in Kerteh (Malaysia)
- · Gradually restoring the profitability of fluorogases and positioning the Group on next generation of fluorogases
- Developing lightweight materials (Altuglas® ShieldUp, Elium® thermoplastic resins)
- Continuing to develop specialty applications in Hydrogen Peroxide

### **KEY FIGURES**

in millions of euros	2015	2014
Sales	2,450	2,269
EBITDA	418	312
EBITDA margin	17.1%	13.8%
Recurring operating income	237	169

### **MAIN ORIENTATIONS**

- Continuing to strengthen downstream acrylic activities through partnerships with customers, innovation and bolt-on acquisitions
- Reinforcing the profitability of the monomers through technology leadership
- Building a leading position in Asia

### **KEY FIGURES**

in millions of euros	2015	2014
Sales	1,849	1,930
EBITDA	190	203
EBITDA margin	10.3%	10.5%
Recurring operating income	72	112

## **AN INNOVATIVE**GROUP

## RECOGNIZED R&D EXPERTISE

### **TOP 100 GLOBAL INNOVATORS**

THE GROUP IS INCLUDED
IN THE THOMSON REUTERS TOP 100
GLOBAL INNOVATORS RANKING LIST
FOR THE 5<sup>TH</sup> CONSECUTIVE YEAR





## 6 RESEARCH PLATFORMS



BIO-BASED PRODUCTS NEW ENERGIES





WATER MANAGEMENT

ELECTRONICS

SOLUTIONS



LIGHTWEIGHT
MATERIALS AND
DESIGN
HOME
EFFICIENCY
AND INSULATION

### **PROMISING DEVELOPMENT AREAS**



### **Smart House**

Inaugurated in 2015, the Smart House is a house-laboratory dedicated to sustainable construction, designed to address the major challenges facing the building industry: energy efficiency, environmental performance, and the health and comfort of building occupants.

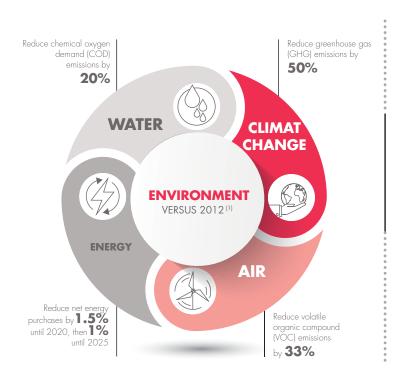


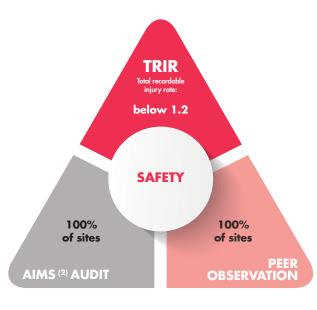
## A recognized player in composite materials

The Group positions itself as a major player in the composite materials market, with many developments including Kepstan® PEKK, known as "the extreme polymer", Elium® resins, Altuglas® ShieldUp, Rilsan HT® and Polystrand® thermoplastic prepregs.

## A RESPONSIBLE GROUP

## **2025 TARGETS**





- (1) Relative indicators based on 2012 reference year.
- (2) The Arkema Integrated Management System (AIMS) combines ISO 9001, ISO 14001 and OHSAS 18001 requirements.



## AN EFFICIENT AND DEMANDING CORPORATE GOVERNANCE

### **BOARD** OF DIRECTORS

(COMPOSITION AT THE DATE OF THIS REFERENCE DOCUMENT)



Thierry Le Hénaff



Claire **Pedini** 



Laurent Mignon



Isabelle Boccon-Gibod



Bernard Kasriel



Marc Pandraud



Victoire de Margerie



François **Enaud** 



Thierry Morin



Patrice Bréant



Philippe Vassor



Hélène Moreau-Leroy

**12** directors

**82%** independence rate\*

6 meetings in 2015

93% attendance rate

### Chaired by Thierry Le Hénaff, Chairman and CEO

- 9 independent directors
- 4 women
- 1 Senior Independent Director
- 1 director representing shareholder employees
- Diverse experience in France and abroad in industry, finance and accounting

\* In accordance with the criteria of the AFEP-MEDEF Code.

## SPECIALIZED COMMITTEES

specialized committees

largely made up of independent directors

AUDIT AND ACCOUNTS COMMITTEE

**6** meetings in 2015

100% attendance rate

NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE



4 meetings in 2015

100% attendance rate

annual seminar

of the Board dedicated to the Group's strategy with an attendance rate of 100%

## **EXECUTIVE COMMITTEE**

A COMPLEMENTARY TEAM FULLY COMMITTED TO THE SUCCESS OF THE GROUP'S STRATEGY

## From top left to bottom right: Luc Benoit-Cattin, Industry

Marc Schuller, Coating Solutions and Industrial Specialties divisions

Thierry Lemonnier, Chief Financial Officer

Michel Delaborde, Human Ressources and Corporate Communication

Bernard Pinatel, High Performance Materials division

Thierry Le Hénaff, Chairman and Chief Executive Officer

Bernard Boyer, Strategy



## **GENERAL COMMENTS**

In this reference document:

- the terms "Arkema" or "Company" refer to the company named Arkema, which shares are traded on the regulated market of Euronext Paris;
- the terms "Group" or "Arkema Group" refer to the group composed of the Company and all the subsidiaries and shareholdings it holds directly or indirectly; and
- the term "Bostik" refers to the Bostik group which was acquired by the Arkema Group on 2 February 2015.

This reference document contains forward-looking statements about the Group's targets and outlook, in particular in section 4.2. Such statements may in certain cases be identified by the use of the future or conditional tense, or by forward-looking words including but not limited to "believes", "targets", "expects", "intends", "should", "aims", "estimates", "considers", "wishes", "may", etc. These statements are based on data, assumptions and estimates that the Group considers to be reasonable. They may change or be amended due to uncertainties linked to the economic, financial, competitive, regulatory and climatic environment. In addition, the Group's business activities and its ability to meet its targets may be affected if certain of the risk factors described in section 1.7 of this reference document were to materialise. Furthermore, achievement of the targets implies the success of the strategy presented in paragraph 1.1.2 of this reference document.

The Group does not undertake to meet and does not give any guarantee that it will meet the targets described in this reference document.

Investors are urged to pay careful attention to the risk factors described in section 1.7 of this reference document. One or more of these risks could have an adverse effect on the Group's activities, condition, financial results or targets. Furthermore, other risks not yet identified or considered as not material by the Group could have the same adverse effect.

This reference document also contains information of the markets in which the Group operates. This information is derived in particular from research produced by external organisations. Given the very rapid pace of change in the chemicals sector in France and the rest of the world, this information may prove to be erroneous or out of date. Accordingly, trends in the Group's business activities may differ from those set out in this reference document

For 2015, the Company has prepared annual financial statements and consolidated financial statements for the period between 1 January and 31 December. These financial statements are presented in chapter 4 of this reference document.

The chapter 4 of this reference document provides a comparative analysis between the 2015 consolidated financial statements and the 2014 consolidated financial statements.

A glossary defining the technical terms used in this reference document can be found on pages 357 to 359 of this reference document.

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## Business overview and risk factors



A global player in specialty chemicals and advanced materials

# 1.1 A GLOBAL PLAYER IN SPECIALTY CHEMICALS AND ADVANCED MATERIALS

All figures contained in this chapter are provided on a consolidated basis and reflect the Arkema Group's organization into three divisions: High Performance Materials, Industrial Specialties and Coating Solutions. See section 1.1.1 of this reference document for an overview of the Arkema Group's new division structure, as presented at the Capital Markets Day in June 2015.

### 1.1.1 General overview

## 1.1.1.1 OVERVIEW OF THE GROUP'S BUSINESS SECTOR

The Arkema Group is a significant player in the global chemical industry.

Its business sector, which is known as the "industry of industries", manufactures a wide range of products for other major industries, including the construction, packaging, chemical, automotive, electronics, food and pharmaceutical industries.

The chemical industry focuses primarily on processing in one or more stages, raw materials such as petroleum products, gas, minerals and other natural products into more or less complex chemical products, or into plastics via polymerization.

At one end of this wide spectrum are commodities, which are characterized by few processing stages, large volumes and cyclical prices and unit margins, and include in particular olefins and polyolefins, ammonia, methanol and caustic soda. At the other end are sophisticated products like pharmaceuticals and agrochemical derivatives. Between the two extremes lies a large number of chemical intermediates, polymers, fine chemical products and specialty chemicals. Generally defined as a solution for a particular application, specialty chemicals consist mainly of high performance materials or formulations such as adhesives, paints, inks and cosmetics.

With estimated sales of some 3,232 billion euros worldwide in 2014, the chemical industry operates on a global scale in three main regions: Europe (around 20% of world production in value terms), North America (around 16%) and Asia Pacific (around 58%) <sup>(1)</sup>. Trade in chemicals between these three main production regions remains limited but is increasing.

Overall, the chemical industry is highly fragmented, be it in terms of products (several tens of thousands), end markets (almost all industrial sectors are consumers) and industry players (the top ten competitors have no more than a 20% share of the global market <sup>[2]</sup>).

### 1.1.1.2 GROUP OVERVIEW

A major player in specialty chemicals, the Arkema Group operates in the chemical industry with a business portfolio focused on three divisions: High Performance Materials, Industrial Specialties and Coating Solutions. The Group reported sales of 7.68 billion euros in 2015, making it one of the industry's leading players worldwide

Present in 50 countries with 18,912 employees at 31 December 2015, the Group operates on a global scale, with production sites in Europe, North America and Asia (136 production centers), and subsidiaries and sales offices in a large number of countries.

The Group ranks among the leading players worldwide in its main product lines, which account for some 90% of sales and serve niche markets characterized by limited size, few major competitors and complex technologies.

In 2015, the Group had 13 research and development (R&D) centers spread across three regional research and innovation hubs, and employed more than 1,500 researchers, with R&D expenditure representing around 2.7% of sales. To bring its R&D into line with the main trends driving the world now and in the future, the Group draws on six solutions-oriented research platforms focusing on bio-based products, new energies, water management, electronics solutions, lightweight materials and design, and home efficiency and insulation. The Group has also

- (1) Source: Cefic Facts and Figures 2014; the rest of the world accounts for approximately 6% of global production.
- (2) Source: Arkema Group internal estimates.

1

set up a dedicated structure known as the "incubator" to facilitate their development, as described in section 1.4.1 of this reference document.

At 31 December 2015, the Group had nine Business Lines (1), organized into three divisions according to the similarity of their activities. These are the High Performance Materials division for predominantly application-oriented activities, the Industrial Specialties division comprising various chemical intermediate activities, and the Coating Solutions division, which combines

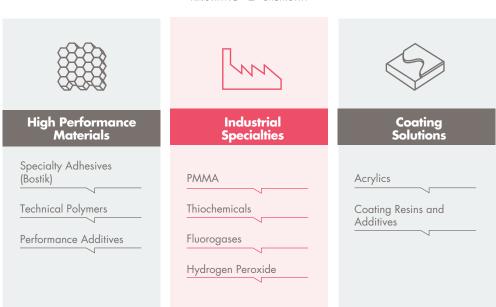
coating-related activities, such as decorative paints, industrial coatings and adhesives, with upstream integration in acrylic monomers. These Business Lines may group several businesses, which are responsible for their own results, cash flows (working capital, capital expenditure, etc.), production management, research, sales, marketing and customer relations. The Business Line or business managing director each report to an operational executive Vice-President who is also a member of the Executive Committee (see section 3.2.2.2. of this reference document).

The divisions' organizational structure was changed in 2015 and the new structure presented at the Capital Markets Day in June 2015. The changes are outlined below:

	High Performance Materials	Industrial Specialties	Coating Solutions
ln	- Sartomer (Performance Additives)	- Functional polyolefins (PMMA) - Casda (Fluorogases)	- Acrylic impact modifiers (Coating Resins and Additives)
Out	<ul> <li>Functional polyolefins (filtration and adsorption)</li> <li>Casda (Technical Polymers)</li> <li>Acrylic impact modifiers (organic peroxides)</li> </ul>		- Sartomer

The simplified organization chart below, effective at 31 December 2015, shows the Business Lines in each division.





<sup>(1)</sup> The Business Lines correspond to businesses (ex-Business Unit) or groups of businesses.

A global player in specialty chemicals and advanced materials

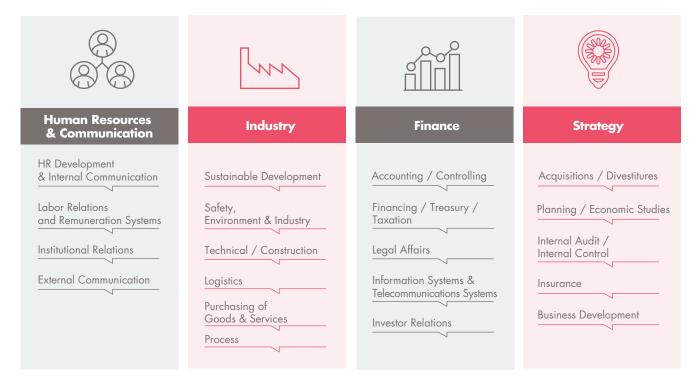
The corporate departments provide continuous support to the Group's divisions, mainly in the areas of accounting, taxation, legal affairs, IT, human resources and communication.

Under the authority of the Executive Committee and in particular the corporate executive Vice-Presidents (see section 3.2.2.2 of this reference document), the corporate departments are responsible for ensuring the overall coherence and control of the Group.

More specifically, they coordinate procurement and logistics and maintain expertise in such key areas as safety, environment, R&D and process engineering. Some of the corporate departments work for the Group as a whole. This is notably the case for Internal Audit and Internal Control, External Communication, Investor Relations, Accounting and Management Control, and Legal Affairs.

The simplified organization chart below shows the Group's corporate departments at 31 December 2015.





As an exception to the general organizational principles governing the corporate departments, the Raw Materials and Energy Procurement department reports directly to one of the two operational executive Vice-Presidents. Similarly, the R&D department reports directly to the Chairman and Chief Executive Officer.

### Breakdown of sales by division

(In billions of euros)		2015		2014		2013
High Performance Materials	3.4	44%	1.7	29%	1.7	29%
Industrial Specialties	2.5	32%	2.3	38%	2.3	38%
Coating Solutions	1.8	24%	1.9	33%	2.0	33%
TOTAL	7.7	100%	6.0	100%	6.1	100%

### Summary of the Group's main products in 2015 and their areas of application by Business Line

High Performance Materials	
Specialty Adhesives (Bostik)	Adhesives and sealants used in industry, hygiene products (nonwoven), construction and consumer products.
Technical Polymers	<ul> <li>Technical Polymers include two activities:</li> <li>specialty polyamides used in the automotive, aerospace, aeronautics, oil and gas and electronics industries, and in consumer goods (sports and cosmetics);</li> <li>polyvinylidene fluoride (PVDF) used in chemical engineering, paint and anti-corrosive coating production, oi and gas extraction, photovoltaic panels, lithium-ion batteries and water treatment membranes.</li> </ul>
Performance Additives	<ul> <li>Performance Additives comprises three activities:</li> <li>filtration and adsorption (CECA), which includes both specialty surfactants and products used for gas and liquid separation and for adsorption and filtration;</li> <li>organic peroxides, which are used as polymerization initiators for polyethylene, PVC and polystyrene and a crosslinking agents. This business also includes glass coating additives;</li> <li>photocure resins (Sartomer), which harden under ultraviolet light and are used in metal, plastic and wood coatings and in optics, graphic art and electronics.</li> </ul>
Industrial Specialties	
PMMA	The PMMA Business Line encompasses two activities:  PMMA used in the construction and automotive industries, and for billboards, decorations, the production of sanitaryware, and LED televisions;  functional polyolefins used in adhesives, packaging, photovoltaics and the electric, electronics and automotive industries.
Thiochemicals	Chemical intermediates for animal feed, petrochemicals and refining, natural gas odorization, polymerization agents, agrochemicals and pharmaceuticals.
Fluorogases	Gases used in refrigeration, air-conditioning, foam and solvents, and as feedstock for fluoropolymers.
Hydrogen Peroxide	Hydrogen peroxide (used in pulp and paper bleaching, water treatment, disinfection, electronics and textiles) and sodium chlorate.
Coating Solutions	
Acrylics	Resins and emulsions for adhesives, paints and coatings, superabsorbents, water treatment, and enhanced oil and gas recovery.
Coating Resins and Additives	The Coating Resins and Additives Business Line includes two activities:  coating resins, which comprise waterborne, solventborne and powder resins used for decorative paints, and industrial coatings, as well as inks, sealants, varnishes and dyes for wood, road paints, adhesives, construction materials, etc. This business also encompasses impact modifiers and processing aids for PVC; rheology additives (Coatex), specialty acrylic polymers used as rheology modifiers such as dispersants and thickeners in paper, paints and industrial coatings.

A global player in specialty chemicals and advanced materials

### Information by region

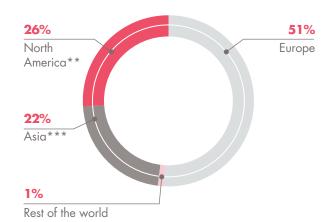
#### 2015 SALES\* BY REGION (1)



In Europe, sales in France accounted for 10% of the Group's total sales, and Southern Europe (Greece, Italy, Portugal and Spain) for 7%.

In Asia, sales in China represented 9% of the Group's total sales.

#### CAPITAL EMPLOYED IN 2015 BY REGION (2)



The breakdown of Group employees by region is given in section 2.5 of this reference document.

- Based on the geographic location of customers.
- \*\* United States, Canada and Mexico.
- \*\*\* Asia and the Middle East.

### 1.1.2 Strategy and competitive strengths

### 1.1.2.1 COMPETITIVE STRENGTHS

The Group's competitive strengths include:

- leading commercial and manufacturing positions, with the Group ranking among the world's top players in most of its businesses. This is particularly true for adhesives, acrylics, coating resins, photocure resins, polymethyl methacrylate (PMMA), fluorogases, PVDF, hydrogen peroxide, thiochemicals, specialty polyamides (polyamides 10, 11 and 12), PVC impact modifiers and processing aids, glass coating additives and organic peroxides;
- strong manufacturing footprint in Europe, North America and Asia, enabling the Group to efficiently and effectively meet customer demand. Its technical knowledge of products and manufacturing processes enables the Group to leverage its existing production facilities and gain a key advantage when
- entering new markets. It also allows the Group to carry out complex investment projects in a timely, cost-effective and technically efficient manner. In addition, the Group also has extensive R&D skills, which it leverages to launch innovative new products on the market, provide its customers with the technical support they need and further improve the efficiency of its manufacturing processes (see section 1.4 of this reference document);
- a solid balance sheet, with Group net debt of 1,379 million euros (or 1.3 times annual EBITDA) at 31 December 2015, compared with shareholders' equity of 3,949 million euros, representing a net debt to equity ratio of 35%;
- high-performing teams who have proved their ability to handle complex industrial projects and adress the challenges brought about by the economic environment, and a workforce recognized for its loyalty, professionalism and experience.

<sup>(1)</sup> In 2014, Group sales by region broke down as follows: 41% Europe, 35% North America, 20% Asia and 4% rest of the world. In 2013, Group sales by region broke down as follows: 41% Europe, 34% North America, 20% Asia and 5% rest of the world.

<sup>(2)</sup> In 2014, Group capital employed by region broke down as follows: 48% Europe, 26% North America, 25% Asia and 1% rest of the world. In 2013, Group capital employed by region broke down as follows: 54% Europe, 26% North America, 19% Asia and 1% rest of the world.

## 1

### 1.1.2.2 **STRATEGY**

Over the past ten years, the Arkema Group has actively strengthened its business portfolio by increasing the share of higher value-added activities with strong development potential. Alongside this internal overhaul, the Group has also rebalanced its geographic positioning by significantly developing business in North America and the emerging economies, primarily in Asia.

The Group is actively pursuing this transformation with the aim of becoming one of the world leaders in advanced materials and specialty chemicals. The Group presented its medium- and long-term strategy and targets at its Capital Markets Day on 29 June 2015. These targets are described in section 4.2 Trends and outlook of this reference document.

The Arkema Group continues to implement a targeted growth strategy, supported by a stronger presence in fast-growing economies, a close-to-the-customer approach, technological innovation, targeted acquisitions and increased industrial investment in its activities offering the highest growth potential.

The strategy is built around six priorities:

- stepping up the development of the High Performance Materials division, which should account for around 50% of Group sales by 2020, by:
  - achieving the ambitious goal of doubling the 2014 EBITDA of Bostik (Specialty Adhesives) to around 300 million euros by 2020.
  - continuing major innovation efforts to address the challenges of sustainable development, notably in the areas of lightweight materials and composites, new energy sources and water treatment, and
  - making targeted bolt-on acquisitions;
- pursuing selective growth in Industrial Specialties, based mainly on the new thiochemicals platform in Malaysia and the introduction of next-generation fluorogases;
- strengthening downstream acrylic activities;
- completing the Group's geographic rebalancing, with the long-term goal of achieving an equal division among Europe, North America and Asia/rest of the world, with sales split evenly across the three regions;
- continuing the program of divestment of non-core businesses, which should represent a total of around 700 million euros in sales between 2014 and 2017; and

• maintaining the focus on improving operational excellence as described in section 1.6 of this reference document.

In terms of portfolio management, the Group completed the sale of Sunclear in November 2015. This plastic and aluminum sheet distribution business was formerly part of the PMMA Business Line and generated sales of around 180 million euros. Following this transaction, other businesses, totaling some 500 million euros in sales, will have to be divested.

Moreover, in early 2016, the Group announced that it will not exercise the option to increase its acrylic capacity rights in China (see section 1.2.3.3 of this reference document).

Finally, in line with its objective of reinforcing High Performance Materials through targeted acquisitions, on 2 February 2015 the Arkema Group completed the acquisition of Bostik, the world number three in adhesives <sup>(1)</sup>. Bostik, which now forms a new Business Line, has generated sales of 1,497 million euros since its integration (for more details, see section 1.2.1.3 of this reference document). The Group may also use some of the funds originally allocated to acrylics in China to make additional bolt-on acquisitions.

Over the medium and long term, the Group intends to continue making targeted acquisitions for a total of between 1 billion and 1.5 billion euros in additional sales. Priority will be given to advanced materials, adhesives and downstream acrylic activities.

As part of this strategy, in addition to the acquisitions and disposals mentioned above, the Group announced the following projects in 2015 and early 2016:

- in Thiochemicals, the start-up of a platform in Kerteh, Malaysia (see section 1.2.2.3 of this reference document);
- in Performance Additives, the acquisition of Oxido, an organic peroxides company, and a project to double specialty molecular sieve production capacity at the Honfleur site in France (see section 1.2.1.3 of this reference document);
- in Adhesives, the start-up of new hot melt pressure-sensitive adhesives units in Bangalore, India and in Mexico, and a unit in Dallas, United States (see section 1.2.1.3 of this reference document);
- a project to develop PEKK production capacities in France and the United States (see section 1.4.4.1 of this reference document).

The Group's strategic priorities are set out in section 1.2 of this reference document by division.

## 1.2 PRESENTATION OF THE GROUP'S DIVISIONS

The Arkema Group is organized into three divisions:

- High Performance Materials, which comprises Specialty Adhesives, Technical Polymers and Performance Additives;
- Industrial Specialties, which comprises Thiochemicals, Fluorogases, PMMA and Hydrogen Peroxide;
- Coating Solutions, which comprises Acrylics and Coating Resins and Additives.

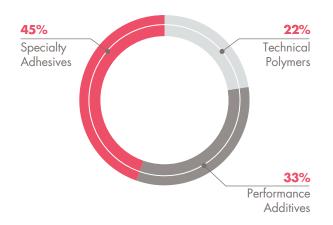
### 1.2.1 High Performance Materials

### 1.2.1.1 KEY FIGURES

(In millions of euros)	2015	2014*	2013*
Sales	3,358	1,730	1,728
EBITDA	506	314	348
Recurring operating income	354	213	251
Capital expenditure	167	112	95

<sup>\*</sup> The 2014 and 2013 figures have been restated in accordance with the new reporting structure presented at the Capital Markets Day on 29 June 2015.

## 1.2.1.2 BREAKDOWN OF DIVISION SALES BY BUSINESS LINE (2015) (1)



### 1.2.1.3 OVERVIEW OF THE DIVISION'S BUSINESS

At 31 December 2015, the High Performance Materials division comprised three Business Lines: Specialty Adhesives, Technical Polymers and Performance Additives.

The three Business Lines share the same objective of serving their various niche markets with innovative, high value-added technical solutions that meet their customers' needs.

The Group holds leadership positions in most of these markets, notably for adhesives, polyamides 10, 11 and 12, PVDF, molecular sieves and organic peroxides, and sells many of its products under widely recognized brands.

The Group also services these markets worldwide thanks to an industrial footprint on three continents.

<sup>(1)</sup> In 2014, sales for the division (which did not include Bostik at the time) broke down by Business Line as follows: 40% Technical Polymers and 60% Performance Additives.

1

The Business Lines within the High Performance Materials division offer a certain degree of integration with the Group's other activities. The precursors for PVDF and polyamide 10, for example, are manufactured by the Fluorogases Business Line, and hydrogen peroxide is used as a feedstock for organic peroxides.

The key success factors for the High Performance Materials division include brand recognition (Bostik®, Kynar® and Rilsan®), good customer relations, and the ability to offer innovative, R&D-based solutions, to develop new, high value-added products and to capitalize on the potential offered by growing local markets, particularly in Asia.

The Arkema Group is reaffirming its objective to accelerate development in High Performance Materials. In the long-term, the division is expected to account for around half of Group sales and to offer resilient growth and steady cash flow generation, supported by first-class assets. Further strengthening of the division will be supported by organic investment projects and bolt-on acquisitions. Development projects will focus in particular on innovative, sustainable development-oriented solutions and ongoing expansion in fast-growing economies. Going forward, development priority will be given to adhesives and ultra-high performance polymers, such as specialty polyamides, PVDF and PEKK.

## Specialty Adhesives (Bostik) (20% of Group sales in 2015)

### Products and markets

Bostik manufactures and markets adhesives and sealants worldwide, with 51 production units in Europe, North America and Asia, operations in 40 countries, and three regional R&D centers.

Bostik has a number of well-known brands that help secure customer loyalty in the construction and consumer goods industries, with examples including Sader®, Quelyd®, Evo-Stik®, Mem®, and Fortaleza®. Bostik is strengthening its global brand Bostik® Smart Adhesives.

Demand for adhesives and sealants worldwide is estimated at some 50 billion euros <sup>(1)</sup>, which breaks down into 33 billion euros for adhesives and 17 billion euros for sealants. Demand is spread across:

- the industrial sector, which accounts for 58% of global demand and includes a wide range of end markets including assembly, tapes and labels, packaging, transportation, non-wovens for the hygiene and personal care industries and electronics;
- the construction sector, which represents 34% of global demand and includes wall and floor surface preparation products, adhesives for tiles, walls and ceilings, and sealing solutions;
- the consumer goods sector, which makes up 8% of global demand and encompasses adhesive solutions for a wide variety

of applications such as repair work, attachment, assembly, decoration and renovation.

Geographically, demand breaks down as follows (1):

- North America represents around 28% of global demand, with average annual growth over the coming years expected to be between 2.5% and 3%;
- Europe accounts for around 31%, with expected average annual growth of 1.5% to 2%;
- Asia and the rest of the world make up around 41%, with expected average annual growth of between 4% and 5%.

Overall, the global adhesives market is expected to grow by around 3% a year on average over the next few years. This trend is likely to be driven by the replacement of traditional mechanical assembly systems and by new solutions that reduce the weight of materials, improve energy efficiency in buildings and contribute to the development of new energies. Other drivers include significant growth in the adhesives market for non-woven fabric used to make baby diapers, feminine hygiene products and adult incontinence products, and the strong momentum in emerging economies, where consumption of adhesives *per capita* is currently much lower than in Europe or the United States. Lastly, technology and experience are key in this market, characterized by high barriers to entry such as good customer relations built on proximity and trust, and a portfolio of well-known brands.

In addition to Bostik, the world number three in adhesives <sup>(2)</sup>, the main players in the market are Henkel, Sika and HB Fuller. However, the industry is still very fragmented with a large number of local players, offering good potential for consolidation through small bolt-on and accretive acquisitions.

Bostik holds leadership positions in several end markets, including:

- non-wovens for hygiene and personal care products: in this global market characterized by a limited number of players, Bostik is estimated to be number two worldwide and the leader for specialty products thanks to its technological expertise. Its main competitors are Henkel and HB Fuller;
- industry: with in particular three main high-growth technology platforms Bostik is estimated to hold the third largest share worldwide in this more regional market. Its main competitors are Henkel, HB Fuller and Sika but it also has a number of local competitors, particularly in emerging economies;
- construction and consumer goods: in these local markets, Bostik
  ranks among the top three players in the main countries in
  which it operates. Bostik can leverage its brand portfolio and
  position in growth regions such as South-East Asia and China
  to expand its business in these still fragmented markets. Its main
  competitors are Henkel, Sika and Mapei.

- (1) Source: Adhesive and Sealant Council and Arkema Group internal estimates.
- (2) Source: Arkema Group internal estimates.

### Strategy and highlights

Bostik has significant potential to improve its profitability. The Arkema Group intends to significantly develop this business over the coming years, with the target of practically doubling Bostik's EBITDA to some 300 million euros by 2020, compared with 158 million euros in 2014. This ambitious goal is based on the tollowing targets:

- increasing Bostik's EBITDA by 30% in 2017 from 2014 levels;
- generating an EBITDA margin of between 14% and 15% in 2020, thereby gradually achieving the same average results as Bostik's main competitors, Henkel, HB Fuller and Sika.

This sharp improvement will be driven primarily by the acceleration of Bostik's recently implemented development strategy, which

- ongoing development in fast-growing regions, where Bostik has started construction or operation of several new sites in countries such as China, India, Malaysia, Brazil and the Philippines. As part of this, Bostik announced in 2015 an increase of its thermoplastic pressure-sensitive adhesives production capacity in Bangalore, India, and in Mexico. One of the main benefits will be to improve Bostik's ability to serve its disposable hygiene product customers throughout the world. This is in line with Bostik's 2020 target of generating some 30% of sales in emerging economies (China, India, South-East Asia, Latin America, Eastern Europe and the Middle East), compared with around 24% in 2014;
- bolt-on acquisitions similar to those completed over the past few years in the United States and Brazil;
- ongoing rationalization of the brand portfolio by promoting the global Bostik® Smart Adhesives brand while narrowing the focus to five major local brands;
- capitalization of the benefits of increased R&D investment, which is expected to gradually raise sales from products less than three years old to around 18% of total sales by 2020, compared with some 15% in 2014 and 8% in 2010;
- ongoing day-to-day efforts to improve operational excellence.

The Group also intends to build on clearly identified cost synergies, which will be realized primarily in certain support functions and from purchases of raw materials, goods and services and logistics, in addition to the reinforcement of Bostik's operational excellence program. In the longer term, the Group is also working to achieve development synergies by setting up two new technology platforms: one for acrylic-based adhesives, which will partially rely on upstream integration with acrylics, and the other for structural adhesives. The aim of these development synergies is to more effectively capitalize on the respective skills of the Arkema Group and Bostik and, by extension, on the unique combination of a specialty chemicals company and an adhesives formulator. The Group benefited from the first integration synergies in 2015.

In addition to the projects mentioned above, Bostik has opened a new production site and a training center in Dallas, United States.

### **Technical Polymers** (10% of Group sales in 2015)

Technical Polymers comprises two main product lines: specialty polyamides and polyvinylidene fluoride (PVDF). These are sold under well-known brand names such as Rilsan®, Rilsamid®, Orgasol®, Pebax® and Kynar®.

### Products and markets

Specialty polyamides encompasses polyamides 10, 11 and 12. The Arkema Group is a market leader for these products and the only manufacturer of bio-based polyamides 10 and 11, which are made from castor oil. Its main competitors for polyamide 12 are Evonik, EMS and Ube.

Specialty polyamides are used in the transportation, oil and gas, new energies, textile and electronics industries. In the automotive industry, growth is supported by metal replacement to reduce vehicle weight, while in oil and gas, the main driver is deep offshore extraction. In addition, polyamides 10 and 11 are benefiting from rising demand for bio-based polymers.

The Group's product line also includes Orgasol®, an ultrafine powder used in cosmetics and paints, Pebax®, a polyether block amide used in sports equipment, and copolyamides, which are used in textiles.

Growth in specialty polyamides end markets over the coming years could average 4% to 5% a year (1).

PVDF is widely used in architectural and anticorrosion coatings, the chemical and oil and gas industries, electric cables, photovoltaic panels, lithium-ion batteries and water treatment membranes.

Demand is primarily being driven by growth in the architectural coatings sector in Asia, the development of deep offshore oil extraction and new energies like lithium-ion batteries, and the rising need for drinking water and water treatment solutions.

The Group is the world leader in PVDF polymers (2), with Solvay as its main competitor. In the coming years, end markets could grow by an average annual rate of 7% (1).

- (1) Source: Arkema Group internal estimates.
- (2) Source: IHS Chemical Economics Handbook, Fluoropolymers, December 2012.

### Strategy and highlights

The Arkema Group has made a number of investments in anticipation of an increase in global demand over the coming years, including tripling the production capacity of the Hipro Polymers bio-based polyamides site.

The Group has also actively pursued a policy of research and innovation to enable it to offer groundbreaking solutions for high-growth applications. For example, the Group entered the electronics market with a new product range focused primarily on specialty polyamides. It has also stepped up development in the battery market through the increased use of its PVDF in lithium-ion batteries for electronic devices like tablets and smartphones. And it is consolidating its presence in the aerospace market with the Kynar® foam range, which can be used to replace certain metal aircraft parts, such as window frames and air-conditioning conducts, to reduce airliner weight by the equivalent of one passenger, thereby meeting demand for lightweight materials.

In terms of its most recent innovations, the Arkema Group announced in May 2014 that it was joining forces with Polymem, a French SME specialized in hollow-fiber membrane filtration modules, to develop new hydrophilic ultrafiltration membrane technology that consistently produces excellent quality water. By harnessing a new grade of nanostructured Kynar® PVDF, this technology improves the effectiveness and energy efficiency of membrane-based water treatment systems. The Group also received the 2013 Pierre Potier Award for its Rilsan® HT, which can withstand high temperatures and corrosive fluids without compromising on flexibility or extrudability. This first-time combination of these three characteristics represents a breakthrough for carmakers in that it enables Rilsan® HT to replace metal in tube applications under the hood. This performance polymer also contains up to 70% of renewable raw materials, thereby meeting manufacturers' demand for environmentally sustainable solutions.

Lastly, the Arkema Group acquired a 24.9% interest in Ihsedu Agrochem in 2013 as part of its policy of securing competitive, long-term access to certain strategic raw materials. The company, a Jayant Agro subsidiary, specializes in the production of castor oil, a key feedstock for bio-based polyamides.

## Performance Additives (14% of Group sales in 2015)

Performance Additives comprises three businesses: filtration and adsorption (CECA), organic peroxides and photocure resins (Sartomer).

#### Products and markets

The filtration and adsorption business is managed by the CECA subsidiary and organized into two areas: surfactants and interface agents, and adsorption and filtration.

The surfactants and interface agents activity mainly includes specialty chemicals produced downstream from fatty acids. The wide variety of resulting products are used as additives in such highly diverse areas as oil and gas production, bitumen, fertilizers, corrosion inhibitors, antistatics and emulsifiers.

The adsorption and filtration activity includes a number of mineral products such as molecular sieves, for which CECA is the world number two <sup>(1)</sup>, diatomite, activated carbon and perlite. Featuring excellent adsorption and filtration properties, these products are mainly used in certain petrochemical units for industrial gas separation, in healthcare for medical oxygen, and in the food, chemical, construction, pharmaceutical and environment industries.

The organic peroxides business comprises two product lines: organic peroxides and glass coating additives.

Organic peroxides are initiators used in a variety of fields including commodity polymers (reaction initiators for low-density polyethylene, PVC and polystyrene), acrylic polymers, unsaturated polyesters and rubber crosslinking. The Group estimates that it ranks number two worldwide in this sector <sup>(1)</sup>. Its main competitors are AkzoNobel and United Initiators.

In the coatings sector, the Group markets products for flat glass and glass bottles, for which it ranks among the leading companies worldwide.

Sartomer offers unique technologies to supply customers with high-tech, high value-added products and applications. Its photocure resins deliver excellent technical performance properties, particularly in terms of stain, impact and scratch resistance, and offer almost instant crosslinking. Made from 100% dry-content, these innovative resins are also environmentally friendly and comply with European volatile organic compound (VOC) standards, strengthening the Group's strategy to develop new, environmentally sustainable materials.

The photocure resins business operates globally, with two sites in the United States, one in Europe and another in Asia, (Nansha, south of Guangzhou, China), which offers the Group new growth opportunities in Asia.

Photocure resins are used in a wide range of markets, including graphic art (inks and varnishes), industrial coatings, optics (fiber, DVD and Blu-Ray technologies), electronics (printed circuits), and

<sup>(1)</sup> Source: Arkema Group internal estimates.

Presentation of the Group's divisions

wood coatings. Global growth in photocure resin end markets over the coming years could be as high as 5% a year <sup>(1)</sup>. The Arkema Group's main competitors are Allnex, Eternal and Miwon.

### Strategy and highlights

CECA's strategy consists in developing high value-added product lines by drawing on R&D and its in-depth knowledge of customer needs.

In June 2015, the Arkema Group announced a project to double CECA's specialty molecular sieve capacity to allow it to match the market's average annual growth rate of 6% to 7%, driven mainly by Asia and the Middle East, and in particular to serve its petrochemicals customers supplying the synthetic textile and PET bottle end markets. This capacity expansion represents an investment of some 60 million euros to be made at the Honfleur site in France. This will enable the Group to produce adsorbents – notably CECA's latest generation ultra-high performance sieve, Siliporite® SPX 5003 – that are used in the petrochemicals industry to separate aromatics. Production is scheduled to come on stream in two phases, with the first to start in the summer of 2016 and the second in early 2017.

In 2014, the Arkema Group announced the creation of a joint venture between CECA and Saudi-based Watan Industrial Investment. The joint venture has operated an oil additive blending and storage facility in Saudi Arabia since 2015. The investment, which will allow CECA to expand in the Gulf region, will be gradually ramped up during 2016.

In 2013, CECA increased the capacity of its Antwerp site in Belgium by nearly 15% to produce more specialty alkoxylate surfactants, which are notably used by Sartomer to manufacture

photocure resins and by Coatex for rheology additives. The investment will enable it to follow the growth in the coatings, road construction, industrial detergent and oil and gas markets.

In January 2016, the Group started up a new organic peroxide production line in Changshu, China, that doubles the site's production capacity. Thanks to this investment, the Arkema Group will be able to support the strong growth of its customers in Asia, in particular in the plastics markets for the construction, packaging and automotive industries.

With the global bis-peroxide market growing by an annual 6% (1), the Arkema Group, the world's leading company in the field, has increased production capacity by 15% at its facilities in Spinetta, Italy and Franklin, United States. Bis-peroxide is used in rubber crosslinking in applications including electrical wires and cables, motor vehicles and footwear. The investments cater to the strong demand for crosslinking agents from the synthetic rubber industry, particularly in Asia, and support the development of the recently launched Luperox® FreeO. The capacity increases are the first stage in a wider program to increase the Group's global bis-peroxide capacity by 30% in the medium term. These developments were strengthened by the acquisition on 2 March 2015 of Italy-based Oxido, a European player in the formulation of organic peroxides used primarily to crosslink synthetic rubbers. Oxido generates sales of around 20 million euros. The acquisition offers significant potential for synergies and strengthens the downstream integration in Europe of organic peroxides, particularly bis-peroxide.

### 1.2.2 Industrial Specialties

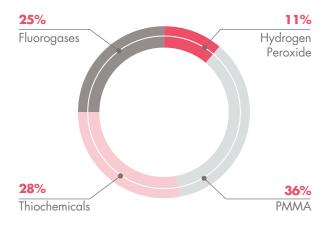
### 1.2.2.1 KEY FIGURES

(In millions of euros)	2015	2014*	2013*
Sales	2,450	2,269	2,311
EBITDA	418	312	361
Recurring operating income	237	169	231
Capital expenditure	183	268	267

<sup>\*</sup> The 2014 and 2013 figures have been restated in accordance with the new reporting structure presented at the Capital Markets Day on 29 June 2015.

<sup>(1)</sup> Source: Arkema Group internal estimates.

## 1.2.2.2 BREAKDOWN OF DIVISION SALES BY BUSINESS LINE (2015) (1)



### 1.2.2.3 OVERVIEW OF THE DIVISION'S BUSINESS

The Industrial Specialties division comprises four Business Lines: PMMA, Thiochemicals, Fluorogases and Hydrogen Peroxide.

The Business Lines in this division share a number of characteristics, including the use of complex manufacturing processes for chemical intermediates and the existence of global markets with strong growth prospects, particularly in Asia.

The Group is a leading industry player worldwide and has production units in Europe, North America and Asia. It started up its first thiochemicals platform in Asia in early 2015.

The Industrial Specialties division aims to selectively pursue the development of its activities and to strengthen its positions worldwide. The Arkema Group plans to achieve this by capitalizing on new facilities in Asia, by carrying out targeted debottleneckings in Europe and North America and implementing cooperation projects with its main partners. It also intends to increase the share of specialty products in its portfolio in order to take advantage of the superior growth rates in these higher value-added niche markets. Industrial Specialties is actively pursuing efforts to improve operational excellence and thereby maintain competitiveness and technological leadership in its markets. Finally, it also continues its work to secure a competitive, long-term supply of strategic raw materials.

## PMMA (11% of Group sales in 2015)

### Products and markets

The PMMA Business Line is organized into two areas.

The first is an integrated production chain from methyl methacrylate to polymethyl methacrylate (PMMA). Operating on three continents, this global activity has facilities in the United States, Mexico, Europe and South Korea. Its main brand names – Plexiglas® on the American continent and Altuglas® elsewhere – have a strong reputation. Its main products include granules for molding, and cast and extruded sheets for forming.

The global PMMA market is estimated at around 1.6 million tonnes <sup>(2)</sup> and serves primarily the construction, automotive, sanitaryware, commercial display, electronics and household goods markets. In the automotive market, beyond traditional PMMA applications like rear lights emerge new applications, such as Altuglas® ShieldUp panoramic roofs, which help reduce vehicle weight. In the signs and display market, growth is being driven by an increase in advertising expenditure and improved living standards in emerging economies. In PMMA end markets as a whole, annual global growth over the coming years could be close to 1.5% <sup>(3)</sup>. The Group is one of the world's leading PMMA producers <sup>(2)</sup>. Its main competitors are Evonik, Mitsubishi Rayon, Sumitomo Chemical and Chi Mei Corporation.

The second area is functional polyolefins, which are used primarily in adhesives, packaging, photovoltaics, and the electrical, electronics and automotive industries.

### Strategy and highlights

To enhance competitiveness, the Group shut down operations at the extruded PMMA sheet site in Bernouville, France in November 2015, resulting in the loss of 39 positions.

In November 2015, the Group sold its plastic and aluminum sheet distribution business, Sunclear, for an enterprise value of 105 million euros as part of its strategy to refocus its portfolio on core businesses. Sunclear represents sales of around 180 million euros and has 354 employees across Europe, in France, Italy and Spain.

<sup>(1)</sup> In 2014, division sales by Business Line broke down as follows: 39% for PMMA, 26% for Thiochemicals, 24% for Fluorogases and 11% for Hydrogen Peroxide.

<sup>(2)</sup> Source: IHS Chemical Economics Handbook, Acrylic Resins and Plastics, August 2013.

<sup>(3)</sup> Source: Arkema Group internal estimates.

In 2014, under the Elium® brand, the Group launched its first range of thermoplastic resins for composite parts made using the same equipment and processes as thermoset composites. In addition to displaying similar mechanical properties to thermoset parts, the resulting composite parts have greater thermoformability and recyclability and offer new assembly possibilities thanks to their thermoplasticity. The resins can be used to make structural parts in a range of applications such as cars and other means of transportation, wind turbines, sports equipment and construction. They can also be used to make body parts, such as shaped parts for trucks, body panels for buses and hoods for agricultural equipment.

Thiochemicals (9% of Group sales in 2015)

### Products and markets

The Thiochemicals Business Line is mainly focused on sulfur chemistry, but also includes amines, oxygenated solvents, hydrazine hydrate and rubber additives, with the latter being produced by French subsidiary MLPC International.

The Business Line operates worldwide, with production sites in the United States and Europe and a new platform in Malaysia started early 2015.

The size of the global thiochemical market is estimated at 0.8 million tonnes (1).

The main markets for thiochemicals are animal feed, refining and petrochemicals, natural gas odorization, solvents, pharmaceuticals and cosmetics. In the animal feed market, the Arkema Group markets a sulfur-based intermediate that is used to synthesize methionine, an amino acid that serves as a poultry feed supplement. Demand in this sector is being supported by increasing poultry consumption, particularly in emerging economies. In the oil and gas industry, demand is driven by the growing use of natural gas and by stricter sulfur content standards for automotive fuel (gasoline and diesel).

New applications have also been developed in soil fumigation, such as the substitute product Paladin® launched to replace methyl bromide due to be gradually phased-out. Paladin® is a new solution for pre-plant soil fumigation and is particularly effective against nematode parasites, weeds, and soil-borne plant pathogens. It has no impact on the ozone layer, a low global warming potential (GWP) and decomposes very quickly in the atmosphere.

Global thiochemical end markets are expected to grow by between 4% and 5% a year on average in the coming years <sup>(1)</sup>. The Group is currently the world number one in this sector <sup>(2)</sup>. Its main competitor is Chevron Phillips Chemical, with additional competition from local players for some products.

### Strategy and highlights

The Arkema Group started operations at its thiochemicals platform in Kerteh, Malaysia in early 2015. To carry through this project, it set up two joint ventures with CJ CheilJedang (CJ). The first, in which an Arkema Group subsidiary holds an 86% interest and CJ a 14% interest, produces thiochemicals (methyl mercaptan, DMDS and heavy mercaptans) primarily for the animal feed, refining, petrochemicals, soil fumigation and polymers markets. The second joint venture, in which CJ has an 86% stake and the same Group subsidiary holds the remaining 14%, was created to produce bio-methionine for animal feed using methyl mercaptan manufactured by the Group on the same platform and based on CJ's innovative and highly competitive new industrial bio-fermentation process that uses bio-based raw materials to produce L-methionine, which animals assimilate more easily than the DL-methionine currently on the market. The project represents an overall investment of around 200 million euros and enables the Group to strengthen its global position with production units in Europe, the United States and now Asia. The ramp-up of this investment in 2015 was greater than the Group initially expected, driven by strong demand from animal feed markets in Asia. The trend is set to continue over the next two years, with the unit expected to contribute some 120 million US dollars to sales once it reaches full capacity.

The Thiochemicals Business Line is pursuing the development of Paladin® as part of its strategy to grow the share of specialty products in its portfolio. After receiving the required approval from the relevant authorities to market the product in the United States (EPA), Israel, Morocco, Turkey, Mexico and Lebanon, the Group is actively pursuing efforts to obtain approval in Europe. To this end, the Arkema Group has submitted an approval application for Paladin® with the French authorities, in their capacity as *Rapporteur* Member State for this procedure, and received confirmation of the admissibility of the application from the French Ministry of Agriculture, Food and Forestry. The Group is now carefully monitoring the assessment process, which is expected to end by 2017 with the inclusion of the active substance in Regulation (EC) no. 1107/2009. Following this, the product may be marketed in the European Union.

To secure access to strategic raw materials, the Group brought on stream the Lacq Cluster Chimie 2030 facilities in late 2013 in partnership with Total and Sobegi, a subsidiary of Total and GDF Suez. The project extends the extraction of gas at low flow over the next 30 years in order to supply cost-competitive sulfur feedstock to the Arkema Group's thiochemicals activities in France.

(1) Source: Arkema Group internal estimates.

## Fluorogases (8% of Group sales in 2015)

### Products and markets

The Fluorogases Business Line manufactures and markets a range of hydrochlorofluorocarbon (HCFC) and hydrofluorocarbon (HCFC) products under the Forane® brand. This is a worldwide business for the Group, with production sites in France, the United States and China

These products are primarily used in two sectors:

- refrigeration and air-conditioning (notably in construction, automotive and retailing) and foams (blowing agents for polyurethane foam, for example). These emissive applications are subject to regulatory changes and are expected to grow by an annual average of 2% to 3% over the coming years (11), due primarily to the development of air-conditioning equipment in emerging economies;
- fluoropolymers such as polytetrafluoroethylene (PTFE), and polyvinylidene fluoride (PVDF), which is produced by the Group as part of the Technical Polymers Business Line. Going forward, average annual growth in these markets is expected to reach between 5% and 6% <sup>[1]</sup>, driven notably by the development of new energies, some fluoropolymers like PVDF being used in both photovoltaic solar panels and lithium-ion batteries.

The size of the global fluorogases market is estimated at 1.7 million tonnes <sup>(2)</sup>.

The Group is the world number three in fluorogases <sup>(2)</sup>, with its main competitors being Chemours, Dongyue, Honeywell and several Chinese players.

Regulatory changes in developed countries concerning HCFCs, notably HCFC-22, are leading to their use being phased out in emissive applications and permitted only for maintenance. Regulations on maintenance use vary from region to region, and range from a total ban in Europe to authorized use in developing economies, albeit with quotas in some cases. North America permits regulated sale as part of a quota allowance system that significantly tightens the balance between supply and demand. As part of this quota allowance system scheduled to continue until 2020, the Fluorogases Business Line generates a large share of its results in the region from the sale of HCFC-22, a situation which should continue after allowance quotas were revised downward for the period 2015 to 2019. For new equipment and foam expansion, HCFCs are being replaced by HFCs.

There have also been some recent regulatory changes regarding HFCs. The most notable example is the European F-gas Regulation. Applicable since 1 January 2015, it introduces a quota system that gradually phases down the use of fluorogases in certain applications. Another example is the European directive on mobile air-conditioning systems (MACs), which bans the use of

refrigerant gases with a global warming potential higher than 150 in new vehicle platforms manufactured after 1 January 2013 and in all new vehicles sold in Europe after 1 January 2017.

To comply with these regulations, and the HCFC regulations first and foremost, the Fluorogases Business Line has developed HFC blends (32, 125, 134a, 143a, etc.) and new substitutes for foams. Together with HFC-32, HFC-125 is an essential component of third-generation refrigerant blends like R-410A, which replaces HCFC-22 in air-conditioning equipment in construction. The Group has an HFC-32 production unit in Calvert City, United States, and an HFC-125 production unit in Changshu, China.

Similarly, the Fluorogases Business Line has developed fourth-generation blowing agents known as HFOs. In addition to zero ozone depletion potential (ODP) and low global warming potential (GWP), HFOs offer a number of outstanding features including excellent insulation and dimensional stability properties.

The Fluorogases Business Line now includes the sebacic acid business, which has a production site in Hebei, China. Derived from castor oil, sebacic acid is notably used in the production of polyamide 10.

### Strategy and highlights

Since mid-2013, the Fluorogases Business Line has been impacted by increasing competitive pressure from certain Chinese producers and by an unfavorable product mix, which have negatively affected prices and margins. This led to a 100 million euro EBITDA decrease between mid-2013 and mid-2014 compared to the prior 12 months.

The Group has made a priority of offsetting this decline between 2015 and 2018 and returning the Business Line to historical levels of profitability. To achieve this, it plans to benefit equally from internal measures to optimize fixed and variable costs, and from an assumption of gradually improving market conditions supported by regulatory changes.

Internal measures will primarily include actions to improve the competitiveness of fluorogas sites in Europe and to gradually develop upstream integration in fluorspar. As part of this, the Group stopped fluorogas production at the Zaramillo site in Spain in the second quarter of 2015. The internal measures also include efforts to increase the share of specialty applications like agrochemical solutions in the Group's product portfolio, and the first expected developments in HFOs, the low-GWP next generation of gases. In terms of marketing the 1234yf refrigerant for car airconditioning systems, the European Commission in 2011 opened formal investigation proceedings for anti-competitive practices against DuPont Co. and Honeywell International Inc. Following this investigation, the European Commission sent DuPont Co. (whose fluorogas operations have since been transferred to Chemours) and Honeywell International Inc. a statement of objections on 21 October 2014 reproaching them for entering

<sup>(1)</sup> Source: Arkema Group internal estimates.

<sup>(2)</sup> Source: IHS Chemical Economics Handbook, Fluorocarbons, February 2014 and Arkema Group internal estimates.

into cooperation agreements that both limited the availability of 1234yf on the market and restricted its technical development. As a major player in fluorogases, the Arkema Group will be closely monitoring the outcome of these proceedings, which it is confident could lead to a more open market. Accordingly, the Group has started building a 1234yf production unit in Changshu, China. This unit is scheduled to come on stream before the end of 2016. A second investment may then be carried out in Europe to meet growing demand.

In line with its ambition to play an active role in the development of the next generations of fluorogases, the Group is pursuing the development of the new low-GWP Forane® 1233zd. This product serves as a blowing agent for polyurethane foams used in the production of domestic refrigerators and freezers, commercial refrigeration, spray foam, polyurethane insulating boards for buildings, and other construction applications.

Regarding gradually improving market conditions, the assumption is based on several factors in Europe and the United States, including: (i) the definition of the R-22 quota allowances in the United States for the period 2015 to 2019, which was announced in October 2014 and produced its first results in 2015, (ii) the entry into force of the F-gas Regulation in Europe on 1 January 2015, which introduces a quota system for HFC gases in Europe, and (iii) several petitions requesting the application of antidumping duties in the United States, including one for 134a that was ruled against in late 2014 by the US International Trade Commission, a decision that was subsequently appealed by Mexichem. Another petition seeking the application of antidumping duties on blends was filed in the United States in late June 2015 by several fluorogas industry players, including the Arkema Group.

Finally, on 29 May 2014, US-based Golden Gate Capital completed the takeover of Canada Fluorspar Inc. (CFI), in which the Arkema Group held a 19% stake. In March 2016, the Group entered into an agreement with CFI under which the Group would sell its stake in their joint venture (Newspar) and would enter into a long-term agreement for the supply of fluorspar.

## Hydrogen Peroxide (4% of Group sales in 2015)

### Products and markets

The Hydrogen Peroxide Business Line includes hydrogen peroxide, sodium chlorate and sodium perchlorate.

Hydrogen peroxide is a global business for the Group, with production units in Europe (France and Germany), North America (Canada and the United States), and Asia (China). Sodium chlorate, which is mostly used in the paper pulp market, is produced only at the Jarrie site in France. The Group is a regional player for this product.

Hydrogen peroxide is primarily used in paper pulp, chemical products (including organic peroxides in the case of the Group), water treatment, disinfection of food packaging, cleaning of electronic components, and textiles. Its intrinsic properties, particularly its environmental safeness, offer excellent prospects, with estimates for global long-term growth at 3% to 4% annually (1). Energy is a major component of the business's production costs.

The Group is ranked third worldwide in terms of hydrogen peroxide production <sup>(2)</sup>. Its main competitors are Solvay, Evonik, EKA (AkzoNobel) and PeroxyChem. The size of the global hydrogen peroxide market is estimated at 3.7 million tonnes <sup>(1)</sup>.

### Strategy and highlights

As part of French State's Technological Risk Prevention Plan (PPRT), the Arkema Group converted from mercury cell to a membrane-based electrolysis and shut down the dichloroethane (DCE) unit at the Jarrie site in France. The new facilities began operating in late 2013.

<sup>(1)</sup> Source: Arkema Group internal estimates.

<sup>(2)</sup> Source: IHS Chemical Economics Handbook, Hydrogen Peroxide, September 2014 and Arkema Group internal estimates.

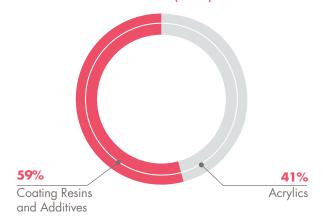
### 1.2.3 Coating Solutions

### 1.2.3.1 KEY FIGURES

(In millions of euros)	2015	2014*	2013*
Sales	1,849	1,930	2,020
EBITDA	190	203	239
Recurring operating income	72	112	154
Capital expenditure	137	86	111

<sup>\*</sup> The 2014 and 2013 figures have been restated in accordance with the new reporting structure presented at the Capital Markets Day on 29 June 2015.

## 1.2.3.2 BREAKDOWN OF DIVISION SALES BY BUSINESS LINE (2015) (1)



### 1.2.3.3 OVERVIEW OF THE DIVISION'S BUSINESS

The Coating Solutions division comprises the Acrylics and Coating Resins and Additives Business Lines.

Since its stock market listing, the Arkema Group has strengthened its acrylics activities by securing competitive upstream acrylic monomers in Europe, North America and Asia (acquisition in China in 2014), by developing downstream integration of its acrylic monomers and by building an integrated chain in the coatings sector. This strategy has been supported by various acquisitions. In 2007, the Group acquired rheology additives specialist Coatex. In 2010, it purchased certain acrylics assets from the Dow Chemical Company in North America, including its Clear Lake, United States, monomers site and downstream emulsions activities. In July 2011, it bought the coating and

photocure resins business from the Total group. And in 2014, it acquired a stake in Sunke in acrylics in China.

The Coating Solutions division is built around a coherent set of activities, with a downstream focused on the coatings market (decorative paints and industrial coatings), and a competitive upstream in acrylic monomers, which supplies the coatings market and higher-growth markets like superabsorbents and water treatment. Building on an industrial footprint in three continents and the market's most comprehensive product range, the Coating Solutions division is implementing a strategy based on:

- pursuing the downstream integration of acrylic monomer activities, with the target of achieving around 45% integration including long-term partnerships by 2020, up from around 37% in 2015. The downstream will be strengthened through long-term partnerships with industry leaders, geographic expansion into higher-growth regions, innovation focused on the development of more environmentally friendly solutions and targeted acquisitions;
- improving the competitiveness of the upstream by maintaining technological leadership and enhancing operational efficiency.

The main purpose of this strategy is to increase the division's resilience and to reduce its cyclicality.

## Acrylics (10% of Group sales in 2015)

### Products and markets

The main products of the Acrylics Business Line are acrylic acid and derivatives (esters) and oxo alcohols.

The primary raw material used by the Acrylics Business Line is propylene, making supply security a critical factor for the Group. The Group's main supplier in France is Total Petrochemicals France, under the terms set out in section 1.5 of this reference document.

<sup>(1)</sup> In 2014, division sales by Business Line broke down as follows: 44% for Acrylics and 56% for Coating Resins and Additives.

The main Acrylics production sites are located in Carling, France, Bayport and Clear Lake, United States and Taixing, China.

The size of the global acrylic acid market is estimated at 5.2 million tonnes  $^{(1)}$ .

The main markets for Acrylics are coatings (such as decorative paints, industrial coatings and photocure resins), superabsorbents, plastic additives, water treatment, paper, adhesives, and enhanced oil and gas recovery. In coming years, growth in coatings, especially paints, is expected to be supported by the development of the construction market in emerging countries, by the increasing use of high performance formulations in paints, and by the gradual recovery of the construction industry in the United States. Demand for superabsorbents is expected to benefit from the growing use of diapers in emerging countries like China and India, and from the aging population in more mature markets. Water treatment is also expected to enjoy buoyant growth thanks to industrialization in emerging economies and stricter environmental regulations on municipal and industrial water treatment. Over the next few years, acrylics end markets may grow by an average of 4% to 5% a year  $^{(2)}.$  Growth in Asia should reach an annual average of 6% to 7%  $^{(2)}$ . In mature markets, growth is expected to be more moderate, with an annual average of 2% to 3% in North America and 1% to 2% in Europe.

The Arkema Group is the third largest acrylics producer worldwide <sup>(3)</sup>, including annual production capacity of 160,000 tonnes of acrylic acid in China. Its main competitors are BASF, the Dow Chemical Company and Nippon Shokubai.

### Strategy and highlights

To keep pace with growth in its end markets and reinforce its geographic presence in Acrylics, the Arkema Group has taken the following steps:

- in January 2014, the Group announced a project to set up Taixing Sunke Chemicals (Sunke), a joint venture with Jurong Chemical, which owns and operates acrylic acid and butyl acrylate production units at the Taixing site in China. Under the agreement, the Group:
  - initially had access to 160,000 tonnes of annual capacity for an investment of 240 million US dollars. This stage was completed on 20 October 2014;

- had an option to increase its stake in Sunke and access a total capacity of 320,000 tonnes per year for an additional amount of around 235 million US dollars. While the exercise of this option was initially expected in the first quarter of 2015, a new agreement with Jurong Chemical in February 2015 extended the exercise period to January 2016, during which the joint venture was operated jointly by the two shareholders. The financial terms of the original January 2014 agreement were adjusted to reflect the option extension;
- had until early 2020 to exercise a further option to acquire the remaining third of the acrylic acid production capacities and to fully own Sunke for 165 million US dollars.

Sunke's performance in 2015 was impacted by challenging market conditions in Asia all throughout the year. While the project must be assessed over the long term, the Group announced in this environment in early 2016 that it did not exercise the option to increase its capacity rights. As of today, the Group has retained its initial acrylic acid capacity rights, which allow it to develop its downstream acrylic activities in Asia and to support the growth of its customers in the region;

- in 2014, the Group finalized a 110 million US dollar investment plan at the Clear Lake and Bayport sites in the United States to develop, upgrade and improve reliability, as part of a drive to strengthen its position in the US acrylics market. The Group announced in July 2014 that it had started up a new 45,000 tonnes plant on the Clear Lake site to produce methyl acrylate, which is notably used to manufacture polymers for water treatment, and elastomers. The plan also resulted in a butyl acrylate unit on the Bayport site being converted to produce 2-ethylhexyl acrylate in 2012, and the reliability and competitiveness of the Clear Lake site being improved by increasing its acrylic acid capacity to some 270,000 tonnes a year;
- in October 2013, the Group consolidated its position as an acrylic monomer producer at the Carling platform in France with the inauguration of a new Sumitomo Seika superabsorbent unit, raising the Carling site's total Sumitomo Seika superabsorbant production capacity to 47,000 tonnes a year.

<sup>(1)</sup> Source: IHS Chemical Economics Handbook, Acrylic Acid and Esters, June 2014.

<sup>(2)</sup> Source: Arkema Group internal estimates.

<sup>(3)</sup> Source: IHS Chemical Economics Handbook, Acrylic Acid and Esters, June 2014 and Arkema Group internal estimates.

1

The Arkema Group has also taken the following measures to improve the competitiveness of the Acrylics Business Line and the Coating Solutions division in general:

- in August 2014, the Group announced the signature of an agreement to purchase propylene in the United States with Enterprise Products Partners LP, one of the leading American energy service players. The agreement is in line with the Arkema Group's strategy to secure supply of strategic raw materials, and will account for a significant share of its propylene supply;
- in early 2014, the Group stopped production of industrial chemical intermediates – used primarily to manufacture plasticized PVC, polyester resins and alkyd resins for paint – at the Chauny industrial site. In doing so, the Group ceased production of diethylhexyl phthalate (DEHP), which was subject to an authorization process under REACH regulations.

## Coating Resins and Additives (14% of Group sales in 2015)

The Coating Resins and Additives Business Line comprises two businesses: coating resins and rheology additives (Coatex).

#### Products and markets

The Arkema Group is a major supplier to the paint and coating industry, with a comprehensive range of technologies and far-reaching geographic coverage. The Group's extensive, innovative range breaks down as follows:

- liquid resins: these include emulsions, alkyd resins, acrylic resins and polyester resins and serve the decorative paint and industrial coating markets and the adhesive and sealant, ink, and road paint markets;
- powder resins for the metal coatings market: by eliminating the need for solvents, these 100% dry-content solutions comply with European requirements for the production of low-VOC coatings;
- rheology additives for aqueous formulations.

The coating resins business operates worldwide, with sites in the United States, Europe, Asia and South America.

Growth in the business' end markets could average up to 3% annually over the coming years  $^{(1)}$ .

The Group ranks among the world's leading companies in the coating materials market. Its main competitors are BASF, the Dow Chemical Company, Allnex, Synthomer and DSM.

Thanks to its various R&D centers, the Arkema Group is able to assist its global customers in their quest for innovative and environmentally friendly formulations. This is the case, for example, of the alkyd emulsions developed to comply with environmental regulations on solvents.

Since 2015, the coating resins business also includes PVC additives, which are acrylic acid derivatives that include impact modifiers and processing agents. The Group is one of the leading players worldwide for this application, with production sites in Europe and North America.

The rheology additives business (Coatex) manufactures primarily acrylic-based polymers that are used as dispersants and thickeners.

The main applications for these high-growth specialty chemical activities are in the paper, paint, water treatment, cosmetics, textile and concrete industries. Coatex has industrial sites and storage facilities in Europe, the United States, Asia and Latin America.

### Strategy and highlights

The Group has taken the following steps to sustain the coating resins development:

- in 2015, the Group announced that it increased its acrylic resin production capacity at the Araçariguama site in Brazil by 60% by starting up a new reactor. The new reactor will allow the Group to manufacture specialty chemicals that were previously unavailable in the region;
- in late 2013, the Group brought on stream an acrylic emulsion unit in China mainly to serve the decorative paint and adhesives markets. The new unit is part of the Changshu complex in China and represented some 30 million US dollars in investment;
- the Group has also continued to innovate with the development of several innovative solutions, including Celocor®, an additive that potentially reduces the cost of paint by partially replacing titanium dioxide (TiO<sub>2</sub>).

The coating resins business has also made progress in improving profitability and refocusing its businesses by:

- shutting down coating resin production at the Villers-Saint-Paul site in France in late 2015, a decision that resulted in the loss of 26 positions;
- divesting the two South African subsidiaries, Arkema Resins Proprietary Limited and Harveys Composites Proprietary Limited, in August 2014, which represented sales of some 45 million euros;
- shutting down coating resin production at the Stallingborough site in the United Kingdom in July 2014, leading to the loss of 58 positions.

Coatex is pursuing its strategy of end-market diversification and geographic expansion. In 2014, it inaugurated a new development and application technical center in Brazil to support its future growth and the development of resin coatings in South America.

## 1.3 CAPITAL EXPENDITURE

## 1.3.1 Overview of the Group's main capital expenditure projects over the past three years

The Arkema Group's capital expenditure on property, plant and equipment and intangible assets amounted to 481 million euros in 2013 (7.9% of Group sales), 470 million euros in 2014 (7.9% of Group sales), and 431 million euros in 2015 <sup>(1)</sup> (5.6% of Group sales). Over the past three years, the Group has invested some 461 million euros a year on average.

Capital expenditure in the past three years has been focused on (i) facility maintenance, safety, environmental protection and information technology, accounting for approximately 52% of the total, and (ii) development projects, *i.e.* of either major projects or productivity improvements to existing facilities, accounting for approximately 48%.

Over the period, 27% of capital expenditure was made in the High Performance Materials division, 52% in the Industrial Specialties division, 20% in the Coating Solutions division, and 1% on Corporate projects. The breakdown of capital expenditure by region was 48% in Europe, 22% in North America, 29% in Asia and 1% in the rest of the world.

The Group's main development expenditure projects over the past three years were:

Business Line	Description
Acrylics	Upgrade of the Clear Lake site in the United States, including an increase in acrylic acid production capacity.
Coating Resins and Additives	Start-up of an acrylic latex unit at the Changshu site in China.
Thiochemicals	Overhaul of the industrial infrastructure at the Lacq site in France in partnership with Sobegi and Total EP France after gas field exploitation stopped.
Hydrogen Peroxide	Conversion from mercury cell to membrane-based electrolysis at the Jarrie site in France.
Technical Polymers	Three-fold increase in PA10 capacity at Hipro Polymers, China.
Acrylics	Start-up of a methyl acrylate unit at the Clear Lake site in the United States.
Thiochemicals	Construction of a thiochemicals production platform in Kerteh, Malaysia started in early 2015, combined with a project to produce bio-methionine in partnership with CJ CheilJedang.
Performance Additives	Two-fold increase in organic peroxide production capacity at the Changshu site in China started up in early 2016.
IT	Deployment of IT systems as part of customer supply chain optimization.
	Acrylics  Coating Resins and Additives Thiochemicals  Hydrogen Peroxide Technical Polymers  Acrylics Thiochemicals

The Group also completed the acquisition of Bostik on 2 February 2015, and of organic peroxide specialist Oxido on 2 March 2015.

<sup>(1)</sup> Excluding capital expenditure related to portfolio management operations. For further details, see section 4.1.9 of this reference document.

### 1.3.2 Overview of the main capital expenditure projects in progress

At the date of this reference document, the Group had the following main capital expenditure projects in progress:

Fluorogases Construction of a 1234yf refrigerant fluorogas unit at the Changshu site in China.

Performance Additives Two-fold increase in molecular sieve production capacity at the Honfleur site in France.

Increase in PEKK production capacity in France.

Ongoing roll out of IT systems as part of customer supply chain optimization.

Capital expenditure is primarily funded by the cash resources that the Group generates during the year. In addition, the Group

may also use the credit resources detailed in section 4.1.8 of this reference document.

### 1.3.3 Future capital expenditure

The Arkema Group aims to further reduce its capital intensity. In the long-term, it targets to achieve an average annual capital expenditure of approximately 5.5% of Group sales, of which around 3% for maintenance and 2.5% for development.

In 2016, the Group expects capital expenditure of some 470 million euros based on a 1.10 euros versus US dollar exchange rate.

The Group believes that its current cash situation and financing resources (see section 4.1.8 of this reference document) are sufficient to finance its future capital expenditure projects, in particular those mentioned in sections 1.3.2 and 1.3.3 of this reference document.

### 1.3.4 Property, plant and equipment

The Group has a policy of owning the industrial facilities that it uses. By way of exception, it sometimes leases offices and warehouses from third party lessors. Lease commitments are included in the off balance sheet commitments described in note 30 to the consolidated financial statements in section 4.3.3 of this reference document.

The net book value of the Group's property, plant and equipment was 2,727 million euros at 31 December 2015. This figure includes transportation equipment and pipelines owned by the Group (see note 11 to the consolidated financial statements in section 4.3.3 of this reference document).

## 1.4 R&D AND INNOVATION STRATEGY

### 1.4.1 R&D objectives

Research and development (R&D) is one of the key drivers in the Arkema Group's growth strategy.

R&D is focused on four primary goals:

- contributing to the Group's operational excellence by making innovative improvements to production facilities so that the Group may produce safely and competitively with the smallest environmental footprint possible;
- developing the Group's products by continuously improving their performance in existing markets and by systematically exploring new markets;
- anticipating technological and market changes and developing products that meet society's future needs;
- introducing disruptive innovations that secure the Group's technological positioning in the medium-term.

As highlighted in the last two points, the need to anticipate change is a crucial challenge for the Group that underpins all of its R&D activity. After identifying a number of mega-trends in society, the R&D department has focused its efforts on six research platforms to bring the Group's R&D into line with the main trends shaping the world now and in the future, namely:

- bio-based products;
- new energies;
- water management;
- lightweight materials and design;
- home efficiency and insulation;
- electronics solutions.

The first five platforms are geared towards responding to major challenges facing society (see section 2.3 of this reference document), such as energy, climate change and access to water. With the acquisition of Bostik, the Group gained global expertise in adhesive technologies, which it leverages accross these platforms.

Introducing disruptive innovations requires an ambitious new-product development policy. For this reason, the R&D department is also responsible for developing groundbreaking solutions at the "incubation" stage in a specific new product incubator. When products have reached an appropriate level of maturity, they are transferred to the relevant businesses for commercial development.

In 2015, the Group was included in Thomson Reuters' annual "Top 100 Global Innovators" for the fifth year in a row.

### 1.4.2 R&D resources

### 1.4.2.1 QUANTITATIVE INFORMATION

In 2015, R&D expenditure represented around 2.7% of Group sales. The Group's R&D department employed more than 1,500 researchers in 2015, who were spread among three regional research and innovation hubs comprising a total of 13 research centers in France, the United States, China and Japan.

R&D efforts break down among the Group's three divisions and its Corporate research program as follows:

 the High Performance Materials division accounts for 51% of the Group's R&D, with a particular focus on the materials of tomorrow. Innovations combining performance with sustainable development include materials made from renewable feedstocks, materials and adhesives with a low environmental impact, lightweight materials for transportation, the structural adhesives used to assemble these materials, and functional adhesives for the construction and manufacturing industries. High Performance Materials fuels its growth by expanding its product range and by adapting the performance and functions of its products to new market demands. The division's technical excellence is reflected in the strong reputation of brands such as Rilsan®, Pebax®, Luperox® and Bostik®, and in the widespread consumer awareness of retail brands like Sader® and Quelyd®;

 the Industrial Specialties division represents 21% of the Group's R&D, with an emphasis on ensuring the division's processes are competitive and finding new applications and end markets for its products. One of its primary objectives is to continuously improve its main processes, such as those used for fluorochemicals, thiochemicals and hydrogen peroxide, in order to make them safer, more reliable, more productive and therefore more competitive, while minimizing

their environmental impact. To this end, R&D teams study the benefits of new raw materials, test new catalysts and reactor types and develop new synthesis routes. They also contribute to the development of new products, such as the new low global warming potential (GWP) refrigerant 1234yf, and Altuglas® ShieldUp nanostructured PMMA sheets;

- the Coating Solutions division accounts for 18% of the Group's R&D, with its main priority being to develop innovative solutions for the coatings market while combining technical performance with sustainable development. In addition to working closely with customers to provide responsive technical support, the division's R&D teams also carry out process research, which enables them to optimize production costs and produce new molecules at an industrial scale;
- The Corporate research program represents 10% of the Group's R&D. Defined by the R&D department and subject to the Executive Committee's approval, the program aims to prepare for the innovations of tomorrow.

#### 1.4.2.2 ORGANIZATION

The R&D department reports directly to the Chairman and Chief Executive Officer and coordinates all of the Group's research programs worldwide. It comprises:

- a Corporate management team, which is in charge of coordinating global R&D, developing research platforms and managing partnerships. It ensures that all projects funded by the various businesses are scientifically and technologically relevant and in line with the Group's overall strategy. It also creates and steers Corporate R&D programs, identifies development opportunities and new research areas and manages the open innovation tools described below;
- global R&D managers for each business, who are responsible for the operational control of their specific programs. These R&D managers may have representatives in the Group's main regions (Europe, Asia and the United States). The R&D managers and the Corporate management team meet regularly to coordinate and steer Group R&D;
- the Intellectual Property department, which supervises patent filing Group-wide and coordinates the management of intellectual property, a fundamental part of the Group's technological asset base;
- the incubator, which develops the Group's most innovative products until they are ready to be brought to market.

The R&D department supervises and coordinates all 13 of the Group's research centers worldwide. It ensures that research efforts are distributed appropriately among these centers, in terms of human and financial resources and R&D topics.

#### 1.4.2.3 COLLABORATIVE RESEARCH

In addition to these internal Group resources, the R&D department implements an ambitious policy of open innovation and partnerships.

#### **Partnerships**

Partnerships are a fundamental prerequisite for research excellence.

Research partnerships may take the form of upstream partnerships with scientific bodies and result in research contracts, for example with doctoral or postdoctoral students, and original and innovative structures. In France, for example, the Group takes part in industrial endowment programs, such as the Industrial Organic Electronics Chair in Bordeaux. It has also formed special partnerships as part of major strategic research programs, most notably with the laboratory of the ESPCI physics and chemistry engineering college in Paris, France.

Partnerships may also be developed with industrial partners as part of joint research programs with customers, suppliers and even competitors to develop together new products or technologies. The Group establishes many research partnerships with customers in order to better understand market demand and to more swiftly develop technical solutions in response.

Numerous strategic tools have been put in place both nationally and internationally to encourage the implementation of collaborative research programs. The Arkema Group has made the use of these tools a key priority in its research policy. Many collaborative programs have been undertaken with the European Commission, such as Horizon 2020, and with various French bodies like the national research agency ANR, the environment and energy management agency ADEME, and the interministerial fund FUI. These partnerships allow the Group's R&D to benefit from joint funding with the public sector and from active collaboration with multiple partners. In France, the Group has been particularly active in the various aspects of the French government's Investissements d'Avenir investment program by taking part in both collaborative research projects and multidisciplinary bodies such as technological research institutes. In 2015, the Group became a partner of the Raw Materials Knowledge Innovation Community (KIC) in Europe, which aims to address the problem of European access to critical raw materials and to develop projects in the areas of mineral extraction, recycling and rare product substitution.

#### Open innovation

In addition to research-contract partnerships, the Group has implemented a dynamic policy on open innovation.

Two examples of this policy are outlined below:

1. The R&D department has set up several shared laboratories that team Arkema Group employees with staff from another organization, most frequently on the latter's premises. Examples of partners include:

- French atomic energy agency CEA, with the creation of three shared laboratories within the following organizations:
  - French solar energy institute INES, with the aim of improving polymer performance in photovoltaic applications,
  - IT electronics laboratory LETI for organic electronics and micro-electronics,
  - new energy technology innovation laboratory LITEN for new energies and new materials,
- the Lorraine-based Pôle de Plasturgie de l'Est (PPE) for the development of thermoplastic composites;
- Hydro-Québec, Canada's largest electricity producer, which in 2015 set up a shared energy storage R&D laboratory with

- the Group at the Lacq Research Center. The laboratory will primarily work on developing the next generation of materials used to make lithium-ion batteries.
- 2. The R&D department has a technology acquisition policy that involves targeting high value-added SMEs and startups and supporting them through their development processes. These acquisitions enable the Group to position itself in the ultra-innovative product and high-tech markets. One of the latest acquisitions to join the incubator is AEC Polymers, a specialist in industrial structural adhesives. These businesses are now growing in an application-oriented environment thanks to the Group's resources and expert staff.

#### 1.4.3 Patent and trademark management

The Group attaches great importance to industrial property rights in respect of both trademarks and patents in order to protect the innovations that result from its R&D and to promote its products among customers. Together, the Group's patents and trademarks represent a key asset for its business.

#### 1.4.3.1 **PATENTS**

The Arkema Group believes that protecting its technologies, products and processes with patents is key in optimally managing its business

Consequently, the Group files patent applications in its main markets in order to protect new chemical compounds, new high technical performance materials, new synthesis processes for major industrial products and new product applications.

The number of patents granted and the number of patent applications filed annually are good indicators of how much a company invests in R&D, and how promising the results are. At 31 December 2015, the Group held 6,856 patents and had 4,902 patent applications pending (all patent applications filed as part of a centralized process – with the World Intellectual Property Organization (WIPO), for example – are counted as a single application, even though the application may result in several patents being granted depending on the number of countries subsequently selected). In 2015, the Group filed 193 priority patent applications.

Patent protection in countries where the Group seeks it is typically granted for the maximum legal duration of twenty years, calculated from the application date. The level of protection varies from one country to another, depending on the patent type and scope. The Group seeks patent protection in many countries and regions, primarily in Europe, China, Japan, South Korea, North America, India, and more recently South America.

To actively protect its markets, the Group monitors competitors and takes legal action against any third-party infringements of its patents. The Group also challenges unwarranted third-party patents and brings legal actions to have them declared invalid.

The expiration of a basic patent for a product or process can lead to increased competition as other companies bring new products to market. In some cases, however, the Group may continue to benefit commercially from a patent after its expiration by leveraging expertise related to a product or process or by filing for application or improvement patents.

The Group also has a policy of obtaining and granting patent licenses to meet operating requirements. For inventions by employees, the Group continues to use the system that it implemented in 1989, whereby it grants additional compensation to employees whose inventions have given rise to a commercially exploited patent.

#### 1.4.3.2 TRADEMARKS

Trademark protection varies from country to country. While in most countries, trademark rights are the result of registration, in some, they may be based on usage regardless of registration. Trademark rights are obtained by registering the trademark nationally, internationally or even supra-nationally in the case of Community trademarks. Registrations are usually granted for a ten-year term and can be renewed indefinitely.

The Group implements a centralized, dynamic trademark registration policy that draws on a worldwide network of intellectual property advisors.

In particular, the Group holds the trademark rights to its main products. Examples from the Group's flagship brands include Pebax®, Rilsan®, Forane®, Altuglas® and Plexiglas®, which is used exclusively on the American continent. The Group has also trademark protected the names of its latest innovations, such as Kepstan®, Nanostrength® and Apolhya®.

The Group further expanded its brand portfolio with the Bostik acquisition in February 2015, adding well-known trademarks such as Bostik®, Sader® and Quelyd®.

Mindful of the importance of its brand portfolio, the Group monitors trademark registrations by competitors in similar business sectors and has a policy of taking legal action against infringements.

#### 1.4.4 R&D highlights

#### 1.4.4.1 THE INCUBATOR

The incubator was set up to develop disruptive innovations. Since its creation, it has notably developed electrostrictive polymers *via* the Piezotech subsidiary, the new PEKK polymer capable of withstanding ultra-high temperatures, and nanostructured PMMA for automotive glazing under the Altuglas® ShieldUp brand.

In 2013, the incubator began sampling its latest copolymers for electronics and launched an amorphous polyamides activity.

In 2014, the incubator reached a milestone in the development of block copolymers under the Nanostrength® and Apolhya® brands by selling more than 100 tonnes of nanostructured polymers for the first time.

2015 saw an acceleration of commercial sales of Kepstan® PEKK, leading the Group to announce that it was increasing production capacity in France in 2016 and planning to build a world-scale unit in the United States in the longer term.

#### 1.4.4.2 RESEARCH PLATFORMS

The Arkema Group has six research platforms: bio-based products, new energies, water management, electronics solutions, lightweight materials and design, and home efficiency and insulation. Their purpose is to keep the Group's R&D in line with the main trends driving our world now and in the future.

Some of the many recent highlights relating to these platforms are outlined below:

#### **Bio-based products**

- In 2013, Rilsan® Clear Rnew G830, the first bio-based transparent polyamide, initially intended for the optics market, was developed with great success for electronics and audiovisual applications.
- In 2013, the Group also developed and put into production a family of alloys incorporating PMMA and bio-based polylactic acid (PLA). The Group signed a co-marketing agreement with

NatureWorks, a world leader in bio-based polymers, to promote a high-performance bio-based alloy.

- Clear G850, the new bio-based component of the Rilsan® product range, was unveiled in November 2013. Transparent and extremely lightweight, it opens up new possibilities for eyeglass frames. A specific grade has also been designed for lenses, and another for applications requiring superior impact resistance.
- The Pebax® thermoplastic elastomers range expanded in 2014 to include the 90% bio-based Pebax® Rnew 80R53. 50% more rigid than other Pebax® grades, it opens up new design possibilities for ski boots by making them lighter and more responsive to the skier's movements.
- In 2015, the Arkema-CJ CheilJedang bio-methionine complex in Kerteh, Malaysia, came on stream. CJ uses Group-made methyl mercaptan as a raw material to produce bio-based methionine in a world-first fermentation process. The Group's contribution to the new L-methionine synthesis technology earned it *Usine* Nouvelle magazine's 2014 Engineer of the Year award in the Best Industrial Project category.

#### Lightweight materials and design

- In 2013, new applications for Rilsan® HT products were developed to replace metal tubes in engine compartments and NOx reduction devices. Rilsan® HT received the 2013 Pierre Potier Award, which recognizes major chemistry innovations supporting sustainable development.
- Also in 2013, the Group developed Elium®, the first thermoplastic suitable for manufacturing composites with the same processes and equipment as for conventional thermoset composites. Thanks to this thermoplastic resin, the Group received the JEC Award at the composite industry's main trade show.
- The commercial interest generated by Elium® resin in 2015 led to the technology being used as the basis for a pilot production line for structural auto parts at research and technology institute

R&D and innovation strategy

IRT-M2P in Metz, France. Scheduled to begin operations in early 2016, the pilot line will demonstrate the continuous production of large-scale parts, with cycle times of less than two minutes per part.

The lightweight materials and design platform places particular emphasis on fast manufacturing technologies, such as 3D printing. Highlights include the following:

- Sartomer released a new range of acrylic photopolymerizable resins in 2013. Using the 3D printing-UV curing process, successive layers of an acrylic resin formulation are printed and instantly dried to make three-dimensional parts. In addition to offering great freedom of design, the technology produces an excellent finish.
- Since 2013, the Invent® range of polyamide powders (PA 11 and PA 12) has been developed for additive technology known as laser sintering. The range offers an excellent finish, optimal mechanical properties and good recyclability, not to mention specific characteristics that facilitate use in professional machines. Applications have so far been oriented toward the demanding aerospace, sport and automotive industries in close collaboration with original equipment manufacturers (OEMs).
- Kepstan® PEKK moved beyond the technical development stage in 2015 after specific grades were created. It is now a commercial product marketed to the aerospace industry. Kepstan® PEKK is unique among polymers as it can be used in both laser sintering and wire-feed systems.

#### **New energies**

- In 2013, CECA launched Cecabase® RT Bio 10, an additive that helps surface roads with asphalt mix at lower temperatures. Biodegradable and environmentally friendly, it cuts energy consumption by 30% during the asphalt mixing process.
- In 2014, Apolhya® nanostructured copolymers were used for the first time in photovoltaic backsheets.
- The Group also launched the new Kynar® SLM200 film for the photovoltaics market in 2014. Thanks to its innovative formulation, the thinner film provides effective protection for the backs of solar modules while offering customers one of the industry's most competitive prices.
- The Forane® 1233zd HFO was tested by a number of potential customers as a replacement for existing HFC blowing agents. Forane 1233zd helps reduce greenhouse gas emissions while delivering excellent thermal insulation properties. The Group's presentation of the product earned it the Best Paper Presentation Award at the Center for the Polyurethanes Industry conference, held in the United States in September 2014. In addition, a demonstration showed that adding 15% to 30% of R-1233zd to the blowing agent pentane increases the thermal insulation of polyurethane foam by 3% to 4%, without affecting

- its processability or stability over time. These properties will be useful in refrigeration equipment.
- In September 2014, production began on a new formulation of low corrosion methane sulfonic acid used primarily as an esterification catalyst for biodiesel. The formulation allows biodiesel producers to use less expensive types of steel, while significantly reducing corrosion to their facilities.
- In 2015, Arkema R-449B reached a milestone when it received an ASHRAE number, essential for selling a refrigerant. The hydrofluoroolefin/hydrofluorocarbon blend can now be sold as a low global warming potential (GWP) substitute for R-404A on industrial refrigeration markets (supermarkets, transportation, etc.). Arkema R-449B can reduce GWP by more than 50%.

#### Water management

 In 2014, the Group and Polymem, a French SME specialized in hollow-fiber membrane filtration modules, jointly developed new hydrophilic ultrafiltration membrane technology that consistently produces excellent quality water.

#### **Electronics solutions**

- In 2012, the Group announced that it had synthesized block copolymers that could be used to etch sub-22 nm then sub-16 nm patterns on silicon wafers. Such sizes cannot be achieved using existing lithography technologies. A range of directed self-assembly lithography resins based on the above proprietary copolymer technology was approved in 2014, making it possible to obtain structures of around 22 nm. A second generation of polymers that could obtain critical dimension structures as small as 5 nm was developed in the laboratory. The range of directed self-assembly lithography resins also came one step closer to being marketed in 2015 after the Group signed a partnership agreement with Brewer Science. The agreement will enable the Group to increase its global presence and offer customers closer support.
- In 2014, a new XZM50-type polyphthalamide was successfully launched on the portable devices market. It makes new designs possible thanks to its exceptional rigidity, dimensional stability and fatigue resistance.
- The Pebax® MH and MV range well-known in the field of antistatic additives, particularly for electronics packaging – was expanded in 2015 to include the new MF range for other matrix and processing types.

#### Home efficiency and insulation

 Two new rheology additives, Crayvallac® SLT and Crayvallac® SLP, were launched for sealant applications in 2013. They offer superior stability and enhanced rheology control compared with conventionally used silica fume.

- The Axios™ range of functional hardwood adhesives was released on the US market in 2014. Based on Bostik's tri-linking polymer technology, which reacts with atmospheric moisture to form a tough seal, these adhesives combine ease of use with excellent mechanical properties. In addition to its bonding properties, Ultra-Set® SingleStep™, the range's flagship product, offers enhanced acoustic performance equivalent to a 6 mm cork underlay and protection against rising moisture.
- In 2015, two new grades of impact modifiers with elastomeric acrylic cores and methacrylic shells, D382® and D365s®, were launched for the window profile market. They offer an excellent compromise between impact resistance, corner weld strength and thermal stability.
- Also in 2015, the coating resins business expanded its Encor® range with a new grade that captures formaldehyde when used as a binder in wall paint.
- The Smart House by Arkema, a one-of-a-kind house-laboratory designed to bring together players in the construction to cooperate on innovation and sustainable development, was inaugurated at the Venette R&D site in France in 2015. The purpose of the concept house is to test, develop and approve new solutions to major challenges facing the construction industry, particularly energy efficiency, environmental footprint and the health and comfort of building occupants.

#### Adhesion expertise

With the acquisition of Bostik in February 2015, the Group gained comprehensive expertise in adhesive technologies that will support R&D Group-wide, particularly in the six platforms. Bostik's strategy, particularly its focus on innovation, is fully in line with the Group's. Its R&D expenses have significantly increased since 2010 and currently stand at around 2.7% of sales.

Bostik leverages three main proprietary technologies to support its leadership positions and generate 60% of sales. These technologies - elastic bonding (primarily for hardwood flooring adhesives, sealants and transportation bonding), hot melt pressure sensitive adhesives (HMPSAs, primarily used in packaging and baby diapers) and polymer-modified binders (adhesives and coating for construction, based on formulated hydraulic binders) form the main focus of Bostik's R&D. Following Bostik's integration into the Arkema Group, it added a significant new technological solution to its portfolio in the form of structural acrylic adhesives, which Bostik plans to develop based on upstream technical and integration synergies offered by the Group in terms of feedstocks and innovative materials. In line with this, AEC Polymers, a start up that develops a range of innovative structural acrylic adhesives, was transferred from Corporate R&D to Specialty Adhesives in October 2015. The move will enable it to benefit from technical and development synergies thanks to the support of Bostik's R&D structure.

Building on these technologies, Bostik develops durable, high-performance assembly solutions that meet market demand

in terms of energy efficiency (construction and transportation) and reduced material consumption (hygiene, packaging), and offer more than just a means of assembling materials thanks, for example, to barrier, acoustic and flame retardant properties.

#### 1.4.4.3 OTHER RESEARCH

R&D activities are also conducted outside these platforms. Recent developments are outlined below by application market.

#### Adhesives market

- ZeroCreep Avancé, a new generation of hot melt adhesive, was first marketed in 2014 as a solution for attaching elastic in personal hygiene products, primarily baby diapers. In addition to offering excellent elasticity, which keeps diapers watertight for longer, ZeroCreep Avancé is applied in smaller quantities and at temperatures 15°C to 20°C lower than previous generations. This allows hygiene product manufacturers to create thinner models and to reduce their material and energy consumption while obtaining the same high-performance end product.
- The ISR 70-03 FR flame retardant adhesive/sealant was launched in 2015 for the rail industry. The first adhesive on the market to comply with the stringent EN 45545 standard, SR 70-03 FR performs to the highest hazard level (HL3) in terms of oxygen index and smoke density and toxicity during fires.
- A new range of flame retardant adhesives was brought to market for the aerospace industry in 2015. Containing no toxic bromine compounds, these adhesives are used to assemble the interior panels of aircraft and to assemble and install thermal and acoustic insulation systems. By providing a way to assemble lightweight composite materials, they help make the entire structure lighter.
- New aqueous pressure sensitive adhesives (PSAs) were developed by the coating resins business unit in 2015 to meet the specific processability and adhesive behavior requirements for producing tapes, labels and other self-adhesive specialty items. An example of the new PSAs is Encor 4211® for temporary protection films.
- REAFREE®, a new powder coating system developed in 2015 to serve the particle board market, can be used at lower temperatures than conventional metal coating solutions.

#### Sports and leisure equipment

 A new grade of organic peroxide, Luperox® FreeO, was launched in 2013 for the manufacture of sports shoe soles and other items made from expanded EVA foam. The enhanced grade eliminates the "new plastic" smell released by a decomposition product in the previous crosslinking agent. Many world-class sports shoe brands have now switched to the new grade. R&D and innovation strategy

- Pebax® Clear, a transparent version of Pebax®, was selected for use in the new Nike soccer shoe, the Magista, in 2014.
   Featuring a groundbreaking new design, the Magista was worn by the top players at the 2014 FIFA World Cup.
- The Pebax® range expanded in 2015 with the release of Pebax® Clear 1200, a new transparent, ultra-light solution for highly rigid materials, and with the Pebax® C series for mid-range shoes.

#### Cosmetics

- The new Orgasol® White for the cosmetics market enhanced the Orgasol® range in 2014. The powder, which contains an active anti-blemish and skin lightening ingredient, was designed to meet a growing demand in Asia and Europe.
- Rheostyl 88L<sup>TM</sup> was launched in 2015 as a new acrylic thickener for paraben-free shampoo and shower gel formulations. The product adds thickness, stabilizes suspended particles and maintains transparency – three key properties in this market.

#### Coatings

- Sartomer developed formulation additives for the highly demanding food packaging ink market in 2014. The product range offers an outstanding combination of properties such as pigment dispersion and adhesion to a wide variety of surfaces, while complying with modern hygiene and environmental standards.
- Coatex further extended its range in 2015 with the commercial release of the Rheocoat 27<sup>TM</sup> and Rheocoat 93<sup>TM</sup> partially neutralized emulsion technologies, which facilitate coating color formulation for paper applications.
- Synolac®, a new bio-based polyester that offers greater protection for steel sheets and cables, was developed as part of the European Sorago project.

#### Oil, gas and asphalt

- In 2014, a new grade of organic peroxide, Luperox® EZ Breaker, was specially developed for the growing fracking fluid market. The new grade displays unrivaled safety and performance properties.
- Also in 2014, CECA successfully applied the new Norust® TLC115 corrosion inhibitor during a test at a gas field. Protected by two patents, the corrosion inhibitor protects both the metal parts in contact with water and those in contact with gas. It comes in response to growing gas production worldwide, and the specific challenges that this brings in terms of metal part corrosion.
- Cecabase® RT 2N1 is a new additive that improves the mechanical performance of asphalt mixes, particularly in wet conditions. It also enhances their workability, making it easier to incorporate recycled materials and to reduce production temperatures.

- CECA developed two new additives in the Prochinor® AP range in 2015 to control paraffin wax crystallization and thereby improve flows of certain waxy crude oils through cooled pipes. The technology reduces the need for pipe insulation and saves energy from pumping.
- In 2015, CECA brought to market Cecabase® 200 which, when added to asphalt mix, provides superior adhesion to aggregate in road construction. This more effectively protects the road from extreme events such as rain, heat waves and frost, thereby extending its lifespan. The Cecabase® 200 additive is made from more than 60% renewable materials.

#### Medical applications

- A new polymer was added to the Pebax® range for medical applications in 2013. The Pebax® MV 1074 SA 01 MED, a hydrophilic polymer, is suitable for use in minimally invasive devices that are exposed to bodily fluids, such as surgical tubing. The new copolymer is United States Pharmacopeia VI (USP VI) certified and offers excellent high moisture absorption properties for device components such as catheters.
- The medical application ranges expanded further in 2015 to encompass Pebax® 7433 SA 01 MED, Rilsan® 8020 MED and Rilsan® Clear G850 Rnew MED for intravascular applications and angioplasty balloons.
- CoDetect®, a new gas odorizer that makes it easier to detect carbon monoxide (CO) in steel mill gases, is currently in the commercial development phase in India, China and Europe. The steel mill gas odorization technique was one of the solutions for reducing gas asphyxiation-related fatalities presented at the World Steel Association's eighth health and safety committee meeting in Saudi Arabia.
- The new Altuglas® Luctor™ HI resin was developed for medical applications that require transparency and high impact and chemical resistance.

#### Miscellaneous

- In 2013, a specific grade of PMMA was developed for the laser etching market. It enables highly precise patterns to be etched onto the glossy black surface of Altuglas® Tattoo PMMA.
- Three new grades of acrylic processing aids were launched in 2014. These high molecular weight copolymers strengthen the mechanical properties of PVC that has melted during extrusion. The main application is for expanded PVC (sheets for outdoor display panels, profiles and pipes), where the copolymers help reduce density without leading to the collapse of the cell structure. The product has since become a market reference. In 2015, a second processing aid with an even higher molecular weight, P580®, was developed and produced on a commercial scale.

- A new grade of impact modifier with an elastomeric polybutadiene core and acrylic shell was launched in 2014.
   It is used to reinforce the impact resistance of polycarbonate alloys.
- The Group has developed the Luperox® F and Vulcup® grades
  of organic peroxides to meet the growing market need for
  non-odorous peroxides used for crosslinking polymers in the
  shoe sole and cable manufacturing industries. By making
  improvements to its synthesis process, the Group met the market
  growth and is now the world leader in the field.
- In 2015, the Group launched Altuglas® HT 121, a new acrylic material combining excellent heat resistance and remarkable optical properties. As car lights get stronger and smaller, this product addresses new challenges emerging in car lamp fitting materials, such as greater, more localized heat emissions.

#### Agriculture

- Fluidiram®, a coating agent that limits dust emissions from grains
  of fertilizer, has undergone major commercial development
  since 2014. The agent significantly reduces fertilizer loss during
  the storage, transportation and spreading phases, thereby
  contributing to the efficient use of non-renewable nutrients such
  as phosphate.
- In 2015, CECA brought to market a flotation collector with improved liquidity, Melioran® P312L, which is used to process phosphate as part of the flotation technique. The phosphate

is then used as one of the three essential nutrients in fertilizer. The first sales have already taken place.

#### Innovations in Group production processes

- A methyl acrylate production unit, based on a new process developed by the processes R&D team, started up at the Clear Lake site in the United States in 2014. Methyl acrylate is a monomer used for the production of acrylic fibers and in the fields of coatings and adhesives.
- A pilot facility to study a new acrylic acid purification method began operations on a semi-industrial scale at the Carling production site in France in 2014. The pilot facility extracts the reaction gases via a direct connection to the acrylic acid unit, then processes them using the new method. Significant savings in terms of energy and raw materials are expected at both Carling and Clear Lake.
- Carelflex®, a service whereby Group employees oversee sulfiding of oil refineries' hydrotreating units using dimethyl disulfide (DMDS), is now supplemented in Europe by continuous hydrogen sulfide measurements. Highly appreciated by refineries, the online measurement technique (patent pending) adds an additional layer of safety when sulfiding hydrotreating units. The service is scheduled to be marketed in Europe in 2016.

### 1.5 MATERIAL CONTRACTS

In order to conduct its business, the Group has concluded a number of contracts that are of major importance either because they enable the Group to secure access to raw materials or energy resources or to ensure operating procedures at its production sites, or because they represent material financial income.

### 1.5.1 Raw material and energy supply contracts

The agreements described in this section represent major raw material or energy supply contracts concluded for several years. Other supply contracts can also be described as material, including the Group's supply of hydrofluoric acid (HF), used as a main raw material for its fluorochemicals activities, of cyclododecatriene (CDT) used in the manufacture of PA 12, and of propylene for acrylics. For confidentiality reasons, the terms and conditions of these contracts cannot be disclosed.

# CONTRACT WITH ENTERPRISE PRODUCTS PARTNERS L.P. ("ENTERPRISE") FOR THE SUPPLY OF PROPYLENE IN THE UNITED STATES

Arkema Inc. concluded a contract for the supply of propylene in the United States with Enterprise, one of the leaders in the US energy industry. The contract takes advantage of the development of shale gas in the United States and secures a long-term supply (more than ten years) of propylene produced by propane dehydrogenation (PDH). The first deliveries are expected upon completion of the construction phase of Enterprise's Mont Belvieu production unit in Texas, USA.

# CONTRACT WITH TOTAL PETROCHEMICALS FRANCE (TPF) FOR THE SUPPLY OF PROPYLENE (C3) FOR ARKEMA FRANCE'S CARLING SITE

Following the shutdown of the TPF steam cracker in 2015, the terms under which Arkema France's Carling site was supplied with propylene were reviewed to ensure the long-term viability of its operations. Under the terms of a new contract for the supply of propylene, entered into on 3 September 2015 and terminating on 30 April 2021, TPF has agreed to sell and deliver propylene

produced at its Gonfreville, Donges and Antwerp steam crackers to Arkema France, for use at its Carling (acrylics) site. The contract entered into force after TPF shut down its steam cracker in Carling in 2015. The 2006 supply contract for propylene used to produce oxo-alcohol at the Lavéra site remains in force. It sets the terms by which TPF delivers propylene from the Lavéra steam cracker.

### INDUSTRIAL AGREEMENT WITH EDF SIGNED ON 21 DECEMBER 1995

Arkema France secured electricity supplies from EDF for its industrial sites for a 25-year period (1996-2020) in return for payment to EDF of a sum corresponding to a drawing right. The quantities of electricity reserved at the signing of the agreement covered the electrical consumption of Arkema France's and its subsidiaries' non-chlorine producing sites. This contract was split between Total Petrochemicals France and Arkema France by an amendment dated 23 September 2005 specifying the rights and obligations of each party for the 15 years remaining on the agreement.

#### CONDITIONS OF ELECTRICITY SUPPLY FROM EXELTIUM

Arkema France, together with six other electro-intensive industrial companies, is a founding member of Exeltium, which continues to source a significant part of Arkema France's energy needs. Under a new agreement, signed in July 2014 between EDF and Exeltium, the price paid for electricity supplies will be decreased initially, before being increased as a counterpart on the basis of changes in the market price for electricity. This mechanism makes the contract more flexible without compromising its overall economic balance.

### 1.5.2 Industrial agreements

Industrial agreements include platform contracts, toll processing, and capacity reservation. The most significant agreements of this type are described in this section.

### MEMORANDUM OF UNDERSTANDING WITH TOTAL E&P FRANCE AND SOBEGI FOR THE LACQ SITE

Arkema France has signed a memorandum of understanding with Total E&P France and Sobegi for future industrial activities on the Induslacq platform in Lacq, France, beyond 2013. It specifies three components: (i) the ongoing production of gas to supply the Arkema Group's thiochemicals units with hydrogen sulfide (H<sub>2</sub>S) and Sobegi's steam furnaces with fuel, (ii) the construction of new gas treatment units and their connection to existing facilities, and (iii) the modification of thiochemicals units to operate with new H<sub>2</sub>S specifications.

# EDA SERVICE CONTRACT WITH TOTAL PETROCHEMICALS FRANCE (CARLING PRODUCTION LINE 41)

TPF owns the Carling site's production line 41 which mainly produces EDA for Arkema France, and can also produce polyethylene for TPF. Under the terms of the line 41 EDA toll-processing contract, Arkema France is responsible for the procurement of the main raw materials, the EDA production process and the financing of related investments. In return, TPF processes the main raw materials to produce EDA on Arkema France's behalf on line 41, and provides secondary raw materials and associated services.

Following the shutdown of the Carling steam cracker in 2015, TPF now supplies ethylene from its Feyzin and Lavéra sites.

# CONTRACT FOR THE PRODUCTION OF HYDROFLUORIC ACID AND FORANE® F22 FOR DAIKIN AT THE CHANGSHU SITE IN CHINA

In 2002, the Group started production of Forane® F22 at its Changshu site near Shanghai, China. The production of Forane® F22 is backed up by the upstream production of hydrofluoric acid (HF). The Group shares the production of Forane® F22 with the Japanese company Daikin pursuant to a heads of agreement document signed on 30 July 1998, which also provides for Daikin to have reserve capacity and access to hydrofluoric acid for its own supply requirements. Following an amendment to the contract in 2009, the amounts payable by Daikin are calculated on the basis of a Forane® F22 market price, and depreciation recognized to cover Daikin's share of the investment in the facilities.

### MMA CAPACITY RESERVATION AGREEMENT WITH DOW IN THE UNITED STATES

In October 2000, the Group signed methyl methacrylate (MMA) capacity reservation agreements with the Dow Chemical Company (formerly Rohm and Haas) in the United States. Under the terms of these contracts, the Dow Chemical Company supplies the Group with significant quantities of MMA, which represent the Group's only source of MMA supply in the United States.

#### 1.5.3 Multi-year sales contracts

The contracts described in this section, which represent material sales for the Group, are related to specific acquisition and investment transactions.

### CONTRACT FOR THE SUPPLY OF DISPERSANTS BY COATEX TO THE OMYA GROUP

On 1 October 2007, the Group acquired Coatex, one of the world's leading producers of rheology additives for aqueous formulations. At that time, a long-term contract was agreed between Coatex and the Omya group (former shareholder of Coatex) for the supply of dispersant agents. This contract was subsequently revised as part of a new contract dated 18 April 2013, which will terminate on 31 December 2017. The sales under this contract represent a material part of Coatex's overall revenues. A new contract is currently being negotiated for the coming years.

#### CONTRACT FOR THE SUPPLY OF METHYL MERCAPTAN BY ARKEMA THIOCHEMICALS SDN. BHD. TO CJ BIO MALAYSIA

Joint venture agreements were signed between the Arkema Group and the South Korean group CJ CheilJedang (CJ) on 12 March 2012. Under the terms of these agreements, since the beginning of 2015, Arkema Thiochemicals Sdn. Bhd. (86%-owned by the Arkema Group and 14%-owned by CJ) supplies methyl mercaptan (MeSH) from its Kerteh complex in Malaysia to CJ Bio Malaysia Sdn. Bhd. (86%-owned by CJ and 14%-owned by the Arkema Group). CJ Bio Malaysia Sdn. Bhd. uses the MeSH to produce methionine at its production unit on the same industrial site.

# CONTRACT BETWEEN ARKEMA INC. AND NOVUS FOR THE SUPPLY OF 3-METHYLTHIOPROPIONALDEHYDE (MMP)

Arkema Inc. signed a long-term contract with Novus International, Inc. on 1 January 2002 for the production of

3-methylthiopropionaldehyde (MMP), an intermediate in the manufacture of methionine, at its site in Beaumont in the United States. Under the terms of this contract, Arkema Inc. has built an MMP production unit on behalf of Novus International, Inc., which is operated by and receives its raw materials from Arkema Inc. This contract represents significant sales for the Group.

Additionally, other sales framework agreements or key supplier agreements have also been concluded that are global and could be multi-product or concern several of the Group's businesses.

#### 1.5.4 Guarantees and indemnities from the Total group as part of the 2006 Spin-Off

In connection with the spin-off of Arkema's Businesses in 2006, Total S.A. and certain Total S.A. companies have extended certain indemnities, or have assumed certain obligations, for the benefit of the Group, relating to (i) certain antitrust litigation, (ii) certain actual or potential environmental liabilities of the Group arising from certain sites in France, Belgium and the United States, the operations on which have ceased in the majority of cases, (iii) certain tax matters, and (iv) the spin-off of Arkema's Businesses. These indemnities and obligations are

described in note 30 of the notes to the consolidated financial statements at 31 December 2015 in paragraph 4.3.3 of this reference document. Moreover, as part of the Total Contribution Agreement, Total S.A. and Arkema made certain representations and warranties, some of them in connection with the separation of the Group from Total.

### 1.6 OPERATIONAL EXCELLENCE STRATEGY

#### 1.6.1 The Group's commitments

Reinforcing its operational excellence in order to position itself as one of the top global industrial leaders is a priority for the Arkema Group and one of the main drivers of the strategy implemented by the Group as part of its ambitions for 2017 and 2020.

Accordingly and following the integration of Bostik's business activities in 2015, the Arkema Group has confirmed the following commitments:

#### • being a top quartile performer in safety in the chemical industry

In order to further improve its safety record, the Group has set out 2025 targets detailed in section 2.1 of this reference document. Implementing the necessary actions to achieve these targets will also help enhance the reliability of the Group's sites.

In particular, the Group aims to reduce the total recordable injury rate (TRIR) to below 1.2 by 2025, down from 1.5 in 2015 and 3.4 in 2012. In 2005, just before the Group's stock market listing, TRIR stood at 11.3. Over the same period, the Group also intends to put a greater emphasis on the human factor, in particular by extending its peer observation program to all its sites (versus 47% of sites in 2012, the baseline year for the definition of safety targets). The peer observation program is used to identify best practices and best-practice deviations, and so helps to significantly reduce unsafe situations and, ultimately, the number of occupational accidents. In addition, the Group aims to audit 100% of its sites based on the Arkema Integrated Management System (AIMS), which combines all the Group's safety, environment and quality audits in a single audit, by 2025 (versus 42% in 2012). These audits are conducted jointly by the Group auditors and a third-party certifying body, and contribute to meeting the requirements of standards such as ISO 9001, ISO 14001 and OHSAS 18001. The Group, which obtained ISO 50001 certification in November 2014, incorporated the ISO 50001 requirements in the 2015 version of the AIMS;

#### positioning its main production sites in the top quartile in terms of competitiveness

Since its stock market listing, the Group has continuously increased the competitiveness and reliability of its main production sites, thereby constantly improving its industrial facilities and reducing its cost structure. In recent years,

the Group has undertaken various restructurings and reorganizations to significantly reduce the fixed costs of its different business activities and has notably pursued productivity improvements since 2013 to offset part of the impact of inflation on its fixed costs. As part of these efforts, the Group shut down its fluorogas production activities at the Zaramillo site in Spain in 2015. It also stopped producing coating resins at its Villers-Saint-Paul site, and extruded PMMA sheets at its Bernouville site, both in France.

The Group also focuses on reducing its variable costs with a program based in particular on optimizing its processes, sustained by the Group's continuous innovation efforts, and enhancing the reliability of its processes and equipment. These efforts help optimize raw material consumption and energy efficiency on the Group's production sites. Accordingly, the Group makes targeted development or productivity investments such as those undertaken as part of its Arkenergy program to increase energy efficiency throughout all its business activities, as described in section 2.2.1.3 of this reference document.

When designing new production units or complexes, the Group relies on the recognized know-how of its technical and R&D teams in order to implement the latest technological processes developed by the Group, and to develop ever more competitive units in terms of cost and operations. In this respect, the most important projects in 2015 concerned the construction of a new fluorogas production unit at the Changshu site in China, and the two-fold increase in production capacity for specialty molecular sieves at the Honfleur site in France. The most recent hot melt pressure sensitive adhesive (HMPSA) production units brought on stream by Bostik at its sites in Bangalore, India and Monterrey, Mexico were also built using the latest techniques to ensure the highest levels of safety, quality and efficiency required by its customers in the disposable hygiene product industry.

The Group also carries out various investments to enhance the competitiveness of its main production units.

In 2015, the Group continued to upgrade and optimize its main production facilities in France, such as the Jarrie hydrogen peroxide site, and the Carling acrylics site following the shutdown of certain Total operations;

### improving the quality of customer service through an optimized supply chain

With its "Ambition" program, the Group has been upgrading and reorganizing its IT systems in order to optimize its supply chain and therefore improve the quality of customer service and satisfaction. The program will also help enhance control over the Group's various business' working capital, and further optimize inventory levels and working capital turnover.

Several phases of this rollout have been successfully completed, with the implementation of the new IT system within the Acrylics Business Line in 2013, followed by its extension to the coating resins and photocure resins (Sartomer) businesses in 2014, and the Thiochemicals and Fluorogases Business Lines in 2015. The program will continue to be rolled out across all the Group's businesses over the next two years;

#### optimizing the procurement of goods and services

In line with actions undertaken to improve the procurement of raw materials and energy, the Group is enhancing the globalization and professionalism of its goods and services procurement and maximizing synergies through its strategic Global Procurement project. These efforts should enable it to reduce the total budget allocated to goods and services procurement and strictly manage its working capital while controlling quality, lead-time and safety risks.

#### 1.6.2 The Group's operational excellence program

To achieve its operational excellence ambitions, the Group's executive management has launched a program involving all Group businesses and subsidiaries that could represent 100 million euros of annual savings by 2017, compared with the baseline year of 2014. Operational excellence will therefore partly offset the impact of inflation on fixed costs and, with geographic expansion and innovation, will contribute to reaching the 2017 EBITDA organic growth targets.

The program, rolled out and monitored at individual business level, involves the industrial managers and site managers for all operating lines, and requires the commitment of all Group employees.

This continuous improvement process involves:

 assessing the improvement potential of each Group business. After reviewing the main areas for improvement at every production site within the various Business Lines, safety, reliability, productivity and raw material and energy consumption objectives are set for each Business Line and translated into quantified fixed and variable cost savings targets;

- improving the monitoring of certain key indicators and the achievement of Business Line objectives by using reporting scoreboards particularly for total recordable injury rates, the optimization of raw material, energy and logistics costs, the optimization of industrial working capital, etc.;
- identifying best practices within the Group, the chemical industry, and other industrial sectors;
- capitalizing on feedback by implementing best practice reference frameworks that are gradually shared by all of the Group's production sites;
- strengthening employee training, particularly regarding safety, through training programs such as the Arkema Safety Academy detailed in section 2.5.2.4 of this reference document.

Implementing these various human and technical resources should help the Group achieve the operational excellence objectives it has set itself for 2017.

### 1.7 RISK FACTORS

## 1.7.1 Comprehensive internal control and risk management procedures

# 1.7.1.1 GENERAL ORGANIZATION: OBJECTIVES AND SCOPE OF INTERNAL CONTROL AND RISK MANAGEMENT

#### **Objectives**

The Arkema Group applies the Reference Framework of the French financial markets authority (*Autorité des marchés financiers* – AMF), published in 2007 and subsequently reviewed and expanded in 2010, which it has adapted to its activity and organization.

Internal control is a Group-wide structure, defined and implemented by executive management, management and employees. Its objective is to ensure:

- compliance with current laws and regulations;
- compliance with the instructions and guidelines issued by executive management;
- the smooth operation of internal processes, notably those serving to protect assets;
- the reliability of financial information.

Generally, internal control contributes to the management of the Group's activities, the effectiveness of its operations, and the efficient use of resources.

However, no internal control structure can provide absolute assurance that these goals are met. Despite the processes and controls in place, it cannot guarantee that all Group employees will constantly comply with the internal control guidelines and apply all the defined procedures.

The Group has also implemented a risk management system that enables the Executive Committee to ensure that risks are at a level that it deems acceptable. This system contributes to:

- creating and protecting the Group's value, assets and reputation;
- securing the Group's decision-making and other processes so that objectives may be achieved more easily;
- ensuring consistency between Group values and actions;
- rallying Group employees around a common vision of the main risks.

#### Scope

The internal control and risk management procedures are adapted to the Group's organization, which is structured around three components:

- the three divisions comprising Business Lines, which are responsible for their respective performance and the implementation of internal control procedures (see section 1.1.1.2 of this reference document);
- the corporate departments (or support functions), which assist
  the divisions and the businesses in their area of competence,
  including accounting, human resources, legal affairs and IT, to
  ensure the coherence and optimization of the Group as a whole
  (see section 1.1.1.2 of this reference document);
- the subsidiaries, in which the Group performs its business activities (see section 5.1.2 of this reference document).

These internal control and risk management procedures apply to all companies that are fully consolidated in the Group financial statements.

### 1.7.1.2 PERSONS INVOLVED IN INTERNAL CONTROL AND RISK MANAGEMENT

#### **Board of Directors and Committees**

The Board of Directors, the two committees in place (the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee), and their members, through their experience and expertise, contribute to the promotion of an internal control and risk management culture suited to the activities of the Group.

In particular, it is the responsibility of the Audit and Accounts Committee to oversee the effectiveness of internal control and risk management systems, and assess the schedule of the internal auditors and the results of their work.

#### **Executive Committee**

The Executive Committee puts in place the internal control structure and ensures compliance by:

 defining the internal control framework and the rules for delegation of responsibility;

- setting targets for each business, corporate department and subsidiary, and providing the resources for these targets to be met:
- supervising the implementation of the control procedures that help achieve the targets it has set;
- assessing the risks specific to each project submitted to the Executive Committee;
- carrying out a review (annually and as deemed necessary) of the Group's major risks, based on the work of the Risk Review Committee and its risk mapping presentation. The Executive Committee calls on the Internal Audit and Internal Control department and the expertise of all its own members to help in its implementation and operation.

Each member of the Executive Committee is responsible for ensuring that the Internal Control Framework's Group-wide rules and principles are observed in the entities and, in particular, the businesses that he supervises.

#### **Risk Review Committee**

A Risk Review Committee was set up in October 2007 to strengthen the formal framework of risk identification, analysis and management, and to regularly monitor the development of risk factors. It is made up of the Strategy Executive Vice-President (committee Chairman), the Industry Executive Vice-President, the Chief Financial Officer, the Legal Affairs Vice-President, the Sustainable Development Vice-President, the Group Safety and Environment Vice-President, the Insurance Vice-President, and the Internal Audit and Internal Control Vice-President (committee secretary).

Every six months or more often in response to specific events, the committee convenes under the chairmanship of the Group's Strategy Executive Vice-President to review:

- summaries of audits and assessments carried out by the Internal Audit and Internal Control, the Safety, Environment and Quality and the Insurance departments;
- reports on fraud or attempted fraud prepared by the anti-fraud unit;
- a summary and progress report of ongoing disputes presented by the Legal department;
- assessments of commercial intermediaries made by the commercial intermediaries review commission;
- a list of risks identified in the surveys carried out by the Internal Audit and Internal Control, Legal, and Accounting and Management Control departments;
- a risk mapping prepared by the Internal Audit and Internal Control department;
- the monitoring of corrective measures in all of these areas.

Following its review, the Risk Review Committee can decide on further corrective measures or request additional information, and can also request updates to the risk map.

The conclusions of its review are reported to the Executive Committee, which can decide on completion of the process to update the main risks described in section 1.7.2 of this reference document.

The Risk Review Committee met twice in 2015.

#### Internal Audit and Internal Control department

The Internal Audit and Internal Control department is made up of the Internal Audit and Internal Control sub-departments, both of which are independent functions under the responsibility of the Strategy Executive Vice-President.

The role of Internal Audit is principally to improve and develop controls in the Group's management systems and processes and, more broadly, to ensure that the Group's operating procedures comply with the Internal Control Framework.

All processes and management system may be subject to an Internal Audit review. The Internal Audit department discusses and agrees its findings with the audited entities before presenting them with a set of recommendations and related action plans that the entities commit to implementing.

An internal committee consisting of the Chief Financial Officer, the Strategy Executive Vice-President and the Internal Audit and Internal Control Vice-President regularly ensures that the recommendations have been followed.

The Internal Audit and Internal Control department defines a draft program for the audit plan based on:

- risk identification initiatives;
- interviews with the Group's operational and corporate departments;
- a selection of priorities from the various proposals gathered.

The final program is validated by the Executive Committee, and then approved by the Audit and Accounts Committee. In 2015 in particular, a decision was made to adjust the number of internal auditors to ensure adequate coverage of companies included in Bostik's scope of consolidation.

In 2015, the Internal Audit department carried out the following 26 audits:

- 6 audits of industrial sites operated by Arkema France, Arkema Inc., Arkema Quimica and Arkema Srl.;
- 12 audits of subsidiaries in Europe, Asia and Africa;
- 5 process audits in Europe and North America;
- 3 audits of businesses in North America, Europe and Asia.

The primary assignment of Internal Control is to strengthen the Group's internal control systems, and its initiatives are communicated and implemented, at subsidiary level, by a network of correspondents within the subsidiaries' Finance and IT departments.

Internal Control is involved in the analysis and formal implementation of processes that impact financial information, for which key controls have been defined.

The methodology consists of:

 analyzing the main risks of error, omission or fraud in processes or sub-processes, which could have a material impact on the Group's consolidated financial statements;

- identifying and implementing control procedures to minimize any risk of error, omission or fraud;
- checking periodically the existence and effective operation of these controls, carried out by the Internal Control correspondents based in the subsidiaries (self-audit) or by the Internal Audit department;
- defining corrective measures in the event of shortcomings and overseeing their implementation.

The list of procedures covered by this methodology is based on the 14 procedures of the AMF Reference Framework application guide published in 2007 and updated in 2010 and adapted to the specific features and size of the subsidiaries.

Virtually all subsidiaries were covered by the internal control system in 2015. The internal control system implemented by Total in the companies included in Bostik's scope of consolidation is based on a detailed annual self-assessment questionnaire. These companies will gradually switch to the Group system according to a multi-year rollout plan, which started in 2015 and will finish in 2017.

### Divisions, Business Lines, corporate departments and subsidiaries

The Group is organized into divisions as described in section 1.2 of this reference document. The divisions are made up of Business Lines that coordinate the use of resources allocated to them by the Executive Committee to meet the targets set in their respective areas. Each business is responsible for its own performance and for implementing suitable control procedures and processes, in accordance with the principles and procedures mainly defined in the Group's Internal Control Framework, Code of Conduct and Business Ethics, charters and guidelines.

The corporate departments ensure that the Group's organization is consistent and optimized.

Each subsidiary is placed under the responsibility of a local executive who is responsible for employing the resources defined with the businesses and the support functions to meet the subsidiary's targets, in accordance with current laws and the rules and principles defined by the Group.

### 1.7.1.3 INTERNAL CONTROL AND RISK MANAGEMENT FRAMEWORK

The Group's internal control and risk managment systems are based on three core principles:

- clear definition of responsibilities and delegations of authority, observing rules governing the segregation of duties (in particular distinguishing between those who perform actions and those who approve them), to ensure that any person who makes commitments to third parties on behalf of the Group has the authority to do so;
- the identification, analysis and management of risks;
- regular reviews to ensure internal control and risk management systems operate correctly.

The Group has defined its organization and operating guiding principles in a document entitled "Internal Control Framework",

which has been approved by the Executive Committee and is available to all employees. It is based on the Safety, Health, Environment and Quality Charter, the Users' Guide for IT and Electronic Communication Resources, and the Code of Conduct and Business Ethics put in place by the Group, and is structured in line with the AMF Reference Framework published in 2007 and updated in 2010 around five components:

- control environment;
- risk management (detailed in section 1.7.1.4 of this reference document);
- control activities;
- information and communication;
- continuous assessment of internal control systems.

#### Control environment

The control environment is the basis for the other components of internal control and refers primarily to the organizational principles of the Group, the Group's values as set out in the Code of Conduct and Business Ethics and the level of awareness among employees.

All employees are informed of the importance attached to observing the rules of proper conduct set out in the Code of Conduct and Business Ethics, the Health, Safety, Environment and Quality Charter, and the Users' Guide for IT and Electronic Communication Resources.

The Group has put in place a compliance program, which mainly covers antitrust, export control and anti-fraud legislation. Each area is the subject of various procedures and/or guides, which are provided to employees. To ensure that the compliance program has been followed, the Legal department sends a declaration of compliance each year to the heads of the businesses, the corporate departments and the main subsidiaries and sites, which they must sign and return to show that they are aware of the compliance program, that they have acted in accordance with it over the past year, and that they undertake to continue to do so in the coming year. These heads are then responsible for obtaining an identical declaration, signed by the employees concerned within their business, corporate department, subsidiary or site.

A fraud prevention procedure was put in place from 2008 to record and centralize situations of fraud and therefore improve their handling and prevention.

In general, the roles and duties of every operational and corporate manager are set out in a job description. Their objectives, which include an internal control dimension, are set by their respective line managers, to whom they must periodically report on their activities.

Lastly, the Group has set up a dynamic human resources management approach and a policy of ongoing training designed to ensure that employees' skills are continuously adapted, and to maintain a high level of individual engagement and motivation.

#### Control activities

Control activities involve applying the standards and procedures that help ensure that Group management directives are implemented at every level of the Group.

To this end, a set of regulations has been formally documented in the Internal Control Framework, and general principles applicable to all Group entities have been defined in order to be able to control the application of the operating procedures defined by the Executive Committee. For example, delegations of authority and investment management are the subject of specific notes.

- Businesses and subsidiaries are responsible for operational processes and therefore for internal control.
- Corporate departments are responsible for defining and communicating policy and best practice guidelines relating to their area of expertise and ensuring that they are correctly applied, particularly in the following fields:
  - compliance with laws and regulations,
  - safety and environmental protection,
  - the reliability of financial information;
- Controlling access to IT systems forms a key part of internal control and is subject to a formal management process involving the departments using the systems and the IT and Telecommunications department.

The Internal Audit team conducts assessments of the Group's compliance with its Internal Control Framework in accordance with the audit plan validated annually by the Executive Committee and approved by the Audit and Accounts Committee.

#### Information and communication

IT systems are a key component of the Group's organization.

Mindful of the opportunities and risks related to the use of information technologies, the Group has set up an IT management structure to control risks while creating value and improving performance.

This approach consists in deploying Group-wide, and as part of its IT systems security policy, the ten IT management practices drawn up formally by the French IT association for major companies, CIGREF (*Club informatique des grandes entreprises françaises*). (For further details, see section 1.7.2.6 of this reference document).

#### Additionally:

- the Group has a highly detailed financial reporting system, an essential management tool used by executive management;
- the main internal control documents are available on the Group's intranet;
- each support function develops professional best practices and communicates them throughout the Group via the intranet.

#### Continuous assessment of internal control systems

The internal control system is assessed on an ongoing basis. The Executive Committee is responsible for the overall internal control system, its performance and its oversight. However, each entity

is responsible for improving internal control performance within its own scope.

In general, any weaknesses in the internal control system must be reported to management and, if necessary, to the Executive Committee

In addition, recommendations made by the Internal Audit department on completion of its audits are systematically reviewed, and a summary is presented to the Audit and Accounts Committee. When decisions to apply corrective measures are adopted, their implementation is monitored on a formal basis.

Furthermore, as part of their assignment, the statutory auditors may alert the Group (represented by the Finance department and the Internal Audit and Internal Control department) and the Group's Audit and Accounts Committee regarding any weaknesses that they may have identified. These factors are taken into account by the Group in its efforts to improve internal control.

#### 1.7.1.4 RISK IDENTIFICATION AND MANAGEMENT

In the course of its business, the Group is exposed to a number of internal and external risks.

As the Group's structure is highly decentralized, risk assessment and management is the responsibility of the businesses, corporate departments and subsidiaries. Each of these entities has a duty to reduce the risks inherent to their activities.

The Group's risk management system is based on regular reviews of risk identification, analysis and treatment, as follows:

- every month, each business presents its results and indicators to its operational executive Vice-President, who also sits on the Executive Committee, and the Executive Committee reviews the results of the divisions and their respective businesses;
- the Accounting and Controlling department organizes a quarterly review of risks and legal disputes that may have to be reported in the Group's financial statements. The businesses, corporate departments and subsidiaries report on their entity's risks, which are analyzed and addressed at quarterly meetings with the Chief Financial Officer, the Accounting and Controlling department, the Legal department, and the Internal Audit and Internal Control department;
- the Internal Audit and Internal Control department carries out an annual survey of risks amongst the Group's main entities, namely the businesses, corporate departments and subsidiaries. The risks are identified and analyzed and the most significant risks are positioned on a risk map, which is presented to the Risk Review Committee, which then assesses the need to update it and puts forward suitable action plans where necessary. The conclusions of the Risk Review Committee are reported to the Executive Committee prior to the definition of the internal audit plan. This plan is drawn up on the basis of the risk map and the need to cover the Group's scope of activity on a regular basis. Material risks known to the Group are allocated to a member of the Executive Committee. They are also examined by the Audit and Accounts Committee and presented to the

Board of Directors. The main risks are set out in section 1.7.2 of this reference document, where they have been classified into the following sections:

- economic and business risks;
- supply chain risks;
- industrial safety and environmental risks;
- regulatory and legal risks;
- financial risks;
- IT risks;
- strategy and corporate governance risks;
- insurance cover default risks.

### 1.7.1.5 ACCOUNTING AND FINANCIAL INTERNAL CONTROL PROCEDURES

Operational and corporate managers' control and understanding of their business' financial performance represent one of the key factors in the Group's financial control system.

#### Organization of the finance function

The finance function is the responsibility of the Chief Financial Officer and includes:

- functions under his direct supervision, in particular:
  - the production of consolidated financial and accounting information, falling within the remit of the Accounting and Controlling department, which is responsible for the reliability of the data constituting the Group's financial information and for providing management analyses common to the Group's different entities, thereby facilitating the management of each entity.
  - cash management and optimization of Group financing, under the responsibility of the Financing and Treasury department, and
  - investor relations, whose remit is to establish, develop and maintain relations with investors, shareholders and financial analysts, and publish financial information once it has been approved by the Company's Board of Directors;
- delegated functions:
  - each business has its own management control team, which monitors and analyzes the business' performance monthly,
  - each subsidiary is responsible for its own monthly accounts and for its half-year and full-year financial information.

#### Accounting reporting and management control

The fundamental financial reporting principles are set out in the financial reporting manual and the Group's management framework. These reference documents are updated annually by the Accounting and Controlling department, following approval by the Chief Financial Officer or the Executive Committee, depending on the type of amendment and its significance.

One of the main purposes of accounting-related reporting is to analyze actual performance compared to forecasts and prior periods based on the processes described below.

#### Medium-term plan

Every year, the Strategy department draws up a five-year medium-term plan that is reviewed by the Executive Committee. It enables the Executive Committee to understand the financial consequences of the Group's major strategic choices and the main threats identified in the environment under consideration.

#### Budget

The budget sets out the financial performance targets for the following year in line with the medium-term plan approved by the Executive Committee.

The budget is the main benchmark to measure the actual performance of the three divisions, their respective businesses, the corporate departments, the subsidiaries and the Group overall.

The budget is prepared annually under the responsibility of the Accounting and Controlling department.

The businesses and corporate departments submit their budget proposals, prepared with the subsidiaries, to the Executive Committee members overseeing them.

The budget of each business and each corporate department is then submitted to the Executive Committee.

The process is completed when the budget is approved by the Company's Board of Directors.

#### Year-end forecasts

Once approved by the Executive Committee and reviewed by the Board of Directors, the budget may no longer be modified. Based on a frequency defined by the Accounting and Controlling department, quarter-end and year-end forecasts are prepared by the businesses and corporate departments.

#### Monthly reporting

Every month, the Accounting and Controlling department prepares detailed consolidated reports by division and business for the Executive Committee.

Financial statements, analytical accounts and capital expenditure and cash flow details are presented together with a commentary on the past month's highlights.

The Executive Committee analyzes these reports in detail at one of its monthly meetings.

#### Consolidated financial statements

The Company publishes consolidated financial information on a quarterly basis. Figures for the six months to 30 June and the twelve months to 31 December are published as full financial statements under IFRS, while the quarterly information to 31 March and 30 September is in summary form only (balance sheet, income statement and cash flow statement).

The half-year financial statements to 30 June are subject to a review by the statutory auditors, while full-year financial statements are fully audited.

As part of the closing of each accounting period, the Accounting and Controlling department identifies the specific closing issues

during preparatory meetings with the support functions and businesses. Similar meetings are also organized at least once a year with the Group's main legal entities.

Each quarter, the Accounting and Controlling department receives a risk report from each business, corporate department and subsidiary.

Additionally, each entity is responsible for identifying, compiling and monitoring its off-balance-sheet commitments. The Financing and Treasury department consolidates all these commitments every six months as part of the half-yearly and annual financial statement preparation process.

The Accounting and Controlling department is also responsible for monitoring changes in accounting regulations and issues technical notes on points of specific relevance to the Group.

#### Parent Company financial statements

The preparation of the Company's financial statements is part of the Accounting and Controlling department's general process for the preparation of annual financial information. Furthermore, the Company submits management forecast documents to the Board of Directors in compliance with the appropriate regulations.

#### IT systems

The IT and Telecommunications department defines and coordinates the IT systems for the entire Group.

The Group is continuing its transformation program using SAP integrated software. In particular, the financial system that has been rolled out in Europe is now being extended to Asia. The customer supply chain has also started to be upgraded, and is being deployed business by business. It represents a major step in SAP integration. These developments are helping to improve the control environment of the Group, particularly through procedure review, improved automated checks, and the removal of interfaces.

Bostik has also started a program to transition its systems to SAP.

#### Representation letters

Each year, the Group issues a representation letter attesting in particular to the accuracy and consistency of the consolidated financial statements that is signed by the Chairman and Chief Executive Officer and the Chief Financial Officer and addressed to the Group's statutory auditors. In support of this representation letter, the operational and financial heads of each consolidated subsidiary make an annual undertaking to observe the internal control rules and ensure the accuracy of the financial information supplied, in the form of a representation letter to the Group's Chairman and Chief Executive Officer, the Chief Financial Officer and the statutory auditors.

Following the same procedure, the Group's half-yearly representation letter is based on the main subsidiaries' half-yearly letters of representation, which certify that the subsidiaries' half-yearly consolidated financial statements have been prepared in accordance with the Group's financial reporting manual.

#### Investor relations

Press releases concerning financial information are prepared by the Investor Relations team and reviewed, internally, by the relevant units of the Finance department, then, by the statutory auditors and the Company's Audit and Accounts Committee. The Company's Board of Directors then approves the final text.

#### 1.7.1.6 THE GROUP'S INSURANCE POLICY

The Group implements an insurance cover strategy that combines a prevention policy in close cooperation with insurers (in particular for property damage, via periodic visits to the sites together with technical recommendations followed up on a regular basis), and the purchasing of insurance policies.

The Group's policy is to centralize its insurance against risks relating to the production, transportation and marketing of its products worldwide, and it uses international insurance brokers to optimize its cover of all Group companies. As a general rule, the Group's insurance cover limits apply either to each claim, or to each claim and each year and vary according to the risks covered. In most cases, cover is limited both by certain exclusions that are standard to these kinds of contracts and by deductibles that are reasonable given the size of the Group.

For the financial year ended 31 December 2015, total premiums paid by the Group, and relating to the Group's insurance policies presented here below, amounted to less than 1% of its sales for the period.

The Group's insurance policies have been established to cover the risks present at the time they are set up, while also accommodating any new acquisitions or divestments that may take place during the year. In this respect, all Bostik companies were incorporated into the Group's centralized insurance policies on the acquisition closing date.

The Group retains a certain level of risk through the deductibles on its insurance policies, and centrally through a captive reinsurance company that is active only in property insurance. The objective of the captive company is to optimize the Group's external insurance costs.

Descriptions of the Group's insurance policies are provided below to a level of detail that enables it to comply with confidentiality requirements and protect the Group's interests and competitiveness.

The Group believes that its insurance policies are consistent with those currently available on the insurance market for groups of similar size and involved in similar business activities.

The Group selects its insurers from the best and most financially sound companies when subscribing its policies. However, the possibility cannot be ruled out that, at the time of settling a claim, one or more of these insurers could be in a difficult, even compromised, financial situation that puts payment of the compensation in doubt.

Furthermore, developments in the insurance market could result in unfavorable changes to the Group's insurance policies and an increase in policy premiums, which could adversely affect the Group's business, financial position or results.

The Group's insurers, under certain conditions deemed customary in the insurance industry for the particular contract type, can prematurely terminate insurance policies in the event of a major claim. In such an event, the Group nevertheless remains covered throughout the notice period, which may vary from policy to policy.

#### Civil liability

The Group has contracted civil liability insurance policies with leading insurance companies. The civil liability policies are subject to applicable exclusions but cover the Group worldwide against the financial consequences of civil liability claims in the context of its business activities and in respect of physical, material or non-material damages or losses caused to third parties. These policies provide cover of up to approximately 900 million euros for the Group. Deductibles vary, particularly depending on the subsidiaries' location.

#### Property damage

The Group's sites are covered by leading insurance companies against material damage and any resulting business interruption. This cover is intended to avoid any significant financial loss and to ensure the resumption of operations in the event of property damage. However, certain property and types of damage can be excluded from the insurance policy's cover depending on the country in which the loss occurs.

The cover includes a "direct damage" component and a "business interruption" component (including sub-limits for machinery breakdowns, natural disasters or terrorism) with the compensation period for the latter limited to either 24 or 36 months, depending on the site. Deductibles vary depending on the size of the site concerned. The maximum total retention in the event of a major claim is between 22 million and 26 million euros.

The combined cover limit of the policies in place for direct damage and business interruption can amount to 630 million euros.

#### **Transportation**

The Group is insured against the risk of damage to its manufacturing assets, equipment, finished or semi-finished products and raw materials during transportation or storage by third parties up to a limit of 12 million euros per shipment. The policy includes a deductible and several exclusions that are standard for this kind of agreement.

#### **Environmental risks**

The Group has entered into two environmental insurance programs with leading insurance companies. For production sites located in the United States, the program dedicated is limited to 50 million US dollars. For production sites outside the United States, the program is limited to 50 million euros.

These programs cover, under certain conditions, environmental liabilities linked to the production sites of the Group. They include in particular damages suffered by third parties as a result of pollution born on the production sites of the Group or as a result of the transportation of products of the Group.

#### 1.7.2 Main risks

The Group carries out its business activities in a rapidly changing environment, which creates risks that may be beyond its control. The risks and uncertainties described below are not the only ones that the Group faces or may face. Other risks and uncertainties of which the Group is currently unaware or that it deems not to be significant at the date of this reference document could also adversely affect its business activities, financial position, results or future prospects.

The means implemented by the Group to assess and manage risks in general, particularly its regularly updated risk map, are outlined in section 1.7.1 of this reference document. The means implemented by the Group to assess and manage each of the

risks to which the Group is exposed are described below, by type of risk.

The occurrence of one or more of the risks described below could have a material adverse impact on the Group's business activities, financial position, results or future prospects.

#### 1.7.2.1 ECONOMIC AND BUSINESS RISKS

The Group has identified three main types of risks related to the economic and business environment: risks related to fluctuations in supply and demand, country-related risks and risks related to competition.

#### Risks related to fluctuations in supply and demand

The Group's results could be directly or indirectly affected by changes in supply and demand, both upstream of its activities (raw materials and energy resources) and downstream, in the various end markets it serves, such as the decorative paints, automotive, construction and energy markets.

Upstream of its activities, the Group uses raw materials and energy resources as part of its manufacturing processes. Some of these materials and resources like propylene and butadiene are indirectly linked to the price of crude oil, while others such as sulfur, castor oil and fluorspar are only minimally connected or not at all. Regardless of their link to the price of crude, the prices of these raw materials can be highly volatile, with any fluctuation leading to significant variations in the cost price of the Group's products.

External factors over which the Group has no control, such as economic conditions, competitors' activities or international situations and events, can also lead to volatility in demand and hence changes in the sales volumes and prices of products manufactured and marketed by the Group. This may have a material adverse impact on the Group's business activities, financial position, results or future prospects.

#### Risk management

The Group seeks to secure its raw material and energy supplies and to optimize their costs by diversifying its sources of supply. In some cases, it may also use derivatives such as futures, forwards, swaps and options, on both organized and over-the-counter markets, to back up existing contracts (see notes 23.5 and 24 to the 2015 consolidated financial statements in section 4.3.3 of this reference document).

The Group also seeks to pass on to its sales prices any increases in the cost of the raw materials used to manufacture its products. Thanks to its diversified portfolio of application-oriented products and markets, and its balanced global presence, the Group manages to limit the risks and adverse effects of demand volatility. These advantages also enable it to mitigate the risk related to worsening economic conditions in any one of its end markets.

The Group is also continuing to consolidate its positioning in higher value-added niche markets, which allows it to offset potential slowdowns in its main end markets.

Lastly, the Group's integration in certain product lines such as acrylics, fluorochemicals and specialty polyamides reduces its exposure to market cycles.

#### Country-related risks

The Group operates on the global market with production facilities mainly located in Europe, North America and Asia. Many of its main customers and suppliers also operate internationally, with a presence in various countries and regions. Consequently, the Group's business and financial results are likely to be directly or indirectly impacted by any adverse changes to the economic and political environment in the countries in which the Group operates.

The direct and indirect consequences of conflicts, terrorist activities, political instability or the emergence of health risks in countries where the Group is active or markets its products could impact the Group's financial position or future prospects, in particular by causing delays or losses in raw material and product delivery or supply, and increased safety costs, insurance premiums or other expenses needed to ensure the continuity of the operations concerned.

The Group's international business activity exposes it to a multitude of local business risks. Its global success depends in particular on its ability to adapt to economic, social and political changes in each of its host countries, and to develop and implement effective policies and strategies in each of its foreign operations.

#### Risk management

In most countries in which it has industrial and commercial operations, the Group relies on subsidiaries, which are placed under the authority of a regional Vice-President. This organization helps the Group maintain relations with local authorities and economic players, defend its interests, and better anticipate changes in the local political and economic environment.

Furthermore, with its balanced geographic presence in Europe, North America and Asia, the Group is able to minimize the overall impact of variations in the economic and political environment in a given region, and to benefit from higher growth areas, particularly in Asia.

#### Risks related to competition

The Group faces strong competition in each of its Business Lines.

In the Industrial Specialties division, the commoditization of certain products can lead to significant price competition. Some of the Group's competitors are larger and more vertically integrated, which could enable them to benefit from lower production costs for certain products that are also manufactured by the Group. In the downstream of Coating Solutions and in High Performance Materials, differentiation, innovation, product quality and related services play an important role.

The economic emergence of certain countries, notably China, has been accompanied by the rise of local competitors and,

subsequently, growing competition on certain product lines, such as fluorogases and acrylics. This could intensify in the future or extend to other products and, consequently, put lasting downward pressure on the price of these products.

The Group's competitive position could also be affected by innovative new products, new technologies, or the emergence of new competitors on the market.

#### Risk management

Since it was created, the Group has implemented a policy of operational excellence and cost optimization to enhance the competitive advantages that it enjoys in its various product lines and to guarantee the quality and performance of the products offered to its customers.

The Group invests heavily in R&D, particularly in the High Performance Materials division, which has enabled it to bring to market a large number of innovative new products (see section 1.4 of this reference document).

The Group has also built its strategy around the development of customer and supplier partnerships with leaders in their respective fields, allowing it to build strong business relationships with its main partners.

#### 1.7.2.2 SUPPLY CHAIN RISKS

#### Risks related to transportation

The Group has various hazardous, toxic or flammable materials transported by road, rail, sea and air, particularly as part of shipments to customers in countries where it operates, giving rise to the risk of accidents. Any such accidents could result in claims against the Group, in particular in its role as the shipper.

Furthermore, due to (i) stricter regulations on the transportation of hazardous materials, (ii) the temporary or permanent lack of means of transporting certain toxic or hazardous products to certain destinations, (iii) the market dominance of a single supplier (in particular in France and the United States), and (iv) job action affecting transportation, the Group may have to face the following problems:

- delays in delivery or even refusal by its carriers to collect shipments;
- difficulties in meeting certain customer demands;
- increases in certain shipping costs or shipping equipment rental costs;
- reductions in certain shipments, unless geographical swaps are set up with other manufacturers.

The Group also owns or uses a small number of pipelines to transport hazardous chemical products. Despite the safety measures that the Group has put in place for the operation of these pipelines (see section 2.1 of this reference document), the possibility of an accident can never be ruled out. In addition

to the environmental impact, such an accident would adversely affect the operation of certain units at its industrial sites and could therefore have a material adverse impact on the Group's business activities, financial position, results or future prospects.

#### Risk management

In order to prevent or minimize the risks related to transportation, the Group endeavors to:

- diversify its service-providers and share its product movements between several carriers where possible;
- use transportation methods that are deemed less dangerous (barge, pipeline, road-rail or rail), when technical and financial conditions permit;
- strictly select suppliers based on the Safety and Quality Assessment System (SQAS) established by a consortium of European chemical manufacturers under the aegis of the European Chemical Industry Council (CEFIC) whose activities extend to the Middle East and Asia;
- assess the quality and safety performance of the carriers used;
- ensure regular maintenance of the transportation equipment that it owns, hires or leases (freight cars, ISO containers, tankers and pipelines);
- carry out systemic risk assessment studies when a modal shift is required;
- use operational risk assessment procedures, such as vetting bulk charter vessels and maintaining the transportation safety management system via the Transportation Safety team, a part of the Group Safety and Environment department.

For pipelines, the Group notably carries out hazard studies and develops compensatory measures to minimize risks where necessary, defines monitoring and response plans, and carries out drills with the emergency services.

#### Risks related to storage

The Group uses many storage and warehousing facilities located on its industrial sites and elsewhere that may present risks to the environment or to public health and safety. The Group could be held liable for accidents arising in the storage and warehousing facilities that it uses.

Moreover, some of the storage providers that the Group uses derive substantial revenues from it in certain regions. Should one of these providers fail to perform, the Group could be compelled to renegotiate storage contracts under less favorable conditions, or to store its products in other locations.

#### Risk management

To anticipate and minimize the above-mentioned risks related to storage, the Group endeavors to:

• diversify its service-providers where possible;

- develop alternative emergency solutions combining transportation plans and distribution schemes, with a lag time for implementation;
- select suppliers based strictly on the SQAS Warehouse and CDIT (Chemical Distribution Institute – Terminals) guidelines;
- conduct storage audits prior to signing contracts repeated every three years for warehouse facilities hosting hazardous materials – under the responsibility of the relevant business management.

#### Risks related to dependence on suppliers

The Group has developed a policy of spreading supplier risk at product line level and at geographic exposure level for its supplies of raw materials, energy and gas, services and some equipment. However, in the case of certain raw materials or equipment that are essential to its business, the Group is significantly dependent on a limited number of suppliers and, in some cases, one single supplier. For example, certain of the Group's operational units in France – in the acrylic acid, oxo-alcohols and functional polyolefins segments – were built downstream of steam crackers. These units present a particularly high level of physical integration with the production capacities supplying the raw materials.

Furthermore, the Group has entered into long-term agreements featuring minimum supply commitments with a number of its raw materials suppliers. In the event of failure to fulfill these contractual commitments or of early termination of the agreements by the Group, these suppliers could claim compensation or penalties.

Other events that could have an adverse impact on the Group's industrial and financial performance include failure to perform by a major supplier, the non-renewal of supply contracts for certain raw materials or their renewal on less favorable terms, and significant price increases.

The Group's main contracts are described in section 1.5 of this reference document.

#### Risk management

One of the aims of the Group's centralized procurement policy for raw materials and goods and services is to analyze and comprehensively address the Group's exposure to the risk of significant dependence on supplies and suppliers.

This policy is based on the following principles:

- diversification of sources of supply when technical conditions permit;
- the development of long-term partnerships and contracts for supply situations that are subject to severe structural constraints due to the supply and demand balance or the limited number of suppliers;
- careful management of the duration of contractual commitments;

- supply chain and inventory management adapted to both business and industrial requirements, particularly for strategic products;
- a thorough assessment of suppliers based on the following criteria: position in the market concerned, industrial performance, financial strength and development;
- participation in certain investments or development projects.

After Total Petrochemicals France shut down its Carling steam cracker on 5 October 2015, a new agreement was signed on 3 September 2015 governing a new logistics plan to supply the Acrylics Business Line with propylene. The Group is also working with the Total group on propylene supply beyond the end of the current agreement.

The Group has also included the risk of failure to perform by one of its suppliers in its insurance policies.

#### Risks related to dependence on customers

The Group has entered into agreements representing significant financial income with certain customers. It cannot be ruled out that these contracts may not be renewed, or may be renewed under less favorable terms than initially agreed, or may be terminated.

#### Risk management

The Group has a highly diversified customer base and makes less than 25% of its sales to its top 30 customers. No customer represented more than 2.5% of Group sales in 2015.

Furthermore, the Group's business policy is based on developing alliances or partnerships with customers in order to establish solid, long-term relationships.

However, in some exceptional cases, when the customer breaches its contractual commitments, the Group may initiate legal proceedings or arbitration to enforce its rights.

Lastly, the Group hedges its customer risk with a global credit insurance program that, given the quality of its customer portfolio and low claim rate, allows it to cover a significant proportion of its accounts receivable.

### 1.7.2.3 INDUSTRIAL SAFETY AND ENVIRONMENTAL RISKS

The Group's business activities are subject to a frequently changing body of international and national laws and regulations in the areas of environmental protection and health and safety. These laws and regulations impose increasingly strict obligations, particularly concerning industrial safety, emissions and discharges to air, water and land of toxic or hazardous substances (including waste), the use, labeling, traceability, handling, transportation, storage and disposal of toxic or hazardous substances and

exposure thereto, the clean-up of past industrial sites, and soil and groundwater decontamination.

#### Risks related to the operation of industrial facilities

The Group's facilities may be subject to risks of accidents, fires, explosions and pollution due to the very nature of their operations and to the level of hazard, toxicity or flammability of certain raw materials, finished products and production or supply processes. Any accident, regardless of whether it occurs at one of the Group's production sites or during the transportation or use of products manufactured by the Group, may cause delays in production or give rise to compensation claims on grounds of contractual liability or product liability, as appropriate.

Some of the Group's industrial sites are also exposed to climate or seismic risks due to their geographic location. A total of 33 sites have been identified as being exposed to climate risks (21 sites) or seismic risks (13 sites, including the Tanay site in the Philippines, which is exposed to both climate and seismic risks).

Furthermore, the Group's production facilities may experience extended shutdowns particularly as a result of problems with raw material or energy resource supplies, reliability of major equipment or even job action.

Such risks, over and above any liability issue, could have an impact on the Group's results, financial position or business activities.

#### Risk management

All the Group's facilities and activities worldwide are covered by a Group-wide safety management program adapted to the risks that each might face.

Developed in line with the Health, Safety, Environment and Quality Charter, the program is based on taking action at three priority levels:

- at the technical level, for example while designing or improving production units (process safety and ergonomics), or in the specifications of hazardous material transportation equipment;
- at the organizational level, by ensuring that each entity's management system complies with the Group's safety requirements, which are also adapted to the level of risk at each site. These requirements are reflected in the Arkema Integrated Management System (AIMS), which combines all the Group's safety, environment and quality audits in a single audit;
- at the human level, by developing social dialogue and a safety culture that raises everyone's awareness of their individual responsibility and of the importance of their behavior.

These points are detailed in section 2.1.1 of this reference document.

The Group has also taken out insurance policies for civil liability and property damage with leading insurance companies (see section 1.7.1.6 of this reference document).

#### Risks related to security

The Group takes into account the risk of possible attacks against its facilities or its employees. It has included industrial espionage in its risk policy, particularly in the fields of research and technology. And it has taken action in response to the growing threat of cybercrime.

The Group raised security levels at its industrial facilities and R&D centers in 2015 following the January and November terrorist attacks in Paris. It has also taken additional security measures in response to deliberate acts of violence at other industrial companies in Isère and Étang de Berre, France.

#### Risk management

Security directives are regularly updated in line with recommendations from the public authorities to strengthen the security of the Group's industrial facilities.

The Group's Seveso "seuil haut" sites in France have undergone security audits by the French authorities, none of which have shown evidence of significant deviations from standards. These initiatives highlighted the Group's high levels of security, and led to adjustments being made where necessary.

The Group's action plan also covers cybersecurity and protection from cyber attacks (see section 1.7.2.6 Risks related to IT systems). As part of this, the Group has begun working more closely with French IT security agency ANSSI in France and has developed a specific strategy to enhance cyber security.

#### Risks related to health

The Group has used toxic or hazardous substances to manufacture its products in the past, and continues to do so. Employees and former employees of the Group and, in some cases, employees of external companies and service providers, as well as Group customers and people living near the Group's industrial sites, may have been exposed or may still be exposed to these substances and, as a result, may have developed or may develop specific illnesses from such exposure. In addition, for certain substances currently regarded as risk-free, chronic toxicity, even at very low concentrations or exposures, could be discovered in the future.

Certain products may also be used directly or indirectly in sensitive applications, particularly medical and food applications.

Furthermore, several types of serious government-declared health crises could result in the shutdown of facilities, research centers, and even head offices and other facilities. Serious health crises of this sort mainly include:

- major epidemics or pandemics;
- crises related to contaminated or polluted medicines, food or vaccines:
- health crises related to climate or weather events, such as heat waves, droughts, tornadoes, cyclones and exceptional flooding;
- the consequences of long-term, chronic exposure to a hazardous contaminant.

#### Risk management

The Group has put in place safety and monitoring procedures at the Group level and at individual production sites. It also conducts regular research into the toxicity of the products it uses, and in addition has developed a tool for monitoring individual exposure to toxic products. The various procedures in place are described in section 2.2.2 of this reference document.

The Group may also be forced to withdraw certain products, particularly in certain sensitive markets.

In the event of a serious health emergency, crisis units managed by trained employees are set up in the facilities, in the countries and at the Group level, to define the standards that guarantee high levels of health protection and the rules governing certain activities in order to achieve the lowest possible risk level, and to put in place response plans to address health emergencies and exceptional situations. Additionally, in the specific event of epidemics or pandemics, all Group sites around the world have set out business continuity plans with actions on two levels:

- health and organization measures to limit the transmission of viruses and protect the health of employees and subcontractors working on the sites by (i) informing all employees about health measures, raising awareness and providing alcohol-based hand sanitizers and protective masks, (ii) issuing instructions on how to contain isolated cases, (iii) reducing the number of meetings and business trips, and (iv) implementing teleworking solutions;
- measures designed to adapt business activities to the level of absenteeism by creating a structure that enables a site to continue operating despite the absence of significant numbers of employees and, in extreme cases, to ensure safety and environmental protection in the absence of a very large number of employees.

#### Risks related to the environment

The Group has activities in business areas that entail significant environmental liability risks.

The Group operates many industrial facilities, including 33 sites in Europe classified as Seveso facilities as per the European Seveso II directive 96/82/EC of 9 December 1996, and facilities outside Europe that fall under a similar classification, where hazardous substances that are liable to present significant risks to the health or safety of neighboring communities and to the environment are used, produced or stored. In this respect, the Group could be held liable (i) following injury or damage to property or to people (primarily due to exposure to hazardous substances being used, produced or destroyed by the Group or present on its sites), or (ii) for having caused damage to natural resources.

While the Group has secured insurance policies to cover civil liability and environmental risks from leading insurance companies (see section 1.7.1.6 of this reference document), it cannot rule out the possibility of claims arising in connection with its activities or products that seek to hold the Group liable for uninsured events or for amounts exceeding the cover limits. Furthermore, any accident, regardless of whether it occurs at one of the Group's production sites or during the transportation or use of products manufactured by the Group, may cause delays in production or give rise to compensation claims on grounds of contractual liability or product liability, as appropriate.

Should the Group be held liable for environmental claims, the amounts covered by provisions or included in the Group's investment plans could prove to be insufficient due to the intrinsic uncertainties involved in projecting expenditure and liabilities relating to health, safety and the environment. The assumptions used to determine these provisions and investments may need to be adjusted, mainly due to changes in regulations, changes in the interpretation or application of regulations by the relevant authorities, the technical, hydrological or geological constraints of environmental remediation or the identification of as yet unknown pollutants.

Achieving compliance for Group sites that are still in operation or for sites where operations have ceased entails a risk that could generate substantial financial costs for the Group.

Contingent environmental liabilities are detailed in note 21 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

#### Risk management

Environmental risk is managed by the implementation of a policy defined and monitored by the Environmental Remediation team within the Group Safety and Environment department and rolled out within the Group's various businesses under the responsibility of the industrial Vice-Presidents. The components of this policy are detailed in section 2.2 of this reference document.

The Group also benefits from guarantees from subsidiaries of Total SA with respect to former industrial sites, which were granted prior to Arkema's stock market listing (for a description of

these guarantees, see note 30 to the 2015 consolidated financial statements in section 4.3.3 of this reference document).

### Risks related to the management of sensitive data and in particular the dependence on certain technologies

In the course of its business, the Group uses both technologies that it owns and a certain number of technologies under license from third parties. Furthermore, in some cases, the Group's activities rely on technologies that require specific skills from its employees. The Group also invests in new industrial units and is exposed to the risk of disclosure of confidential documents and of copying of a process or technology that is critical to its production and to maintaining its international competitiveness.

If the Group were no longer able to use these technologies, this could have an adverse impact on its business activities, financial position, results or future prospects.

#### Risk management

The Group has a process technology development policy, in particular as part of its R&D programs, to give it direct ownership over the technologies that it uses in its major activities, and to help reduce its level of technological exposure to third parties.

Additionally, the Group has an employee retention policy (see section 2.5 of this reference document), and ensures that skills in certain sensitive technologies are shared by a sufficient number of employees.

Furthermore, the Group only subcontracts equipment essential to its critical processes to specific companies bound by confidentiality agreements. Files and technical manuals are managed by a restricted number of individuals, specifically the business process officers and technical center engineers.

The Group has decided to strengthen its security policy and to improve the documentation to be applied in its sites worldwide, by drawing on services provided by the French State and on feedback from other regions in France. This strategy resulted in updates and improvements to application guides and procedures, particularly to take into account IT risks, the protection of sensitive data, the protection of sites and the protection of employees working in high-risk countries. The documentation includes security audit guides, vulnerability analysis guides and the classification of documents containing sensitive data.

Employee training and awareness initiatives in this area have also been stepped up.

#### Risks related to land that the Group does not own

While the Group owns most of the land on which its industrial sites are built, some industrial facilities around the world are located on land that belongs to third parties, either due to local regulations or for technical or strategic reasons. In such cases,

the Group occupies the land under the terms of leases or similar agreements.

If these agreements were to be terminated or not renewed, or if a site were to be expropriated, this could adversely impact the Group's business activities, results or financial position.

#### Risk management

When negotiating contracts, the Group secures its right to occupy land by implementing sufficiently long terms and lengthy notice periods. Contractual expiration dates are monitored regularly to anticipate any problems regarding renewals.

#### 1.7.2.4 REGULATORY AND LEGAL RISKS

The Group is subject to complex and constantly changing local, national and international laws and regulations that differ depending on the countries in which the Group operates and that encompass a large number of fields including safety, environmental protection, antitrust law, company law, commercial law, patent protection, labor law, tax law and customs regulations.

The Group's corporate and regional units and subsidiaries ensure regulatory watch in their respective fields of expertise in order to maintain a high level of knowledge and anticipate possible future changes.

#### Risks related to product regulations

If existing regulations were to be amended to become more restrictive for the Group or if new regulations were adopted, this could (i) compel the Group to significantly scale back on production and marketing of certain products, or, possibly, discontinue production and marketing altogether, (ii) restrict the Group's ability to alter or expand its facilities, and (iii) possibly compel it to abandon certain markets, incur significant expenditure to produce substitute substances, or institute costly emissions control or reduction systems.

A large number of these regulations, described in section 2.2.2 of this reference document, require chemical products to be recorded in lists, called inventories, and files of varying degrees of complexity to be made available.

#### Risk management

To ensure that its products are marketed in accordance with local, national or international regulations, the Group employs regulatory experts supported by a global network of correspondents based in the industrial sites, businesses and subsidiaries, and experts in physicochemistry, toxicology and ecotoxicology who work to improve knowledge and understanding of the hazard characteristics of the substances and products manufactured, imported and marketed by the Group. All these experts also use efficient IT resources and have access to databases allowing them

to follow scientific developments and regulatory changes, and to produce the documents required to comply with the regulations within the prescribed time. These experts take part in professional associations that monitor proposed regulatory changes at state or agency level, and this helps the Group anticipate regulatory changes and prepare accordingly.

In cases where product regulation changes lead to restrictions on the use of raw materials or the marketing of finished products, the Group relies on its R&D to develop alternative solutions. This is the case, for example, with the Group's successful development of resins-for-paint formulations that meet the latest VOC requirements, such as alkyds in emulsions, VAE emulsions, powder resins and high solid resins.

Finally, in the particular case of Registration, Evaluation and Authorization of Chemicals (REACH) and other local legislation described in chapter 2 of this reference document, the Group has put in place a specific organization to optimize the implementation of these regulations.

#### Risks related to industrial property

The Group attaches great importance to industrial property rights, both in respect of its trademarks and patents, in order to protect the innovations coming out of R&D. The Group's patents and trademarks represent an asset that is essential for its business activities and inadequate protection of its industrial property rights or trademarks could therefore have a material adverse impact on the Group's business activities, results or financial position, and impair the Group's future prospects.

#### Risk management

The Group develops a dynamic policy to protect its innovations and know-how (registration of patents and trademarks), particularly with the support of a global network of industrial property consultants (for further details on the Group's industrial property protection policy, see section 1.4.3 of this reference document).

#### Risks related to mergers, acquisitions and divestments

As the Group has implemented its strategy, it has provided a number of guarantees to third parties when divesting businesses. It cannot be ruled out that when some of these guarantees are invoked, the compensation claims could exceed the provisions made by the Group and therefore have an adverse impact on its results or financial position.

The Group has also carried out several acquisitions in recent years that may expose it to various risks and in particular potential liabilities or responsibilities related to these activities. Should the assumptions on which these acquisitions were made fail to materialize, the development prospects of these activities may not be achieved and this could consequently impact the valuation of goodwill and have a material adverse impact on the Group's business activities, results or financial position.

#### Risk management

The Group endeavors, before entering into any external growth transaction, to take all necessary precautions when identifying targets, in particular by conducting in-depth evaluations of the activities and companies concerned and the various liabilities related to the business being divested and by negotiating appropriate guarantees from the sellers with the advice of external consultants who are experts in the field. Furthermore, acquisitions are carried out by teams of qualified experts under the responsibility of the Strategy department.

The Group's policy in terms of business divestment is to limit its liability in the guarantees it is required to grant to the buyers.

#### Risks related to current or potential litigation

In the normal course of its business, the Group is a party or may become a party to a number of administrative, legal or arbitration proceedings, as a result of which it may be found liable on various grounds, such as for violating antitrust laws relating to cartel behavior, full or partial failure to fulfill contractual obligations, termination of established commercial relationships, pollution, or non-conformity of products.

A description of the most significant current or potential litigation is given in note 21 to the 2015 consolidated financial statements in section 4.3.3 of this reference document. To the best of the Company's and the Group's knowledge, there is no other administrative, legal or arbitration proceeding currently underway or with which the Company or the Group are threatened, that is likely to have or has had over the course of the past twelve months a material adverse impact on the results or financial position of the Company or the Group.

Provisions are made in the accounts every time the payment of a quantifiable and large indemnity is likely (see note 20 to the 2015 consolidated financial statements in section 4.3.3 of this reference document). The resulting provisions, and in particular those relating to large claims, can however prove insufficient, which could have material adverse consequences on the Group's business activities, financial position, results or future prospects.

In addition, it generally cannot be ruled out that, in the future, new proceedings, related or unrelated to existing proceedings, could be initiated against a Group entity. Should such proceedings have an unfavorable outcome, they could adversely impact the Group's business activities, financial position or results.

#### Risk management

Legal risks related to current or potential litigation are subject to a quarterly review at Group level.

Therefore, on the first day of the last month of each quarter, each business, corporate department and subsidiary must inform in writing the Group's Accounting and Controlling department and the Legal department of the Group of any legal risk or legal proceedings affecting or likely to affect the Group's business activities, results or financial position. Representatives from the Accounting and Controlling department and the Legal department meet to analyze the risks and legal proceedings that were identified and to determine, in conjunction with the businesses, corporate departments and subsidiaries, the amount of the provisions relating to such risks and legal proceedings based on the rules described in note B Accounting policies to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

Additionally, the Group has put in place a compliance program, as referred to in section 1.7.1.3 of this reference document, which sets out standards and practices to be applied, in particular to ensure compliance with the applicable antitrust regulations.

#### Spin-Off of Arkema's business activities in 2006

As part of the Spin-Off of Arkema's business activities, Total SA or certain Total group companies have entered into contractual commitments and guarantees with the Company to cover certain risks related to the environment, tax and antitrust litigation (see section 1.5 of this reference document and note 30.2 to the 2015consolidated financial statements in section 4.3.3 of this reference document). However, these commitments and guarantees do not cover all the risks or liabilities that the Group may incur, and the Group will continue to assume part of such risks, which could have a material adverse impact on its business activities, financial position, results or future prospects. Furthermore, certain contractual commitments and guarantees, in particular antitrust guarantees, provide for assumptions whereby they would become null and void particularly upon (i) the occurrence of certain events, such as a change in control of the Company or (ii) a breach by the Group of its contractual obligations. Should these events occur, this could have a material adverse impact on the Group's results, financial position or future prospects.

#### 1.7.2.5 FINANCIAL RISKS

The Group is exposed to various types of financial risks such as liquidity risk, foreign exchange risk, interest rate risk, credit risk (counterparty risk), pension funding risk and tax risk.

The information provided below is based on certain assumptions and expectations that, by nature, may prove to be inaccurate, particularly with respect to changes in exchange rates and interest rates, and the Group's exposure to the associated risks.

#### Liquidity risk

In order to finance its day-to-day operating requirements and its developments, the Group uses bond issues and loans from banking institutions. However, unforeseen needs may also arise, resulting in particular from an increase in working capital requirement or unfavorable market conditions. Additionally, market conditions may make it difficult to refinance bonds at maturity and one or more banks may be unable to meet their obligations to the Group with respect to one of its main credit lines, which would significantly reduce the Group's access to financing under equivalent conditions.

For further details on borrowing conditions and in particular on early repayment clauses, see section 4.1.8.1 and notes 22 and 23 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

#### Risk management

The Group's financing policy, implemented by the Financing and Treasury department, aims to provide the Group with the necessary financial resources to fund its operations over periods of time adapted to its repayment ability. This policy is based on the following principles:

- having the Group's long-term credit rated by two rating agencies, and maintaining the ratings at least at their current level:
- having a gearing ratio of less than 40% by the end of 2017;
- maintaining cash reserves in excess of 500 million euros;
- maintaining average maturity at over three years;
- diversifying its sources of financing: in order to finance the acquisition of Bostik, in 2014 the Group issued a total of 700 million euros super subordinated perpetual hybrid bonds and carried out a capital increase of some 350 million euros with preferential subscription rights for existing shareholders. The aim of these transactions was to strengthen the Group's financial structure, particularly shareholders' equity, and maintain a strong balance sheet position while maintaining its financial flexibility.

At 31 December 2015, the Group presented a strong financial profile, with:

- a gearing ratio of 34.9%;
- cash reserves of around 1,400 million euros;
- a Euro Medium Term Note (EMTN) program, representing a maximum amount of 2 billion euros, to facilitate access to bond markets.

At the date of this reference document:

- without taking into account the issue of perpetual hybrid bonds classified as equity, completed on 29 October 2014, the average maturity of the Group's financial resources is greater than five years;
- the Group's long-term credit ratings are BBB (negative outlook) according to Standard & Poor's and Baa2 (negative outlook) according to Moody's.

Consequently, at the date of this reference document, the Group is able to meet its financial commitments as part of its operations, and does not anticipate any problem in the coming months.

#### Currency risk

Given its international operations, the Group is exposed to various types of currency risks:

- transactional risks related to the Group's day-to-day operations and development projects;
- translation risks related to the consolidation in euros of Group subsidiary accounts in currencies other than the euro. Fluctuations in these currencies, particularly the US dollar against the euro, have had in the past and may have in the future a material impact on the Group's financial position and its operating income. For an indication of the impact on sales of the translation effect, especially of the US dollar to the euro, see section 4.1.5 of this reference document;
- competition risk related to the fact that, proportionately, the Group incurs more operating expenses in the euro zone than it generates sales. As a result, the Group's competitive position may be affected by the weakness of certain currencies, and in particular the US dollar against the euro, compared with its competitors positioned in countries with a weak currency. Furthermore, the weakness of certain currencies in countries with major imports from the Group may affect its results.

#### Risk management

The Group's objective is to minimize the impact of exchange rate fluctuations on its results and financial position.

Transactional risks are systematically hedged when recorded in the accounts: Group companies hedge their foreign currency assets and liabilities against their respective functional currencies. Revenues and costs in foreign currencies are hedged essentially by spot foreign exchange transactions and sometimes by forward transactions.

Foreign exchange risk linked to future flows, such as capital expenditure or sales flows, particularly export sales, may also be hedged. The Executive Committee is responsible for deciding whether such hedging is necessary, while implementation is carried out by the Financing and Treasury department using simple derivatives.

For further details, see notes 23 and 24 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

Competition risk has gradually decreased following the implementation of a more balanced Group development and geographic expansion strategy.

Translation risk is not hedged as the Group considers that it is inherent to its worldwide operations. However, the Group reduces its balance sheet risk through a policy of allowing its companies to contract debt only in their functional currencies, except when a foreign-currency loan is backed by a commercial risk in the same currency.

#### Interest rate risk

The Group is exposed to interest rate fluctuations.

At 31 December 2015, the Group's debt stood at 2,090 million euros, which mainly included a 500 million euro bond issue with a 4% fixed rate, a 480 million euro bond issue with a 3.85% fixed rate, a 150 million euro bond issue with a 3.125% fixed rate and a 700 million euro bond issue with a 1.50% fixed rate. Neither the revolving multi-currency credit line nor the commercial paper program had been used at 31 December 2015. The terms of this financing are described in section 4.1.8.1 of this reference document

Given the Group's net debt and the distribution of net debt between fixed rate and variable rate borrowings, a 1% increase in interest rates would reduce the cost of the debt by around 1 million euros

#### Risk management

The Group's policy is to minimize the impact of interest rate fluctuations on its financing costs.

- Interest rate risk exposure is managed by the Group's Financing and Treasury department and is hedged using simple derivatives
- The Group gives priority to fixed-rate borrowing due to the historically low rates. However, the Group regularly re-assesses its position based on market developments, and could enter into rate swaps on its bonds in order to reduce the cost of its debt.

For further details, see note 23 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

#### Credit risk

#### Accounts receivable and other debtors

The Group fosters relations with a large number of counterparties, most of which are its customers. At 31 December 2015, accounts receivable net of provisions for doubtful accounts amounted to 1,051 million euros. These accounts receivable are detailed by due date in note 23.4 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

The Group's exposure to credit risk is linked to the individual characteristics of its customers. Default by one of these customers is likely to lead to a financial loss limited to the uninsured share of the customer's debt to the Group.

#### Risk management

The Group's objective is to secure the collection of its accounts receivable through a global insurance policy implemented by the Financing and Treasury department.

- The Group has a highly diversified customer base and makes less than 25% of its sales to its top 30 customers.
- There is no geographical concentration of credit risk as the Group makes significant sales in a large number of countries.
- The Group hedges most of its customer risk with a global credit insurance program that, at the date of this reference document, covered most Bostik entities. Given the quality of the Group's customer portfolio and low claim rate, this program allows it to cover a significant proportion of its accounts receivable. The Group strives to further minimize this risk through a specific credit risk management policy that consists in regularly assessing the solvency of each of its uninsured customers. Uninsured customers whose financial situation does not meet the Group's solvency requirements are only supplied after payment.

For further details, see note 23 to the 2015 consolidated financial statements in section 4.3.3 of this reference document. The policy concerning provisions for doubtful accounts on fully or partially uninsured accounts receivable is also detailed in note 23.

#### Investments

Banking credit risk is related to financial investments, derivatives and credit facilities granted by banks. The Group is indebted overall, but at times may be required to invest cash, in particular to maintain a certain level of liquidity, to comply with local regulations or to manage cash lags. At 31 December 2015, the amount of cash invested with banking institutions or money market funds amounted to 711 million euros. Default by any one of these counterparties is likely to lead to a financial loss limited to the amount invested with the defaulting counterparty and therefore to an adverse impact on the Group's results.

#### Risk management

The Group's objective is to minimize this risk by centralizing the management of its financing resources and requirements.

- The Group recycles the financial surplus of its subsidiaries through intra-Group current accounts wherever local regulations permit.
- Any new relationship between a Group subsidiary and a banking or financial institution is first approved by the Financing and Treasury department.

 The Group minimizes its exposure to credit risk by investing only in highly secure assets with leading diversified counterparties.

For further details, see note 23 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

#### Risks related to pension funding

The Group has obligations to its employees for pension benefits and other post-employment benefits in most countries where it operates (see section 2.5 of this reference document). The Group's pension commitments and other similar obligations could:

- exceed its related provisions if the actuarial assumptions used were inaccurate or if regulations changed; or
- result in asset shortfalls in certain countries where the Group operates, particularly the United States and the United Kingdom, in the event of an adverse trend in the financial markets.

#### Risk management

The Group's objective is to minimize this risk by opting for defined contribution plans wherever possible, and by taking the following measures:

- the main defined benefit plans have been closed to new entrants for a number of years, and in some cases to further accrual too.
   The Bostik plans in the United Kingdom are in the process of being closed. Furthermore, some pension obligations existing prior to the Spin-Off of Arkema's business activities have been retained by Total SA;
- certain pension plans have been the subject of a transfer of pension rights to insurance institutions, in particular in France and the Netherlands;
- the management of assets allocated to cover employee pension benefit obligations in some countries in which the Group operates and an allocation obligation exists, is outsourced to qualified professionals and controlled by independent trustees who themselves use the services of recognized professionals.

For further details, see note 19 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

#### Tax and customs risks

Changes in tax or customs duty laws or regulations or amendments in the interpretation of case law, international treaties or administrative doctrine in any one of the many countries in which the Group operates could adversely impact its business activities, financial position and results.

Furthermore, the Group benefits from special tax treatment in some countries, such as reduced tax rates under certain conditions and for limited periods of time. If such special tax treatment were to be withdrawn, amended or not renewed, it could adversely impact the Group's financial position and results.

Similarly, certain customs procedures may be reviewed by the customs administration on account of different practices in place in different countries or changes to regulations, which could adversely impact the Group's business activities, financial position and results.

#### Risk management

The Group's objective is to comply with the tax and customs regulations in all the countries in which it operates, while minimizing its tax burden.

The tax function is overseen by a team within the Financing and Treasury department that is made up of specialists supported by local employees and that uses the services of major external consultants whenever necessary. The Central Tax department is responsible for regularly updating the Group's transfer pricing policy and for overseeing tax audits and implementing corrective measures when required.

In addition, the Group has a dedicated "customs" team that centralizes all key issues, with the help of an internal and external network of customs specialists and purpose-designed IT systems.

For further details on the financial impact of tax disputes, see note 21 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

#### 1.7.2.6 RISKS RELATED TO IT SYSTEMS

Industrial and management processes and communication between employees and third parties are highly dependent on information technology systems based on complex and everchanging technical environments. Their failure could have a material impact on the Group's business activities, results and financial position. These threats also apply to the industrial businesses' production unit control systems. The main risks related to IT systems, or cyber risks, are as follows:

- technical risk of an interruption in the operation of critical applications or the loss of sensitive data resulting in the shutdown or serious disruption of the operation of an industrial unit or department. Given the rollout of the SAP integration program and the current coexistence with the preceding systems, the risk of an incident is temporarily increased;
- risk of intrusion or malicious use of the IT systems, particularly to steal information, misappropriate money or disrupt the operation of industrial facilities.

#### Risk management

The IT and Telecommunications department aims to provide systems access to authorized users while ensuring the integrity and confidentiality of sensitive data.

Accordingly, the Group has adopted an IT Systems Security Policy that sets out the objectives and rules to be applied to guarantee the reliability of its IT systems based on the three criteria of availability, integrity and confidentiality mentioned above. The Group has also defined and put in place an internal Health, Safety and Environment (HSE) directive to bolster the security of its industrial networks.

The Group's IT Systems Security Policy is currently being implemented by Bostik as part of its migration to the standards of the Group IT and Telecommunications department.

Pursuant to this policy, the IT and Telecommunications department implements, among other things, technical measures such as network protection, high-availability architectures with data replication, redundant data centers, standard workstation architecture with up-to-date antivirus software and segregation of industrial networks, and organizational measures including remote access for key employees, IT systems monitoring, management of ID and access rights, business recovery plans tested on a regular basis, formal classification of information, user awareness and annual reviews of IT risks. Strict version management procedures that include non-regression testing are also in place to minimize any incidents brought about by the rollout of new versions of software or hardware.

The continuing implementation of the SAP integration program contributes to reducing the risk of obsolescence of existing applications and of disruption of processes related to the customer supply chain.

The regular review of the Group's IT Systems Security Policy, particularly in terms of industrial systems, and the closer partnership with government security bodies enables the Group to deal with threats to its management systems and to the operations of its industrial units (see section 1.7.2.3 Industrial safety and environmental risks).

Lastly, the Group has set up an internal control system consisting of a number of general IT controls to ensure the reliability of the Group's critical processes and compliance with security rules. The effectiveness of these measures is assessed every year and action plans are put in place to address any identified weaknesses.

### 1.7.2.7 STRATEGY AND CORPORATE GOVERNANCE RISKS

#### Risks related to the development of new products or processes

The business activities, results and future prospects of the Group are heavily reliant on its ability to produce new products and new applications and to develop new production processes. This is particularly the case for fluorogases, where new blends or substitutes have to be developed to respond to regulatory changes and patent registration can often prove decisive. Furthermore, the Group invests in new industrial units and is exposed to the risk of disclosure of confidential documents and of copying of a process or technology that is critical to its production and to maintaining its international competitiveness.

#### Risk management

Each year, the Group invests heavily in R&D to develop new products and processes. In the High Performance Materials and Coating Solutions divisions, the regular introduction of innovative new products is a key success factor. Similarly, in Industrial Specialties, process performance is a major driver of competitiveness. The Group focuses its R&D efforts on fast growing markets such as new energies, batteries, lightweight materials to replace metal and glass, water treatment and 3D printing.

This major innovation drive also enables the Group to adapt to regulatory trends.

Furthermore, the Group only subcontracts the manufacture of equipment that is essential to its critical processes to specific companies bound by confidentiality agreements. Files and technical manuals are managed by a restricted number of individuals, specifically the business process officers and technical center engineers.

#### Risks related to joint ventures

The Group is subject to risks related to the non-controlling interests that it holds in companies. Some such companies are major suppliers or customers of the Group. The joint ventures included in the Group's scope of consolidation are described in the notes to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

In accordance with the contracts and agreements governing the operation, control and financing of these joint ventures, certain strategic decisions can be made only with the agreement of all partners. There are risks of disagreement or deadlock between

the partners in these joint ventures. In certain cases that are beyond the Group's control, these joint ventures could also make decisions that go against the Group's interests. Lastly, despite all the precautions taken when choosing partners, the Group cannot rule out the possibility that one of its partners could file for bankruptcy.

Investment decisions made within these joint ventures, whether as part of general operations or pursuant to specific agreements with the partners in these companies, may require the Group to incur additional expenses, to invest further or to purchase or sell certain companies.

#### Risk management

The Group has a small number of non-controlling and joint-controlling interests in joint ventures, and accordingly protects its interests by putting in place, where possible, terms in the contracts designed to resolve deadlocks and achieve a fair allocation of decision-making powers between the various partners. The contracts or agreements relating to joint ventures that the Group considers material are described in section 1.5 of this reference document.

#### 1.7.2.8 INSURANCE COVER DEFAULT RISKS

The Group's insurance policy is part of the overall risk management framework and, as such, is described in detail in section 1.7.1.6 of this reference document.

At the date of this reference document, the Group believes that the limits of cover described in said section take into account the type of risks incurred by the Group and are consistent with those currently available on the insurance market for groups of similar size and involved in similar business activities.

However, in some cases, the possibility that the Group could be required to pay substantial compensation for claims that are not covered by the existing insurance program or that it will incur very large expenses that will not be reimbursed or only partially reimbursed under its insurance policies cannot be excluded. Indeed, while the insurance market offers property insurance levels that cover any probable maximum claims, this is not the case with respect to civil liability, where the potential maximum claims exceed what the insurance market can offer on terms acceptable for the Group.

For a description of the various types of insurance contracts subscribed by the Group, see section 1.7.1.6 of this reference document.

### 1.8 SELECTED FINANCIAL INFORMATION

		l	
(In millions of euros unless otherwise mentioned)	2015	2014	2013
Sales	7,683	5,952	6,098
EBITDA	1,057	784	902
EBITDA margin (in %)	13.8%	13.2%	14.8%
Recurring operating income	604	447	588
Operating income	488	364	383
Net income – Group share	285	167	168
Net income per share (euros)	3.87	2.53	2.59 (2)
Adjusted net income per share (1) (euros)	4.23	3.72	5.67 (2)
Dividend per share (euros)	1.90 (3)	1.85	1.85
Shareholders' equity	3,949	3,573	2,349
Net debt	1,379	154	923
Gearing (in %)	35%	4%	39%
Capital employed	6,466	4,565	4,070
Working capital on sales (in %)	14.6% (4)	16.1%	14.9%
Net provisions (5)	907	751	698
Cash flow from operating activities	858	507	467
Cash flow from investing activities	(1,635)	(670)	(389)
Cash flow from financing activities	371	928	(60)
Free cash flow (6)	442	21	129
Capital expenditure	431 (7)	470	481
Capital intensity (capital expenditure/sales) (in %)	5.6%	7.9%	7.9%
Employees (31 December)	18,912	14,280	13,908

<sup>(1)</sup> Adjusted net income excludes unrealized foreign exchange results on the financing in foreign currencies of non-recurring investments. 2014 adjusted net income has been restated accordingly.

<sup>(2)</sup> For 2013, the adjusted net income per share and the net income per share have been adjusted to take account of the share capital increase with preferential subscription rights achieved in December 2014

<sup>(3)</sup> Dividend proposed at the annual general meeting on 7 June 2016.

<sup>(4)</sup> Working capital on sales as defined in section 4.1.7 of this reference document.

<sup>(5)</sup> Provisions net of non-current assets as defined in section 4.1.7 of this reference document.

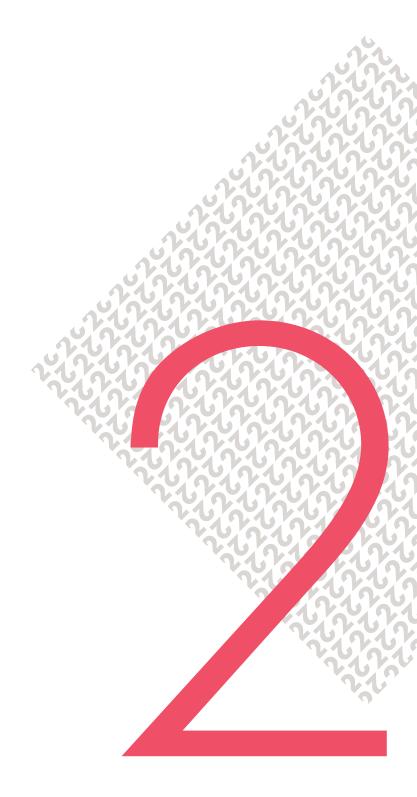
<sup>(6)</sup> Cash flow from operations and investments excluding the impact of portfolio management.

<sup>(7)</sup> Excluding capital expenditure related to portfolio management as defined in section 4.1.9 of this reference.

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The different parts constituting the Annual Financial Report are identified in the content by the pictogram  $$\Delta F\!_{\rm L}$$ 

# Corporate social responsibility



In a world that faces many economic, environmental and social challenges, the Group's Corporate Social Responsibility (CSR) policy is at the heart of its growth strategy and makes a positive contribution to the society in which we live and in which future generations will live.

The CSR objectives address the expectations of the Group and its stakeholders, and ensure sustainable and responsible growth for the Group.

The Group decided to consolidate Bostik in its CSR reporting from 2015. If Bostik is not included, this is stated in the text or in a footnote.

#### The Group's CSR ambitions and commitments

The Group's CSR commitments concern five major areas:

#### 1. Being a top quartile performer in safety in the chemical industry

The Group's industrial safety initiative has been rolled out around the world and comprises complementary technical, organizational and human aspects. By introducing a Groupwide safety culture and making safety a priority, the Group has continuously improved its safety performance since its stock market listing.

#### 2. Reducing the environmental footprint of its activities

All Group employees are sharing the objective of reducing the Group's environmental footprint, which can be achieved through three types of actions: limiting the emissions of the Group's different activities, reducing consumption of natural resources and developing the use of renewable resources.

The Group also takes care that neither people's health or safety, nor the environment, are impacted by its products.

### 3. Placing sustainable development solutions at the heart of its approach to innovation and its product range

The Group uses its product R&D and marketing teams to support sustainable development and address the challenges facing the planet. To this end, it creates innovative solutions in support of new energies, lightweight materials, the fight against climate change, access to water, and the use of bio-based raw materials. The Group's R&D policy is described in section 1.4 of this reference document.

#### 4. Encouraging open dialogue with all its stakeholders

The Group invites dialogue on its activities and products with all stakeholders, through programs such as the Common Ground® (Terrains d'Entente®) initiative, developed to build mutual understanding and trust-based relationships with local residents, associations and schools. With its suppliers, the Group also adopts responsible behavior based on the desire to develop balanced, long-term, trust-based relationships.

#### Promoting the individual and collective development of all its employees

The Group's employees – unique in their know-how, profession, nationality, role and personality – make up together a community. The Group's employment policies around the world focus on two aspects: the individual development of its employees and social development through actions that aim to improve working conditions for all.

All Group entities aim to contribute to achieving the Group's CSR ambition in these five areas as part of a continuous improvement initiative. The rules governing the collection and consolidation process for the CSR data featured in this chapter are notably set out in section 2.6 of this reference document.

By carrying through these commitments, the Group will achieve its ambition of being a recognized contributor to the sustainable development of the world, and to stand among the leading chemical producers in the world in terms not only of economic performance, but also of labor, social and environmental performance.

#### CSR players and governance

To deliver on its CSR ambitions, the Group set up a Sustainable Development department in 2012 comprising the Product Safety and Environment and the Sustainable Development departments. The Sustainable Development department reports directly to the Group Industry Executive Vice-President, who is a member of the Executive Committee.

The Group also set up a CSR steering committee in late 2012. Chaired by the Industry Executive Vice-President, the committee includes the Human Resources and Communication Executive Vice-President and a number of corporate Vice-Presidents, all of whom are actively involved in the Group's CSR policy. It oversees actions conducted as part of the Group's CSR policy, and defines projects for any planned CSR actions before submission to the Executive Committee. The steering committee meets twice a year.

The Executive Committee defines and validates the Group's CSR ambitions, the actions associated and implemented, the main indicators and the safety and environmental objectives, including those targeted for 2025. It submits this information to the Board of Directors once a year.

The Sustainable Development Vice-President makes a presentation to the Audit and Accounts Committee annually outlining the content of the extra-financial data audit and the findings of the Independent Third-Party auditor. These findings appear in the auditor's opinion issued to the annual general meeting along with the Board of Director's report, which also includes social and environmental information.

All 2015 indicators provided in chapter 2 of this reference document were subject to confirmation by the Independent Third-Party auditor, as indicated in its opinion in section 2.8.

#### 2025 objectives

In 2013, the Group reinforced its commitments on sustainable development by setting four environmental objectives for 2020, on emissions to air, greenhouse gas emissions, emissions to water and net energy purchases. These objectives complement the three 2020 safety objectives set by the Group in 2012, the most important of which is a reduction in the total recordable injury rate (TRIR).

The Group decided in 2015 to review all its objectives to take into account Bostik's consolidation, whose environmental profile differs from that of most of the rest of the Group, and in the light of the very good results achieved in 2014 on safety, greenhouse gas emissions and emissions of volatile organic compounds (VOCs), thanks to the committed environmental awareness of the Group's employees.

This review also involved an adjustment to the target date, shifted from 2020 to 2025.



Through its commitment and ongoing efforts to reduce its environmental footprint, and through the technological solutions offered to its customers on sustainable development, the Group stands among the companies that will contribute to meet the goals set in the Paris Agreement concluded at the COP 21.

#### Standards and fundamental charters

As a participant in its initiative, the Group supports the ten principles of the United Nations Global Compact, notably on issues including human rights, labor, the environment and anticorruption.

In addition to the principles of the Global Compact, the Group's values also extend to those of the 1948 Universal Declaration of Human Rights and those expressed by the International Labour Organization and in the OECD's Guidelines for Multinational Enterprises.

The Group also complies worldwide with the principles of the International Council of Chemical Associations (ICCA) Responsible Care® Global Charter, for which it signed the declaration of support on 16 November 2006.

All these principles are included in Group standards, namely the Code of Conduct and Business Ethics; the Code of Conduct for Arkema's suppliers; the Health, Safety, Environment and Quality Charter; and the Energy Policy.

# 2.1 BE A TOP QUARTILE PERFORMER IN SAFETY IN THE CHEMICAL INDUSTRY

### 2.1.1 General industrial safety and environment policy

The Group places safety, health and the environment at the heart of its objectives when conducting operations, with a permanent focus on improving performance in these areas.

The Group's Health, Safety and Environment (HSE) policy has been continuously strengthened since its creation in order to incorporate the applicable regulations and the Group's own requirements. The Group has formally expressed its fundamental requirements in the Health, Safety, Environment and Quality Charter and in a global standard, the HSE manual, which was implemented by the Group at the time of its creation. The Charter and manual form the basis of HSE management systems in all Group entities.

The Group's HSE policy is an integral part of its commitment to sustainable development, which is based on the firm belief that its long-term growth partly depends on the way it rises to its responsibilities in the areas of labor, safety, security and the environment

Accordingly, the Group supports the International Council of Chemical Associations (ICCA) Responsible Care® global initiative, which is backed by the Association of International Chemical Manufacturers (AICM) in China and the European Chemical Industry Council (CEFIC) in Europe and followed by most national associations, including the Union des industries chimiques (UIC) in France. Responsible Care® is a voluntary initiative undertaken by the global chemical industry that extends beyond regulatory compliance. It was first launched in the 1990s in the areas of industrial health, safety and environment, before subsequently being extended to product stewardship.

In 2006, ICCA launched the Responsible Care® Global Charter to enhance the Responsible Care® initiative by strengthening sustainable development, product stewardship, measurable performance and third-party audits of procedures.

The Group signed the original declaration of support for the Responsible Care® Global Charter on 16 November 2006 and the new Responsible Care® Global Charter on 10 December 2014.

To support its commitments to sustainable development, and to safety in particular, the Group has set three 2025 safety objectives primarily reflecting its will to continuously improve safety performance and strengthen operational excellence. These objectives, which include Bostik (51 sites and 3 R&D centers), are as follows:

 reduce the total recordable injury rate (TRIR) to below 1.2 by 2025;

In early 2016, the Group strengthened its long-term TRIR target even further, from 1.7 to below 1.2, consistent with the improvements achieved so far and with its commitment to ongoing operational excellence;

- extend the peer observation program to 100% of sites by 2025;
- audit 100% of sites in accordance with the Arkema Integrated Management System (AIMS) by 2025.

# 2.1.1.1 GROUP ORGANIZATION IN TERMS OF INDUSTRIAL SAFETY AND ENVIRONMENT ISSUES

The Arkema Group's industrial safety and environment policy has been rolled out around the world and applies to all Group subsidiaries and all countries in which the Group operates.

The Group Safety and Environment department, which is based at the Group's head office, operates globally with support from safety and environment experts in every region.

### 2.1.1.2 AN INITIATIVE BASED ON THREE PRIORITY AREAS

The Group's safety initiative is based on three areas: reducing risks related to safety, environment and pollution, following the management system and promoting a culture on safety and sustainability.

# Prevention of safety, environment and pollution risks

In compliance with applicable regulations, the assessment of risks on the Group's industrial sites is carried out through systematic studies of (i) manufacturing processes, (ii) operating conditions in existing units, (iii) transportation operations (particularly those involving hazardous products), (iv) the design and construction of new facilities, (v) changes to existing facilities, (vi) health and safety at workstations, and (vii) environmental impact.

For its industrial sites and for the transportation of hazardous substances, the Group has put in place technical and organizational resources in order to identify these risks, rank them using a qualitative and quantitative approach based on simulation models and input from a network of experts, and define preventive measures to reduce their impact and likelihood of occurring.

The Group attaches careful attention to the analysis of risks connected with its business activities, particularly in the case of Seveso sites (or their equivalent), for which the Group increases safety requirements in line with the potential risks identified. Similarly, the Group pays great importance to feedback (both inside and outside the Group), particularly regarding the level of incidents and accidents as well as best practice in industrial risk management.

When a new production unit is designed or a significant extension made to an existing production unit, the best options are sought to improve industrial safety. In addition, the Group regularly makes improvements to its existing production units. The Group's capital expenditure allocated to safety, environment and maintenance of its industrial units up to standard totaled 203 million euros in 2015 (versus 211 million euros in 2014).

In Europe, at the date of this reference document, 33 of the Group's production sites, under the 2015 consolidation scope, are monitored with extra vigilance and are subject to the European Directive 2012/18/EU of 4 July 2012 on the control of majoraccident hazards involving dangerous substances, known as the "Seveso III directive". This directive requires, in particular, the introduction of safety management systems and regular updating of hazard studies, the findings of which can lead to additional risk-prevention requirements for the companies operating the sites.

French Act No. 2003-699 of 30 July 2003 and the relevant application decrees have strengthened the obligations imposed on companies operating Seveso sites in France by laying down the principle of government-designed and -implemented Technological Risk Prevention Plans (plans de prévention des risques technologiques – PPRTs), which aim to control urban development around potentially dangerous sites and to limit the impact of potential accidents. At end-2015, 16 sites operated by the Group in France were subject to PPRTs. The Group will be required to contribute to the funding of any measures related to these PPRTs. Furthermore, the ministerial decree of 29 September 2005 relating to the evaluation and consideration of the

probability of occurrence, the kinetics, the intensity of the impact, and the severity of the consequences of potential accidents in hazard studies for classified facilities subject to authorization, will also entail the introduction of additional risk control measures by 2018 at the 16 sites mentioned above for which a PPRT is required.

In the United States, industrial accidents risk management is primarily regulated by the Superfund Reauthorization Act (SARA), the Risk Management Process (RMP) and the Emergency Planning and Community-Right-to-Know Act (EPCRA). The latter notably requires companies to inform the government authorities when hazardous products, above a certain quantity, are being handled or stored, and requires companies storing such products to have emergency plans and procedures in place. Other regulations at federal, state or local levels govern certain specific aspects of the storage of chemical products, the safety of workers when handling stored products, and the storage of highly hazardous products.

The crisis management procedures at Group facilities are broadly based on the Group Crisis Management directive, which covers the management of potentially critical situations in the areas of health, safety and the environment. They include a year-round oncall system for ensuring rapid and effective response to potential incidents, assessing their context, and fielding crisis management teams accordingly. The Group also runs "crisis management and communication" training courses, along with exercises involving crisis simulation and the formation of crisis management teams.

### AIMS, the all-in-one audit

The Arkema Integrated Management System (AIMS) combines all Group-led safety, environment and quality audits into one single audit. It includes the Group's own requirements as well as those featured in standards endorsed by the Group, such as ISO 9001, ISO 14001 and OHSAS 18001. This "all-in-one" approach has the dual benefit of being in line with the Group's culture and ensuring consistency across all its safety, environment and quality management initiatives. In order to obtain external certifications, AIMS audits are conducted by mixed teams made up of Group auditors and auditors from a third-party accreditation body. They are conducted every three years and complemented by annual follow-up audits. This new method is well established and applied at Bostik sites since 2015.

In 2015, 61% of the Group's sites (including Bostik sites acquired in early 2015) had undergone an AIMS audit within the previous three years, versus 78% of sites in 2014 and 62% in 2013  $^{(1)}$ . The 2015 percentage is lower than that for 2014 because of the gradual rollout of the AIMS method across Bostik sites in 2015. Excluding Bostik sites, the percentage would be 91% in 2015, an increase on the 2014 figure.

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# The 2025 target is for 100% of sites to have had an AIMS audit within the previous three years.

In 2015, 52% of Group sites worldwide (including the Bostik sites acquired in early 2015) are OHSAS 18001-certified, compared with 60% in 2014 and 54% in 2013<sup>[1]</sup>. This breaks down into 51% in Europe, 60% in North America and 45% in Asia. The decrease from 2014 to 2015 arises from the integration of Bostik sites, acquired in early 2015.

Each year, the Arkema Group also conducts a large number of non-AIMS audits, including:

- operational safety audits: such as construction site audits, prestart-up reviews, operational safety audits on topics such as mechanical integrity and explosive atmospheres, and simplified AIMS audits for smaller sites;
- process safety audits: including fire safety audits, post-incident audits and risk analysis reviews;
- supplier and logistics audits: like transportation company and off-site warehouse visits and assessments. These audits are in addition to the evaluations conducted by third parties, such as the Safety & Quality Assessment System (SQAS) for land transportation, the Chemical Distribution Institute (CDI) questionnaire for maritime transportation, and the European Barge Inspection Scheme (EBIS) for river transportation. Some packaging is also verified;
- safety support action: this action is conducted at certain sites
  consisting in meeting with sites' management teams and
  sharing analyses of their accident records and HSE activities.
  The initiative also includes discussions on how to draw up and
  monitor action plans.

A feedback program also encourages experience sharing about relevant incidents in order to prevent them from reoccurring. This sharing takes place on a global scale through various networks (regions, professions and technologies). Through these networks, any significant incident triggers a safety alert and corrective measures at Group sites that might encounter a similar incident. The feedback process includes mechanisms for consolidating the measures implemented and verifying their efficiency. It also extends to all voluntary measures, as following rollout of an Essential or a Safety Culture campaign.

# Safety culture: training, information for employees and industrial safety and environment tools

Behavioral approaches represent a key component in risk prevention. The development of a safety culture where everyone is aware of their responsibility and the importance of their behavior lies at the heart of the Group's safety initiative. To develop a safety culture shared by all employees, the Group makes use of various tools such as the "Safety in Action" program, the "Essentials", field activities (peer observation, flash audits, planned general inspections, safety tours, field safety audits, etc.) and the "Human and organizational safety factors" and "Safety culture and leadership" training courses.

The Group's safety culture took a further step forward in 2014 with the launch of the Arkema Safety Academy, which addresses all Group employees with the aim of developing interaction on safety issues, policy and tools. Training courses under this program have so far included a number of modules primarily addressing HSE managers, plus others on crisis communications, crisis management, accident prevention through peer observation, awareness-raising on safety culture, and human and organizational safety factors.

# General HSE training

Priority is given to HSE training in the induction of new hires, general on-site induction, workstation training plans and training initiatives for existing employees. HSE managers receive country-specific specialist training inside or outside the Group and regularly attend HSE conventions.

Safety training takes two forms: classroom courses and e-learning. In 2015, safety training <sup>(2)</sup> totaled 172,909 hours (12 hours per year per employee trained), and the number of employees reached by at least one safety training session totaled 14,582 (80% of the Group headcount) <sup>(2)</sup>.

In addition, 5,538 people (30% of the Group headcount) took e-learning courses on safety in 2015 <sup>(1)</sup>. These e-learning courses deal with safety-related topics such as Gestures and Postures, Moving on Foot, Explosive Atmospheres, Legionella, Pressure Equipment, Regulations for Labeling Hazardous Products, Transporting Hazardous Substances, Personal Protective Equipment (PPE), Accident Prevention Through Peer Observation, Slips and Trips, and Work at Height. Titles of forthcoming e-learning courses include Security of Travelers, Root Cause Analyses and Risk Analyses.

In 2015, the Safety Culture module was rolled out in all three regions (Europe, Asia and the Americas) by more than 300 inhouse facilitators specially trained for this purpose. Further details on this Safety Academy program are given in section 2.5.2.4 of this reference document.

<sup>(1)</sup> The figures for 2013 and 2014 do not include the Bostik sites acquired in early 2015.

<sup>(2)</sup> In entities in which the Group holds a stake of 50% or more, and which employ more than 30 people.

### The Safety in Action program

The Group runs an ambitious employee information and motivation program to stimulate and follow through changes in behavior with regard to safety. This program reflects a will to establish relentless vigilance toward safety matters. It emphasizes individual and group commitment to taking action at the team and workstation level. The program is based in particular on two priorities targeting exchanges and communication, namely:

- producing "Site Safety" films, which systematically deliver information on site safety instructions to all visitors. These films were updated in 2015;
- organizing "Safety High Points", which offer a forum in which
  to regularly discuss safety-related topics, to draw up action
  plans specific to each work environment, and to define areas
  for improvement at the team level.

### The Essentials

The 14 "Essentials" are clear and simple safety rules that have been derived from feedback and apply to everyday situations. Everyone on all Group sites is expected to know and apply these rules scrupulously, and to lead by example. Employees are invited to suggest improvements that facilitate the application of a rule, and to report all substandard situations. All employees, regardless of their position, can step in when they witness someone breaking the rules. Three Essentials are rolled out per year. Each is accompanied by a specific, three-month campaign including a host of measures to encourage employee appropriation.

The three Essentials rolled out in 2015 were Mobile Phones, Electrical Risks and Safety in Buildings.

### Field activities

Peer observation raises awareness of risks in order to reduce the number of occupational accidents. It capitalizes on positive experiences and a collective search for solutions to improve practices. Using a structured observation method, each site implements the initiative in a way that best suits its own specific features (type of risks and nature of the activities). Employees with similar qualifications are then encouraged to observe each other while carrying out their duties. Peer observation helps identify best practices, deviations and potentially dangerous situations. The method has been successfully implemented in the United States, is being rolled out in Asia and the main European countries, and will be extended to all of the Group's production sites.

Bostik has developed a monitoring system for in-the-field detection of deficiencies and deviations from good practice. Employees detecting a problem of this kind can report it using the Smart Zone table. Immediate corrective action is then taken, and further measures discussed between the employee and the table manager. Implementation of a full solution is logged in the Smart Zone table through to completion, for rapid, effective tracking. Rollout of this approach across other Group sites is under examination.

In 2015, 57% of sites (including Bostik sites acquired in early 2015) had put in place the peer observation program to improve safety, versus 77% in 2014 and 62% in 2013. Excluding Bostik sites, the percentage would be 85% in 2015, an increase on the 2014 figure.

# The 2025 target is to extend the program to 100% of Group sites.

To move from a safety discipline culture to a safety commitment culture, the Group has integrated an initiative in place in the United States that was first devised in Canada. Named "SafeStart®", the initiative consists in observing oneself and other people to identify critical states (rushing, frustration, fatigue and complacency) that can lead to critical errors (eyes not on task, line of fire, mind not on task, loss of balance, traction or grip) which in turn transform minor risks into major ones. Critical error reduction techniques are used to continuously improve accident prevention.

The Group runs regular field safety audits at its sites to evaluate safety culture and facility compliance on a continuous, long-term basis. These audits can take various forms, including flash audits, planned general inspections (monthly or quarterly, depending on the site) and safety tours performed by management. They cover all personnel present, whether employees of the Group or of outside companies. They are also used for checking implementation of HSE recommendations on major projects, and for furthering a safety and risk-prevention mindset during turnarounds.

In France, many sites run yearly or twice-yearly "safety days" addressing their main subcontractors. These events involve local HSE employees, the Group contract manager, and the sales manager of the subcontractor concerned. Here, the Group is represented by the local management, the management of the business unit concerned, and representatives from the Procurement department and the Group Safety and Environment department. The events provide an opportunity for dialogue on best practices in health and safety at the workstation.

The Group has also stepped up communications on safety, by displaying safety results at each site, for example.

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# 2.1.2 Safety performance

By implementing the safety policies based on the three priority areas described in section 2.1.1.2 of this reference document, the Arkema Group has improved its safety performance.

# Injury rates

In 2015, the total recordable injury rate (TRIR) was 1.5, down from 1.9 in 2014. This puts the Group among the best in its sector and confirms the very strong safety improvement dynamic underway in recent years, driven largely by firm employee commitment.

The following diagram shows injury rates within the Group for the period 2011 to 2015, calculated according to the methodology detailed in section 2.6 of this reference document. The rates are expressed as the number of injuries per million hours worked for all Group employees and subcontractor employees present at Arkema Group sites.

# LOST-TIME INJURY RATE (LTIR) (1) TOTAL RECORDABLE INJURY RATE (TRIR)



# The Group's 2025 target is to achieve a total recordable injury rate (TRIR) below 1.2.

For the record, the Group's injury rates in 2005 (a milestone date, the year before the stock market listing) were 11.3 for total recordable injuries and 5.3 for lost-time injuries.

The severity of accidents is established by the number of days lost per injury. This stood at an average of 48 days in 2015, across all Group employees and subcontractor employees at Group sites.

With regard to Arkema Group employees, 48 were victims of accidents recorded for the purposes of calculating the TRIR in 2015, 34 of which with lost time, out of a total global headcount of 18,912. Analysis of data from previous years shows a decrease in the number of serious and very serious accidents, which account for a very small proportion of the total. The Group is firmly committed to reducing the number of serious and very serious accidents further.

# **Process safety**

The Group's process safety objective is to minimize the number of process safety incidents as defined by CEFIC <sup>(2)</sup>.

Since 2013 the quality of this reporting is improving and continues to do so. From the same year on, the number of major and minor Process Safety Incidents (PSIs) has been systematically reviewed monthly by the Executive Committee. In addition, Executive Committee members are notified promptly of all major PSIs occurring.

In 2015 (including Bostik sites), 27 major PSIs (type A or C1, according to the CEFIC method) were reported. In 2014 (excluding Bostik), the figure was 33, stable versus 2013.

<sup>(1) &</sup>quot;Lost-time injury" refers to any event causing bodily harm or psychological shock to an employee in the course of his/her duties and resulting in time off work.

<sup>(2)</sup> See the note on methodology in section 2.6 of this reference document.

# 2.2 REDUCE THE ENVIRONMENTAL FOOTPRINT OF THE GROUP'S ACTIVITIES

# 2.2.1 General policy in terms of reducing the environmental footprint

Committed to continuous improvement, in respect to the regulations, the Arkema Group has integrated environmental protection in its management system. Accordingly, the reduction of its environmental footprint is one of the five CSR objectives set up by the Group. To achieve this goal, the Group adapts its industrial practices to minimize its emissions and to optimize and reduce its consumption of energy, water and non-renewable raw materials. The Group's industrial sites rigorously monitor their waste and emissions.

Each year since its creation, the Group has reported its emissions and consumption of resources in extensive values.

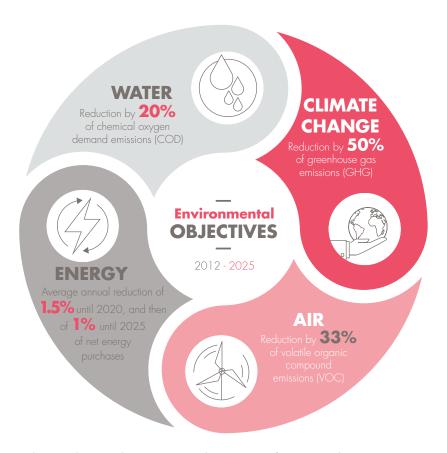
To manage its environmental performance more precisely and provide a consolidated Group data report that more accurately describes changes to this performance, the Group has adopted a methodology that also enables its facilities to report on relative indicators. This methodology limits the impact of any changes to the Group's scope of business, production facilities, or the method used to assess or calculate environmental footprint variables.

The procedure for calculating these intensive indicators, known as Environmental Footprint Performance Indicators (EFPIs), is described in the note on methodology in section 2.6 of this reference document.

In 2013, the Arkema Group decided to strenghten its commitment to sustainable development by setting four objectives for 2020. These primarily translate the Group's initiative to reduce its environmental footprint and strengthen its operational excellence.

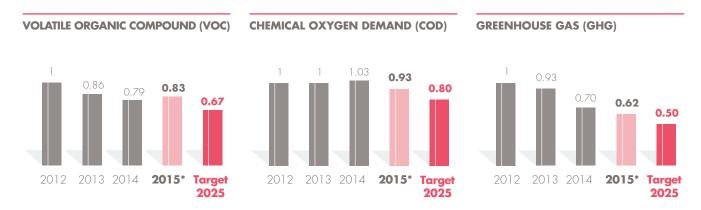
In 2015, the Group decided to tighten its objectives, for two reasons. First, in 2015, it acquired the business activities of Bostik, whose environmental profile differs from that of most of the rest of the Group. Second, some of the objectives set for 2020, including those on greenhouse gas and volatile organic compound (VOC) emissions, had already been reached by 2014.

Beyond these four specific relative indicators, the Group will continue to report absolute figures in all areas used to monitor its environmental footprint.



These objectives apply to relative indicators, the Environmental Footprint Performance Indicators (EFPIs).

The diagrams below show Group results since 2012:



<sup>\*</sup> In 2015, figures include data for Bostik sites. 2014 and 2013 exclude Bostik.

# 2.2.1.1 ENVIRONMENTAL MANAGEMENT SYSTEM

### **Environmental certifications**

The Group has put in place environmental management systems at its industrial sites, most of which have received external environmental certification in accordance with the ISO 14001 standard. Depending on the local context, certain sites have adopted other standards, such as the Responsible Care® Management System (RCMS) in the United States.

The environmental management system requires each of the Group's industrial sites to identify its environmental impact in terms of water, air (including greenhouse gas emissions), waste, noise, odors, soil, use of resources and logistics flows, and then to define the priorities of its action plan. A regular environmental analysis of the sites is used to measure progress and to determine new improvement objectives. Each site rigorously monitors its waste and emissions, including carbon dioxide (CO2) and greenhouse gas (GHG) emissions.

To harmonize identification, evaluation and analysis of environmental risk, the Group rolled out a new methodology, with global application, in 2013. A dedicated IT system was rolled out in Europe and the United States in 2015, and will be extended to Asia in 2016.

In addition to the audits conducted by the Internal Audit department, Group sites undergo two other types of audits: certification by external bodies and audits conducted by experts from the Group Safety and Environment department (DSEG).

In 2015, 62% of Group sites worldwide (including the Bostik sites acquired in early 2015) were certified to ISO 14001 or RCMS (in the United States), compared with 70% (excluding Bostik sites) in 2014 and 59% (excluding Bostik sites) in 2013. Excluding Bostik, the figure would be 93%, a steep rise on 2014. Percentages (including Bostik sites) by geographic area in 2015 are 69% in Europe, 60% in America and 41% in Asia.

# **Environmental declaration**

The Group issues a declaration on environmental indicators, including GHGs, in accordance with its environmental declaration directive and the guidelines provided to all its subsidiaries. This declaration is based on the principles of relevance, representativeness and consistency, and is drawn up according to the methodology detailed in section 2.6 of this reference document.

# Management involvement

The declaration of actions undertaken to reduce the Group's environmental footprint is the subject of various presentations and discussions within the Group:

 for each business, an annual review of the full environmental footprint, including the energy footprint, is carried out at individual meetings between the business and industrial Vice-Presidents, and the Group Safety and Environment and Sustainable Development Vice-Presidents;

- an annual environmental report and annual energy report for the Arkema Group, setting out the results for the reporting year and for the previous fiscal year along with historical environmental footprint data (excluding energy) for the past six years, are issued to all the departments concerned;
- each year, the Group Safety and Environment Vice-President sends the Executive Committee a summary of the Group's environmental results, and the Sustainable Development Vice-President sends a summary of the results for the Group's four key environmental footprint indicators included in the 2025 targets.

# Environmental culture: training and information for employees and regulatory monitoring

Training and awareness-raising on environmental issues acquaints Group employees with the main characteristics of their site and the tangible consequences of their everyday actions and activities. It also teaches them about the operational control of emissions of all types, operation levels during facility shutdown or start-up in terms of emissions, and waste sorting.

For the 62% of Group sites certified to ISO 14001 (or RCMS in the United States) in 2015, a specific environmental training program is rolled out after an environmental risk analysis has been performed at each workshop and the main feedback on environmental incidents has been examined in the tracking system for incidents and responses (impacts). The training program is repeated on a regular basis to maintain awareness of the importance of critical parameters.

The Group also ensures, through regular conference calls and monitoring reports, that EU regulations, such as Phase III of the European Union Emissions Trading Scheme (EU ETS), the Industrial Emissions Directive (IED) and environmental declaration rules, are properly understood by the HSE network through awareness-raising days. Programs for auditing regulatory compliance have been run at most of the Group's American sites. European sites can verify compliance with applicable texts using IT applications specific to regulations in each country.

Details on employee training, including induction of new hires, are given under "General HSE Training" in section 2.1.1.2 of this reference document. In 2015, training on environmental issues totaled 20,447 hours (1), or an average of 7.2 hours per year per employee trained in environmental matters. A total of 2,841 employees (16% of the Group headcount) took at least one environment-related training course (excluding e-learning) during the year (1).

<sup>(1)</sup> In entities in which the Group holds a stake of 50% or more, and which employ more than 30 people.

Reduce the environmental footprint of the Group's activities

### 2.2.1.2 EMISSIONS MANAGEMENT

The Group has a policy of actively controlling and reducing the environmental impact of its business activities.

Accordingly, substance emissions are identified and quantified by type (air, water, waste) so that suitable measures can be implemented to control them.

### Regulations on specific emissions

A number of regulations place strict limits on emissions from the Group's industrial facilities, such as the European Water Framework directive 2000/60/EC on emissions to water.

In accordance with European directive 2010/75/EU on industrial emissions, as transposed into national law, the industrial sites concerned are subject to authorizations to operate that include emission limit values in line with best-practice values in various business sectors, as set out in the Best REFerence (BREF) documents.

The United States Clean Air Act (CAA) sets federal standards relating to air pollution from stationary and mobile sources, and establishes national emission standards for 200 hazardous substances, based in particular on Maximum Achievable Control Technology (MACT) standards.

European directive 2003/87/EC, as amended by European directive 2009/29/EC of 23 April 2009, established a greenhouse gas (GHG) trading system within the European Union. The Group has applied for EU quota allowances (EUAs) for phase III, which runs from 2013 to 2020. Four new sites have been added to the scope for the new phase. As the Group's sites belong to sectors and subsectors deemed to be exposed to a significant risk of carbon leakage, they will benefit from free EUAs based on their emissions performance in relation to relevant standards. Total annual allowances amount to 665,769 EUAs. The Group does not expect to have to make significant purchases of additional CO<sub>2</sub> allowances.

### Preventive measures

The Group mitigates the environmental impact of its industrial sites by optimizing the use of raw materials, energy and natural

resources like water, thereby reducing emissions into the natural environment and other waste production. As part of this, the Group has developed a method for environmental analysis in order to characterize significant environmental aspects and impacts related to the activities of a given site and to implement the necessary corrective programs.

The Group also regularly upgrades its existing production units, by adapting processes to reduce waste volumes and installing waste treatment units, for example.

### **Emissions to air**

The Group is committed to minimizing emissions of the most polluting compounds, particularly volatile organic compounds (VOCs), substances responsible for air acidification (nitrogen oxides and sulfur dioxide) and dust.

The Group's production facilities reduce VOC emissions in several ways, including:

- collecting and treating effluents containing VOCs (the most widely used technology is based on the installation of thermal oxidizers or vent scrubbing);
- conducting regular campaigns to locate leaks and eliminate any identified emissions.



Improvements in plant performance and treatment system reliability at the Changshu site in China helped to reduce VOC emissions by around 40% from 2014 to 2015.

The Group is also reducing its emissions of substances contributing to air acidification by:

- using fuels with low or very low sulfur content, or replacing fuel oil with natural gas, in its boilers;
- installing new low nitrogen oxide burner technologies.

### Absolute emissions to air indicators

The table below shows emissions to air indicators for the Group's activities in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

Emissions to air	2015*	2014	2013
All substances contributing to acidification (t SO <sub>2</sub> eq.)	4,430	4,750	5,330
Carbon monoxide (CO) (t)	1,900	3,030	8,850
Volatile organic compounds (VOCs) (†)	5,010	4,600	4,460
Dust (t)	520	430	400

<sup>\*</sup> The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

In 2014 and 2015, a number of Group sites took measures to reduce emissions of substances contributing to air acidification. Significant reductions were achieved by investments in boilers at some sites, involving either conversion from fuel oil to natural gas (La Chambre, France), or new emission treatment equipment (Carling, France). The fall in these emissions in 2015 is explained mainly by new operating procedures at the reconfigured Lacq site (France) following start-up of the Lacq 2014 project in late 2013, work to cut down flare gas burn-off at the Beaumont site (United States) and optimized boiler operation in favor of natural gas at the La Chambre site (France).

The reduction of around 1,100 tonnes in carbon monoxide (CO) emissions from 2014 to 2015 arises from changes at the Parentis site (France), which will come under further analysis in 2016. The significant reduction in CO emissions, of approximately 5,100 tonnes from 2013 to 2014, is related to the shutdown of activities at the Chauny site in France.

The rise in emissions of VOCs from 2014 to 2015 arises primarily from the consolidation of Bostik, acquired in early 2015. Progress in reducing VOC emissions at the Parentis and Changshu sites is offset by emissions arising from certain production increases at the Hengshui site. A significant increase in VOC emission figures for the Hengshui site in China, acquired in 2012, was seen as a result of improved reliability in data reporting in 2014. This apparent increase wholly offset improvements at other Group sites

The increase in dust emissions seen in 2015 arises from the integration of Bostik, acquired in early 2015, and from more intensive operation of coal-fired boilers at the Hengshui site, coal being a traditionally important fuel in China. The investment in a new transportation system and a closed silo resulted in a reduction of five tonnes in dust emissions from the Changshu site in China from 2013 to 2014. Additional investments were made in late 2015, targeting further improvements in 2016.

# Intensive indicator to air emissions

The diagram below shows the relative VOC emissions to air EFPI for the Group's activities in 2013, 2014 and 2015, calculated in accordance with the methodology detailed in section 2.6 of this reference document. Emissions from the largest VOC emitters among the Group's sites used for these computations account for over 80% of the Group's emissions.



\* The figures for 2015, but not for 2014, 2013 or 2012, include data for Bostik sites

After major improvements in 2013 and 2014, VOC emission levels in 2015 reflect inclusion of data from the Hengshui, China site and Bostik sites in the indicator. Action plans are underway to improve performance through to the 2025 target date.

The results achieved in recent years confirm the Group's confidence in its continuous improvement dynamic, and for 2025 the objective is to reduce VOC emissions by 33% compared to 2012 levels.

### **Emissions to water**

Reducing emissions to water is one of the Group's main environmental objectives. Particular attention is being paid to the issue of effluents with high chemical oxygen demand (COD), and to the discharge of suspended solids.

The Group conducts many actions to minimize its emissions to water. In particular, it systematically treats effluents to reduce high COD and suspended solid contents through measures such as:

- building its plants on inter-company platforms equipped with treatment units:
- gradually installing physico-chemical or biological treatment units to treat effluents on remote sites;
- optimizing treatment at effluent plants or more effectively controlling the effluents sent for treatment.

The Group also uses original water treatment techniques such as phytoremediation and phytodepuration, which are natural purification systems that reproduce the ecological balance of aquatic environments and wetlands. This kind of system is used at the Boretto site in Italy. This natural treatment reduces CODs and surfactants in the waste water.

Reduce the environmental footprint of the Group's activities

### Extensive indicators to water emissions

The table below shows quantified emissions to water environmental indicators for the Group's activities in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

Emissions to water	2015*	2014	2013
Chemical oxygen demand (COD) $(t \circ C_2)$	3,200	3,870	3,800
Suspended solids (t)	870	3,030	2,950

<sup>\*</sup> The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

The integration of Bostik has no significant impact on these figures.

In the last few years, several initiatives have helped reduce COD emissions from certain sites. At the Carling site in France, improvements to a sensitive stage of the production process on an acrylate production unit, combined with the improved technological reliability of the equipment, helped significantly decrease the unit's COD discharges of the site in 2014.

The progress in 2015 arises from improved calculation methods at the Calvert City site in the United States, and improved operation of treatment techniques at the Rio Claro site in Brazil and the Spinetta site in Italy.

From 2013 to 2014, the Group's overall COD discharge increased despite the actions undertaken to decrease it. The rise is mainly a result of changes in the conditions for producing organic peroxides in Europe. The new processes optimize the consumption of raw materials and energy but gave rise to an increase of two thirds in COD emissions from this activity in 2014. The Group is studying ways to optimize its processes by recycling its liquid waste with the long-term objective of bringing COD emissions from this activity back to 2013 levels.

The significant fall in the suspended solids discharge indicator is explained by progress at the Pierre-Bénite site in France.



reduction in suspended solids was achieved by the Pierre-Bénite site in France in 2015, following installation of a wastewater treatment plant in late 2014.

# Intensive indicator to water emissions

The diagram shows the relative COD emissions to water EFPI for the Group's activities in 2013, 2014 and 2015, calculated in accordance with the methodology detailed in section 2.6 of this reference document. Emissions from the largest COD emitters among the Group's sites used for these computations account for over 80% of the Group's emissions.

### **CHEMICAL OXYGEN DEMAND (COD) EFPI:**



\* The figures for 2015, but not for 2014, 2013 or 2012, include data for Bostik sites.

Improved extensive value results contributed to a drop in the intensive indicator figure in 2015. In January 2016, the Group decided to run a water management project with a view to stepping up progress on this point through continuous improvement.

The Group has decided to adjust only the date for reaching the objective pending the results from this project.

The Group's 2025 target is to reduce COD emissions, expressed in EFPI terms, by 20% compared with 2012.

# Waste production

Waste production is inherent to the industrial activities of the Group, which nevertheless endeavors to control waste production at all stages in its activities.

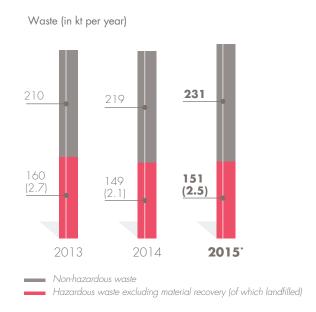
This commitment is reflected in a number of areas:

- reducing waste at the source, by designing products and processes that generate as little waste as possible;
- valorization of by-products to prevent them from becoming waste;
- using waste for energy recovery, whenever possible.

Recent years have seen various examples of progress in waste reduction and utilization in line with the Group's commitments, such as:

- research into new ways to valorize and reuse waste, using, for example, certain types of waste as replacement fuels in boilers instead of conventional fuels;
- a process for recycling cleaning solvents and optimizing cleaning cycles;
- installation of filters to reduce the volume of sludge.

The diagram hereafter shows the amounts of hazardous and non-hazardous waste generated by the Group's activities in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.



\* The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

In 2015, rising waste figures resulting from integration of the Bostik sites acquired in early 2015, and the inclusion of new production sites, with start-up of the Kerteh complex in Malaysia and the acquisition in Taixing in China, were very largely offset by site optimization efforts and by the use of a by-product as fuel at the Carling site in France.

In 2014, the shutdown of activities at the Chauny site made a significant contribution to the reduction in the tonnage of hazardous waste and offset increases related to the start-up of certain new units.

The Group's objective is not only to reduce its overall waste production, but also to recycle waste or recover its energy potential through combustion. Accordingly, in 2015, 15% of hazardous waste produced by the Group worldwide was recycled on or off the site at which it was produced, and 47% was used for energy recovery by combustion.

The table below shows the quantities of hazardous waste that was either recycled or used for energy recovery by combustion in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

Hazardous waste (kt per year)	2015*	2014	2013
Waste recycled into materials	26	29	26
Waste used for energy recovery by combustion	84	79	88
Total waste (including recycled into materials)	177	178	186

The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

The increase in the amount of waste used for energy recovery in 2015 arises mainly from the inclusion of Bostik data.

The reduced tonnage for waste burned for energy recovery in 2014 is chiefly the result of the shutdown of activities at the Chauny site.

Under applicable regulations, many by-products of manufacturing processes are sold as products rather than being declared as waste.

Reduce the environmental footprint of the Group's activities

# Other pollution

A major focus of the Group's environmental policy is how pollution from its activities might affect people living near its industrial sites. Every year, work is undertaken to reduce this pollution, with examples including:

- odor reduction through incinerator upgrades that cut down SO<sub>2</sub> emissions;
- noise reduction through improved acoustic protection devices of air compressors;
- visual pollution reduction by replacing fuel oil with gas in boilers.

The Group has put in place real-time communication with its stakeholders on any event with a sound, visual or odor impact outside the boundaries of its industrial sites. Most sites now also have a system for receiving and processing complaints from local residents so that they can address the issues and minimize the nuisance where possible. Complaints are investigated and action plans defined accordingly in liaison with local authorities, as it was the case at the Lacq site in France in 2015.

# 2.2.1.3 RESOURCE MANAGEMENT

Reducing the environmental impact of the Group's industrial sites also involves optimizing the use of raw materials, energy and natural resources such as water.

New manufacturing units incorporate environmental footprint consideration into the choice of processes and equipment from the design phase.

The Group also regularly improves operating conditions and makes development investments to reduce site consumption of water, energy resources and raw materials.

### Water consumption

The Group uses water in its industrial activities for:

- its manufacturing processes as reaction media, the cooling of production facilities and the cleaning of products and equipment;
- the production of steam;
- the use of hydraulic barriers for treating groundwater contaminated by historical pollution (at old sites, for example).

In a drive to optimize fresh water consumption, be it surface water or groundwater, the Group is changing its production practices, using systems for reducing water consumption, and developing closed circuits. Specific actions cover a wide variety of topics, including improved monitoring of consumption, installation of flowmeters, introduction of leak detection programs, changing of technologies, upgrading of fire-fighting circuits, recovery of rainwater, and recycling of water from scrubbing or boiler condensates.



The Memphis site in the United States decreased its water consumption by 2 million cubic meters from 2013 to 2015, following installation of a new cooling tower in late 2013. This is equivalent to the average annual water consumption of 13,000 families.

The table below shows environmental indicators corresponding to water withdrawn by the Group in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

Use of water	2015*	2014	2013
Total water withdrawn (million M³)	124	120	130

<sup>\*</sup> The figure for 2015, but not for 2014 or 2013, include data for Bostik sites.

The increase in the amount of water withdrawn in 2015 arises from integration of new production sites such as Kerteh in Malaysia and Taixing in China, and from pumping requirements at the Pierre-Bénite site in France. The inclusion of Bostik sites had no significant impact on this indicator.

In 2015, the Group investigated accessibility to water at its sites. It found that 9% of its sites worldwide were located in water-stress areas. This initial analysis strengthens the Group's decision to set up a Water project in 2016, with the purpose of listing the sites concerned by water-stress problems and drawing up an action plan accordingly.

# Consumption of raw materials

The Group wants to be a contributor in optimizing the consumption of non-renewable raw materials used in its manufacturing processes.

Optimization is sought by economizing raw materials through process control and by developing better operating practices.

To optimize its own and its customers' raw material consumption, the Group develops independently and with suppliers on such initiatives as recycling reaction solvents used in manufacturing, and offers to recycle spent activated carbon for customers.

The Group is also developing the use of renewable raw materials, and bio-based materials in particular, for use in production. The Group is the world's largest producer of specialty polyamides derived from castor oil. As well as being the world's only producer of polyamide 11, it also produces polyamides 10.10 and 10.12, using sebacic acid as the raw material. In 2015, the Group's new thiochemicals complex in Malaysia began supplying the Group's partner CJ CheilJedang (CJ) with a sulfur-based intermediate, methyl mercaptan, for the production of methionine using an innovative bio-based process.

Details on the use of renewable raw materials are given in section 2.3.4 of this reference document;

# **Energy consumption**

The Group uses various energy sources, most significantly in its industrial activities. With a view to optimizing energy use, the Group has set an objective of reducing its energy consumption by an average of 1.5% per year over the 2012 to 2020 period and of 1% per year through 2025.

To this end, the Group is rolling out Arkenergy program in all its subsidiaries through a network of Energy Leaders in businesses, facilities and the relevant procurement and technical departments. It focuses on the optimization of energies used in the Group's production facilities and processes, which account for 97% of the Group's overall energy consumption. The program's main priorities are:

- continuously seeking to optimize the consumption and cost of energy, from equipment design and procurement through to day-to-day operations in the Group's facilities;
- developing an energy management system to systematically embed best operational practices, define site-specific targets and periodically review them;
- complying with laws, regulations and other applicable requirements on energy efficiency.

As well as improving energy efficiency, the Arkenergy program also helps to enhance the competitive performance of the Group's industrial sites.

Since the Arkenergy program was strengthened in 2014, it has focused primarily on:

 rollout of energy efficiency evaluations worldwide, focusing on the facilities with the highest net energy purchase demands. The Group has begun or completed a total of 62 energy efficiency evaluations (including 37 in 2015), with 46 in Europe, 14 in North America and 2 in China. The facilities evaluated account for 67% of the Group's overall energy consumption;

- implementation of ISO 50001 as the energy management system in Europe and Asia. By the end of 2015, 17 Group sites had been ISO 50001-certified in Europe and 14 had begun the process, including 11 in Europe;
- allocation of a corporate capital expenditure budget specifically for initiatives under the Arkenergy program. In 2015, 42 capital projects were funded by this central Group budget, with 23 in Europe, 12 in America and 7 in Asia. In 2015, the total savings expected as a result of these investments are estimated at around 82 GWh on an annualized basis.

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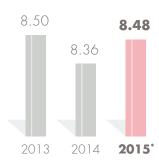
At the Shanghai site in China, patented advanced technology brought energy savings of 15% compared to the previous situation.

Investment at the Clear Lake acrylics facility in the United States minimized energy consumption of the facility's cooling water network, and at the Carling site in France, substantial energy savings were achieved by fitting a condensate recovery system.

Bostik was included in the Arkenergy program in 2015, and has defined the target of reducing its net energy purchases in line with the Group's objective of 1.5% per year. Rollout of the program has begun, and the initial investments made accordingly. Five energy efficiency audits have been carried out already.

### Extensive indicator for energy purchases

The diagram below shows the Group's net energy purchases in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

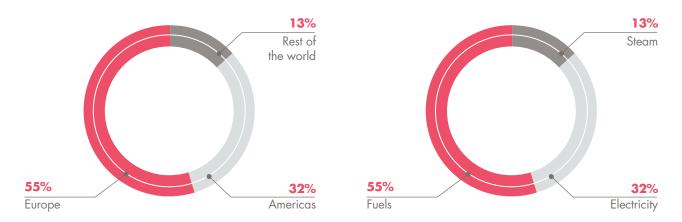


\* The figures for 2015, but not for 2014 or 2013, include data for Bostik sites

Under the same reporting scope as 2014, net energy purchases in 2015 were 8.14 terawatt-hours (TWh).

Reduce the environmental footprint of the Group's activities

Net energy purchases by region and by type of energy break down as follows:



89% of the terawatt-hours purchased in the fuels category result from natural gas.

17% of net purchases of terawatt-hours by the Group, all sources of energy combined, result from low-carbon emission electricity.

### Intensive indicator for energy purchases

The table below shows the intensive net energy purchase EFPI for the Group's activities in 2013, 2014 and 2015, calculated in accordance with the methodology detailed in section 2.6 of

this reference document. Net energy purchases are calculated using the Group's biggest net energy purchasers, which account for more than 80% of the Group's total purchases.

Net energy purchases	2015*	2014	2013
Net energy purchases EFPI	0.98	0.99	1.02

<sup>\*</sup> The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

The Group targets an average reduction of 1.5% per year in net energy purchases expressed in relative values (EFPI) from 2012 to 2020 and of 1% per year through to 2025.

### Land use

The Group seeks to minimize its footprint and use of land.

The first type of actions it uses to do so is soil remediation, where the Group is developing new techniques that stimulate bacteria naturally present in the soil to help with the degradation of chlorinated solvents remaining from past activities, as is the case at the Saint-Auban and Mont sites in France. The operations undertaken at the Mont site produced conclusive results and continued in 2015 following approval from the authorities. This program has built up to semi-industrial scale and should be extended for wide-scale use in 2016, under conditions set by a regional government decree, for treatment of groundwater at the Mont site.

Some of the Group's industrial sites, particularly those with a long history of manufacturing activity, have been (or are still)

responsible for polluting the soil or groundwater. Actions taken to manage this historical pollution are described in section 2.2.1.6 of this reference document.

The second type of action conducted by the Group concerns the management of sections of some of its sites which are not or no longer occupied by production units, in order to encourage the development of certain animal species. Some of these actions are described in section 2.2.1.5 of this reference document on biodiversity.

The last type of action concerns the regulatory restoration of Group subsidiary CECA's after usage diatomite quarries in Virargues and Saint-Bauzile, France. Following partial backfilling of the quarry sections that are no longer in use, remediation work was completed with a final backfill and the addition of a layer of topsoil to the remodeled land. Two regional government decrees determined the end use of these sites, with the Saint-Bauzile site being converted into natural, ecological parkland, and the Virargues site into agricultural use and parkland.

# 2.2.1.4 CLIMATE CHANGE

# Direct greenhouse gas emissions

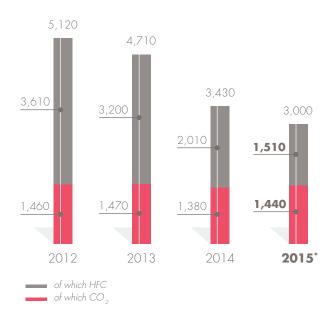
The Group's direct emissions to air, known as Scope 1 greenhouse gas (GHG) emissions, arise from:

- operations requiring energy (burning of fuel oil and gas);
- emissions from processes that generate carbon dioxide (CO<sub>2</sub>), nitrous oxide (N<sub>2</sub>O) or methane (CH<sub>4</sub>) as a product, by-product, co-product or waste, and gas discharges as produced by processes such as thermal oxidation, which converts volatile organic compounds (VOCs) into CO<sub>2</sub>;
- hydrofluorocarbon (HFC) emissions from its production units for these products;
- fugitive emissions from cooling circuits using GHGs.

# Extensive indicator for direct greenhouse gas emissions

The diagram below shows quantified direct GHG emissions to air generated by the Group's activities in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

(Kt CO<sub>2</sub> eq.)



\* The figures for 2015, but not for 2014, 2013 or 2012, include data for Bostik sites.

The figures for 2015 include data for Bostik sites, the emissions from which are very low, corresponding to about 1% of total direct GHG emissions across all Group sites.

These direct GHG emissions, expressed in kilotons of carbon dioxide equivalent (kt  $CO_2$  eq.), break down by region as follows:



The Arkema Group is taking actions to fight climate change by reducing GHG emissions from its production units.

To reduce its impact on global warming, the Group has undertaken a number of actions and deployed effective measures to minimize direct GHG emissions, including:

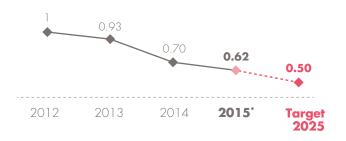
- replacing boilers with more efficient equipment and undertaking work on steam traps and steam circuit insulation at a number of sites under the Arkenergy program (see section 2.2.1.3 of this reference document);
- replacing air-conditioners and cooling units with more efficient models, as well as carrying out enhanced preventive maintenance work, which have helped reduce emissions from this type of equipment;
- installing systems for site emissions treatment, notably at Calvert City, USA, Pierre-Bénite, France and Changshu, China.

In 2013, the Calvert City site in the Unites States made a major contribution to lowering GHG emissions. In 2014, additional investment at this site brought further reductions of 1.2 Mt  $\rm CO_2$  eq. in site GHG emissions.

The sites contributing most to the fall in GHG emissions in 2015 are Calvert City in the United States (reduction of 275 kt, benefitting from a full year of the investments made in 2014), Zaramillo in Spain (reduction of 150 kt from plant closure), and Changshu in China (reduction of 130 kt from improved incinerator reliability).

### Intensive indicator for direct greenhouse gas emissions

The diagram below shows the direct GHG emissions EFPI for the Group's activities from 2015 to 2012, calculated in accordance with the methodology detailed in section 2.6 of this reference document. Emissions from the biggest GHG emitters among the Group's sites used for these calculations account for over 80% of the Group's emissions.



\* The figures for 2015, but not for 2014, 2013 or 2012, include data for Bostik sites.

Scope 2 CO<sub>2</sub> emissions break down as follows:

The Group's 2020 target of reducing direct GHG emissions by 30%, compared with 2012, was achieved in 2014, largely due to the investments made at the Calvert City site in the United States. The progress achieved in 2015 reflects the Group's dynamic on this matter and the effectiveness of its action plan, which extends to all sites.

The Group's new target for 2025 is to reduce GHG emissions, expressed in EFPI terms, by 50% compared with 2012.

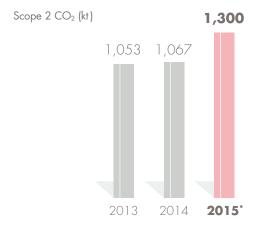
### Indirect greenhouse gas emissions

The Group analyzes the following indirect GHG emissions:

- Scope 2 CO<sub>2</sub> emissions, related to the production by suppliers of the electricity and steam purchased by the Group;
- Scope 3 CO<sub>2</sub> emissions, resulting from the transportation of all Group products.

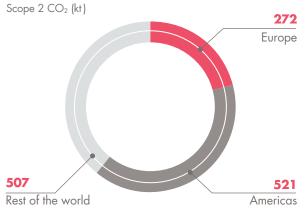
The table below shows Scope 2 and Scope 3  $\rm CO_2$  emissions, as defined above, for the Group's activities in 2015, 2014 and 2013, calculated in accordance with the methodology detailed in section 2.6 of this reference document.

### **INDIRECT GREENHOUSE GAS (GHG) EMISSIONS**



\* In 2015, figures include data for Bostik sites. 2014 and 2013 exclude Bostik.

# INDIRECT GHG EMISSIONS BY REGION



The rise in Scope 2 CO<sub>2</sub> emissions from 2014 to 2015 results from the inclusion of the Taixing facility in China and the Bostik sites.

The Group implements a range of actions to reduce Scope  $2\ CO_2$  emissions under its Arkenergy program (see section 2.2.1.3 of this reference document) and its operational excellence strategy (see section 1.6.1 of this reference document).

In 2015, Scope 3  $CO_2$  emissions resulting from the transportation of all Group products are estimated at around 0.2 million tonnes (to within 20%). This breaks down as 175,000 tonnes across the Group's pre-2015 consolidation scope and 35,000 tonnes for Bostik.

The typology of Group shipments (excluding Bostik) as set out in the 2014 reference document did not change significantly from 2014 to 2015.

For Bostik, around 90% of emissions arise from non-bulk road transportation, compared with 30% for the rest of the Group. This difference in product transportation typology is explained by the fact that Bostik production sites tend to be located closer to their customers.

# Adapting to the extreme consequences of climate change

The Group operates a number of sites in Asia and in the United States, in particular near the Gulf of Mexico, that can experience extreme weather events such as tornadoes, tropical cyclones (typhoons, hurricanes), and flooding. The frequency and intensity of such events could be exacerbated by climate change.

The Group pays particular attention to the potential consequences of these extreme weather events, notably through analyses when acquiring new businesses. Where the potential climate impact is regarded as liable to have a particular incidence on personal safety or on the economic aspects of the acquisition, it may be the subject of a specific study by third-party experts.

When designing new production units, the Group applies the HAZard IDentification (HAZID) method to take account of the impact of external events, like natural disasters, on the mechanical strength of the construction.

The standards used for the construction of the Group's facilities comply with local regulations and data. Facility design therefore takes into consideration data on extreme wind speeds and flood risks (100-year floods) for the sites housing the new units.

Measures taken to protect sites that are potentially subject to such extreme events include installing raised units and control rooms, earth-filled dams and concrete walls around storage facilities.

Responses to these events are described in emergency response procedures for potentially impacted sites. In all cases of alert, sites comply with instructions from the authorities.

Emergency facility shut-down and protection procedures are applied to minimize the risk of chemical substances escaping into the environment when these extreme events occur.

Stocks of some products are also maintained in external storage facilities that are not at risk of impact in order to prevent supply shortages to the Group's customers.

The Group also indicates the exposure of its sites in some regions that are particularly exposed to these types of events. Extreme weather events do not include seismic risks, as described in section 1.7.2.3 of this reference document.

Twenty-one Group sites are exposed to the risk of severe storms (tornadoes and cyclones) and flooding, eleven of which are on the American continent and ten in Asia. This data is based on the 2015 update of reports compiled by the Group's property damage insurers and information on climate-related risks provided by a reinsurance company. These figures include three Bostik sites in Asia, not included in 2014.

# 2.2.1.5 PROTECTION OF BIODIVERSITY

### Measures to protect flora and fauna, and biodiversity in general

Protection of biodiversity involves protection of all flora and fauna species liable to be impacted by emissions due to the Group's activities.

The actions taken seek to reduce each site's emissions to water, soil, and air. Periodic environmental analysis is carried out at each site to identify its impact on the environment, identify the species liable to be concerned, define priority focuses for action plans on environmental protection, and measure the progress achieved. Additionally, new manufacturing units are designed to incorporate environmental footprint considerations into the choice of processes and equipment.

Actions conducted by the Group, including those required by applicable regulations, have succeeded in:

- reducing chemical oxygen demand (COD) in the effluents discharged into rivers, in order to preserve the dissolved oxygen gas that is essential to all aquatic life;
- reducing the amount of volatile organic compounds (VOCs) emitted into the air (under the 2014 reporting scope), to limit the formation of ground-level ozone, a super-oxidant harmful to flora and fauna;
- reducing the amount of sulfur dioxide (SO<sub>2</sub>) and nitrogen oxide (NOx) emissions (under 2014 reporting scope), to help prevent the formation of acid rain which, in addition to its direct effect on plant life, can also alter soil characteristics.

The Group has also acted within the framework of soil remediation laws and regulations to protect various species that depend on the soil or groundwater at sites with long-standing industrial activities.

# Measures to develop biodiversity

Despite occupying only a limited amount of land, the Group conducts a number of actions in Europe to contribute, at its level, to the development of biodiversity on sites where part of the land is not allocated to industrial activities. One of the purposes of these actions is to encourage the return of local species of plant life at, or in the vicinity of, the Group's industrial sites.

In France, rehabilitation and ecosystem restoration work has been carried out at several sites, including Pierre-Bénite (reed bed restoration and installation of flower meadows and pools to replace old buildings), Carling (ecology-focused rehabilitation of a former wastewater treatment lagoon), Saint-Bauzile and Virargues (quarry rehabilitation compliant with regulatory framework, then top-soiling to allow the return of local plant life).

In Italy, the Group tends hundreds of olive trees in the grounds of the Gissi site, thus helping to safeguard the plant and animal ecosystem in the vicinity of the facility.

# 2.2.1.6 MANAGEMENT OF HISTORICAL POLLUTION AND RELATED PROVISIONS

Some Group industrial sites, particularly those with a long history of manufacturing activity, have been (or still are) responsible for polluting the environment, particularly the soil or groundwater. Due to this, a number of sites that are (or were) operated by the Group, sites sold by the Group, adjoining sites and sites where the Group stored waste or had waste eliminated have been (or still are, or could later be) subject to specific demands for remediation from the relevant authorities.

Where there is a probable soil or groundwater contamination on a site, inquiries are launched to establish the extent of the area concerned and ascertain whether the pollution is likely to spread. The Group cooperates with the authorities to define appropriate measures when an environmental or health risk is identified.

The amount of provisions for environmental risk at 31 December 2015 is provided in note 20.3 to the consolidated financial statements in section 4.3.3 of this reference document.

# 2.2.2 Managing products responsibly (product stewardship)

# 2.2.2.1 POLICY AND GENERAL ORGANIZATION

The Group works to market products that are safe and useful to society and do not harm human health or the environment.

To do this, the Group relies on an organizational structure, teams of experts, IT resources and databases that enable it to meet regulatory requirements on product safety.

Product stewardship requires continuously improving knowledge of product characteristics and usages. Accordingly, the Group has for many years relied on a team of expert toxicologists and ecotoxicologists, who conduct product hazard studies and work closely with regulatory experts on risk assessments in normal conditions of use.

The Group expresses its commitment by complying with REACH, the European regulation covering registration, evaluation, authorization and restriction processes for chemical products. REACH is a highly ambitious regulation that aims to make indepth changes to the management of chemical substances that are produced, imported and sold on the European market, by improving knowledge, analyzing environmental and health risks and defining measures to manage potential risks resulting from their manufacture or use. The Group endorses the objectives of REACH, which represents an additional means of continuously improving knowledge of its substances and their safe use and thus meets the legitimate expectations of civil society.

To carry out the work necessary for full compliance with REACH's many obligations, the Group has set up a project structure overseen by a steering committee at the Executive Committee level. The main competence is centralized at the Group level within the Product Safety and Environment department, which oversees product-related health, safety and environment matters and regulatory implications and has a team of experts in toxicology, ecotoxicology and regulations. These experts ensure the implementation of the REACH regulations by drawing on a network of correspondents that take part in drafting parts of the cases that concern business units, industrial sites, subsidiaries and R&D, for operational aspects; and the Procurement, IT, Legal, and Communication departments, for corporate issues. This

organizational structure has enabled the Group (including Bostik) to fulfill the following requirements of the REACH regulation:

- Registration: A total of 277 substances had been registered with the European Chemicals Agency (ECHA) by the first two registration deadlines, on 30 November 2010 and 31 May 2013 (2015 scope of business). The Group has already begun the substance registration process for the 2018 deadline. The Group plans to register 430 substances in all, and around ten of these are liable to require authorization. This figure was adjusted following the two previous registration stages and completed, on the basis of a survey to examine forthcoming developments in the business units' portfolios. The Group estimates that compliance with this new regulation will cost around 25 million euros over the period 2016-2020.
- Evaluation: The Group is involved in eight cases for which the evaluation has now been completed. They pertain to seven substances manufactured by the Group: carbon tetrachloride (CTC), which was manufactured until 1 July 2012 then used at the Mont site in France; diphenyl guanidine (DPG), for which the Group is acting as leader for the registration case; methyl chloride, which is manufactured at the Jarrie site in France; butyl acrylate, made at the Carling site in France; isophorone, made at the Guntzbourg site in France; tert-butyl perbenzoate, made at the Guntzbourg site in Germany; and propoxylated bisphenol A (BPA), made by CECA in Belgium. They also concern another substance, bisphenol A (BPA), used by the Arkema Group as a raw material and currently the subject of European risk studies and national bills, particularly concerning its use in materials in contact with foodstuffs.

At this stage, the decisions received from the European authorities on CTC, DPG, methyl chloride, butyl acrylate, isophorone, tert-butyl perbenzoate and propoxylated BPA go no further than requiring additional tests and risk assessments. On the other hand, BPA, and indirectly its derivatives, may be subject to restriction measures in certain markets, particularly the food market. French Act No. 2012-1442 of 24 December 2012 suspended, as from 1 January 2013, the manufacture, import and sale on the market of any packaging, container or utensil containing BPA and entering directly in contact with

foodstuffs for babies and small children. This ban was extended to all categories of people on 1 January 2015. The Group has little exposure to the market for food containers, and is working closely with its customers to substitute BPA-derived products. Five cases were evaluated in 2014 and six were undergoing evaluation in 2015. They concern ten substances produced by the Group (methyl methacrylate, 2-ethylhexanol, dimethyl disulfide, trimethylolpropane triacrylate, sodium perchlorate, 1,2,4-triazole, dicumyl and tert-amyl peroxides, [1,3(or 1,4)-phenylenebis(1-methylethylidene)]bis[tert-butyl] peroxide and the quaternary ammonium compounds, di-C16-18- alkyldimethyl, chlorides, plus one substance, nonyl phenol, used by the Group as a raw material. Draft decisions on the five substances evaluated in 2014 suggest that additional risk data is needed before final decisions can be made on the need for European measures (except for 2-ethylhexanol, for which the existing data would appear sufficient).

- Authorization: In terms of registering substances on the candidate list, the Group follows the proposals for registration and responds to consultations organized by ECHA for substances whose uses may be subject to authorization (note that substances used as synthesis intermediates are not subject to authorization). The potential implications are estimated then actions decided, such as a study of alternative substances for the intended uses, an application for authorization when falling under Annex XIV, unit conversion or planned cessation of the activity. At 31 December 2015, the industry candidate list contained 168 substances. These substances include: (i) hydrazine produced at the Lannemezan site in France, (ii) 2-imidazolidinethione (ETU) produced by MLPC, (iii) nonylphenol ethoxylates produced by CECA, (iv) dioctyltin bis (2-ethylhexyl mercaptoacetate) produced at Vlissingen in the Netherlands on behalf of another company, and (v) sodium dichromate, used as a processing aid at the Jarrie site in France. Sodium dichromate is registered under Annex XIV; in November 2015 the Group filed an application to have it authorized, as the search for an alternative solution has not yet been successful.
- Restriction: Cobalt chloride is expected to go from a recommendation for registration under Annex XIV with a view to authorization, to a recommendation for restriction that would in theory only target metal coatings. This application does not concern the Group, which uses it as a processing aid at the Jarrie site in France. Nevertheless, pending a formal proposal for restriction and as a precautionary measure, the Group is studying a substitute solution. For perfluorooctanoic acid (PFOA) and its salts, a draft restriction seeks to limit the PFOA concentration in products and articles. This concerns certain grades of the Group's PVDF, but because of its 2006 commitment to find alternatives for this kind of surfactant, and discontinue use on 31 December 2015, this restriction should not impact the Group.

The Group does not manufacture any persistent organic pollutants (POPs).

The Group discontinued production of diethyl hexylphtalate (DEHP) in the first quarter of 2014, and shut down the Chauny site in France, where DEHP was made, in the same year. For this product, an authorization process is underway with registration under Annex XIV of the REACH regulation and under various national regulations restricting its use owing to suspicions that it might cause disturbances to the endocrine system. The Group does not make or sell bisphenol A (BPA), but uses it as a raw material for making other products.

Outside Europe, the Group markets its chemicals in accordance with national and regional mandatory inventories, where relevant. Due to its history and global presence, the Group has products that are already notified in many inventories. Should a need arise for a new product notification, the Group has a major database on the characteristics of its products enabling it to file dossiers in a timely manner. Notifications are executed thanks to the work of experts at the Group level who rely on product HSE managers in country subsidiaries and/or a network of local specialist consultants. These experts are in constant contact within their own network. Every year, a seminar is held over several days in Asia devoted to discussions between product HSE managers in the Asian subsidiaries and their head office and American contacts. Country-specific product HSE roadmaps are decided during this seminar depending on changes in the local situation and regulations.

In 2015, three new sets of regulations similar to REACH were put in place in Asia (in South Korea, Taiwan and Turkey) concerning the obligation to register existing substances. And, in Malaysia and Turkey, rollout proceeded of the Globally Harmonized System of Classification and Labeling for Chemicals (GHS), set up by the United Nations Economic and Social Council.

In many countries, the Group records knowledge of product characteristics and usages in Safety Data Sheets (SDSs). SDSs are documents that are prepared in order to market chemical products classified as hazardous to human health or the environment. SDSs must contain prevention and safety data necessary for the use of a hazardous product. They are prepared in some forty languages using efficient IT infrastructure and information compiled from global databases grouping together all product compositions and their toxicological, ecotoxicological and physico-chemical data. This ensures information is consistent wherever the Group's products are marketed. The Group disseminates SDSs in accordance with regulatory requirements or makes them available on its website or via the online QuickFDS platform.

A combination of Group organization, allocated resources and motivated teams has enabled the release of extended safety data sheets (eSDSs, the latest format established by REACH), which now include a description of exposure scenarios for identified uses, thereby improving risk management.

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Reduce the environmental footprint of the Group's activities

The Group uses efficient IT systems to draft regulatory documents, and adapts them as required to include the latest formats and data. This is particularly true during implementation of the GHS, a common classification and labeling method, in participating countries

The Group has also developed systems that use validated data from its central database to print labels to a consistent classification, regardless of the country in which the product is manufactured or marketed.

Thanks to its organization, scientific and regulatory expertise and expert teams assisted by efficient IT systems, the Group upholds its commitment to marketing chemical products in a safe and responsible manner over and above these regulatory requirements by informing its customers and the public in complete transparency.

# 2.2.2.2 HEALTH, SAFETY AND ENVIRONMENT FOR CONSUMERS

Product stewardship goes beyond regulations by ensuring that products have no effect on people's health and safety or their environment. This approach involves every player in the product chain, from raw material suppliers to end customers. The Group works to market products that are safe and useful to society and do not harm the health, safety or environment of users and consumers. To this end, it takes actions that go beyond mere compliance with the regulations described in section 2.2.2.1 of this reference document, in line with the commitments set out in its Health, Safety, Environment and Quality Charter.

The Group has already demonstrated its commitment to product stewardship by endorsing the International Council of Chemical Associations (ICCA) Responsible Care® Global Charter as part of international projects, such as the High Production Volume (HPV) program led by the ICCA and the United States Environmental Protection Agency (EPA).

The Group has also extended its commitment by participating in the Global Product Strategy (GPS) program, which entails the creation of a dedicated web page and the regular publication of safety summaries on the ICCA website and its own website as and when REACH registration dossiers are filed. At end-2015, the Group had published 145 GPS safety summaries on its website (arkema.com) corresponding to finished products registered as part of REACH in 2010 or 2013.

In the interest of product stewardship of its own products, the Group goes beyond its regulatory obligations and supplies safety data sheets even for products that are not classified as hazardous.

The Group also carries out life cycle analyses (LCAs) to inform its customers of the environmental performance of certain products. LCAs are multi-criteria analyses that notably convert the full inventory of flows related to a product's production into environmental impacts.

The Group gives initial priority to LCAs for product ranges aimed at customers in industries that also use LCAs. This mainly concerns the Rilsamid®, Rilsan®, Pebax®, Kynar® and Forane® product ranges, as well as certain Bostik products.

These analyses are used to assess products' impacts in areas such as carbon dioxide emissions, ozone depletion potential, contribution to acidification, energy and water consumption, and land use during production.

The Group has developed in-house expertise at its Rhône-Alpes research center in France to help it apply this comprehensive approach, which has been recognized and standardized as part of customer relations.

The Group follows the recommendations of the International Reference Life Cycle Data System (ILCD) when conducting these analyses.

# 2.3 PLACE SUSTAINABLE DEVELOPMENT SOLUTIONS AT THE HEART OF THE GROUP'S INNOVATION POLICY AND PRODUCT RANGE

To address the major challenges of the future and contribute to sustainable development for the planet, the Group is committed to promoting the advancement and widespread use of environmentally sound technologies, and to developing an innovative range of technologies and products in the fields of new energies, climate change reversal, access to water, renewable raw materials, recycling and extended product lifespans. This proactive commitment is in line with the principles of the United Nations Global Compact and the Responsible Care® Global Charter, to which the Group is a signatory.

The Group develops new production processes and upgrades its manufacturing technologies to minimize the environmental risks arising from the activities of its industrial sites and the emission of potential pollutants.

These actions are outlined in section 2.2.1 of this reference document.



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In 2015, the Group filed 61 patents applications (including five from Bostik) for innovative solutions addressing sustainable development challenges. In 2014, 81 applications were filed. Since 2010, the average number is 60 per year.

# 2.3.1 Develop products for new energies

New energies are one of the Group's primary research areas. By proposing innovative solutions for new energies, the Group contributes to preserving the planet's fossil resources.

# 2.3.1.1 CURRENT SOLUTIONS FOR SOLAR ENERGY AND ENERGY STORAGE

The Group develops and offers a range of solutions for the solar energy and energy storage markets that are crucial for discontinuous-flow alternative energies. In particular, the Group has developed applications for:

- lithium-ion batteries:
  - Kynar® PVDF, an excellent binder for battery electrodes and an excellent "separator" material (polymer film separating two electrodes),
  - polyamides used for forming batteries, multi-module assemblies and connector encapsulation;

- photovoltaic systems:
  - ethylene vinyl acetates (EVA), used as encapsulation materials for photovoltaic cells,
  - new Apolhya® resins, used for their high transmittance and UV resistance, in encapsulation and backsheet applications,
  - Kynar® PVDF, used along with other films for photovoltaic cell backsheets,
  - Bostik Vitel® polyester adhesives, used for binding backsheets (PVDF on PET). Some AEC Polymers adhesives are also used for binding cells in supports such as solar tiles.

Place sustainable development solutions at the heart of the Group's innovation policy and product range

# 2.3.1.2 NEW DEVELOPMENTS IN SOLAR AND WIND POWER AND ENERGY STORAGE

The Group is preparing for the future by developing new products for solar power, wind power and energy storage. Examples include:

- next-generation lithium salts, which are still at the experimental stage but should make lithium-ion batteries safer thanks to their thermal and chemical stability;
- Elium® thermoplastic composites, used for wind turbine blades.

The Group establishes partnerships with a variety of stakeholders as part of its research into how its existing and future products could potentially contribute to new energy applications. Since 2014, the Arkema Group and the Hydro-Québec utility's research

institute IREQ have been working together to develop a new, high-safety electrolyte using fluoride salts made by the Group, for use in electric batteries in cars and public transportation vehicles. In 2015, the Arkema Group and Hydro-Québec, Canada's biggest electricity producer, strengthened their partnership by founding a joint R&D laboratory specializing in energy storage. One of the missions of the new laboratory concerns the development of next-generation materials for making lithium-ion batteries.

The Arkema Group also participates in various projects led by ADEME, the French environment and energy management agency, such as the Isocel photovoltaic and Effiwind wind turbine projects, both of which have been selected for France's largescale investment program, *Investissements d'avenir*.

# 2.3.2 Fight against global warming

The Group develops and manufactures technical products and solutions that contribute to reducing greenhouse gases (GHGs) and hence global warming. This is achieved by increasing the fuel efficiency of various means of transportation, decreasing the energy consumption of heating and cooling systems in the construction and public works industries, and providing alternative chemical substances with low global warming potential.

# 2.3.2.1 LIGHTER MATERIALS FOR TRANSPORTATION

The Group develops lightweight, resistant materials that can be used to reduce vehicle weight and, by extension, fuel consumption. In doing so, they also contribute to minimizing  $CO_2$  emissions in the transportation sector.

The Group's main innovations in this area include:

- Altuglas® ShieldUp PMMA, a nanostructured resin used as a replacement for glass. Nanostrength® technology based on acrylic copolymers, which can organize themselves on a nanometric scale, increases the impact resistance of certain transparent polymers. Altuglas ShieldUp® technology is used in car windows as a replacement for glass and helps make vehicles lighter. A roof in Altuglas® ShieldUp instead of glass could result in a 0.4 liter decrease in fuel consumption per hundred kilometers and a 7 kilogram decrease in CO2 over the same distance. Assuming that 100,000 vehicles driving 20,000 kilometers per year were equipped with this innovation, CO2 emissions would be reduced by 140,000 tonnes per year;
- Rilsan® HT polyamide 11, used as a substitute for metal. This
  product, made from non-foodstuff vegetable raw materials,
  offers flexibility plus resistance to very high temperatures. It is
  used in the automotive industry to replace metal and rubber in

- fluid pipes in the engine compartment. Six times lighter than steel and three times lighter than aluminum, it lightens vehicles and contributes to reducing fuel consumption and emissions;
- Kepstan® polyetherketone (PEKK), used as a substitute for metal in extreme conditions. PEKK is an ultra-high-performance polymer (the "extreme polymer"), with excellent mechanical properties and exceptional resistance to high temperatures (up to 260°C), chemical agents, abrasion and fire. These characteristics make it ideal for highly specialized applications, particularly offshore drilling and aerospace, where it replaces metal in fastening components, insulating parts and interior fittings:
- acrylic and polyamide thermoplastic composites, used to replace conventional composites. The Group launched its first line of liquid thermoplastic resins under the Elium® brand in 2014. These resins are made using the same equipment and processes as thermo-set composites. They offer a minimum 50% reduction in weight compared with parts traditionally made in metal, without compromising on strength. AEC Polymers and Bostik also supply adhesives for structural binding of composite materials;
- Bostik elastic adhesives, which are used for binding body panels and windows in industrial vehicles, such as coaches, buses and wagons. These semi-structural bonding techniques improve the torsional rigidity of vehicles, and thereby contribute to the development of lightweight vehicle structures.

Under its R&D program, the Group develops partnerships for sharing skills and accelerating innovation. One such partnership is with the *Pôle de Plasturgie de l'Est* in France.

The Group also coordinates the Compofast project, which brings together some 15 European partners for the development of thermoplastic composites suitable for use in vehicles and thus capable of reducing vehicle weight. Similar industrial partnerships lie behind the Group's Altuglas® ShieldUp technology, for applications in panoramic vehicle roofs, as with Renault and on Peugeot's Onyx concept car.

# SOLUTIONS FOR REDUCING GREENHOUSE 2.3.2.2

The Group develops enhancements and new applications for its existing products to help minimize greenhouse gas emissions.

The Group is pursuing the development of low global warming potential (GWP) refrigerant gases and has announced the launch of a new industrial project for producing 1234yf, a nextgeneration fluorinated gas, to serve the needs of automotive air-

conditioning. More generally speaking, the Group is pursuing its strategy of continuous adaptation to changes in global regulations, and developing competitive solutions to be a global participant in the drive to reduce GHG emissions.

The Group has also developed the Kynar Aquatec® PVDF resin, a water-based formulation for white paint used on reflecting roofs. Because it has a much longer lifespan than traditional paints, it helps reduce air conditioning needs in regions with high sunlight exposure. The use of reflecting roofs with Kynar Aquatec® bases reduces buildings' energy consumption in highsunlight regions by 20%, or 20 kilowatt-hours per square meter a year. For ten buildings with a roof area of 15,000 square meters, this would represent a total annual reduction of 1,500 tonnes of CO<sub>2</sub> emissions, assuming an emission coefficient of 0.5 tonne of CO<sub>2</sub> per 1,000 kilowatt-hours.

Outside of the automotive industry, CECA has developed the Cecabase RT® line of warm mix asphalt (WMA) additives, which offer energy savings of 20% to 30% when paving roads.

### Improve water quality and access to water 2.3.3

Water treatment is another of the Group's major sustainable development research focuses.

### 2.3.3.1 DRINKING WATER FILTRATION SOLUTIONS

The main products and solutions developed for this purpose are fluorinated polymer membranes and CECA's filtering agents.

Hollow-fiber membranes made with the Group's Kynar® PVDF are used for treating water by micro-filtration, which is more effective than conventional sand percolation filtration systems since it traps particles from 1 to 10 microns. In this kind of microfiltration system, now at the product engineering stage, Kynar® provides better resistance to the chlorinated products used for cleaning membranes.

The Group also works with innovative companies to develop ultrafiltration water treatment solutions. In 2014, the Group entered into a partnership with Polymem, a medium-sized French company specialized in manufacturing hollow-fiber membrane filtration modules. The goal of the partnership is to develop new hydrophilic ultrafiltration membrane technology using the Group's new Kynar® nanostructured polymer. This innovation increases the performance and energy efficiency of membrane water treatment. The partnership will make the technology accessible to water treatment players more quickly.

In another filtration stage, activated carbon marketed by Group subsidiary CECA under the Acticarbone® and Anticromos® brands eliminates micro-contaminants, odor and taste in wastewater treated for use as drinking water. As noted in section 2.3.5.2 of this reference document, ČECA also offers its customers a service to regenerate microcontaminant-saturated activated carbon.

# OTHER WATER TREATMENT SOLUTIONS

The Group markets a variety of other products for water treatment, including:

- acrylic acid, which serves to manufacture polyacrylates used in water treatment plants to ensure the flocculation of suspended
- hydrogen peroxide, used as an agent to reduce chemical oxygen demand. A clean reagent, hydrogen peroxide only has water and oxygen as by-products and offers the benefit of generating neither wastewater sludge nor toxic by-products;
- Rilsan® fine powders, which have been chosen by many cities to coat their drinking water pipe networks and wastewater treatment plant equipment because of their strength, durability and flow properties.

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Place sustainable development solutions at the heart of the Group's innovation policy and product range

The Group completed its range of Kynar® PVDF resins in 2014 with the launch of a grade suited for multilayer pipes used to transport drinking water without affecting the taste. The new grade also delays the growth of thin layers of bacteria due to its purity and the fact that its implementation does not require any

additives. It has received KTW certification from the German water and gas agency.

# 2.3.4 Develop the use of renewable raw materials

By developing products based on renewable raw materials, the Group is contributing to the conservation of non-renewable fossil fuels thanks to innovative solutions resulting from in-house and collaborative research.

This ongoing commitment is seen in the fact that products made using 20% to 100% of renewable raw materials account for close to 13% of the Group's net sales (excluding Bostik) in 2014.

# 2.3.4.1 THE GROUP'S CURRENT SOLUTIONS

The Group has been manufacturing the monomer used to produce Rilsan® polyamide 11 from castor oil in Marseille, France for over 50 years.

The Group acquired two companies in China in 2012: Hebei Casda Biomaterials Co. Ltd., which produces sebacic acid from castor oil, and Suzhou Hipro Polymers Co. Ltd., which makes polyamides 10.10 and 10.12 derived from this sebacic acid.

The Group also operates three other bio-facilities:

- the Parentis facility in France's Landes region uses local pine wood to produce activated carbon, which is used as filters in the food and pharmaceutical industries, as micro-contaminant filters in wastewater treatment, and as catalyst supports;
- the Blooming Prairie facility in the United States manufactures various additives for lubricants and the cosmetics industry via epoxidation of flaxseed oil, terpenes and limonenes;
- the Feuchy facility in France converts plant fatty acids into surfactants for fertilizers and warm mix asphalt.

As part of its coating resins activities, the Group also develops and sells alkyd resins derived from plant oils and diamide-type rheology additives for which a significant portion of raw materials are bio-based fatty acids.

### 2.3.4.2 NEW DEVELOPMENTS

The Group's R&D constantly works to increase the use of renewable raw materials in current and future Group products.

One of the preferred methods is to work with research partners as part of major collaborative projects that include customers, suppliers and university laboratories. For example:

- the Group was an active participant in the European FP7
  Eurobioref bio-facilities project, which involved 29 partners
  and concluded in 2014. Its corporate research unit coordinated
  the industrial side of this project. As part of the project, the
  Group developed new methods for synthesizing monomers for
  polyamides and contributed to the development of a process for
  the production of aviation fuel. Results were also achieved in
  the areas of activated carbon, fatty amines, hydrogen peroxide
  and acrylics;
- since 2015, the Group has been involved in the H2020 Cosmos project, on industrial applications (including polymer production) using non-foodstuff, non-GM oil plants that can be grown in Europe, such as crambe and camelina;
- the Group is involved in the BIOMA+ project alongside Global Bioenergies and CNRS, the French national research agency. Global Bioenergies is developing a fermentation-based process for making isobutene, a product of interest to Arkema for use in selective oxidation applications;
- the Group is one of the six founding members of the Fimalin association, whose goal is to create, structure and promote a technical flax industry in France in order to develop ecodesigned materials using high-performance flax fibers. The long-term objective is to make technical flax an alternative to glass and carbon fibers for strengthening composites, opening the way for eco-polymers, eco-composites and the creation of a new agro-industrial sector;
- the Group's coating resins business unit is working with its customers to research the use of partially bio-based raw materials as a substitute for fossil fuel-based raw materials in the production of "oil-free polyester";
- for flexible packaging applications, Bostik develops polyurethane adhesives containing more than 70% of raw materials of renewable origin.

# 2.3.5 Encourage recycling and the circular economy

The Group contributes to the conservation of non-renewable fossil based raw materials by reusing the by-products of its industrial processes, by helping to recycle its products and those of its customers, and by extending the lifespan of customers' products.

# 2.3.5.1 CIRCULAR ECONOMY

The Group sells many of the by-products created by the production of its main products by finding applications suited to their inherent properties.

In addition to selling by-products, the Group also transforms waste wherever possible into products that can be used by other industrial sectors, thereby preventing them from becoming industrial waste. In 2015, the Group set up an inter-business working group to step up these efforts and tighten coordination with partners.

As mentioned in section 2.2.1.2 of this reference document, 15% of hazardous waste produced by the Group (including Bostik) worldwide in 2015 was recycled on or off the production site (as raw materials).

For example, the sodium-bearing water produced at the Mont facility in France as part of the purification process of a monomer produced at the site has been recycled for many years. The water is used by the paper industry as part of the manufacturing process for Kraft paper and cardboard. This basic water, rich in organics, is used by paper manufacturers to minimize sulfur loss in their process regeneration loops.

At the Hengshui, China site of the Group's subsidiary Casda, the flow of residual sulfuric acid generated by the manufacturing process for sebacic acid is neutralized to obtain a sodium sulfate solution, which is then concentrated and crystallized. Instead of producing dilute sulfuric acid that has to be treated as waste, the new process produces 50,000 tonnes of sodium sulfate per year in solid form, as a marketable by-product.

# 2.3.5.2 GROUP AND CUSTOMER PRODUCT RECYCLING

The Group is developing a number of solutions that make it easier to recycle customers' products.

For example, Elium® liquid thermoplastics are made using the same equipment and processes as thermoset composites. Unlike parts made from thermoset resins such as epoxy, the parts made from these innovative resins are easy to recycle.

The Group has also developed technologies to protect glass bottles (Kercoat®) and hide scuffs (Opticoat®). These products significantly improve the appearance and lifespan of bottles by

tripling the number of times returned bottles, notably those of beer producers, can be reused.

CECA, a Group subsidiary, has developed a solution that increases the recycling rate of products from roadwork. Using Cecabase RT® additives in asphalt mix increases the aggregate recycling rate by 10% to 15% compared with conventional techniques. These additives also reduce the asphalt mix's workable heating temperature.

After being used for drinking water treatment as described in section 2.3.3.1 of this reference document, CECA-produced activated carbon is saturated with micro-contaminants. To prevent the carbon from being landfilled, the Group subsidiary has introduced a recycling service for customers. The used activated carbon is processed in high-temperature ovens, which completely eliminate the pollutants absorbed in its porous structure. Thanks to CECA's expertise, the absorption properties of the activated carbon are reactivated, enabling it to be reused in the same processing systems.

# 2.3.5.3 EXTENDING THE LIFESPAN OF CUSTOMER PRODUCTS

The Group endeavors to steadily increase the performance of its products over time.

It has developed a line of organic peroxides for crosslinking rubber, which is then used to manufacture parts, typically for the automotive industry. The parts meet manufacturer requirements for aging and extended use.

The Group has also developed new polymer grades which increase the lifespan of its customers' products. For example, Kynar® offers a coating with a particularly long lifespan. The Kynar Aquatec® product, used for reflective roofs (see section 2.3.2.2 of this reference document), keeps its white color over a very long time span, thus affording long-life, maintenance-free reflective properties.

In 2015, the Group launched its Glass Coating Academy training program for professionals in the glass bottle industry. The program draws upon the Group's thirty-year experience to raise awareness of the issues involved in proper use of glass coatings. Used optimally, Kercoat® and Opticoat® extend the service life of customers' bottles by increasing the number of reuse cycles supported by deposit-return bottles.

The Group's research policy and initiatives are detailed in section 1.4 of this reference document.

# 2.3.6 The Smart House: a project dedicated to sustainable construction

The Smart House by Arkema, the only house-laboratory of its kind in the world, is designed to muster forces industry-wide on innovation and sustainable development for the construction industry.

It was opened in 2015 at the Bostik R&D site in Venette, France, to test, develop and approve new solutions to major challenges facing the construction industry, particularly energy efficiency, sustainable development, and the health and comfort of residents.

The Smart House is designed as a multidisciplinary research platform enabling Group researchers, scientific partners and customers to develop a comprehensive R&D approach capable of yielding sustainable construction innovations through to 2030.

This original cooperative development initiative will help all players in the ecosystem bring innovative sustainable construction solutions to market faster. As well as countering climate change, the Smart House also helps customers accelerating their performance.

# 2.4 ENCOURAGE OPEN DIALOGUE WITH ALL GROUP STAKEHOLDERS

# F CUS: Arkema's participation in COP 21

The Group took part in several events in connection with COP 21. It attended the Paris Business & Climate Summit during the run-up phase in June 2015. It played an important role in the French nationwide public awareness-raising operation "Noah's Ark for the Climate" run by the French Environment Ministry. Additionally it sat on several panels during the COP 21 conference. The Group was also involved in the "French Companies Act on Climate" publication outlining the ambitions of 39 major French groups in light of the COP 21 conference.

# 2.4.1 Regional, economic and social impact of the Group's activities

The Group approaches corporate citizenship in all its host regions from three priority angles:

- investment;
- revitalization of labor market areas;
- scientific support upstream of innovation.

# Investment

The Group's activities generate tens of thousands of direct and indirect jobs worldwide, making it a contributor to the economic and social development of the regions where it operates.

Group investment in 2015 contributed to the creation of around 1,350 direct or indirect full-time equivalent (FTE) jobs. This

investment also had an extended impact on the economic fabric of the labor market areas to the equivalent of 2,750 FTE jobs.



The new thiochemicals complex in Kerteh, Malaysia, which started up in 2015, represented an investment budget approaching 200 million euros. Construction work on the new complex, mostly commissioned from local companies, involved 1,400 people and more than five million working hours.

### Revitalization of labor market areas

The Group pays close attention to the possible consequences of business relocation. Where such reorganization is called for in France, the Group strives to compensate for job losses wherever possible, and helps to revitalize the impacted labor market areas. These actions are defined within the legal framework of revitalization agreements with public authorities and include a variety of measures, such as:

- financial support for company creation or takeovers;
- exploration for possibilities of setting up new activities and supporting their development.

More generally, the Group has a policy of supporting innovative small and medium-sized enterprises (SMEs) in related business areas through joint projects and equity investments. An example of this is when research centers work closely with neighboring schools or laboratories as part of clusters while creating possibilities for partnerships with local SMEs. The Group is a founding member of Axelera, a world-class competitiveness cluster in the field of chemistry and the environment that brings together and coordinates players from industry, research and education in the Rhône-Alpes region in France.

Through this kind of local partnership, the Group stimulates innovation and deepens its local integration. For example, at the Lacq site in France, the Group provides technical and infrastructure support to innovative young businesses setting up in the Chemstart'up business incubator.

It also takes a stance as a key early-stage player in strategically crucial industries such as thermoplastic composite materials, renewable raw materials and new energies.

For example, under a public-private partnership initiated by the Aquitaine region in France, the Group has signed a cooperation agreement with SCE France (a subsidiary of Hydro-Québec,

Canada's leading electricity producer), a recent arrival at the Lacq complex, on a joint R&D laboratory working on next-generation materials for making lithium-ion batteries. The aim is to develop very-high-performance materials for renewable energy and electric vehicle applications.

# Scientific support

Under its ambitious innovation policy, the Group maintains close ties with the scientific and educational ecosystems in its host regions worldwide, through many partnerships with universities and public and private research laboratories.

An example of scientific and technological cooperation in France is the Smart House project, in which the Compiègne Technology University is a stakeholder. The Smart House is a highly original house-laboratory designed as a multidisciplinary cooperative platform for developing innovations to address major sustainable construction challenges (such as reductions in greenhouse gas emissions and domestic energy consumption) through to 2030.

In Asia, the Group has partnerships with highly reputed and innovative universities in China, Japan and South Korea. By joining, in this way, the communities that drive innovation in Asia today, the Group also benefits from the region's strong development potential.

In the Unites States, in the field of composites, the Group is a member of the Oak Ridge Carbon Fiber Consortium, which liaises closely with the Oak Ridge national laboratory, and has become active in the Institute for Advanced Composites Manufacturing Innovation (IACMI). At this industrial innovation hub, announced by President Barack Obama in January 2015, there are 122 organizations (companies, associations, universities and research laboratories) working on next-generation composite materials in partnership with the US Department of Energy.

# 2.4.2 Relations with stakeholders

As a responsible economic player in an increasingly interconnected environment, the Group is particularly attentive to the need to forge close ties with all stakeholders. Worldwide, the Group develops grassroots communication to build quality, trust-based relations across its immediate environment. Open dialogue also helps the Group understand the expectations of local communities and ensure they are properly accommodated in its CSR strategy.

# 2.4.2.1 THE COMMON GROUND® APPROACH

The Arkema Group goes beyond regulatory requirements by actively developing dialogue with local communities. The Group's innovative community relations program, Common Ground®, has been running for more than ten years now. Used in all the Group's host countries, the program focuses on three main areas:

### • Listening to understand expectations

One of the primary aims of the Common Ground® program is to understand the concerns of local communities. One way the Group develops this understanding is through opinion surveys addressing communities living near its industrial sites. Survey

Encourage open dialogue with all Group stakeholders

input enables the Group to address specific concerns on issues such as industrial and chemical risks.

### · Exchanging and informing

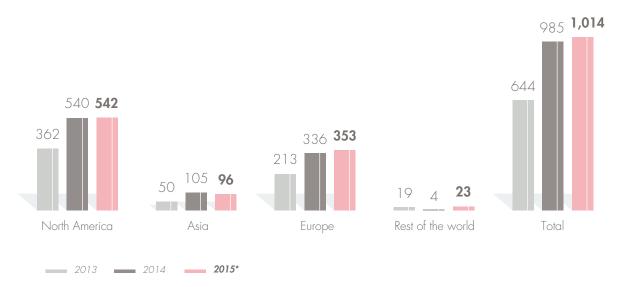
Industrial site mangers run regular open-day events, at which people can find out about the site's activities, the products it makes and the processes it uses, and get a reassuring first-hand view of how the site runs and what its projects are. In 2015, around 80% of the Group's sites opened their doors to the public in this way.

# Preventing risk and ensuring progress

Continuous improvement to safety and environmental and health protection is a priority for all Group sites. The Group develops a strong risk prevention culture extending throughout all its organizations wherever they operate in the world. As part of a proactive approach, the Group regularly organizes incident and accident simulations in order to test the complementarity of on-site and external emergency response resources, procedures and methods aimed at protecting employees and the local community.

# 2.4.2.2 QUANTITATIVE ASSESSMENT OF COMMON GROUND® INITIATIVES

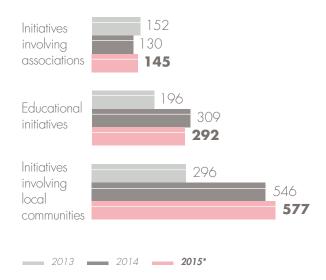
In 2015, more than 1,000 Common Ground® initiatives were carried out worldwide, with 82% of sites actively participating. The diagrams below show the breakdown of these initiatives by region, with Bostik sites included in the 2015 figures:



\* In 2015, figures include data for Bostik sites. 2014 and 2013 exclude Bostik.

In all, 90% of industrial sites took part in these initiatives in the United States, 88% in Europe, and 80% in Asia. In Europe, France, the Netherlands and Italy were the most active in organizing events. In Asia, China was the most active.

Operations under the Group's Common Ground® program address local communities, schools and associations. The breakdown by type of initiative is as follows:



The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

# 2.4.2.3 QUALITATIVE ASSESSMENT OF COMMON GROUND® INITIATIVES

### Initiatives involving local communities and the public

To foster closer relations, employees at Group facilities and subsidiaries meet with members of the public to explain, for example, some of the everyday living improvements to which the chemicals industry has contributed.

In the United States and Asia, many sites take part in information meetings organized by local resident associations.

In France, the Group has partnered two important science and industry events for several years now:

- the Fête de la Science, an initiative of the French Ministry of Higher Education and Research to encourage interaction between research scientists and the general public;
- the Semaine de l'Industrie industry week event, which gives young people and career seekers insights into the world of industry and its job openings.

In the run-up to the 21st United Nations climate change conference (COP 21), held in Paris in 2015, the Group worked with UIC on the Climate Train, a public education campaign on global warming. The train stopped at 19 French towns from 6 to 25 October 2015, inviting members of the public to climb on board and discover some of the tangible innovative solutions developed by the chemicals industry to counter climate change. In all, the train welcomed 23,000 visitors on board.

# **Educational initiatives**

Throughout the world, the Group gives priority attention to strengthening its ties with schools and universities.

The Group runs regular operations in cooperation with schools, to provide young people with information on careers in the chemicals industry and further the development of a scientific culture. Sites put on regular visits for school groups, take part in educational initiatives, and speak at conferences at higher education venues, such as Rho University in Italy.

The Group also offers opportunities for socially disadvantaged young people, and helps them obtain academic qualifications. To promote access to the prestigious ENSIC chemical engineering school, Fondation de France and the Arkema Group founded Fondation ENSIC to grant scholarships to students experiencing financial hardship. Since it opened, the foundation has provided support for around a hundred students.

The Arkema Inc. Foundation, set up in 1996, runs a number of disinterested initiatives with a priority on science and education at all levels. Its yearly Science Teacher Program has reached hundreds of researchers and teachers.

### Initiatives involving associations

The Group's values of community spirit and responsibility show through in many initiatives addressing non-profit associations in all its host regions. Many examples around the world attest to the work done by Group employees to help those who are most in need and to actively participate in local life.

The Group runs or partners community-oriented actions on a regular basis:

- it supports various associations in their work on developing employment openings for disabled persons;
- the Group and its employees take part in many non-profit health and community initiatives;
- the Group is active in many environmental preservation initiatives, addressing biodiversity in particular (see section 2.2.1.5).



In 2015, the Group supported the Sail for Water association's initiative to hand out 1,000 filter cartridges, providing drinking water for around 100,000 people in various regions of the world.

# 2.4.3 Institutional affairs initiatives

As a responsible chemicals producer, the Group interacts with public authorities in all its host regions. It does this to help draw up legal and regulatory frameworks favorable to the development of its businesses in the strict respect of its values and commitments on social and environmental responsibility, and to take part in public debate on issues relevant to its activities.

Group experts are involved in various business federations and associations, such as the French association of large companies (AFEP), and chemical industry bodies such as the French chemicals industry union (UIC), the European Chemical Industry Council (CEFIC), the American Chemical Council, and the European Chemicals Agency (ECHA).

Cooperative work within these organizations is a considerable driving force in the development of corporate social responsibility.

For example, the Group has set up a working group with other chemical companies in South Korea, where there are moves toward setting up regulations along the lines of REACH in Europe. Regular meetings are held with the ministries concerned, the chamber of commerce, chemical industry organizations and university chemical committees to discuss the matter and improve the management of chemical substance registration.

# 2.4.4 Fair practices, rejection of corruption

Beyond complying with international conventions and with legislation applicable in the countries where it operates, the Group is committed to complying with antitrust regulations and to rejecting all forms of corruption and fraud. The Group condemns fraud and corruption and works to prevent it in commercial transactions with partners.

Compliance with these rules and anti-corruption measures is based on two principles in particular: (i) the inclusion of these rules in the Group's Code of Conduct and Business Ethics, and (ii) the implementation of procedures for managing potential fraud and corruption risks.

# The Arkema Group Code of Conduct and Business Ethics

In November 2013, the Group brought in a new Code of Conduct and Business Ethics to replace the initial May 2006 version, setting out rules that all Group employees are required to follow. The rules are rooted in the Group's ethical values, include the ten

principles of the United Nations Global Compact (one of which specifically covers the issue of corruption) and draw inspiration from the principles of other fundamental international texts <sup>(1)</sup>.

The Code can be accessed on the Group's website.

Essentially, the Code of Conduct and Business Ethics states that:

- employees may not offer, provide or accept, directly or indirectly, any unfair advantage, be it pecuniary or otherwise, whose purpose is to secure business relations or any other business advantage. The specific partners concerned are people in positions of public authority, agents or employees of customers, financial or banking bodies and political parties;
- employees must scrupulously comply with all applicable rules relating to antitrust legislation in all countries where Arkema operates;
- employees must comply with import and export regulations.

<sup>(1)</sup> Universal Declaration of Human Rights, fundamental principles of the International Labour Organization, and OECD Guidelines for Multinational Enterprises.

# **Employee support**

The Group has created a roadmap to assist employees in complying with all the requirements of its Code of Conduct and Business Ethics. It includes the following initiatives:

- accessibility of the Code on the Group's intranet sites;
- ongoing classroom training program on compliance, mainly addressing businesses;
- e-learning course on the Code of Conduct and Business Ethics put up during 2016 in parallel with employees' annual pledge to comply with the rules and principles of the Code.

# Processes for identifying and reducing the risks of non-competitive practices, corruption and fraud

A compliance and business ethics program based on the Code of Conduct and Business Ethics has been set up, covering issues such as antitrust legislation, export control and anti-corruption measures. There are rules and procedures on these issues applicable throughout the Group.

To ensure this program runs smoothly, the following resources have been implemented:

- awareness-raising activities in each business unit to increase the accountability of employees with respect to competition rules;
- a "Competition practice guide" on rules and required behaviors issued to employees;
- vetting of commercial intermediaries prior to appointment, to minimize the risks of corruption-prone situations arising;
- systematic approval required prior to any export to countries covered by sales or financial restrictions.

Application of the compliance program throughout the Group is overseen by the Compliance Committee and the ethics mediator.

The Compliance Committee, whose members are appointed by the Chief Executive Officer and which reports to the Executive Committee, consists of the Internal Audit and Internal Control Vice-President, a Human Resources department representative, the Sustainable Development Vice-President, the Group Safety and Environment Vice-President, a representative of the Legal department and a representative of the Finance/Treasury/Tax department.

This committee is responsible for monitoring the Group's compliance in the following areas: antitrust laws, commercial intermediaries, fraud, commercial practices and business integrity, work environment integrity and respect for the environment.

The ethics mediator is appointed by the Chief Executive Officer. This person is fully familiar with the Group's activities and professions and occupies a position that ensures independent judgment.

The ethics mediator is bound by an obligation not to disclose the identity of people raising ethics issues to third parties, or to disclose information likely to help identify such people. This obligation may be tempered and third-parties informed on a need-to-know basis as strictly required to address and solve the question raised or to handle the case concerned, the said third parties then also being bound by the same obligation on confidentiality.

In regions where the Group conducts its activities, the regional Vice-Presidents are appointed correspondents of the ethics mediator.

For all practical questions regarding an ethical issue in general, and particularly any problem in applying the Group Code of Conduct and Business Ethics, an application may be made to the Compliance Committee and the ethics mediator either by executive management or by any employee.

Finally, as part of the global risk management measures put in place by the Group, the Internal Audit and Internal Control department conducts regular audits in the Group's subsidiaries. These involve analyzing the various management processes in place to help identify possible risks of fraud and set out, where appropriate, the necessary corrective measures (for more information on global risk management measures, see section 1.7.1 of this reference document).

# 2.4.5 Subcontracting and suppliers

# Consideration of social and environmental issues in the procurement policy

The Group adopts responsible behavior towards suppliers and establishes balanced, sustainable, trust-based relations with them in order to build long-term relationships. Relations with suppliers must develop transparently in compliance with fairly negotiated contractual terms – including those related to intellectual property – and Responsible Care® principles.

The Group's approach is based on the ethical principles set out in its Code of Conduct and Business Ethics as described in section 2.4.4 of this reference document. The Group is also a signatory to the national inter-company charter of the French purchasing managers' organization (CDAF), and the state-sponsored inter-company mediation initiative *Médiation Inter-Entreprises*, which is based on ten responsible procurement commitments.

The procurement policy of the Group's Goods and Services Procurement department provides for all employees to be made aware of procurement ethics rules and the need to conduct their duties in compliance with both ethical principles and a sustainable development approach. Procurement officers are systematically reminded of these requirements during training and information events.

In some cases, goods and services buyers also approach suppliers of services or materials with a specific view to generating energy savings or optimizing waste treatment and recycling activities.

As regards raw material procurement, the Group favors a collaborative approach with certain strategic suppliers and works to jointly improve the safety and environmental impact of the supply chain.

In its logistics purchases, the Group includes, among other things, a "carbon footprint" dimension when selecting its suppliers and transportation methods. Generally speaking, when the technical and economic conditions are met, the choice of supplier and transportation method will favor slow and low-emission methods such as rail, barge, maritime bulk or container rather than road and air. These concerns also converge with the need to control transportation risks as mentioned in section 1.7.2.2 of this reference document.

# Consideration of social and environmental responsibilities of suppliers and subcontractors

As part of its endeavor to build and maintain long-term relations with suppliers, the Group expects them to behave responsibly, particularly in regard to social and environmental matters.

The Group's approach is based on the ethical principles set out in its Code of Conduct and Business Ethics as described in section 2.4.4 of this reference document. As well as being required to comply with all applicable legislation and regulations, suppliers are also encouraged to take up principles equivalent to those set out in the Group's Code of Conduct and Business Ethics. For this purpose, in September 2014 the Group brought in its Supplier Code of Conduct. This Code is accessible on the Group's website and included in all new tenders. In addition, a process for informing new and existing suppliers about the Code was completed and came into effect in 2015. The Group Supplier Code of Conduct is based on the United Nations Global Compact, which the Group has committed to supporting. It covers human rights and labor-related issues and, in particular, freedom of association, child labor, forced labor, discrimination, health, safety, hygiene, harassment and violence. These requirements also include the environment, quality and safety of supplied products and services. Within the context of business integrity and transparency, suppliers must also comply with laws governing competition, corruption, conflicts of interests, confidentiality and the transparency and accuracy of reported information.

In addition to performance, cost and quality criteria, the supplier selection process examines compliance with the Supplier Code of Conduct and with Responsible Care® principles.

In terms of safety, the Group Goods and Services Procurement department regularly analyzes the performance of its main suppliers regarding their personnel working at Group sites. The Group gives equal importance to the safety of on-site workers from external companies as to that of its own employees, and its accident-rate figures include both indifferently.

When selecting logistics services, the Group takes into account carrier performances in terms of safety, security and the environment. The procedures used to select road haulers for hazardous materials are based on third-party assessments, such as the Safety and Quality Assessment System (SQAS) in Europe. In China, the Group uses the same assessment criteria, gradually implemented in this country under the Road Safety and Quality Assessment System (RSQAS). Similarly, vessels used worldwide for the bulk transportation of Group products are first vetted by a third party.

For raw materials purchases, the Group generally uses pre-approval questionnaires to assess its suppliers. These questionnaires are designed to assess their management system, their compliance with the principles of the Responsible Care® program or their certification to ISO-type standards.

The Group uses subcontractors with regard to company restaurants. The Group will check in 2016 that action programs are in place to minimize food waste.

The Supplier Code of Conduct requires that suppliers comply with the Group's CSR expectations from the time of implementation. They commit to cooperating with audits on compliance with this Code.

To base its requirements on accepted standards and avoid the need for duplicate supplier assessment procedures, in 2014 the Group joined the Together for Sustainability (TfS) initiative, founded by six European chemical companies. This global program aims to develop corporate social responsibility throughout the entire chemical industry service chain, and is based on the principles of the United Nations Global Compact and the Responsible Care®

Global Charter. Through this program, chemical companies benefit from common supplier CSR assessments conducted by Ecovadis or by independent audit firms, with members of the TfS program sharing the findings. Ecovadis analyzes suppliers' documents and answers on CSR criteria in line with international standards, and ensures a 360° watch on information provided by external stakeholders.

In the coming years, the Group will regularly rely on supplier risk analyses when choosing which suppliers to assess and audit as part of the TfS program.

The Group has launched 146 supplier assessments, and 71 completed questionnaires have been returned.

In addition, the Group's Internal Audit and Internal Control department carries out annual audits of Group subsidiaries. During these audits, it conducts a range of tests on supplier approval and assessment processes and on the practices and risks associated with the raw materials procurement and goods and services procurement functions.

# The impact of subcontracting

The Group subcontracts for two main purposes: for maintenance operations, and, to a very limited extent, for production of certain finished products. Subcontracting thus accounts for part of the 203 million euros of expenditure on safety, environment and maintenance of industrial units.

Under the Group's procurement policy, subcontractors are bound by the Group's Supplier Code of Conduct and the associated general purchasing conditions.

# 2

# 2.5 PROMOTE THE INDIVIDUAL AND COLLECTIVE DEVELOPMENT OF ALL ITS EMPLOYEES

The Group conducts its operations at various industrial sites located essentially in Europe, America and Asia, and at sales subsidiaries in some forty countries.

The Group's human resources policy focuses on actions to further individual development and improve collective working conditions.

Individual development covers recruitment, training and career paths, with the aim of enabling employees to consolidate their skills and expertise. A career management policy helps build career paths that reinforce the expertise of employees and, by extension, that of the Group. This policy is backed up by a training policy designed to provide the necessary theoretical and

practical knowledge for a new post or a change in direction. Internally, individual development is underpinned by a policy of proper recognition and fair compensation. Benchmarking against other companies is conducted regularly.

Collective working conditions are enhanced as part of a continuous improvement drive, which covers initiatives to improve the working environment and preventative health care measures for employees. Efforts are made to foster good employee relations, while strengthening diversity by selecting employees representing a wide range of nationalities, profiles and backgrounds and also ensuring high quality employee feedback mechanisms and social dialogue structures are in place.

# 2.5.1 Employment

The figures given in the following paragraphs concern the Group headcount

Every company records its employees under an employment contract. Interns and temporary workers are not included in the headcount. Employee numbers are recorded on a headcount basis, regardless of working hours.

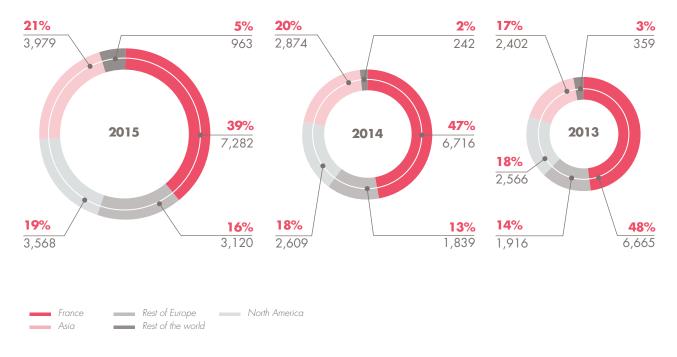
For further details on the data collection and calculation methods used, and the constraints they may present, see note on methodology in section 2.6 of this reference document.

In September 2013, an agreement was signed with the CFDT, CFE-CGC and CGT trade unions on strategic jobs and skills management planning (SWP) and on intergenerational management in the Group's companies in France. This agreement notably lays down new targets in terms of the recruitment of young people (aged under 30) and "seniors" (aged 50 and over), and the number of people on work-study programs (see section 2.5.1.2 of this reference document).

# 2.5.1.1 TOTAL HEADCOUNT AND BREAKDOWN BY GENDER, AGE AND REGION

# Change between 2013 and 2015

Changes to headcount over the past three years are given by region below.



Total headcount	31 Dec. 2015 (1)	31 Dec. 2014	31 Dec. 2013
GROUP TOTAL	18,912	14,280	13,908
of which permanent <sup>(2)</sup>	17,801	13,832	13,434
of which fixed-term	1,111	448	474

<sup>(1)</sup> The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.

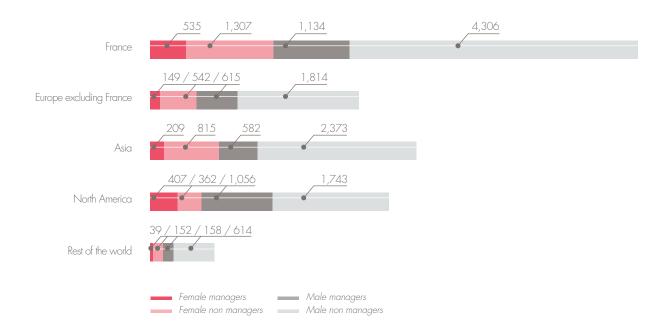
The headcount rose by more than 32% from 2014 to 2015. This increase is due mainly to the change in consolidation scope, with the acquisition of Bostik (plus 4,916) and Oxido in Italy (plus 44), and the divestment of Sunclear (minus 354).

<sup>(2)</sup> See the note on methodology in section 2.6 of this reference document.

Promote the individual and collective development of all its employees

# Breakdown by category, gender and region

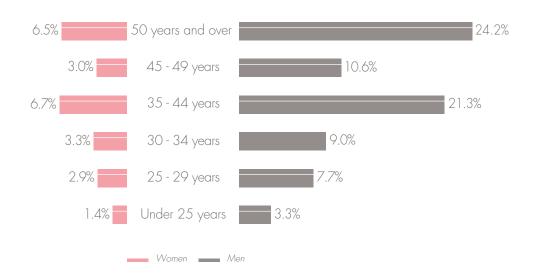
At 31 December 2015, executives accounted for 25.8% of Group employees, compared with 25.1% in 2014. Women represented 23.8% of Group employees, versus 23.7% in 2014.



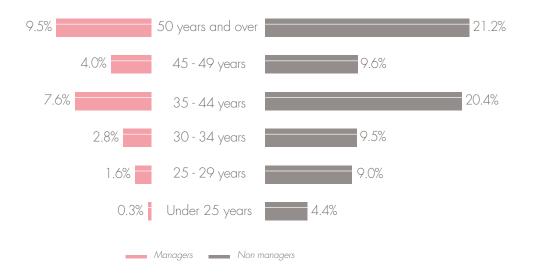
	Managers	Non managers	Male	Female	Total
GROUP TOTAL	4,884	14,028	14,395	4,517	18,912
of which permanent*	4,803	12,998	13,623	4,178	17,801
of which fixed-term	81	1,030	772	339	1,111

<sup>(\*)</sup> See the note on methodology in section 2.6 of this reference document.

### **BREAKDOWN BY AGE GROUP AND GENDER**



### **BREAKDOWN BY AGE GROUP AND CATEGORY**



### 2.5.1.2 CHANGES TO THE NUMBER OF GROUP EMPLOYEES: NEW HIRES AND DEPARTURES

The Arkema Group's recruitment policy is designed to attract the most skilled profiles in order to further its development.

In keeping with its founding values of simplicity, solidarity, performance and accountability, the Group attaches a great deal of importance to finding applicants with cultural openness, teamwork skills, a solution-driven approach and an entrepreneurial spirit.

The Group has drawn up a recruitment charter to help promote the principles of fairness and non-discrimination when selecting job applicants, and will be stepping up its diversity program in 2016. Bostik's HR policy, applicable across its subsidiaries, is set out in its Corporate Employee Handbook, which can be downloaded from its intranet.

In 2015, the Group began work on updating its employer brand to accommodate the Bostik identity, which involved carrying out a study to determine convergences. A new brand will be defined and rolled out in 2016, through various Group communications materials. Along with the update, there are also plans for a revamp of the careers website on www.arkema.com.

As regards recruitment, the Group signed an agreement on jobs and skills management and intergenerational management in September 2013. Under the agreement, all Group companies in France agree that 30% of annual permanent new hires will be young people under 30, and 10% will be seniors (aged 50 and over).

### Relations with educational institutions

Mindful of enriching recruitment, the Group fosters special relations with the best educational and training institutions for all its Business Lines.

In France, the Group takes part in many school events, such as recruitment forums, presentations and site visits. These initiatives seek to promote the Group and its Business Lines among the students of non-specialized engineering schools (Mines de Paris,

Centrale Paris and Polytechnique), chemistry schools (such as ESPCI, Chimie Paris, ENSIC and ENSIACET), business schools (including HEC, ESSEC and ESCP-Europe), and technical schools in the fields of safety and maintenance. An example of one such initiative is Arkema France's three-year sponsorship of the ESPCI school. The École Polytechnique sponsorship, which began in 2014, continued in 2015.

The Group launched the "Campus" program in October 2013 to further strengthen its relations with schools and give them greater visibility. Campus pairs second-year students from the above target schools, known as Campus Students, with Group employees, or Campus Managers, who graduated from those schools. The role of Campus Students is to inform the Campus Managers of student expectations and together to organize events with the Arkema Group recruitment team. Examples of events include visits to industrial sites, round tables on careers with the Group, and presentations on Arkema Group R&D.

Each year, the Group also offers many opportunities for internships, apprenticeships, graduation projects and international volunteer programs. In 2015, it was running eight international volunteer programs, in the USA, Asia and Europe. Final-year internships, international volunteer programs and graduation projects are managed at the corporate level to ensure closer monitoring of the Group's recruitment pool.

In 2012, Arkema France adopted a proactive policy toward work-study programs for executive and non-executive positions. This policy was confirmed in the agreement signed in September 2013 on jobs and skills management and intergenerational management in Group companies in France, which includes an undertaking to increase the number of work-study trainees above the statutory minimum of 5% of the workforce in 2015.

In the United States, the Developing Engineer Program enables the Group to take on four to six engineering students from top American universities every year for internships at its industrial sites over five years.

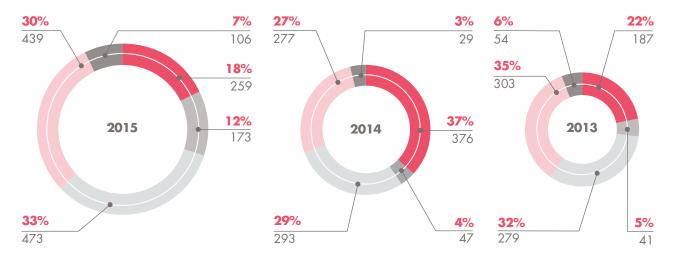
### Permanent new hires between 2013 and 2015

The Group hired 1,450 permanent employees in 2015 versus 1,022 in 2014. Increased recruitment is in line with the increase in Group headcount.

This figure covers all the Group's recruitments worldwide.

Permanent employee new hires	2015*	2014	2013
GROUP TOTAL	1,450	1,022	864

<sup>\*</sup> The figures for 2015, but not for 2014 or 2013, include data for Bostik sites.



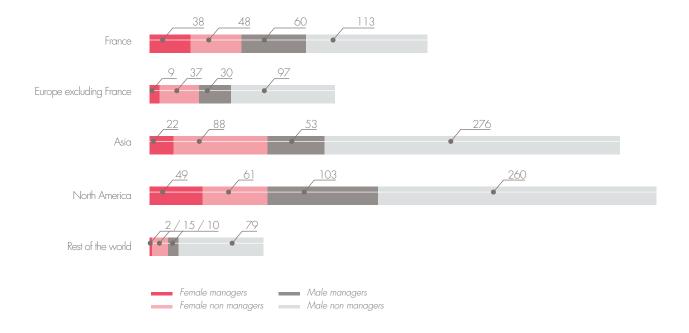


Promote the individual and collective development of all its employees

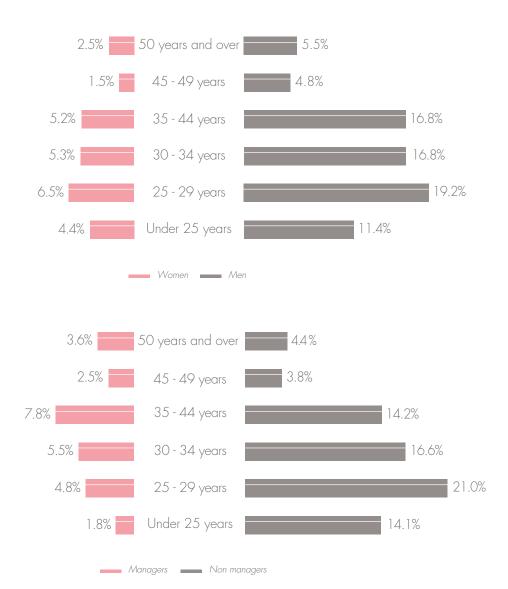
### Geographic breakdown of permanent new hires by category and gender

In 2015, management profiles accounted for 25.9% of new hires, compared with 27.6% in 2014. Women totaled 25.4% of new hires versus 25% in 2014, and 31.9% of management-level new hires versus 30.9% in 2014.

	Managers Non manager	s Male	Female	Total
GROUP TOTAL	376 1.07	4 1.081	369	1.450



### BREAKDOWN OF PERMANENT NEW HIRES BY AGE GROUP, CATEGORY AND GENDER IN 2015



In 2015, people aged under 30 accounted for 41.6% of permanent new hires (compared with 41.5% in 2014), whereas seniors (aged 50 and over) totaled 8% (versus 9.8% in 2014).

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Promote the individual and collective development of all its employees

### **Departures**

In 2015, the Group recorded 2,753 employee departures, compared with 1,905 in 2014.

Departures by region	France	Rest of Europe	North America	Asia	Rest of the world	Total
Total departures	1,136	492	406	496	223	2,753
of which resignations	52	143	221	296	46	758
of which dismissals	18	49	69	36	81	253
of which departures following a divestment*	308	46	-	-	-	354

<sup>\*</sup> Sale of Sunclear (France, Spain and Italy).

### 2.5.1.3 COMPENSATION AND CHANGES TO COMPENSATION

Overall compensation is a key component of the Group's human resources policy. It aims to promote each employee's contribution to the Group's success and reward them fairly for their efforts.

Implemented by management, the compensation policy represents a key tool for recognizing employee performance and commitment in areas that are essential to the Group's development, such as growth, innovation, safety, industrial reliability, and competitiveness.

To strengthen the link between contribution and compensation, all management positions are classified in accordance with the Hay method. This initiative is also gradually being rolled out to all non-management positions, notably in France.

The compensation structure comprises a fixed component, an individual variable component and a collective variable component, which apply differently depending on the position and the country. The compensation structure fulfills a number of objectives:

- compensate individual and collective performance;
- develop employees' individual sense of responsibility and involve all employees in the achievement of goals;
- ensure competitiveness in the market;
- provide fair compensation and ensure internal consistency;
- manage costs.

In the majority of the Group's companies, 22% of employees receive some form of individual variable compensation that depends on personal performance and contribution to the collective performance of a business, a country or the Group.

Collective variable compensation components give some 60% of employees a stake in the Group's growth and in its economic and financial performance. In France, incentive schemes and profit-sharing plans are part of this framework.

In addition to fixed and variable compensation components, Group employees also benefit from deferred compensation in the form of employee shareholding, employee savings schemes and, for some employees, performance shares. Nearly all the Group's employees (99.5%) benefit from guarantees in respect of minimum compensation.

### Incentives and profit sharing

In addition to the profit sharing required under French law, all the Group's French companies have set up an incentive scheme that gives all employees both a share of Group profits and incentives to meet certain performance targets that promote the Group's growth. These schemes vary from subsidiary to subsidiary but most are based on the same principles. Incentive schemes consist of (i) a bonus based on economic results, and (ii) a performance bonus defined by each facility in line with its specific objectives.

### Employee share ownership

Since its 2006 stock market listing, the Arkema Group has conducted a dynamic employee shareholding policy. Every other year, it has offered employees in twenty or so countries, representing some 95% of its headcount, the opportunity to purchase Company shares with preferential terms.

For further details, see section 5.2.7 of this reference document.

### **Employee savings schemes**

A Group savings plan (*Plan d'Épargne Groupe*) and a collective pension savings plan (*Plan d'Épargne pour la Retraite Collective*) allow employees of Group companies in France to make voluntary contributions and invest their profit-sharing and incentive income.

These sums are matched by the employer up to an annual maximum of 1,000 euros for the Group savings plan and 400 euros for the collective pension savings plan.

The investment structures available are the Arkema Actionnariat France corporate mutual fund (Fonds Commun de Placement d'Entreprise – FCPE), a Group savings plan invested entirely in the Company's shares; a range of multi-company FCPE funds offering the choice of investment in different asset classes (equities, bonds and money market instruments); and structured funds offering capital guarantees.

On consolidation in the Group, Bostik SA also joined the Group savings plan under a collective bargaining agreement.

### **Performance shares**

Performance share plans, which were set up in 2006, complement the deferred compensation packages described above.

Performance share allocation plans are compensation and retention tools for employees whose responsibilities influence the Group's results, as well as employees with outstanding performance or participation in a project.

Each year, nearly 6% of the global headcount receives performance share allocation rights.

Following a vesting period of four years for the performance share plan decided in 2015, the beneficiaries are granted the Arkema shares definitively provided they meet presence and performance requirements.

Further information on these compensation tools may be found in section 3.5 and section 5.2.6 of this reference document, as well as in note 28 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

### 2.5.1.4 PENSION AND HEALTH AND WELFARE BENEFITS

In most countries in which the Group is present, employees benefit from a mandatory public scheme covering risks related to death, disability, work incapacity, pensions and health costs.

In addition to these statutory requirements, the various Group entities in France and abroad are responsible for putting in place and keeping up to date social security and employee benefit provisions within the constraints of the agreed annual budgets,

and in keeping with requirements and local practices. Over 85% of Group employees receive supplementary life and disability cover.

As regards life insurance cover, the aim is to put in place a guarantee representing at least 18 months' salary. Some 75% of the global headcount has this level of cover.

Concerning retirement pensions, the Group's policy is to favor defined contribution plans over defined benefit plans, and to limit very long-term liabilities. Accordingly, the relevant entities have gradually closed their defined benefit plans to new entrants and replaced them with defined contribution plans.

This is the case in the United States, the United Kingdom and Germany, where defined benefit plans have been closed to employees hired between 2002 and 2006 and defined contribution plans have since been put in place.

Under this policy, in October 2015 the Group announced plans to close the acquisition of new rights in the defined benefit plan at Bostik Ltd. in the United Kingdom, following similar measures in other Group companies in 2013.

Negotiations have also been undertaken to close remaining defined benefit plans in the Netherlands.

Defined contribution plans are offered to all Group employees in both countries.

For more information, please see note 19.3 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

### 2.5.2 Training and individual development

### 2.5.2.1 TRAINING AND INDIVIDUAL DEVELOPMENT POLICIES

Professional training concerns every employee regardless of their profession, level of responsibility or age. It allows employees to develop or acquire the necessary skills to hold a position, move to a new position and fulfill the Company's expectations in terms of technical expertise or management practice. For this reason, the Group is affirming its commitment to providing all employees with access to training throughout their careers.

Within the Group, 97% of companies carry out Annual Performance Reviews. These meetings provide a special opportunity for employees and managers to discuss and set objectives for the coming year and to review the employee's career path and the training completed over the past year. The

resulting joint analysis provides a starting point to decide on training for the following year in order to round out the employee's knowledge and expertise.

In 2015, the number of training hours (excluding e-learning) recorded in companies with more than 30 employees in which the Group had at least a 50% interest (i.e., 96.5% of the Group's workforce) amounted to 463,065 hours, or slightly more than 27 hours of training per employee per year (versus 334,278 hours, or 26 hours per employee, in 2014). The number of permanent employees who took at least one training course during the year (excluding e-learning) amounted to 17,062, or 93% of the Group headcount (versus 11,534, or 89%, in 2014).

In addition, 8,218 people undertook e-learning courses, representing 45% of employees (compared with 4,442 people, or 33% of employees, in 2014).

Promote the individual and collective development of all its employees

### 2.5.2.2 CAREER MANAGEMENT

Career management is one of the cornerstones in the development of human resources in the Group. It helps diversify the experiences that employees accumulate throughout their careers and thereby ensures that they regularly improve their skills, which is essential to the Group's development.

Career management therefore focuses on both:

- ensuring that the Company has the expertise that it needs to meet its development requirements today and in the mediumterm;
- helping employees build their careers, thereby enabling them
  to increase their skills and implement their projects based on
  the potential and opportunities available in the Group.

Employee career management is provided by career managers, whose responsibilities include:

- overseeing career management at the corporate level for managers in France and level 15 jobs and higher internationally;
- working in collaboration with other career managers in their country or their site for non managers employees.

The Group has a single career management policy, meaning that it is based on the same principles regardless of the employee's status (manager or non manager), country, age or gender. These policy's objectives are as follows:

- providing each employee with the means to manage their career and with the necessary assistance at each step;
- implementing a proactive internal promotion policy;
- identifying and developing potential to promote increased responsibility and career development;
- promoting functional and geographic mobility;
- enabling all employees to advance in the Company and enrich their experience and skills while ensuring organizational flexibility.

The Annual Performance Reviews described in section 2.5.2.1 of this reference document provide management with an opportunity to appraise employees' suitability for promotion. In addition to these reviews, meetings with career managers provide an opportunity to review the employee's career path, their expectations and how they could advance their career in other Group Business Lines.

In addition to the recruitment targets for young people and seniors (see section 2.5.1.2 of this reference document), the jobs and skills management planning and intergenerational management agreement signed in September 2013 for Group companies in France includes measures for recognizing experts through skills/profession charts that complement the Hay classification. The agreement also provides for specific measures such as knowledge transfer, a retirement advice service, and the possibility of working 80% of full-time equivalent at 85% of the pay for the 24 months preceding retirement in order to facilitate the transition.

In the United States, HR teams have taken up the Success Factor system to back Talent Management operations. This system will be rolled out Group-wide in 2016.

A Talent Management function was set up in China in 2015. In liaison with HR departments in each country, this function covers employees across the whole of the Asia region.

A career development program has been rolled out Group-wide, covering high-potential employees in all countries. It is based on feedback to employees of comparative results from self-assessment and assessment by L+1 and L+2 line managers. This program provides input for drawing up individualized action and progress plans involving coaching, new experience and training.

### 2.5.2.3 INTERNATIONAL EXPERIENCE

The Group conducts its activities essentially in Europe, North America and Asia. It implements an international mobility policy to guarantee that the level of expertise required at all sites is met and to enhance the skills of employees by posting them to different environments.

This policy consists of five programs (including one set up in 2015) suited to the different international mobility objectives.

### **Expertise**

This program allows Group employees to develop strategic Group projects in a foreign country that does not have the required skills locally, and therefore to actively participate in skills transfer to local employees.

### Development

This program is designed to allow Group employees to develop their careers for a specific period of time (on average three years) by taking on a job in their area of expertise in another country where there is similar local expertise. Here they round out their knowledge then return to their country of origin with their newly acquired experience.

### International

This program is for Group employees whose career is exclusively international with no further reference to their country of origin.

### **Expatriation in Europe**

This program enables French employees of the Group to work on strategic projects or develop their careers in another European country.

### **Talent Program**

This new program was set up in 2015 to offer international experience within the Group to talented young employees in initial job positions or on international volunteer programs.

### 2.5.2.4 SPECIAL PROFESSIONAL TRAINING PROGRAMS FOR EMPLOYEES

The Group's training policy aims to boost employees' skills in the areas of safety, health, professions of the Group, and management.

Actions along these lines in 2015 included the following:

 International rollout continued for the Group's Arkema Safety Academy training program, launched in 2014. As part of this, the program's Safety Culture module, which covers safety issues, policy and systems, was rolled out across the whole of the Group workforce. All of the Group's sites in Asia and the United States and most of its sites in Europe have been covered. The program will be rolled out at Bostik sites in 2016.

New Group e-learning modules have also been developed on CSR issues and policy, the Group Code of Conduct and Business Ethics, personal protective equipment, and accident prevention through peer observation.

- Regional initiatives:
  - In Europe, the Share Strategic Challenges training program addressing new hires was rolled out across the new Group scope. This provided the fifty or so participants with a valuable

- opportunity to develop their networks and meet members of the Group Executive Committee. The program has now been extended to Asia. The first courses in the Finance for Non-Specialists program were also given.
- In the United States, a wide range of training programs were rolled out covering objectives in organization, teamwork efficiency, leadership and career development. Throughout 2015, courses were run under the Arkema Manufacturing Program addressing key production positions at industrial sites, and under the Arkema Cornell Leadership Program addressing key functional, marketing and business positions.

Bostik is pushing ahead with its Bostik University program, which comprises courses in communications, leadership, marketing and innovation for key and high-potential positions.

In 2015, Arkema and Bostik employees attended joint training programs to develop interaction between the two groups. Exchanges will continue in 2016, along with discussions on program mergers.

A further session of the Arkema Executive Program, run by INSEAD, will be run in 2016. This two-yearly program is attended by forty or so high-potential men and women from different functions and countries across the Group.

### 2.5.3 Work organization

### 2.5.3.1 ORGANIZATION OF WORKING TIME

In every country, the Group implements working times that comply with the relevant statutory and professional requirements.

Employees work full time, and to a lesser extent part time. At Arkema France, for example, working time amounts to 1,575 hours per year for a full-time employee, while the number of working hours for part-time employees ranges from 50% to 80% of the full-time equivalent. In the United States, working time amounts to 1,960 hours per year for a full-time employee, while the number of working hours for part-time employees ranges from 50% to 90% of the full-time equivalent. For the Group overall, part-time employees accounted for 3.1% of the total workforce at 31 December 2015, compared with 3.7% in 2014.

Given the specific features of the Group's industrial activities, the organization of working times for some employee groups may involve continuous, discontinuous or semi-continuous work regimes.

In the event of additional workload or particular problems, the Group can make use of fixed-term employment contracts, overtime, subcontracted work, or temporary staff agencies in accordance with local legislation and depending on the job market.

### 2.5.3.2 ABSENTEEISM

The number of hours lost to absenteeism in the Group in 2015 (excluding authorized leave) was 3.4% of hours worked, compared with 3.5% in 2014. Absences on medical grounds accounted for 71.7% of the total number of hours of absence, compared with 70.7% in 2014.

Promote the individual and collective development of all its employees

### 2.5.4 Dialogue with social partners

The Group is committed to developing two-way feedback and consultation with its employees, either directly in the form of internal surveys or via employee representatives. In countries where the law does not provide for employee representation, specific bodies can be set up locally. A consultation and dialogue structure has been implemented at the European level with the European Works Council.

### 2.5.4.1 ORGANIZATION OF SOCIAL DIALOGUE

As part of its labor relations policy, the Group develops ongoing dialogue with employee representatives across all Group entities, in accordance with cultural norms and local laws and regulations.

The Group Human Resources policy is accessible on the intranet. It explains the principles for implementing social dialogue, which is in full compliance with the provisions of the Code of Conduct and Business Ethics.

The social dialogue body at the European level is the European Works Council, which consists of 26 members. It holds a one-day plenary meeting once a year to discuss issues within its remit, including:

- economic issues, such as changes in markets, sales position, activity levels, main strategic priorities, development prospects and goals;
- financial issues, including the Group's consolidated financial statements, annual report and investments;
- labor issues, like the Group's labor policy, the employment situation and any changes it may have undergone;
- environmental issues, such as the Group's policy and changes to European regulations;
- organizational issues, for example material changes to the Group's organization, changes to its activities and the creation or termination of activities affecting at least two European Union countries.

The 2015 plenary session was held on 3 July at the Arkema head office.

The European Works Council's liaison office, consisting of 11 members appointed among employee representatives within the council, meets yearly with management for updates on the Company's progress. A liaison office meeting was held on 19 March 2015.

In the United States, employees at sites with union representation are covered by collective bargaining agreements negotiated with local and central trade unions. With an average three-year term, these agreements notably cover compensation, the safety of people and processes, and quality of life at work.

In the People's Republic of China, members of the first Employee Representatives Congress (ERC) of Arkema China Investment, the Group's main structure in China, were elected on 20 December 2007 and began operations in January 2008. The body currently comprises 34 members who elected among themselves the four members of the "Presidium". The ERC has a number of rights, ranging from pay negotiations to safety and training. It complements the labor unions already in place at the Group's industrial sites in China.

At all Bostik sites in China, there are employee representative bodies comprising elected or appointed employees. The rights of these bodies are similar to those at Group sites.

### Employee relations with regard to the Group's development

The Group acts within the framework of a structured, permanent consultation approach with employee representative bodies that aims to accommodate changes in the Group.

In particular, the various reorganization projects decided and implemented within the Group involve in-depth discussions with the employee representative bodies as part of information and consultation procedures, both centrally and locally. Much attention is paid to the treatment of the social consequences of these changes. The social support measures implemented during reorganization projects are focused on offering redundant employees the opportunity of internal or external redeployment under the best possible conditions and in line with national regulations.

On 9 September 2014, the Group presented employee representative bodies with a plan for shutdown of the Zaramillo site and the Madrid office in Spain, under its plan to improve the profitability of its fluorogases activity. Following several months of negotiations, an agreement was signed on 17 April 2015 with the ELA trade union and the Basque region's labor authorities. Shutdown of the Zaramillo site resulted in the loss of 59 jobs. An employment preservation plan with a number of different measures was implemented to ensure internal redeployment (functional or geographic) and external mobility (search for an external position or self-employment). An early retirement scheme was negotiated for employees in the upper age groups, consistent with the possibilities offered by Spanish legislation on the matter. To date, 6 employees have benefited from internal redeployment, 12 have found positions elsewhere, and 19 have opted for early retirement. At 31 December, 14 employees were still assigned to site safety duties.

On 11 February 2015, a procedure for information and consultation with employee representative bodies was begun regarding a project for reorganizing the Villers-Saint-Paul site in France following the very substantial decline in results for solventborne resin activities over several years. The project involved shutdown of the Coatings production sector and reorganization of the support services accordingly, leading to the loss of 26 jobs. Management took a full range of measures on redeployment, retraining and alternative employment for all the

employees concerned, setting up an employment mobility unit on completion of the information and consultation procedure with the employee representative bodies. At 31 December 2015, solutions had been found for 92% of the employees, more than 66% of whom were redeployed within the Group in France.

At the Central Works Council meeting on 29 May 2015, Altuglas International announced its project to shut down the Bernouville site. Altuglas International will be implementing support measures compliant with Group practices, to help all the employees concerned find appropriate individual solutions. Shutdown of the Bernouville site resulted in the loss of 39 jobs.

Under its program to sell non-strategic businesses worth a total of 700 million euros, announced in 2014, and to push ahead with its strategy of refocusing on its core businesses, in June 2015 the Group announced a project for selling the Sunclear group, a distributor of plastic and composite sheets with sites in France, Spain and Italy. In France, following the information and consultation procedure with employee representative bodies, Sunclear was sold to the Aramis group (owned by BF Invest) on 10 November 2015. This sale forms part of a coherent business development project and has no impact on headcount or employee status.

### 2.5.4.2 OVERVIEW OF EMPLOYEE REPRESENTATION IN 2015

Percentage of Group employees, by region, with employee representation and/or trade union representation

	2015
France	100%
Rest of Europe	90.1%
North America	78.5%
Asia	82.1%
Rest of the world	50.5%
GROUP TOTAL	88.2%

### 2.5.4.3 COLLECTIVE AGREEMENTS SIGNED IN 2015

Since the Group was founded, it has signed several collective agreements as part of its contract policy.

In France, some agreements were signed at the Group level and are, therefore, applicable to all Group companies in France. They are supplemented by company and facility agreements negotiated within these entities.

Outside of France, collective bargaining within the Group and its subsidiaries is carried out based on national customs regarding employee representation and relations with social partners.

The main topics for negotiation relate to overall compensation (salaries, health and welfare schemes, health cover, employee savings and other company benefits), employment and skills management, quality of life at work, health and safety at work and social dialogue.

The main agreements signed in France in 2015 were:

- Arkema France:
  - framework agreement on solidarity leave at Arkema France, 10 February 2015;

- agreement on support measures for arduous working conditions for shift workers, 26 March 2015;
- agreement on professional equal opportunity and diversity, 16 July 2015;
- agreement on annual collective bargaining for 2016, 18 December 2015.
- Coatex
  - agreement on compulsory annual collective bargaining for 2015, 14 January 2015.
- CECA
  - agreement on compulsory annual collective bargaining, 9 January 2015;
  - agreement on support measures for arduous working conditions for shift workers, 31 March 2015;
  - agreement on gender equality, 10 April 2015;
  - agreement on the composition of the Central Works Council, 10 December 2015.

- Altuglas International
  - agreement on extended deadlines for the Central Works Council information and consultation procedure on projects for shutting down activities at the Bernouville site and merging the accounting, payroll and customer credit functions of Altuglas International SAS and Arkema France, 4 September 2015:
  - agreement on compulsory annual collective bargaining, 21 December 2015.
- MLPC International
  - agreement on gradual work dispensation for shift workers,
     9 July 2015;
  - agreement on health insurance coverage, 22 December 2015;
  - agreement on health and welfare insurance coverage, 22 December 2015.
- Bostik SA
  - 2015 pay agreement, 28 January 2015;
  - agreement on gender equality, 17 December 2015;
  - agreement on supplementary health insurance coverage, 17 December 2015;
  - agreement on supplementary health and welfare insurance coverage, 17 December 2015.

As part of Bostik's integration, Bostik SA signed four agreements to join the Group's employee savings schemes.

Outside of France, the social dialogue policy within the Group and its subsidiaries is carried out based on local customs applicable to employee representation and relations with social partners. The main developments include:

- in the United States, Arkema Inc. signed three agreements on compensation, retirement, and working hours and conditions;
- in Germany, Bostik Gmbh and Arkema Gmbh (Leuna, Günzburg, and Zwickau) signed several agreements on health and safety at work, working conditions and compensation;
- in Mexico, Arkema Mexico Servicios Sa De Cv and Bostik Servicios Mexico Sa De Cv signed agreements on union representation and social dialogue; working hours and conditions; compensation; training; and health and safety at work;
- in Japan, Arkema KK signed an agreement on working hours and conditions;
- compensation agreements were also signed in India (Bostik India Private Ltd.), Australia (Bostik Australia Pty Ltd.), Korea (Arkema Korea Ltd.), Argentina (Bostik Argentina SA), Denmark (Altuglas International Denmark A/S) and the United Kingdom (Bostik Ltd., Leicester and Stafford sites);
- profit-sharing agreements were signed in Brazil by Arkema Quimica Ltda, and in Italy by CECA Italiana Srl (Rho) and Arkema Srl.

### 2.5.5 Health at work

### 2.5.5.1 HEALTH AT WORK: AGREEMENTS AND INITIATIVES

In terms of health at work, the Group has undertaken continuous improvement initiatives to prevent arduous working conditions, stress and risks at workstations.

### Agreements and initiatives to prevent arduous working conditions

In France, the February 2012 agreement on the prevention of arduous working conditions expired in 2015. Arkema France accordingly began renegotiation of the agreement, and this work will continue in 2016.

Initiatives to prevent arduous working conditions and improve ergonomics continued throughout 2015 in France, as outlined below:

 through work conducted with the Technical department since this program was begun, ergonomics considerations have been integrated in the Golden project (investments at the CECA facility in Honfleur), which makes specific allowance for operator feedback and for the ways in which the project impacts the extent of arduous working conditions. Ergonomics considerations are also integrated in the Group's project methodology (Agate);

- the work situations library, listing the 150 situations analyzed by
  ergonomics specialists along with best practices implemented
  at sites to improve working conditions, has been supplemented
  with data on situations observed in the field. This database
  provides a highly valuable service when designing new plant;
- a full assessment of actions undertaken at sites was performed in 2015. Specific actions carried out at sites include workstation layout adaptation, development of handling assistance tools, analysis of work organization and skills development;
- discussions took place on a long-term program extension involving the appointment of site ergonomics correspondents. These correspondents would: (i) take part in site projects and studies requiring allowance for ergonomics and working conditions, (ii) take part in the various stages of projects managed by the Technical department, (iii) monitor actions requiring intervention on ergonomics, and (iv) take part in the work group managing prevention of accidents by peer

observation. The site ergonomics correspondents will be trained in these missions in 2016.

Bostik also invests, on a permanent basis, in reducing arduous working conditions at its production units. Many improvements were made in 2015, at sites worldwide. Examples include:

- Guangzhou, China: new sack handling arm for loading raw materials (around 100,000 to 150,000 per year);
- Wauwatosa, USA: new equipment replacing manual operation for turning sheet metal rolls (weighing 30kg) on the lamination line (10,000 to 15,000 rolls per year);
- Coubert, France: reformulation of three different master batches into a single product, the manufacture of which can be mechanized. Since the new product is in liquid form, there is no more need to handle sacks of powder;
- Stafford, UK: equipment confinement to reduce operators' exposure to noise.

In the United States, the Wellness Matters program developed by Arkema Inc. provides a formalized approach to "health culture", the aim being to raise awareness among employees and their families on health and wellbeing at work. The program includes information campaigns on issues such as healthy living and compliance with safety instructions, for enhanced efficiency and minimum call on medical care. At each site there is at least one Wellness Champion promoting wellbeing activities, health education, check-ups and preventive health measures such as influenza vaccination. Employees receive quarterly health and safety bulletins at their homes. There are also regular training seminars on stress management.

### Agreements and initiatives for stress prevention

Arkema France launched a voluntary individual medical workplace stress prevention initiative in 2008. It is based on a diagnosis of employee stress levels established during a medical check-up with the French occupational health observatory, OMSAD. In 2009, the Group also launched a voluntary collective workplace stress prevention initiative designed to take action in the work environment when it is identified as a potential risk based on relevant indicators, such as an overly high rate of "excess-stress".

This collective workplace stress prevention initiative was included in an agreement with Arkema France signed by four out of five unions in May 2010. Under the agreement, the Group reaffirmed its goal of providing all of its employees with a working environment that promotes well-being.

The agreement covers collective preventive actions (such as training, communication and personal support) and the introduction of a procedure for identifying potential risk areas, analyzing them with a view to identifying stress factors, and putting in place corrective actions.

The primary stress prevention actions carried out in this area in 2015 include:

- new mapping of OMSAD results on the basis of input from questionnaires from mid-2013 to end-2014;
- start of qualitative studies on populations at risk identified from the OMSAD mapping;
- update of database of organizations capable of carrying out qualitative studies;
- awareness-raising and prevention sessions on burnout, addressing directors, HR managers, the central observatory on stress, and head office and Cetia employees; issue of a questionnaire on burnout prevention for Cetia employees;
- ongoing awareness-raising operations on information and communications technologies (ICT) usages and behaviors, with a week-long campaign on the mental workload entailed by digital practices;
- development of local initiatives on quality of life at work, with conferences at the head office and Pierre-Bénite sites.

In 2016, Bostik France plans to implement the stress measurement system used at other Group units in France. A management education program on the issues of burnout and harassment will be rolled out across all Group sites in France.

### Initiatives to protect health at the workstation level

To consolidate its occupational health and safety initiatives at the workstation level, the Group is developing STARMAP, a workstation health and safety risk assessment tool.

STARMAP takes over from the Franco-American MRT (Management of Risks and Tasks) tool, with a centrally managed library of best practices and data to promote health and safety risk prevention worldwide.

### Agreements on early employee retirement at sites with asbestos

In France, five Group sites in operation were included by ministerial decree on a list of sites qualifying for early retirement provisions for asbestos workers available to people still in employment. The Group cannot exclude the possibility that other sites will be added to this list in the future.

Accordingly, on 30 June 2003, Arkema France concluded an agreement with all representative trade unions aimed at improving the retirement terms of its employees as part of these measures, and at adjusting the retirement date for those employees concerned in order to facilitate skills and knowledge transfer within the Group. These measures were extended to all Group companies in France by a Group agreement concluded on 1 September 2007 with all trade unions. For more information, see note 20 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

Promote the individual and collective development of all its employees

### 2.5.5.2 MEDICAL CARE

Regular medical check-ups were available in 95.5% of the Group's companies in 2015, representing 95.2% of the Group's employees.

### 2.5.5.3 OCCUPATIONAL ILLNESSES

The Group has used toxic or hazardous substances in the manufacture of its products, and continues to do so. Despite the safety and monitoring procedures that have been instituted at the Group and production site levels, Group employees may have been exposed to such substances and may develop specific illnesses as a result of such exposure.

In this respect, like most industrial companies, the Group used a variety of insulating or heat-proofing materials containing asbestos at its industrial facilities in the past. Consequently, certain employees may have been exposed to such materials before these were gradually phased out and replaced with substitute products by the Group.

Claims for occupational illnesses related to past asbestos exposure have been filed against the Group, mostly for periods before 1980. Risks related to occupational illness are described in section 1.7.2 of this reference document.

As regards industrial hygiene, the Group requires the implementation of assessments of exposure risks at workstations and ensures that residual exposure by employees to hazardous chemical products is regularly measured. These measures are in addition to the introduction of enclosed industrial processes limiting emissions as much as possible, collective protective measures such as source capture of residual emissions, general improvement work designed to minimize exposure risks, and personal protective measures adapted to each task. The aim of these measures is to prevent future risks of occupational illnesses where possible. Measurement data are kept in conditions that guarantee their long-term integrity.

In 2015, 79 occupational illnesses were reported at the Group level, of which 13 were related to exposure to asbestos and 5 to exposure to chemical products.

In France, the Group is also developing a traceability policy for potential exposure to arduous working conditions identified on its sites, including chemical risks, as part of its single risk assessment document, in accordance with French regulations. The Group has been working since 2012 to digitize these data, while adapting them to the requirements of the 2010 and 2014 laws on arduous working conditions. The STARMAP tool (see section 2.5.5.1) will manage internal traceability and track arduous working conditions in line with the Group's international scope.

### 2.5.6 Diversity and equal opportunity, equal treatment

Equal opportunity is one of the priorities of the Group's human resources policy, along with the prevention of discrimination in general. The Group notably takes steps aimed at ensuring gender equality, promoting the integration of disabled employees, and observing the principle of non-discrimination as regards age and nationality. Measures put in place to ensure equal opportunity and obtain quantifiable results include:

- a program of regular job description reviews to ensure that they accurately reflect the required duties and responsibilities, and an annual review of positions, their titles and the profiles required, department by department, in order to safeguard equality and consistency within the professions;
- a recruitment policy based on the sole criterion of suitability for the job. In the United States, for example, Arkema Inc. gives training to the people involved in the recruitment process, provides them with descriptions of the job and the profiles required, and remedies any situations where there is an underrepresentation of minorities or women at Company facilities.

### 2.5.6.1 MEASURES TAKEN TO PROMOTE GENDER EQUALITY

Over recent years, the Group has developed a policy of gender equality and equal pay.

Initiatives in this respect concern the following four areas:

- strengthening the principle of non-discrimination in access to employment;
- ensuring that the principle of equal pay is implemented;
- promoting and facilitating career development;
- promoting parenting within the Company.

An agreement on gender equality and diversity was signed in 2015 at Arkema France.

The main points in the Arkema France agreement cover recruitment and induction, compensation and promotions, access to training and work/life balance. The agreement also restates Arkema France's objectives on recruitment of young people and seniors as set out in the strategic jobs and skills management planning agreement, and the main measures on employment for disabled persons.

In 2016, the Group will strengthen its policy on recruitment and promotion for women at grade 15 and higher. Specific actions are planned, including the development of a mentoring program. This program, run by senior executives, seeks to develop female employees' access to positions of responsibility. It will begin with the appointment of a steering committee in early 2016. Bostik has also been running a diversity promotion program since 2011. A diversity council, with delegates from each region, meets regularly to discuss development focuses and specific actions. Communications campaigns on diversity are also run regularly.

The Group ensures that female employees are offered the same career development opportunities as their male counterparts. At Arkema France, women accounted for 5 of the 13 promotions to executive positions in 2015 (38%, compared with 22% in 2014).

In the United States, Arkema Inc. created an affirmative action plan supporting gender and pay equality between all employees and job applicants with similar qualifications, regardless of origin, ethnicity, nationality, religion or gender. Site-specific plans are updated each year for the period from 1 June to 31 May. To make proper allowance for diversity in recruitment, all Arkema Inc. vacancies inviting applications from outside the Company are posted or released on various recruitment sites designed to reach women, disabled persons and former members of the armed forces. Information on vacancies is also posted to local community organizations that help people in these categories find employment.

In 2015, women accounted for 17% of employees at level 15 positions and higher.

## 2.5.6.2 MEASURES TO PROMOTE THE EMPLOYMENT AND INTEGRATION OF PEOPLE WITH DISABILITIES

### A disability agreement for the period 2014-2016

The agreement covering the period from 2014 to 2016 is the third on the subject signed by Arkema France with unanimous approval from the trade unions. It confirms the following commitments by the Company:

- maintaining disabled people in employment and guaranteeing them access to training and career development;
- conducting an open recruitment and integration policy;
- hosting young people in training;
- developing partnerships with the protected sector;
- raising awareness within the Company.

It also includes the following new recruitment objectives:

- achieving an overall employment rate for people with disabilities of 4.45%;
- recruiting at least 16 people on permanent contracts;
- training at least 16 people as part of work-study programs;

- contracting 14 full-time equivalent employees on fixed-term or temporary assignments;
- signing 40 internship/trainee agreements;
- increasing the amount spent before tax on the labor component of subcontractor contracts by 5% compared with the average amount for the period from 2011 to 2013.

The following actions were taken in 2015:

- work continued on the appointment and training of volunteer local disability correspondents, with two training sessions in 2015. Disability correspondents take charge of facilitating the integration of disabled employees;
- Group nurses were trained to assist in sustained employment for disabled employees;
- partnerships with education were stepped up, with support for the Science Po Accessible campaign;
- a program on digital accessibility was begun, covering
  (i) accessibility for key communications materials (HR and
  disability), (ii) accessibility instructions for internal and
  external use, (iii) awareness-raising operations addressing
  communications agencies and HR and communications teams,
  and (iv) communications on accessibility during disability week;
- a program was begun for the support and integration of disabled persons referred to the Group by ESAT, French centers that help people with disabilities enter the workforce. A number of measures were identified, including provision of employees, work by Group employees at ESAT centers, inclusion of ESAT users on the Group payroll, and funding for training and equipment for ESAT centers.

### Implementation of suitable training programs

Executive management and employee representative bodies are especially attached to the notion of promoting employability through special training programs, a key point in the Group's policy on disability. The first training session qualifying chemical industry manufacturing operators, designed in 2012 in partnership with the INTERFORA training institute and other chemical industry companies, was completed in 2014. The operation will be continuing for its third year in partnership with chemical industry companies and institutions in the Rhône-Alpes region.

### 2.5.6.3 ANTI-DISCRIMINATION POLICY

The action plan for the employment of seniors, which took effect on 1 January 2010 for a period of three years, ended on 31 December 2012. It resulted in the recruitment of 697 employees on permanent contracts, 54 of whom (7.74%) were aged 50 and over.

In 2013, the issue of employment of seniors was included in the agreement on strategic jobs and skills management planning and intergenerational management in Group companies, signed on 12 September 2013 by the CFDT and CFE-CGC trade unions (see section 2.5.2.2 of this reference document).

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For the purposes of this agreement, "seniors" are defined as people aged 50 and over. The Group committed to the following actions in the agreement:

- a recruitment target of 10% of permanent contracts for people aged 50 and over;
- efforts to keep seniors in employment;
- end-of-career assistance;
- retirement planning;
- knowledge transfer.

In 2015, there were 259 new hires on permanent contracts in the Group in France, 31 of whom were aged 50 or over, amounting to 12% of all new hires compared with 11% in 2014.

Legislative changes in France in relation to retirement and senior employment resulted in a modification to corresponding employee-related liabilities as described in note 19 to the 2015 consolidated financial statements in section 4.3.3 of this reference document.

## 2.5.7 Promotion and compliance with the provisions of the fundamental conventions of the International Labour Organization

The Group endeavors to scrupulously comply with the constitutional texts, treaties, conventions, laws and regulations in force in its host countries and regions.

Accordingly, the Group confirms its adherence to:

- the principles of the Universal Declaration and of the European Convention on Human Rights;
- the fundamental conventions of the International Labour Organization;
- the OECD Guidelines for Multinational Enterprises.

Through its official participation in the United Nations Global Compact, the Group supports the ten principles and particularly those related to human rights and international labor standards.

To confirm this support, the Group introduced a Group Code of Conduct and Business Ethics, which sets out the requirements imposed on the Group wherever it operates, vis-à-vis its shareholders, customers, employees and any other stakeholders. The Code also lays down the individual behavior principles and rules which employees are required to observe within the Group.

As indicated in section 2.4.3 of this reference document, the Group has implemented a number of different training and awareness-raising initiatives directed at employees. The aim is to ensure that they comply with the rules and principles of the Code and, in particular, that they respect the right to freedom of association and expression and human rights, that they oppose all forms of forced labor and child labor and that they reject all forms of discrimination.

### 2.5.7.1 FREEDOM OF ASSOCIATION AND THE RIGHT TO COLLECTIVE BARGAINING

The Group is committed to respecting the fundamental freedoms of its employees, such as the freedom of association and expression, to protecting the personal data of its employees and to respecting their privacy, as defined in the Code of Conduct and Business Ethics.

Among the fundamental principles and rights at work, the right to freedom of association and to collective bargaining is a vector of social progress that the Group encourages wherever it operates.

Accordingly, over and above compliance with statutory and regulatory provisions in its host countries, the Group facilitates and promotes employee representation in order to allow suitable collective bargaining processes to be developed.

The organization of social dialogue and a review of the collective bargaining agreements signed within the Group are provided in section 2.5.4 of this reference document.

### 2.5.7.2 ELIMINATION OF EMPLOYMENT AND OCCUPATION DISCRIMINATION

The Group is committed to promoting the elimination of discrimination of all kinds as part of its policy of non-discrimination and promotion of gender equality and diversity.

The Group undertakes to promote diversity, which is an asset for its global business, and to hire employees based solely on its needs and their abilities, as defined in the Code of Conduct and Business Ethics.

The Group's diversity, equal opportunity and equal treatment policy is detailed in section 2.5.6 of this reference document.

### 2.5.7.3 ELIMINATION OF FORCED OR COMPULSORY LABOR AND ABOLITION OF CHILD LABOR

The Group fully supports the elimination of forced labor and opposes any type of labor which involves forcing people to work against their will or in violation of their personal freedom, as defined in the Code of Conduct and Business Ethics.

The Group commits to never using child labor under any circumstances, regardless of the country in which the Group operates, as defined in its Code of Conduct and Business Ethics.

### 2.6 METHODOLOGY NOTE

### 2.6.1 Methodology note on environmental and safety indicators

### 2.6.1.1 ENVIRONMENTAL REPORTING TOOLS AND SCOPE

### **Extensive data**

The Group's extensive quantitative environmental data are compiled by its Reporting of Environmental and Energy Data system (REED), which is accessible worldwide via the web platform of a service provider.

The values of the extensive indicators, once published after verification by the Independent Third-Party auditor, are not amended in the REED system. Any subsequent retroactive modifications made, whether due to a change in the estimation method or to a correction, are addressed in section 2.2 of this reference document.

The data are entered by site Health, Safety and Environment (HSE) departments and validated at the geographic level then the Group level.

The scope of consolidation for environmental reporting covers all Group sites for which operations (and emissions) permits were held in the name of the Group or a majority-owned subsidiary at 31 December 2015.

The activities sold or terminated in 2015 are not included in the scope of reporting for 2015, but are still included for previous years.

For activities that were acquired in 2015 (Bostik in particular), all operations for the year are included in the scope of reporting. Throughout this reference document, mention is made wherever relevant on how Group results are affected by the inclusion of data for Bostik sites, and on any particularities arising from this inclusion.

The Taixing Sunke Chemicals site in Taixing, China, run jointly by Arkema and Jurong Chemical since 2014, reported partial environmental indicator data in 2015. All indicators were included except: "Substances contributing to acidification", "Carbon monoxide", "Dust", and "Volatile organic compounds (VOCs)". This is indicated in note (18) to the table of indicators (section 2.7). All indicators for the Taixing site will be included in Group reporting from 2016.

Activities started in 2015 are reported from their start-up date.

### Intensive data (EFPIs)

In order to manage its environmental performance more accurately and provide a consolidated Group data report that better

describes changes to this performance, the Arkema Group has adopted a methodology allowing its facilities to report intensive indicators, known as Environmental Footprint Performance Indicators (EFPIs). This methodology is used by the Group to calculate the intensity of emissions or resource consumption relative to production volumes, compared with a baseline year. It minimizes the impact of any changes to the Group's business base and production from its plants, as well as any changes to the method used to estimate or calculate environmental footprint variables.

The Group's intensive quantitative environmental data are compiled by the same REED environmental reporting system, which is accessible worldwide via the web platform of a service provider.

EFPI data are entered by site Health, Safety and Environment (HSE) departments and validated by the Industrial Vice-President then at the Group level. They are subject to a large number of consistency tests.

The scope of consolidation for EFPI reporting covers Group sites for which operations (and emissions) permits were held in the name of the Group or a majority-owned subsidiary at 31 December 2015 and which are among the biggest contributors of the Group's sites. These sites account for a minimum of 80% of the Group's emissions or consumption from the previous year.

Any activities sold or terminated in 2015 are not included in the scope of EFPI reporting for 2015, but are still included for previous years.

Activities started up in the course of 2014 will be included in the scope of EFPI reporting in 2016 compared with their 2015 performance.

Activities that were acquired in 2015 will be included in the 2017 scope of EFPI reporting for all 2017 operations as compared with their 2016 performance.

The Group nevertheless decided that Bostik data should be included in its scope of EFPI reporting for 2015. Throughout this reference document, mention is made wherever relevant on how Group results are affected by the inclusion of data for Bostik sites, and on any particularities arising from this inclusion.

The Hengshui, China site of Hebei Casda Biomaterials Co. Ltd. and the Zhangjiagang, China site of Suzhou Hipro Polymers Co. Ltd., acquired in 2012, are included in the scope of EFPI reporting for 2015, comparative with 2014 performance, consistent with the Group's reporting methodology.

American sites that began reporting their emissions to water, expressed in terms of chemical oxygen demand (COD), in 2013 will only be included in the scope of COD EFPI reporting from 2014 or 2015 onward.

The methodology used to calculate EFPIs allows for new reporting sites to be included within the scope of the Group's previous performance. Should the inclusion of a large number of new sites result in a significant change to the confidence interval in this calculation of the Group's EFPI, consideration will be given to whether an adjustment factor should be applied or whether the use of a new baseline year be required.

### 2.6.1.2 SAFETY REPORTING TOOLS AND SCOPE

Quantitative data concerning safety:

- are recorded in the SafetyLog application accessible on the Group's intranet;
- are entered by the sites and validated by head office;
- cover all industrial sites operated by the Group or by majority-owned subsidiaries, head offices and research and development centers;
- did not include vinyl-producing sites sold in 2012 in the 2012 data;
- cover Bostik from 2015 unless specified otherwise.

### 2.6.1.3 CHOICE OF INDICATORS, MEASUREMENT METHODS AND INFORMATION TO USERS

The Group has defined these indicators in order to monitor various emissions and consumption levels that are relevant to its activities in accordance with the French law on new reporting requirements and the associated decree of 20 February 2002.

These indicators were set out at the time of the Group's creation and have been monitored since the 2006 reporting year.

They also comply with the regulatory requirements of Article 225-l of the French "Grenelle II" Law No. 2010-788 of 12 July 2010 and its application decree of 24 April 2012.

Environmental reporting is covered by an Environmental Reporting directive, an EFPI Reporting directive and an Energy Reporting directive, which are issued by the Group Safety and Environment (DSEG), Sustainable Development (DDD) and Energy Procurement departments (DAMPE) and accessible to all employees via the Arkema Group's intranet.

Calculation and estimation methods are subject to change, for example due to changes to national or international regulations, measures to improve consistency between regions, or problems arising out of their application.

The directives may then be adapted into guides, which are accompanied by training sessions per region as required.

Safety reporting is the subject of a Monthly Safety Reporting directive issued by the Group Safety and Environment department and accessible to all employees via the Group's intranet.

### 2.6.1.4 DETAILS ON ENVIRONMENTAL AND SAFETY INDICATORS

The following information is provided to clarify the definition of the indicators applied by the Group.

### Total substances contributing to acidification

This indicator is calculated using sulfur oxide (SOx), ammonia (NH<sub>3</sub>) and nitrogen oxide (NOx) emissions converted into tonnes of sulfur dioxide (SO<sub>2</sub>) equivalent.

### Volatile organic compounds (VOCs)

The list of products regarded as VOCs may vary from country to country, in particular between Europe and North America.

The VOC definitions used by the Group are those recommended in Europe by directive 2010/75/EU on industrial emissions, known as the Industrial Emissions directive (IED).

Emissions from American sites are therefore obtained by adding products such as fluorinated organic compounds to national reported data.

### Chemical oxygen demand (COD)

For reporting purposes, COD emissions are those emitted into the natural environment.

In cases where water from a Group facility is treated in an external treatment plant, the reported data takes into account the effectiveness of treatment by the external treatment plant.

In cases where a Group site takes in external COD-laden water, the Group's reported data concerns the COD load effectively introduced by the Group (outgoing minus incoming).

### Waste

The distinction between hazardous and non-hazardous waste may vary from one region to another. The definitions used by the Group are those of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.

By-products that are sold to third parties for reuse without processing at a Group site are not counted as waste.

### Water consumption

All sources of water are included in the reported data, namely groundwater/wells, rivers, the sea, public or private networks and drinking water, excluding rainwater collected in separate networks.

### **Energy consumption**

Reported consumption corresponds to net energy purchases.

This indicator does not include self-generated energy, which corresponds to the energy produced by exothermic chemical reactions and therefore does not deduct from the planet's energy resources.

Sales of energy are deducted from purchases of energy. This is the case, for example, for sites fitted with cogeneration facilities that generate steam and electricity from purchased gas (reported), then sell the electricity (deducted). In cases where sites do not have any December data due to late reporting by energy providers, the values for the year are extrapolated from the data at end-November.

### Direct greenhouse gas (GHG) emissions

For reporting purposes, direct GHG emissions correspond to those defined in the Kyoto Protocol.

Their impact is calculated in equivalent tonnes of carbon dioxide (t  $CO_2$  eq.).

In this report, 2012 emissions have been calculated using the Global Warming Potential values published in 2007 by the Intergovernmental Panel on Climate Change (IPCC).

For intensive data, EFPI calculations include fluorinated greenhouse gases that are not listed in the Kyoto Protocol but are listed in the Montreal Protocol.

### Indirect greenhouse gas (GHG) emissions

For the purposes of this report, indirect Scope 2  $CO_2$  emissions were calculated using electricity and steam consumption and emission factors in tonnes per kilowatt-hour (KWh) or tonnes of steam provided by Group site suppliers. Where this was not possible, they were calculated using figures provided by local authorities, such as those available in the EPA-2012 database in the United States, the 2013 Baseline Emission Factors for Regional Power Grids issued by China's National Development & Reform Council (NDRC) for China, SEMARNAT data issued by Mexico's Federal Environmental Agency for Mexico and data issued by the French environment agency, ADEME, on several countries.

In 2015, an error was detected in the steam emission factors used for the Changhsu site in 2014. This reference document uses corrected values for 2015 and 2014.

For the purposes of this report, Scope 3 indirect  $CO_2$  emissions were estimated using internal Group company logistics data, which account for 99% of Group shipments. These data are made

up of measurements of tonnes transported, number of shipments, weight transported per shipment and average mileage for each type of transportation. The measurements are then converted into tonnes of CO<sub>2</sub> emitted during transportation using the emission factors for the different modes of transportation defined in the "Guidelines for Measuring and Managing CO<sub>2</sub> Emissions from Freight Transport Operations". Published by the European Chemical Transport Association (ECTA) and the European Chemical Industry Council (CEFIC) in March 2011, these guidelines are based on the work of Professor Alan McKinnon of Heriot-Watt University in Edinburgh, UK.

Because of an enterprise ressource planning (ERP) change, 2015 data for world liner shipping and European road transportation (Arkema France, Spain, Germany, Netherlands and Italy) had to be estimated by extrapolation from the 2014 figures. For liner shipping, estimated values are taken for the volume transported (estimated on the basis of variation in the number of containers shipped from 2014 to 2015) and for the shipping mileages (estimated on the basis of average distances between departure and arrival zones). For road transportation, CO<sub>2</sub> impact in 2015 was estimated on the basis of volumes transported in 2015 and average transportation mileages in 2014.

#### **Accidents**

Total recordable injury rates (TRIR) and lost-time injury rates (LTIR) are calculated for all of the Group's own employees as well as for subcontracted workers on Group sites on the basis of US standard 29 CFR 1904.

### **Process safety**

The safety performance of the processes in use at industrial sites is evaluated by means of performance indicators that measure and analyze process safety incidents. The Group reports on and classifies process safety indicators to CEFIC (European Chemical Industry Council) guidelines.

### 2.6.2 Methodology note on social and societal information/indicators

### 2.6.2.1 SCOPE AND REPORTING TOOLS

The Group's quantitative social data are taken from several different reporting processes.

The headcount data in sections 2.5.1.1 and 2.5.1.2:

- are recorded in the AREA 1 application accessible via the Group's intranet;
- are entered by the human resources managers or the managers of Group companies (depending on their size);
- are validated at the Arkema, Altuglas International, Bostik, CECA, Coatex and Sartomer group levels;
- cover all companies in which the Group has at least a 50% interest;
- cover Bostik from 2015 unless specified otherwise.

The quantitative and qualitative data concerning other social and societal information:

 are recorded in the AREA 2 application accessible via the Group's intranet;

- are entered by the human resources employees of regional companies and subsidiaries;
- are validated by the regional human resources directors or subsidiary managers;
- cover all companies of 30 or more employees in which the Group has at least a 50% interest, which amounts to 96.5% of the Group's total headcount;
- cover Bostik from 2015 unless specified otherwise.

Any modifications or corrections to previous years' data are noted in section 2.6.2.3 of this reference document.

### 2.6.2.2 CHOICE OF INDICATORS, DETERMINATION METHODS AND INFORMATION TO USERS

The Group has defined indicators that are relevant to its activities and its social policy.

Indicators concerning employees and the safety performance were put in place at the time of the Group's creation, and have been monitored since 2006.

Additional social information and indicators, and societal data, were made part of a new reporting process in 2012 via the AREA 2 compilation system. Their use was gradually extended in 2013, in particular with regard to the monitoring of reported training hours.

The information and indicators also comply with the regulatory requirements of Article 225-I of the French "Grenelle II" Law No. 2010-788 of 12 July 2010 and the application decree of 24 April 2012.

Social reporting is covered by different procedure documents in the form of AREA 1 and AREA 2 guides, which have been provided to all people in charge of reporting and validating data.

The calculation methods may have limitations and be subject to change, for example due to national social regulations and practices varying from one region to another, difficulties reporting certain information in some areas, or unavailability of information in some countries.

### 2.6.2.3 DETAILS ON SOCIAL INFORMATION AND INDICATORS

### Headcount

For the purposes of reporting, headcount includes employees on the Group's payroll (employees present and employees whose employment contract – regardless of its nature – has been suspended) at 31 December of the reporting year. Permanent employees are defined as employees that have signed an employment contract for an indefinite period of time. Outside of France, employees engaged on fixed-term contracts for periods of more than 12 months and renewed more than once are also included among permanent employees.

### Categories of employees

Data are presented by professional category. In France, manager status (cadre) is determined by the collective bargaining agreements governing the Company. Outside of France, employees with a Hay job level of 10 or more are considered managers.

#### New hires

These data cover the recruitment of employees on permanent contracts (permanent headcount) only.

### Compensation

Collective variable components are defined as components that vary depending on overarching economic criteria and the economic and financial results of the employee's Company. In France, these take the form of incentive schemes and profitsharing plans.

### Health and welfare

Health and welfare cover refers to benefits from a collective or mutual insurance scheme providing cover for incapacity/disability/death risks.

### **Training**

Training hours are defined as the hours spent in training by Group employees on permanent contracts (excluding e-learning).

During verification by the Independent Third-Party auditor for 2015 reporting, an error was detected in the 2014 data reported by Arkema Inc. The figure of 136,992 training hours reported under "education assistance" should have read 13,692 hours. The corrected Group value for 2014 is therefore 334,000.

This correction does not impact Group data on environment and safety training in 2014.

### Absenteeism

The absenteeism rate corresponds to the total number of hours of absence in the year (due to sickness, injuries, maternity leave, strikes and unpaid leave but excluding paid leave) divided by the total number of hours worked in the year.

### 2.7 INDICATORS

		2015	2014	2013
SAFETY				
Total recordable injury rate (TRIR) (1)		1.5	1.9	2.8
Lost-time injury rate (LTIR) (1)		1.1	1.1	1.6
Quota of AIMS-audited sites (2)	%	61	78	62
Quota of Sites implementing peer observation	%	57	77	62
Quota of Safety, environment and maintenance expenditure	€m	203	211	195
Quota of OHSAS 18001-certified sites	%	52	60	54
Quota of OHSAS 18001-certified sites in Europe	%	51	62	
Quota of OHSAS 18001-certified sites in the Americas	%	60	63	
Quota of OHSAS 18001-certified sites in Asia	%	45	50	
Number of Process Safety Incidents (PSIs)		27	33	33
ENVIRONMENT				
Quota of ISO 14001-audited sites (3)	%	62	70	59
Quota of ISO 14001-audited sites (3) in Europe	%	69	68	
Quota of ISO 14001-audited sites (3) in the Americas	%	60	84	
Quota of ISO 14001-audited sites (3) in Asia	%	41	50	
Emissions to air				
Substances contributing to acidification (18)	t SO <sub>2</sub> eq.	4,430	4,750	5,330
Carbon monoxide (18)	t	1,900	3,030	8,850
Volatile organic compounds (VOCs) (4) (18)	t	5,010	4,600	4,460
Dust (18)	t	520	430	400
Emissions to water				
Chemical oxygen demand (COD)	t O <sub>2</sub>	3,200	3,870	3,800
Suspended solids	t	870	3,030	2,950
Waste				
Hazardous waste (excluding material recovery)	kt	151	149	160
of which landfill disposal	kt	2.5	2.1	2.7
Hazardous waste recycled into materials	%	15	16	15
Hazardous waste utilized for energy recovery	%	47	46	49
Non-hazardous waste	kt	231	219	210
Resources				
Total water withdrawn	$Mm^3$	124	120	130
Net energy purchases	TWh	8.48	8.36	8.50
• of which in Europe	TWh	4.66	4.65	
• of which in the Americas	TWh	2.69	2.78	
• of which in the Rest of the world	TWh	1.12	0.93	
Net energy purchases by type				
• fuel	TWh	4.69	4.52	
• electricity	TWh	2.70	2.44	
• steam	TWh	1.08	1.40	

<ul> <li>of which CO<sub>2</sub></li> <li>of which HFC</li> <li>of which HFC</li> <li>kt CO<sub>2</sub> eq.</li> <li>1,510</li> <li>2,010</li> <li>3,000</li> <li>Europe</li> <li>Americas</li> <li>Rest of the world</li> <li>kt CO<sub>2</sub> eq.</li> <li>1,510</li> <li>2,010</li> <li>3,000</li> <li>33</li> <li>30</li> <li>40</li> <li>8</li> <li>10</li> </ul>			2015	2014	2013
Direct greenhouse gas   GHG   emissions   S	Natural gas in net purchases of fuel	%	89	90	
e of which CO2 kt CO2 eq. 1,440 1,380 1, et of which HFC kt CO2 eq. 1,510 2,010 3, completed greenhouse gas (GHG) emissions (5) by region ending greenhouse gas (GHG) emissions (5) by region ending greenhouse gas (GHG) emissions of CO2 kt 1,300 1,067 1, et of which in Europe kt 272 284 et of which in Europe kt 272 284 et of which in the Americas kt 521 545 et of which in the Rest of the world kt 507 239 et of which in the Rest of the world kt 507 239 et of which in the Rest of the world kt 507 239 et of which in the Rest of the world kt 507 239 et of which in the Rest of the world kt 507 239 et of which in Europe and the Rest of the world so which in Europe end gas (GHG) emissions of CO2 (at more or less 20%) Mt 0.2 0.2 et of which in Europe end gas (GHG) emissions of CO3 et of which in Europe end gas (GHG) emissions of CO3 et of which in Europe end gas (GHG) emissions of CO3 et of which in North America end gas e	Low-carbon electricity in net energy purchases	%	17	17	
e of which HFC kt CO₂ eq. 1,510 2,010 3,   Direct greenhouse gas (GHG) emissions <sup>[S]</sup> by region  ■ Europe	Direct greenhouse gas (GHG) emissions (5)	kt CO2 eq.	3,000	3,430	4,710
Europe	• of which CO <sub>2</sub>	kt CO <sub>2</sub> eq.	1,440	1,380	1,470
Europe	• of which HFC	kt CO <sub>2</sub> eq.	1,510	2,010	3,200
• Americas % 59 60 • Rest of the world % 8 10 Scope 2 indirect greenhouse gas (GHG) emissions of CO2 kt 1,300 1,067 1,06	Direct greenhouse gas (GHG) emissions (5) by region				
• Rest of the world         %         8         10           Scope 2 indirect greenhouse gas (GHG) emissions of CO2         kt         1,300         1,067         1,067           • of which in Europe         kt         272         284           • of which in the Americas         kt         521         545           • of which in the Rest of the world         kt         507         239           Scope 3 indirect greenhouse gas (GHG) emissions of CO2 (at more or less 20%)         Mt         0.2         0.2           Number of energy diagnostics in progress or completed         37         20           • of which in Europe         28         14           • of which in North America         8         5           • of which in North America         8         5           • of which in Europe         21         31           • of which in North America         10         12           • of which in Sia         7         4           Number of ISO 50001-certified sites<	• Europe	%	33	30	
Scope 2 indirect greenhouse gas (GHG) emissions of CO2	Americas	%	59	60	
• of which in Europe • of which in the Americas • of which in the Rest of the world • of which in the Rest of the world • of which in the Rest of the world • of which in the Rest of the world • of which in Europe • of which in Europe • of which in North America • of which in North America • of which in North America • of which in Europe • of which in In Europe • of which in Asia • of which in Europe • of which in Asia • of which in Europe • of which in Europe • of which in In Europe • of which in Europe • of which in South America • of which in Europe • of which in Europe • of which in Europe • of which in South America • of which in South America • of which in North America • of which in South America • of which in South America • of which in Asia • of which in South America • of which in Asia • of which in South America • of which in Asia • of which in South America • of which in Asia • of which in South America • of which in North America • of which in North America • of which in North America • of which in Europe • 21 • 31 • Other America • 32 • 31 • 31 • 31 • 31 • 32 • 32 • 34 • 35 • 35 • 36 • 37 • 38 • 37 • 38 • 37 • 38 • 37 • 38 • 37 • 38 • 37 • 38 • 37 • 38 • 39 • 30 • 30 • 30 • 30 • 30 • 30 • 30 • 30	Rest of the world	%	8	10	
<ul> <li>of which in the Americas</li> <li>of which in the Rest of the world</li> <li>kt</li> <li>507</li> <li>239</li> <li>Scope 3 indirect greenhouse gas (GHG) emissions of CO<sub>2</sub> (at more or less 20%)</li> <li>Number of energy diagnostics in progress or completed</li> <li>of which in Europe</li> <li>of which in North America</li> <li>of which in Asia</li> <li>1</li> <li>Number of Arkenergy investments</li> <li>of which in Europe</li> <li>of which in Europe</li> <li>of which in Europe</li> <li>of which in Europe</li> <li>of which in Furope</li> <li>of which in Furope</li> <li>of which in North America</li> <li>of which in North America</li> <li>of which in North America</li> <li>of which in Asia</li> <li>Number of ISO 50001-certified sites</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>Number of sites exposed to a severe risk of storms and/or flooding</li> <li>Sales from products made in full or in part from renewable raw materials</li> <li>N/A</li> <li>SOCIAL</li> </ul>	Scope 2 indirect greenhouse gas (GHG) emissions of CO <sub>2</sub>	kt	1,300	1,067	1,053
• of which in the Rest of the world Scope 3 indirect greenhouse gas [GHG] emissions of CO2 (at more or less 20%) Number of energy diagnostics in progress or completed • of which in Europe • of which in North America • of which in Asia Number of Arkenergy investments • of which in Europe • of which in Furope • of which in North America • of which in Asia • of which in Sia • of which in Asia • of which in Sia • of which in Asia • of which in Sia • of which in Asia • of which in Sia • of which in Asia • of which in Sia • of which in Asia • of which in Sia • of which in North America • of which in Sia • of which in North America • of which in In Sia • of which in In Sia • of which in In Sia • of which in North America • of which in In Sia • of which in North America • of which in In Sia • of which in Sia • of w	• of which in Europe	kt	272	284	
Scope 3 indirect greenhouse gas (GHG) emissions of CO <sub>2</sub> (at more or less 20%)  Number of energy diagnostics in progress or completed  of which in Europe  of which in North America  of which in Asia  In Interprectation of which in Asia  of which in Europe  of which in Asia  of which in Asia  In Interprectation of Arkenergy investments  of which in Europe  of which in North America  of which in Asia  Number of ISO 50001-certified sites  Number of sites where ISO 50001 certification is in progress  Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding  Sales from products made in full or in part from renewable raw materials  N/A 13	• of which in the Americas	kt	521	545	
(at more or less 20%)  Number of energy diagnostics in progress or completed  of which in Europe  of which in North America  of which in Asia  Number of Arkenergy investments  of which in Europe  of which in North America  of which in Asia  August 10  of which in Asia  Number of ISO 50001-certified sites  Number of sites where ISO 50001 certification is in progress  Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding  Sales from products made in full or in part from renewable raw materials  SOCIAL  Mt 0.2  0.2  0.2  0.2  0.2  0.2  0.2  0.2	of which in the Rest of the world	kt	507	239	
<ul> <li>of which in Europe</li> <li>of which in North America</li> <li>of which in North America</li> <li>of which in Asia</li> <li>1</li> <li>Number of Arkenergy investments</li> <li>of which in Europe</li> <li>of which in North America</li> <li>of which in North America</li> <li>of which in Asia</li> <li>Number of ISO 50001-certified sites</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>14</li> <li>10</li> <li>Adaptation to the consequences of climate change</li> <li>Number of sites exposed to a severe risk of storms and/or flooding</li> <li>Sales from products made in full or in part from renewable raw materials</li> <li>N/A</li> <li>SOCIAL</li> </ul>		Mt	0.2	0.2	
<ul> <li>of which in North America</li> <li>of which in Asia</li> <li>1</li> <li>Number of Arkenergy investments</li> <li>of which in Europe</li> <li>of which in Europe</li> <li>of which in North America</li> <li>of which in Asia</li> <li>of which in Asia</li> <li>Number of ISO 50001-certified sites</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>14</li> <li>10</li> <li>Adaptation to the consequences of climate change</li> <li>Number of sites exposed to a severe risk of storms and/or flooding</li> <li>Sales from products made in full or in part from renewable raw materials</li> <li>N/A</li> <li>SOCIAL</li> </ul>	Number of energy diagnostics in progress or completed		37	20	
<ul> <li>of which in Asia</li> <li>Number of Arkenergy investments</li> <li>of which in Europe</li> <li>of which in North America</li> <li>of which in North America</li> <li>of which in Asia</li> <li>of which in Asia</li> <li>Number of ISO 50001-certified sites</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>10</li> <li>Adaptation to the consequences of climate change</li> <li>Number of sites exposed to a severe risk of storms and/or flooding</li> <li>Sales from products made in full or in part from renewable raw materials</li> <li>N/A</li> <li>SOCIAL</li> </ul>	• of which in Europe		28	14	
Number of Arkenergy investments  of which in Europe  of which in North America  of which in North America  of which in Asia  Number of ISO 50001-certified sites  Number of sites where ISO 50001 certification is in progress  Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding  Sales from products made in full or in part from renewable raw materials  **N/A**  **SOCIAL**  38  47  47  40  10  12  4  10  10  11  10  11  18  18  SOCIAL	of which in North America		8	5	
<ul> <li>of which in Europe</li> <li>of which in North America</li> <li>of which in North America</li> <li>of which in Asia</li> <li>of which in Asia</li> <li>Number of ISO 50001-certified sites</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>10</li> <li>Adaptation to the consequences of climate change</li> <li>Number of sites exposed to a severe risk of storms and/or flooding</li> <li>21</li> <li>18</li> <li>Sales from products made in full or in part from renewable raw materials</li> <li>%</li> <li>N/A</li> <li>13</li> <li>SOCIAL</li> </ul>	• of which in Asia		1	1	
<ul> <li>of which in North America</li> <li>of which in Asia</li> <li>Number of ISO 50001-certified sites</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>Number of sites where ISO 50001 certification is in progress</li> <li>Adaptation to the consequences of climate change</li> <li>Number of sites exposed to a severe risk of storms and/or flooding</li> <li>Sales from products made in full or in part from renewable raw materials</li> <li>N/A</li> <li>SOCIAL</li> </ul>	Number of Arkenergy investments		38	47	
of which in Asia     Number of ISO 50001-certified sites     17     5 Number of sites where ISO 50001 certification is in progress     14     10  Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding     Sales from products made in full or in part from renewable raw materials  SOCIAL  7     4     17     5     18     10     18     SOCIAL	of which in Europe		21	31	
Number of ISO 50001-certified sites  Number of sites where ISO 50001 certification is in progress  14  10  Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding  Sales from products made in full or in part from renewable raw materials  N/A  13  SOCIAL	of which in North America		10	12	
Number of sites where ISO 50001 certification is in progress  Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding  Sales from products made in full or in part from renewable raw materials  **N/A**  **N/A**  **SOCIAL**	• of which in Asia		7	4	
Adaptation to the consequences of climate change  Number of sites exposed to a severe risk of storms and/or flooding  Sales from products made in full or in part from renewable raw materials  SOCIAL	Number of ISO 50001-certified sites		17	5	
Number of sites exposed to a severe risk of storms and/or flooding 21 18 Sales from products made in full or in part from renewable raw materials % N/A 13  SOCIAL	Number of sites where ISO 50001 certification is in progress		14	10	
and/or flooding 21 18 Sales from products made in full or in part from renewable raw materials % N/A 13  SOCIAL	Adaptation to the consequences of climate change				
raw materials % N/A 13  SOCIAL	and/or flooding		21	18	
SOCIAL	Sales from products made in full or in part from renewable	%	NI/A	13	
		70	14/74	10	
Total headcount at 31 December (6) 18,912 14,280 13,			18.912	14.280	13,908
					13,434
					474
		%			26.3
	·				23.3
Women in management positions (7) % 17 17	• •				19
New hires <sup>(8)</sup> 1,450 1,022					864
		%			20.0
New hires aged 50 and over % 8 9.8					8.2

	1			
		2015	2014	2013
New hires aged under 30	%	41.6	41.5	39.5
Departures (9)		2,753	1,905	1,352
• of which resignations		758	379	362
• of which dismissals		253	252	224
<ul> <li>of which departures following a divestment/merger</li> </ul>		354	213	0
Part-time employees	%	3.1	3.7	3.3
Training				
Number of training hours (10)	thousands	463	334	307
Number of training hours per employee		27	26	23
Number of permanent employees who received training [11]		17,062	11,534	10,082
Number of employees who undertook e-learning courses		8,218	4,442	3,585
Number of safety training hours	thousands	173	150	
Number of safety training hours per employee		12	17	
Number of employees who received safety training (excluding e-learning)		14,582	8,776	
Number of employees who undertook safety-related e-learning courses		5,538	4,263	
Number of environment-related training hours		20,447	15,837	
Number of environment-related training hours per employee		7.2	7.6	
Number of employees who received environment-related training (excluding e-learning)		2,841	2,070	
Work-study students (12)	%	4.2	4.6	4.5
Group companies conducting Annual Performance Reviews	%	97	95.6	
Health and welfare				
Absenteeism (13)	%	3.4	3.5	3.4
Hours off work on medical grounds	%	71.7	70.7	73.5
Employees benefiting from medical follow-up	%	95.2	83	84
Employees benefiting from supplementary disability cover	%	86	95	95
Employees benefiting from supplementary life insurance cover	%	92	95	95
Employees benefiting from death benefit cover (14)	%	75	80	80
Compensation				
Employees benefiting from minimum compensation guarantees	%	99.5	99	98
Employees benefiting from collective variable compensation components	%	60	65	60
Employees benefiting from individual variable compensation components	%	22	18	15
Representation				
Employees benefiting from employee and/or trade union representation (1.5)	%	88.2	94.2	94.9

		2015	2014	2013
SOCIETY				
Number of Common Ground® initiatives (16)		1,014	985	644
Group industrial sites taking part in Common Ground®	%	82	90	81
European industrial sites taking part in Common Ground®	%	88	85	
North American industrial sites taking part in Common Ground®	%	90	93	
Asian industrial sites taking part in Common Ground®	%	80	94	
Product stewardship				
Number of substances with REACH registration		277	274	
Number of GPS sheets voluntarily published		145	145	
INNOVATION				
Number of patent applications filed for solutions to sustainable development challenges (17)		61	81	79

- (1) Number of injuries per million hours worked.
- (2) Arkema Integrated Management System (AIMS) audit, which combines ISO 9001, ISO 14001 and OHSAS 18001 requirements.
- (3) Or Responsible Care Management System (RCMS) in the United States.
- (4) 2012 data revised as indicated in section 2.2.1.2 of this reference document.
- (5) GHG emissions concerning gases covered in the Kyoto Protocol.
- (6) Breakdown by region, age group, job category and gender, as detailed in section 2.5.1.1 of this reference document.
- (7) Level 15 job or higher according to the Hay classification.
- (8) Breakdown by region, age group, job category and gender, as detailed in section 2.5.1.2 of this reference document.
- (9) Breakdown by region, as detailed in section 2.5.1.2 of this reference document.
- (10) Recorded in companies with at least 30 employees and in which the Group has at least a 50% interest, which amounts to 96.5% of the total headcount.
- (11) Excluding e-learning.
- (12) Percentage of work-study students in relation to total headcount (scope: Arkema France).
- (13) Total number of hours off work (excluding authorized leaves of absence) divided by the total number of hours worked.
- (14) Guarantee representing at least 18 months' salary.
- (15) Breakdown by region, as detailed in section 2.5.4.2 of this reference document.
- (16) Initiative started by the Group as part of its relations with its industrial site and research center stakeholders.
- (17) Filed by the Group, excluding the Coatex and Arkema Inc. subsidiaries.
- (18) For 2015, the Taixing site did not report on "Substances contributing to acidification", "Carbon monoxide" or "Dust". The impact of these omissions on Group figures is estimated at under 1%. "Volatile organic compounds (VOCs)" from the Taixing site are estimated to account for around 2% of the Group total in 2016.

# 2.8 INDEPENDENT THIRD PARTY OPINION PURSUANT TO ARTICLE L. 225-102-1 OF THE FRENCH COMMERCIAL CODE

REPORT OF ONE OF THE STATUTORY AUDITORS, APPOINTED AS INDEPENDENT THIRD PARTY, ON THE CONSOLIDATED SOCIAL, ENVIRONMENTAL AND SOCIETAL INFORMATION INCLUDED IN THE MANAGEMENT REPORT

Year ended 31 December 2015

This is a free English translation of the original report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditor of Arkema, appointed as independent third party and certified by COFRAC under number 3-1049 (1), we hereby report to you on the consolidated social, environmental and societal information for the year ended 31 December 2015 (hereinafter the "CSR Information"), presented in the Management report included in the Registration document, pursuant to article L. 225-102-1 of the French Commercial Code.

### Company's responsibility

The Board of Directors is responsible for preparing a management report including the CSR Information required by article R. 225-105-1 of the French Commercial Code prepared in accordance with the guidelines and procedures used by the Group (hereinafter the "Guidelines"), summarised in the Management report and available on request from the Group's head office.

### Independence and quality control

Our independence is defined by regulatory texts, the French Code of ethics of our profession and the requirements of article L. 822-11 of the French Commercial Code. In addition, we have implemented a quality control system including documented policies and procedures designed to ensure compliance with the ethical requirements, French professional standards and applicable legal and regulatory requirements.

### Statutory Auditor's responsibility

On the basis of our work, our responsibility is to:

- attest that the required CSR Information is included in the management report or, in the event of non-disclosure of a part or all of the CSR Information, that an explanation is provided in accordance with the third paragraph of article R. 225-105 of the French Commercial Code (Attestation of completeness of CSR Information);
- express a limited assurance conclusion that the CSR Information taken as a whole is, in all material respects, fairly presented in accordance with the Guidelines (Conclusion on the fairness of CSR Information).

Our work involved twelve persons and was conducted between October 2015 and March 2016 during a twelve weeks period. We were assisted in our work by our CSR experts.

(1) For which the scope is available on the site www.cofrac.fr

Independent third party opinion pursuant to article L. 225-102-1 of the French Commercial Code

We performed our work in accordance with the French professional standards and with the order dated 13 May 2013 defining the conditions under which the independent third party performs its engagement and with the international standard ISAE 3000 (1) concerning our conclusion on the fairness of CSR Information.

### 1. Attestation of completeness of CSR Information

### Nature and scope of our work

On the basis of interviews with the individuals in charge of the relevant departments, we obtained an understanding of the Group's sustainability strategy regarding social and environmental impacts of its activities and its societal commitments and, where applicable, any resulting actions or programmes.

We compared the CSR Information presented in the Management report with the list provided in article R. 225-105-1 of the French Commercial Code.

For any consolidated information that is not disclosed, we verified that explanations were provided in accordance with article R. 225-105, paragraph 3 of the French Commercial Code.

We verified that the CSR Information covers the scope of consolidation, i.e., the Group, its subsidiaries as defined by article L. 233-1 and the controlled entities as defined by article L. 233-3 of the French Commercial Code within the limitations set out in the methodological note, presented in the Management report (2.6. section of the Registration document).

#### Conclusion

Based on the work performed and given the limitations mentioned above, we attest that the required CSR Information has been disclosed in the management report.

### 2. Conclusion on the fairness of CSR Information

### Nature and scope of our work

We conducted around thirty interviews with the persons responsible for preparing the CSR Information in the departments in charge of collecting the information and, where appropriate, responsible for internal control and risk management procedures, in order to:

- assess the suitability of the Guidelines in terms of their relevance, completeness, reliability, neutrality and understandability, and taking into account industry best practices where appropriate;
- verify the implementation of data-collection, compilation, processing and control process to ensure the completeness and consistency
  of the CSR Information and obtain an understanding of the internal control and risk management procedures used to prepare the
  CSR Information.

We determined the nature and scope of our tests and procedures based on the nature and importance of the CSR Information with respect to the characteristics of the Company, the social and environmental challenges of its activities, its sustainability strategy and industry best practices.

Regarding the CSR Information that we considered to be the most important, listed in the following table:

- at parent entity level, we referred to documentary sources and conducted interviews to corroborate the qualitative information (organisation, policies, actions), performed analytical procedures on the quantitative information and verified, using sampling techniques, the calculations and the consolidation of the data. We also verified that the information was consistent and in agreement with the other information presented in the Management report;
- at the level of a representative sample of sites and entities (2) selected by us on the basis of their activity, their contribution to the consolidated indicators, their location and a risk analysis, we conducted interviews to verify that procedures are properly applied and to identify potential undisclosed data, and we performed tests of details, using sampling techniques, in order to verify the calculations and reconcile the data with the supporting documents. The selected sample represents on average 29% of headcount, between 16% and 99% of quantitative environmental data and 100% of quantitative societal data disclosed.

<sup>(1)</sup> ISAE 3000 - Assurance engagements other than audits or reviews of historical financial information.

<sup>(2)</sup> Social information: Arkema France; Changshu (China). Safety information: Arkema France including the sites of Carling, Jarrie, Lacq and Pierre Bénite (France); Calvert City (USA); Porto Marghera (Italy). Environmental information: Carling, Jarrie, Lacq and Pierre Bénite (France); Rio Claro (Brazil); Changshu (China); Shanghai H2O2 ASHP (China); Calvert City (USA); Porto Marghera, Rho (Italy).

### **SOCIAL AND SAFETY INDICATORS**

Total headcount as at 31/12 and breakdown by age, gender, geographical area and type of contract (regular or fixed term)

Percentage of women in management position

Recruits and leavers

Percentage of employees benefiting of personnel representation and/or trade union representation

Absenteeism (including absences for medical reason)

Percentage of employees benefiting from regular medical check-ups

Number of training hours (including safety training)

TRIR (Total Recordable Injury Rate)

LTIR (Lost Time Injury Rate)

Percentage of OHSAS 18001 certified sites by area

Percentage of sites implementing peer observation

Percentage of AIMS (Arkema Integrated Management System) audited sites

### **ENVIRONMENTAL INDICATORS**

Number of patent application filed during the year for solutions to sustainable development challenges

Percentage of ISO 14001 and ISO 50001 certified sites by area

VOC emissions (Volatile Organic Compounds)

Chemical Oxygen Demand (COD) in water

All substances contributing to acidification

Hazardous waste

Water withdrawn

Net purchases of energy by area and type (including share of net fuel purchases from gas)

Direct greenhouse gas emissions including CO<sub>2</sub>

HFC emissions

Independent third party opinion pursuant to article L. 225-102-1 of the French Commercial Code

SOCIETAL INDICATORS	
Number of "Common Grou	nd <sup>®</sup> " initiatives
QUALITATIVE INFORMATION	NS
Social topic	Working time organisation Social dialogue Occupational health and safety conditions Employee development and in particular the implementation of annual individual interviews Measures implemented to promote gender equality in particular in the Board
Environmental topic	The organisation of the company to integrate environmental issues in particular certification process regarding environmental issues Resources allocated to prevention of environmental risks and pollution Measures of prevention, reduction or repair of discharges into the air, water and ground, impacting severely the environment Measures regarding waste prevention, recycling and disposal Water consumption and water supply adapted to local constraints Consumption of raw materials and measures implemented to improve efficiency in their use Energy consumption and measures implemented to improve energy efficiency especially energy audit and Arkenergy investments Adaptation to consequences of climate change and especially share of sites exposed to risks.
Societal topic	Territorial, economic and social impact of the company activity on the local populations Importance of subcontracting and consideration, in the relationship with subcontractors and suppliers of their social and environmental responsibility Measures implemented to promote consumers health and safety

For the remaining consolidated CSR Information, we assessed its consistency based on our understanding of the company.

We also assessed the relevance of explanations provided for any information that was not disclosed, either in whole or in part.

We believe that the sampling methods and sample sizes we have used, based on our professional judgement, are sufficient to provide a basis for our limited assurance conclusion; a higher level of assurance would have required us to carry out more extensive procedures. Due to the use of sampling techniques and other limitations inherent to information and internal control systems, the risk of not detecting a material misstatement in the CSR information cannot be totally eliminated.

### Conclusion

Based on the work performed, no material misstatement has come to our attention that causes us to believe that the CSR Information, taken as a whole, is not presented fairly in accordance with the Guidelines.

Paris - La Défense, 2 March 2016

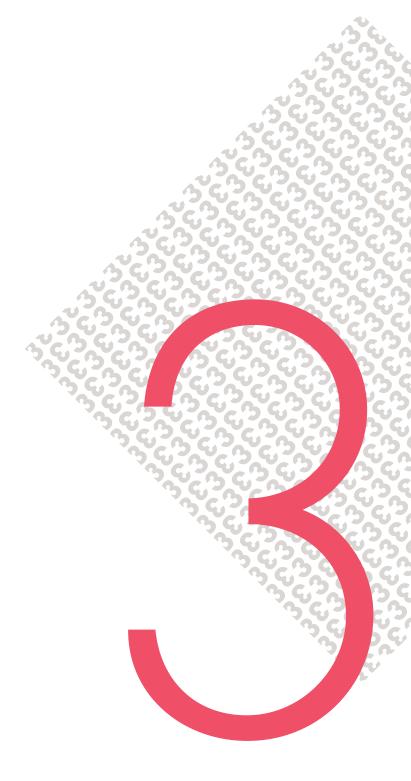
French original signed by one of the Statutory auditors

KPMG S.A.

Jacques-François Lethu Partner François Quédiniac Partner Anne Garans Partner Climate Change & Sustainability Services

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# Corporate governance



The different parts constituting the Annual Financial Report are identified in the content by the pictogram  ${\color{red} {\bf AFR}}$ 

Compliance with the corporate governance system

This chapter 3, together with section 1.7.1 of this reference document, make up the Chairman of the Board of Directors' report as required under article L. 225-37 of the French Commercial Code (Code de commerce). This report was prepared by the Company's Chairman and Chief Executive Officer, with the assistance of a working group comprising, in particular, the Secretary of the Board of Directors and the Internal Audit and Internal Control Vice-President, having taken into consideration:

- the AFEP-MEDEF Corporate Governance code for listed companies as revised in November 2015 (the "AFEP-MEDEF Code"), and its November 2015 Application Guide, available on the AFEP and MEDEF websites (www.afep.com and www.medef.com);
- the Autorité des marchés financiers (AMF) recommendation no. 2012-02 dated 9 February 2012 on corporate governance and the compensation of directors of listed companies, updated on 22 December 2015 and 11 December 2014, and AMF

- recommendations no. 2013-17 dated 4 November 2013 and no. 2014-08 dated 22 September 2014; and
- the recommendations of the AFEP-MEDEF Haut Comité de Gouvernement d'Entreprise set out in its annual report published in October 2015.

It was then submitted to and reviewed by the Nominating, Compensation and Corporate Governance Committee (for the corporate governance part) and by the Audit and Accounts Committee (for the internal control part) prior to approval by the Company's Board of Directors on 2 March 2016.

The other information required under the aforementioned article L. 225-37, namely, the conditions of shareholder participation at general shareholders meetings, information concerning the structure of the Company's share capital and factors likely to have an impact in the event of a takeover bid, are set out in sections 5.5.1, 5.2.1, 5.3.1, 5.3.2 and 5.3.3, respectively, of this reference document.

### 3.1 COMPLIANCE WITH THE CORPORATE dvernance system

With regard to corporate governance, the Company refers to the recommendations of the AFEP-MEDEF Code and its Application Guide, available on the AFEP and MEDEF websites (www.afep.com and www.medef.com).

In accordance with the "comply or explain" rule provided under article L. 225-37 of the French Commercial Code and section 25.1 of the AFEP-MEDEF Code, the Company considers that, barring exceptions for which comprehensible, relevant and detailed explanations are provided in the following summary table, the Company complies with the corporate governance system in force in France.

### Disregarded provisions of the AFEP-MEDEF Code Explanations

### 16. Audit and Accounts Committee

should be sufficient (no less than two days before review by the Board).

Given the timetable for closing the accounts and publishing the results, as well as the Company's "The time available for reviewing the accounts internal organization, the Audit and Accounts Committee sometimes meets the day before the Board of Directors' meeting. However, members of the Audit and Accounts Committee effectively receive the necessary documents and information to carry out their duties within a sufficient timeframe (generally 5 days prior to the meeting) to be able to review them in a satisfactory manner and give their opinion to the Board of Directors. In addition, annual accounts are analyzed during a meeting which takes place mid-December and during which main closing options are reviewed.

### 23.2.4. Stock options and performance shares

shares are available.

The Nominating, Compensation and Corporate Governance Committee has not deemed it "In accordance with terms determined by the necessary to introduce an obligation to purchase additional shares in the Company, given Board and announced upon the award, the the stringent obligations to hold shares set by the Board of Directors whereby the Company's necessary to introduce an obligation to purchase additional shares in the Company, given performance shares awarded to executive Chairman and Chief Executive Officer, in particular, must retain at least 30% of the vested directors are conditional upon the acquisition of performance shares and a number of shares obtained upon the exercise of stock options a defined quantity of shares once the awarded corresponding to at least 40% of the net capital gain on acquisition for as long as he remains in office (for further details on the holding requirements for the Chairman and Chief Executive Officer, see section 3.4.3.3 of this reference document)

# 3.2 COMPOSITION OF ADMINISTRATIVE AND MANAGEMENT BODIES

### 3.2.1 Board of Directors

### 3.2.1.1 PRINCIPLES FOR THE COMPOSITION OF THE BOARD OF DIRECTORS

The composition and operating procedures of the Company's Board of Directors are determined by current laws and regulations, by the Company's Articles of Association, and by the Internal Rules of the Board of Directors.

At the date of this reference document, the Company is run by a Board of Directors comprising twelve members, nine of whom are independent. The Board includes four women and one member representing shareholder employees.

In accordance with the AFEP-MEDEF Code and with AMF recommendations on the composition of Boards of Directors, the Nominating, Compensation and Corporate Governance Committee regularly reviews the objectives relating to the diversification of the Board of Directors, in terms of directors' independence, gender balance and the mix of nationalities and cultures, as well as the range of experience and complementary skills. Consequently, the Committee aims to select and propose current and former executives with skills in areas such as industry, finance, research and information technology for Board approval. In terms of developing the Board's international dimension, and given the Group's brief history as an independent company, the Board of Directors wishes to continue to encourage the faceto-face presence and active participation of its members at its meetings and, in that respect, is seeking French or foreign nationality candidates who have acquired significant international

At the date of this reference document, the Board of Directors considers that its members' skills and career paths are diverse enough to allow it to carry out its duties with the necessary independence and objectivity, except for progress identified during the assessment process conducted in 2016 by an external advisory firm and agreed by the Board (see paragraph 3.3.2.4 of this reference document).

The professional expertise of each member of the Board of Directors, at the date of this reference document, is set out in sections 3.2.1.2 and 3.2.1.3 herein.

### Independence of directors

As part of its process to assess its members' independence and to avoid risks of conflicts of interest between directors and management, the Company or the Group, the Board of Directors takes into account all the criteria of the AFEP-MEDEF Code, which are laid down in its Internal Rules. Accordingly, an independent director is one who, other than his position on the Board, has no relationship whatsoever with the Company, the Group or its management. In particular, the director must not:

- be, or have been within the last five years, an employee or executive director of the Company or an employee or director of a consolidated company;
- be, or have been within the last five years, an executive director
  of a company in which the Company holds a directorship,
  directly or indirectly, or in which one of its employees
  (designated as such) or executive directors holds a directorship;
- be, or be directly or indirectly linked to a major customer, supplier, corporate or investment banker of the Company or the Group, or for which the Company or Group represents a significant portion of the business;
- have close family ties with a director of the Company;
- have been an auditor of the Company in the previous five years:
- have been a director of the Company for more than twelve years; or
- be or represent a significant shareholder of the Company owning over 10% of the Company's share capital or voting rights.

The annual review of the independence of each member of the Board of Directors, in accordance with the AFEP-MEDEF Code and the Board of Directors' Internal Rules, took place at the Nominating, Compensation and Corporate Governance Committee meeting of 8 January 2016 and at the Board of Directors meeting of 21 January 2016. At these meetings, the Nominating, Compensation and Corporate Governance Committee, and subsequently the Board of Directors, specifically

reviewed the business relationships in place with companies with which one or several directors are associated and, in that respect, performed materiality tests to establish whether those relationships are significant. To that end, a summary of the transactions carried out between the Group and these companies was submitted to the Board of Directors in order to assess the volume of business between the Group and each of these companies, individually.

One such review concerned the situation of Laurent Mignon, Chief Executive Officer of Natixis. After confirming the Group's practice of inviting a small number of leading banks to participate in a call for tenders each year, giving the Group access to financing and, more generally, banking products, at competitive rates, the Board performed materiality tests to compare the fees received by all of the Group's banks and determine the share of the Group's credit commitments held by each one. These tests enabled the Board to establish that the volume of Arkema's banking business handled by Natixis was not material compared to either of the two companies' revenues. In addition, in line with the Group's policy concerning its banking relationships, Natixis' confirmed lending commitments to Arkema represent less than 15% of the total commitments received by the Group and are at the same level as those of the Group's other main banks. Consequently, the Board of Directors concluded that no dependency relationship exists between the two companies and that Laurent Mignon continued to qualify as an independent director. It is recalled that the fees paid to Natixis in early 2015 in connection with the financing of the Bostik acquisition on 2 February 2015 were examined in detail during last year's assessment of Laurent Mignon's independence by the Board.

Moreover, the Fonds Stratégique de Participations (FSP) notified the Group that it had crossed the disclosure threshold of 10% of voting rights on 25 July 2015 as a result of double voting rights being allocated to some of its shares. Consequently, the Board of Directors noted that the FSP no longer qualified as an independent director due to this change.

In light of the foregoing, the Board of Directors decided that, with the exception of Thierry Le Hénaff, Chairman and Chief Executive Officer of the Company, Patrice Bréant, who is employed by a Group company, and Isabelle Boccon-Gibod, permanent representative of the Fonds Stratégique de Participations, all members of the Board of Directors are independent.

At the date of this reference document, and in accordance with the AFEP-MEDEF Code, which provides that the director representing shareholder employees, Patrice Bréant, should not be included when calculating the percentage of independent directors, the rate of independence of the Board of Directors was 82% (9 directors out of 11). This proportion is greater than the AFEP-MEDEF Code recommendation that at least half the Board members of companies with diversified capital and no controlling shareholders be independent.

### Gender balance on the Board of Directors

In accordance with articles L. 225-17 paragraph 2 and L. 225-37 paragraph 6 of the French Commercial Code, the Board of Directors ensures that the principle of gender balance among its members is applied, particularly when renewing each director's term of office. Thus, in accordance with the provisions of French law no. 2011-103 of 27 January 2011 relating to gender balance on Boards of Directors and Supervisory Boards and to equality in the workplace, and following the election as a director of Hélène Moreau-Leroy at the annual general meeting of 2 June 2015, the Company's Board of Directors included four women among its 12 members, representing 33.33%, at the date of this reference document. The Board of Directors will act on the recommendation of the Nominating, Compensation and Corporate Governance Committee to ensure that women will represent 40% of Board membership, as provided for in the above-referenced law, by the annual general meeting held to approve the financial statements for the financial year ending 31 December 2016, at the latest.

### Representation of shareholder employees/representation of employees

In accordance with the applicable regulations, the Board of Directors includes a member representing shareholder employees, Patrice Bréant, whose term of office was renewed at the annual general meeting of 15 May 2014.

In addition, pursuant to the provisions of French law no. 2015-994 of 17 August 2015 on social dialogue and employment, which amends law no. 2013-504 of 14 June 2013 relating to job security (article L. 225-27-1 of the French Commercial Code), the Company is required to appoint at least one director representing employees in accordance with the conditions provided for in the Articles of Association, by 2017 at the latest. At its meeting on 2 March 2016, the Board of Directors approved the recommendation of the Nominating, Compensation and Corporate Governance Committee to comply with this requirement as from 2016. The Board therefore decided to propose a resolution at the annual general meeting of 7 June 2016 amending the Articles of Association to enable the appointment of a director representing employees in 2016. (For further details on this resolution, see section 6.2.2 of this reference document.)

### Other characteristics

According to the provisions of the Company's Articles of Association and the Board of Directors' Internal Rules:

 subject to the laws applicable to provisional appointments made by the Board of Directors, the directors shall serve a four-year term of office. In accordance with the recommendations of the AFEP-MEDEF Code, the directors' terms of office are staggered in order to avoid reappointment of the Board *en masse*, and ensure that the directors' reappointment process runs smoothly. As the terms of office of all directors are staggered, the general shareholders meeting is called upon every year to decide on the renewal of one or more terms of office;

- each director must hold at least 450 of the Company's shares throughout their term of office except for the director representing shareholder employees, who must hold, individually or through a company mutual fund (Fonds Commun de Placement d'Entreprise FCPE) governed by article L. 214-165 of the French Monetary and Financial Code (Code monétaire et financier), at least one share in the Company, or a number of units of the said fund equivalent to at least one share in the Company; and
- the age limit for directors set in the Company's Articles of Association is 70 years old and serving directors who reach

this age limit are automatically considered as having resigned on their  $70^{\text{th}}$  birthday unless the Board decides that they may complete their term.

Furthermore, in accordance with the provisions of the Board of Directors' Internal Rules, each director is subject to an obligation to report any potential direct or indirect conflicts of interest to the Company (see section 3.2.3.3 below).

### 3.2.1.2 COMPOSITION OF THE BOARD OF DIRECTORS

In 2015, the composition of the Board of Directors has been modified as a result of Jean-Pierre Seeuws reaching the age limit for serving as a director and the subsequent election of Hélène Moreau-Leroy as a director by the annual general meeting of 2 June 2015.

At 31 December 2015, the composition of the Board of Directors was as follows:

Directors	Other offices held
Thierry Le Hénaff Chairman and Chief Executive Officer	Currently held:
Date of first appointment: 6 March 2006	Within the Group  Chairman of the Board of Directors, Arkema France
Date of last renewal: 23 May 2012	Outside the Group  ▶ Director, Eramet* (1)
Date appointment expires: AGM held to approve financial statements for	International  ► None
2015 financial year	Held in the past five years but now expired:
Nationality: French Number of shares held at 31 December 2015:	Expired in 2015 None
124,675	Expired from 2011 to 2014  None
Patrice Bréant	Currently held:
Director representing shareholder employees	France
Date of first appointment: 1 June 2010	Within the Group  ► Member of the Supervisory Board, FCPE Arkema Actionnariat France
Date of last renewal: 15 May 2014	International ► None
Date appointment expires:	Held in the past five years but now expired:
AGM held to approve financial statements for 2017 financial year	Expired in 2015  None
Nationality: French	Expired from 2011 to 2014
Number of FCPE units held at 31 December 2015: 475	► None
<b>Expertise:</b> experience in trade union matters and R&D for High Performance products	

### Composition of administrative and management bodies

#### François Engud

INDEPENDENT DIRECTOR, MEMBER OF THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE AND SENIOR INDEPENDENT DIRECTOR

### Date of first appointment:

10 May 2006

### Date of last renewal:

2 June 2015

### Date appointment expires:

AGM held to approve financial statements for 2018 financial year

#### Nationality: French

### Number of shares held at 31 December 2015: 551

**Expertise:** former CEO of a large digital services company with a strong presence in India and the United Kingdom, listed on the Paris stock exchange; significant experience in customerdriven businesses and new technologies

#### **Bernard Kasriel**

INDEPENDENT DIRECTOR AND MEMBER OF THE NOMINATING. Compensation and Corporate Governance Committee

### Date of first appointment:

10 May 2006

### Date of last renewal:

4 June 2013

### Date appointment expires:

AGM held to approve financial statements for 2016 financial year

### Nationality: French

### Number of shares held at 31 December 2015:

Expertise: engineer and former CEO of a major French CAC40-listed industrial group; significant international experience, particularly in the United

### Victoire de Margerie

INDEPENDENT DIRECTOR AND MEMBER OF THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE

### Date of first appointment:

7 November 2012

### Date of last renewal:

2 June 2015

### Date appointment expires:

AGM held to approve financial statements for 2018 financial year

### Nationality: French

### Number of shares held at 31 December 2015: 450

Expertise: chairman of a micromechanics SME, an independent director of various listed companies in the industrial sector in France, United Kingdom and Italy; broad experience in industry acquired for the most part in Germany and the United

### Currently held\*\*:

- Chairman, FE Développement SAS
- Partner and Director, Aston Finance
- Partner and Director, Premium Peers
- Chairman of the Board of Directors, Agence nouvelle des solidarités actives (ANSA)
- Director, FONDACT (Association under French law 1901 for participative management, employee savings plans, and responsible share ownership)

#### International

None

### Held in the past five years but now expired\*\*:

#### Expired in 2015

► Chief Executive Officer and Director, Sopra Steria group\*

### Expired from 2011 to 2014

- Chief Executive Officer, Groupe Steria SA\*
- Chairman and Chief Executive Officer, Steria SA
- Director, Steria Limited
- ► Director, Steria Services Limited
- Managing Partner, Groupe Steria SCA

#### Currently held\*\*:

#### France

Director, L'Oréal\*

#### International

▶ Director, Nucor\* (USA)

### Held in the past five years but now expired\*\*:

### Expired in 2015

### Expired from 2011 to 2014

Partner, LBO France

### Currently held\*\*:

### France

- Chairman, Rondol Industrie
- Director, Ecoemballages
- Director, Eurazéo\*
- Director, Banque Transatlantique

### International (2)

- Director, Morgan Advanced Materials\* (United Kingdom)
- ► Director, Italcementi\* (Italy)

### Held in the past five years but now expired\*\*:

### Expired in 2015

None

### Expired from 2011 to 2014

- Director, Norsk Hydro\* (Norway)
- Director, Ciments Français
- Director, Groupe Flo
- Director, Outokumpu

### Laurent Mignon INDEPENDENT DIRECTOR

### Date of first appointment:

10 May 2006

### Date of last renewal:

2 June 2015

#### Date appointment expires:

AGM held to approve financial statements for 2018 financial year

### Nationality: French

### Number of shares held at 31 December 2015: 300

**Expertise:** CEO of a major French bank listed on the Paris stock exchange; significant experience in finance and economics

### Currently held\*\*:

#### Eranco

#### Within the BPCE group

- ► Chief Executive Officer, Natixis SA\*
- ► Chairman of the Board of Directors, Natixis Global Asset Management (NGAM)
- ▶ Member of the Executive Board, BPCE
- ▶ Chairman of the Board of Directors, Coface SA\*

#### International

### Outside the BPCE group

Director, Lazard Ltd\*

### Held in the past five years but now expired\*\*:

### Expired in 2015

▶ None

### Expired from 2011 to 2014

- Chairman, Coface Holding SAS
- ▶ Permanent Representative of Natixis, Director, Coface SA
- ► Director, Sequana\*
- ▶ Permanent Representative of Natixis, non-voting member of the Supervisory Board, BPCE

### Hélène Moreau-Leroy

Independent director and member of the Audit and Accounts Committee

### Date of first appointment:

2 June 2015

### Date appointment expires:

AGM held to approve financial statements for 2018 financial year

### Nationality: French

### Number of shares held at 31 December 2015: 450

**Expertise:** chairman and CEO of a company belonging to a major industrial group; many years' international experience

### **Thierry Morin**

Independent director and Chairman of the Nominating, Compensation and Corporate Governance Committee

### Date of first appointment:

10 May 2006

### Date of last renewal:

4 June 2013

### Date appointment expires:

AGM held to approve financial statements for 2016 financial year

### Nationality: French

### Number of shares held at 31 December 2015: 1,281

**Expertise:** former Chairman and CEO of a French industrial group operating in the highly competitive automotive equipment sector, with a strong international presence

### Currently held\*\*:

#### France

- ► Chairman and Chief Executive Officer, Hispano-Suiza (Safran group)
- ► Director, SEM-MB

#### International

None

### Held in the past five years but now expired\*\*:

### Expired in 2015

None

### Expired from 2011 to 2014

None

### Currently held\*\*:

### France

- Chairman, Thierry Morin Consulting (TMC)
- Chairman of the Board of Directors, *Université de Technologie de Compiègne*
- Manager, TM France
- ► Director, Elis\*

### International

► Chairman, TMPARFI SA (Luxembourg)

### Held in the past five years but now expired\*\*:

### Expired in 2015

None

### Expired from 2011 to 2014

Chairman of the Board of Directors, Institut national de la propriété industrielle (INPI)

### Composition of administrative and management bodies

### Marc Pandraud

INDEPENDENT DIRECTOR

Date of first appointment:

15 June 2009

Date of last renewal:

4 June 2013

Date appointment expires:

AGM held to approve financial statements for 2016 financial year

Nationality: French

Number of shares held at 31 December 2015: 500

**Expertise:** executive of a major international bank; significant experience in investment banking across numerous countries

#### Claire Pedini

Independent director and member of the Audit and Accounts Committee

Date of first appointment:

1 June 2010

Date of last renewal:

15 May 2014

Date appointment expires:

AGM held to approve financial statements for 2017 financial year

Nationality: French

Number of shares held at the date of this reference document: 450

**Expertise:** member of the Executive Committee of a major French CAC40-listed industrial group; significant experience in finance, investor relations and human resources, both in France and

Philippe Vassor

Independent director and member of the Audit and Accounts Committee

ACCOUNTS COMMITTED

Date of first appointment:

10 May 2006

Date of last renewal:

4 June 2013

Date appointment expires:

AGM held to approve financial statements for 2016 financial year

Nationality: French

Number of shares held at 31 December 2015:

2,000

**Expertise:** former Chairman and CEO (France) of a leading accounting firm; significant experience in finance and accounting

Currently held\*\*:

France

Vice-Chairman, Deutsche Bank France – Middle East and Africa (3)

International

None

Held in the past five years but now expired\*\*:

Expired in 2015

None

Expired from 2011 to 2014

None

Currently held\*\*:

France

Senior Vice-President in charge of Human Resources, Compagnie Saint-Gobain\*

International

▶ None

Held in the past five years but now expired\*\*:

Expired in 2015

None

Expired from 2011 to 2014

None

Currently held\*\*:

France

► Chairman, Baignas SAS

► Chairman, V.L.V. SAS

Chairman, Triple V SAS

► Chairman, VLV Orfila SAS

International

None

Held in the past five years but now expired\*\*:

Expired in 2015

► Director, Bull\*

Expired from 2011 to 2014

► Chairman and Director, Infovista

Director, Groupama S.A.

▶ Chairman, DGI Finance SAS

Fonds Stratégique de Participations (FSP)  DIRECTOR  Date of first appointment: 15 May 2014	Currently held: France  Director, SEB S.A.* Director, Zodiac Aérospace *
Date appointment expires: AGM held to approve financial statements for 2017 financial year	International ► None
Number of shares held at 31 December 2015: 4,759,008	
Permanent representative of the FSP: Isabelle Boccon-Gibod  Member of the Audit and Accounts Committee	Currently held:  France  Member of the national investment strategy Board (Conseil national d'orientation), BPI France
Date appointed: 15 May 2014	Vice-President of the Economic Commission, MEDEF     Director, Paprec     Director, Centre Technique du Papier
Nationality: French  Expertise: former executive of a major international industrial group present in the pulp and paper industry	International ► None

- \* Listed company.
- \* \* Outside the Arkema Group
- (1) Thierry Le Hénaff resigned from his position as director of Eramet on 17 February 2016.
- (2) Victoire de Margerie has been a director of Babcock International Group Plc (a listed company) since 1 February 2016. She is also a member of its Remuneration & Nominations Committee and its Audit & Risks Committee.
- (3) Position held until 14 January 2016.

At the annual general meeting of 7 June 2016, on a recommendation of the Board of Directors, shareholders are invited to re-elect Thierry Le Hénaff as a director for a four-year period expiring at the close of the annual general meeting to be held in 2020 to approve the financial statements for the year ending 31 December 2019.

For further details on this resolution, see section 6.2.2 of this reference document.

# 3.2.1.3 INFORMATION ON THE MEMBERS OF THE BOARD OF DIRECTORS

**Thierry Le Hénaff**, born in 1963, is a graduate of France's École polytechnique and École nationale des ponts et chaussées and holds a master's degree in Industrial Management from Stanford University in the United States. Thierry Le Hénaff was appointed Chairman and Chief Executive Officer of Arkema on 6 March 2006 and Chairman of the Board of Directors of Arkema France on 18 April 2006.

After starting his career with Peat Marwick Consultants, in 1992 he joined Bostik, Total's Adhesives division, where he held a number of operational positions in France and worldwide. In July 2001, he was appointed Chairman and Chief Executive Officer of Bostik Findley, the new entity resulting from the merger of Total's and Elf Atochem's Adhesives divisions. On 1 January 2003, he joined Atofina's Executive Committee, where he was in charge of three business units (Agrochemicals, Fertilizers and Thiochemicals) and three corporate departments. In 2004, he became a member of Total's management committee. On 6 March 2006, he was appointed Chairman and Chief Executive Officer of Arkema and led the Company's stock market listing on 18 May 2006.

Patrice Bréant (director representing shareholder employees), born in 1954 in Rouen, is a graduate of the *Institut national supérieur de la chimie industrielle de Rouen* and holds a doctorate in organic chemical engineering. He is an expert engineer in experimental methodology and statistical process control.

He started his career in 1983 at the Nord Research Center of CDF Chimie (which later became Orkem), as a polyethylene formulation and modification research engineer. In 1990, he joined the Cerdato Research Center in Serquigny, France, and later the Materials Research Laboratory's technical polymers department.

He has been a member of the Serquigny site Works Council and of the Central Works Council since 1994. He was *rapporteur* to the research commission of the Central Works Council of Arkema France from 1994 to 2007. He has also been the union representative for Arkema France's Serquigny site and the CFE-CGC central trade union representative for Arkema France since 2004. He serves as a member of the Supervisory Board of the FCPE Arkema Actionnariat France company mutual fund (*Fonds Commun de Placement d'Entreprise*).

**François Enaud**, born in 1959, is a graduate of France's École polytechnique and graduated as a civil engineer from the École nationale des ponts et chaussées.

Between 1998 and March 2015, he was successively Chairman and Chief Executive Officer of Steria SA, Managing Partner of Steria SCA and Chief Executive Officer of the Sopra Steria Group. After spending two years as a works engineer at Colas (1981-1982), François Enaud joined Steria in 1983 where he held several management positions (Technical and Quality divisions Manager, Chief Executive Officer of subsidiaries, Transport division Manager and Telecoms division Manager) before being appointed Chief Executive Officer of Steria in 1997

Composition of administrative and management bodies

and Chairman in 1998. In September 2014, François Enaud was appointed Chief Executive Officer of the Sopra Steria Group, which was formed following the merger of Sopra and Steria.

In September 2015, François Enaud set up the FE Développement consultancy whose corporate purpose is to develop and support a network of innovative companies in the digital economy.

**Bernard Kasriel**, born in 1946, is a graduate of France's *École* polytechnique and has MBAs from Harvard Business School and INSEAD business school.

He joined Lafarge in 1977 as Executive Vice-President and later Chief Executive Officer of the Sanitaryware division. He was appointed Executive Vice-President of the Lafarge group and member of its Executive Committee in 1981. After spending two years in the United States as Chairman and Chief Operating Officer of National Gypsum, in 1989 he became Director and Chief Executive Officer, then Vice-Chairman and Chief Executive Officer of Lafarge in 1995. He was Chief Executive Officer of Lafarge from 2003 to the end of 2005.

Before joining Lafarge, Bernard Kasriel had begun his career at the Institut de développement industriel (1970), before holding executive management positions in different regional companies (1972). He then joined Société Phocéenne de Métallurgie as Executive Vice-President (1975). He was also a Managing Partner at LBO France from September 2006 to September 2011.

Victoire de Margerie, born in 1963, is a graduate of France's École des hautes études commerciales (HEC) and Institut d'Études Politiques (IEP), and holds a DESS in Private Law from the Université de Paris 1 - Panthéon-Sorbonne, and a PhD in Management Science from the Université de Paris 2 - Panthéon-Assas. She has been Chairman and principal shareholder of Rondol Industrie, a micromechanics SME, since 2009.

She previously held operational positions in industry in Germany, France and the United States with Elf Atochem, CarnaudMetalbox and Pechiney. Between 2002 and 2011, Victoire de Margerie also taught strategy and management of technology at the Grenoble Ecole de Management business school.

**Laurent Mignon**, born in 1963, is a graduate of France's *École des hautes études commerciales* (HEC) and the Stanford Executive Program. He has been Chief Executive Officer of Natixis SA since 14 May 2009.

For over 10 years, he held a number of positions in the banking sector at Banque Indosuez, from trading to investment banking. In 1996, he joined Schroders in London, followed by AGF in 1997 as Finance Director, and was appointed member of the Executive Committee in 1998. In 2002, he was given responsibility for investments at AGF Bank, AGF Asset Management and AGF Real Estate successively, and, in 2003, the Life and Financial Services department as well as Credit Insurance. From September 2007 to May 2009, he was Managing Partner, alongside Philippe Oddo, of Oddo & Cie.

**Hélène Moreau-Leroy,** born in 1964, is a graduate of the *Institut National des Sciences Appliquées* (INSA) based in Lyon, France, and holds a Master in International Business Administration from Australia's University of New England. She is an APICS-Certified Supply Chain Professional. Her current position is Chairman and Chief Executive Officer of Hispano-Suiza, a member of the Safran Group.

Hélène Moreau-Leroy has held various management positions in the areas of research and development, project management, procurement and production with different industrial groups and spent 14 years in international positions outside France. She joined the Safran group in 2003, as a member of the Snecma SA group purchasing department. She was subsequently given responsibility for organizing Messier-Bugatti Dowty's supply chain in emerging markets, before becoming the company's Programs Director and a member of the management committee. She is also a member of the management committee of the French association of aerospace and military equipment manufacturers (GEAD) and of various networks and associations set up to promote workplace diversity.

**Thierry Morin**, born in 1952, holds a degree in management from the Université de Paris IX Dauphine. He is also Chairman of the Board of Directors of the *Université de Technologie de Compiègne*, former Chairman of the Board of Directors of INPI (*Institut national de la propriété industrielle*), and Chairman of Thierry Morin Consulting and TM France.

Thierry Morin joined the Valeo group in 1989, where he held various positions, including divisional finance director, and director of financial control, strategy and purchasing, before becoming Executive Vice-President in 1997, Chief Executive Officer in 2000, Chairman of the Executive Board in 2001, then Chairman and Chief Executive Officer from March 2003 to March 2009. Prior to that, he held various positions at Burroughs, Schlumberger and Thomson Consumer Electronics.

**Marc Pandraud**, born in 1958, is a graduate of France's *École supérieure de commerce de Paris* (ESCP). He has been Chairman of investment banking for France and Belgium at JPMorgan since 14 January 2016.

Marc Pandraud began his career as an auditor with Peat Marwick Mitchell (1982-1985). He was subsequently Vice-President of Bear Stearns & Co Inc. (1985-1989), Chief Executive Officer of SG Warburg France S.A. (1989-1995), Chief Executive Officer of Deutsche Morgan Grenfell (1995-1998), then Chief Executive Officer in charge of investment banking (1998). He then joined Merrill Lynch as Managing Director of Merrill Lynch & Co Inc. (1998) and Chief Executive Officer of Merrill Lynch France (1998) before becoming Chairman of Merrill Lynch France (2005-2009). In 2009, he moved to Deutsche Bank to take up a position as Chairman of the bank's French operations, going on to serve as Vice-Chairman of Deutsche Bank Europe, Middle East and Africa from June 2013 until January 2016.

Claire Pedini, born in 1965, is a graduate of France's École des hautes études commerciales (HEC) and holds a master's degree in Media Management from the ESCP business school. She has been Senior Vice-President in charge of Human Resources of Compagnie Saint-Gobain since 1 June 2010.

After holding several finance and management control positions at Total, Claire Pedini was in charge of the group's financial communications from 1992 to 1994, after successfully completing the group's New York stock exchange listing in 1991. She was responsible for Total's media relations from 1995 to 1997 before joining Alcatel in September 1998 as head of financial communications and investor relations. In 2002, she became Director of Financial Communication and Institutional Relations, then Group Deputy Finance Officer in February 2004.

In 2006, she was appointed Director of Human Resources and a member of Alcatel-Lucent's Executive Committee, then Director of Human Resources and Communications in June 2006 and Director of Human Resources and Transformation in 2009.

**Philippe Vassor**, born in 1953, is a graduate of France's *École* supérieure de commerce de Paris (ESCP) and is a French certified public accountant (expert comptable) and statutory auditor. He has served as the Chairman of Baignas S.A.S. since June 2005.

Philippe Vassor spent most of his career (from 1975 to 2005) at Deloitte, where he became Chairman and Chief Executive Officer in France and a member of the global Executive Group, responsible for Human Resources (from 2000 to 2004).

Fonds Stratégique de Participations (FSP) was created in 2012 by four major French insurance companies – BNP Paribas Cardif, CNP Assurances, Predica and Sogécap – to make long-term investments in the share capital of French non-financial listed companies and to support them in the implementation of their strategy. It is represented in the governance bodies of these companies.

The FSP is an independent investment body with its own governance structure. Its portfolio is managed by a dedicated team within Edmond de Rothschild Asset Management (EdRAM), part of the Edmond de Rothschild group, which is responsible for the financial monitoring of the companies in which it has invested and relations with the FSP's permanent representatives on those companies' Boards of Directors. The FSP does not act in concert with other shareholders and votes independently at general shareholders' meetings. The FSP appointed Isabelle Boccon-Gibod as its permanent representative on the Company's Board of Directors.

Isabelle Boccon-Gibod, born in 1968, is a graduate of the École Centrale de Paris in France and the University of Columbia in the United States. She is a member of the national investment strategy Board (Conseil national d'orientation) of BPI France, Vice-President of the MEDEF Economic Commission and has been a director of the Paprec group since April 2014. She is also a photographer and author. She was Executive Vice-President of Arjowiggins and an Executive Director of Sequana and also chaired Copacel, the French Association of Paper Industries, until the end of 2013.

# 3.2.2 Executive management

# 3.2.2.1 CHAIRMAN AND CHIEF EXECUTIVE OFFICER

#### **Governance structure**

Since the Company's stock market listing in May 2006, the Group has undertaken an in-depth transformation project in a chemical industry that has seen many changes over the years, particularly in terms of regulation and competition.

Accordingly, in 2006 the Board of Directors decided not to separate the roles of Chairman of the Board and Chief Executive Officer in order to put in place a simple, reactive and responsible decision-making process. At its meeting of 23 May 2012 held immediately after the Company's annual general meeting at which Thierry Le Hénaff was re-elected as a director, the Board of Directors renewed the appointment of Thierry Le Hénaff as Chairman and Chief Executive Officer of the Company.

As part of the proposal to renew the term of office of Thierry Le Hénaff as director at the upcoming annual general meeting, on 2 March 2016, the Board decided unanimously that the positions of Chairman and of Chief Executive Officer should continue to be combined, as recommended by the Nominating, Compensation and Corporate Governance Committee.

This decision was based on a detailed analysis by the Board of Directors taking into account both the way Arkema's governance structures have operated over the last ten years and the Group's specific needs, in full compliance with the recommendations of the AFEP-MEDEF Code.

This analysis led the Board of Directors to acknowledge that the Group's governance structures operated very efficiently with a

strict balance of powers between the Board and the management, thanks to the robust control mechanisms set up which include:

- a very large majority of independent directors on the Board of Directors (82%);
- a very large majority of independent members on the various committees of the Board of Directors (100% for the Nominating, Compensation and Corporate Governance Committee and 75% for the Audit and Accounts Committee);
- a close involvment of all members of the Board of Directors in the Group's strategy, notably during the annual strategy seminar; and
- limitations of the powers of the Chairman and Chief Executive
  Officer, who is required to inform the Board of Directors of
  the most significant transactions or submit them to the Board
  of Directors for prior approval. These limitations are set out in
  detail in section 3.3.1 of this reference document.

In addition, the Chairman and Chief Executive Officer is not a member of any of the specialized committees of the Board of Directors.

It should also be noted that, as part of the annual assessment of the Board of Directors, the directors are questioned every year on the continuation of the existing governance structure and that the Nominating, Compensation and Corporate Governance Committee regularly reviews the existing governance structure, and verifies that the chosen structure continues to be the most appropriate. Its conclusions are presented to the Board of Directors, which then decides whether or not to maintain the structure in place.

Composition of administrative and management bodies

Lastly, during the annual assessment of the Board of Directors and notably the one carried out by Spencer Stuart in early 2016, the directors regularly expressed their satisfaction with the current organization of the governance structure and with the Board's open and constructive discussions. The directors appreciate, in particular, their complete freedom of expression and the quality of the discussions, strengthened by the Board's diversity and its members' complementary skills.

The directors also underlined the very positive achievements and performance of Thierry Le Hénaff in his position as Chairman and Chief Executive Officer, in a high level competitive environment and despite the volatile and challenging economic environment, especially in recent years. Thierry Le Hénaff successfully led the Group's transformation, repositioning it as a specialty chemicals player that ranks among the world leaders in advanced materials with the finalization in the last four years of several major projects, including the acquisition of Bostik, which has been smoothly integrated into the Group, the divestment of the vinyl business, and the successful start-up and ramp-up of the thiochemicals platform in Malaysia, which represents the largest industrial project ever carried out by the Group. The high quality results reported by the Group in 2015 and the clear long-term strategy illustrate the achievements of Thierry Le Hénaff.

In light of the above, the Board of Directors reaffirmed its strong belief that the current governance structure, which has demonstrated to work well over the past ten years, remains the most appropriate to the Group's needs. It will enable the Group to pursue the in-depth transformation process that has been underway since its independence, in a rapidly changing regulatory, competitive and economic environment. It will also ensure that the Group continues to enjoy strong and stable leadership, while also benefiting from a simple and responsive decision-making process and a fully independant control structure.

However, as part of the drive to constantly improve its governance, on a proposal of the Chairman and Chief Executive Officer, supported by the Nominating, Compensation and Corporate Governance Committee, the Board of Directors also decided at its meeting on 2 March 2016 to appoint one of the independent directors to serve as Senior Independent Director. The primary role of the Senior Independent Director will be to oversee the efficient running of the Company's governance structure and the absence of conflicts of interests and to ensure that shareholders' concerns on corporate governance matters are taken into consideration.

The Senior Independent Director's role and responsibilities are described in detail in the Board of Directors' Internal Rules available on the Company's website, www.arkema.com, and are presented in section 3.3.3 of this reference document.

The Board of Directors has decided to appoint François Enaud to serve as Senior Independent Director, for the duration of his term as director, in light of his very good knowledge of the Group, of which he has been an independent director and a member of the Nominating, Compensation and Corporate Governance

Committee since 2006, and his 17 years' experience as Chairman and Chief Executive Officer of a listed company.

This change, which is in line with best governance practice, will contribute to the Group's ongoing success and solid governance.

#### 3.2.2.2 EXECUTIVE COMMITTEE

The Chairman and Chief Executive Officer has put in place an Executive Committee comprising two operational executive Vice-Presidents and four corporate executive Vice-Presidents who report to him directly.

The Executive Committee is in charge of the Group's operational management supervision as well as coordination and monitoring of the implementation of strategy within the Group. It is a decision-making body that focuses on strategic matters and performance monitoring, and reviews significant organizational matters and large projects. It also ensures the effective implementation of internal control. The Executive Committee meets twice a month.

At 31 December 2015, the Executive Committee was made up of the following members:

• Thierry Le Hénaff: Chairman and Chief Executive Officer.

Four corporate executive Vice-Presidents:

- Luc Benoît-Cattin: Executive Vice-President, Industry, oversees industrial safety, environment and sustainable development, technology, logistics, quality and goods and services procurement;
- Bernard Boyer: Executive Vice-President, Strategy, oversees strategic planning, economic studies, acquisitions and divestments, internal audit and internal control, insurance and risk management;
- Michel Delaborde: Executive Vice-President, Human Resources and Corporate Communications; and
- Thierry Lemonnier: Chief Financial Officer, oversees accounting, management control, treasury management, legal, taxation, financial communication and IT.

Two operational executive Vice-Presidents:

- Bernard Pinatel: Executive Vice President oversees the High Performance Materials division since 3 February 2015, when he took over from Pierre Chanoine upon the latter's retirement;
- Marc Schuller: Executive Vice-President oversees the Coating Solutions and Industrial Specialties divisions in addition to Raw Materials and Energy Procurement.

#### Information on members of the Executive Committee:

**Luc Benoît-Cattin,** born in 1963, is a graduate of France's École polytechnique and École des Mines de Paris.

Between 1988 and 1995, he held a number of positions in administration at the French Ministry for Economy, Finance and

Industry. From 1995 to 1997, he was Technical Advisor to the Minister for Industry. In 1997, he joined the Pechiney group as Plant Manager and later became head of the aluminum rolling business unit. In 2002, he joined CGG Veritas, where he was successively Director of Resources and Operating Performance, Director of Offshore, and, from 2009, Managing Director of Geophysical Services and a member of the Executive Committee. He has been a member of Arkema's Executive Committee since March 2011

**Bernard Boyer,** born in 1960, is a graduate of France's École polytechnique and École nationale supérieure des pétroles et moteurs.

He has spent his career working in the chemicals industry in operational positions, starting out at industrial facilities before moving to Elf Atochem's head office (Finance & Strategy department), from 1992 until 1998. In 1998, he joined Elf Atochem's Adhesives affiliate as Executive Vice-President. He was appointed Atofina's Director of Acquisitions and Divestitures in 2000, then Director of Economic Research, Business Plans, Strategy, Acquisitions and Divestitures at the end of 2003. He has been a member of Arkema's Executive Committee since its creation in 2006.

**Michel Delaborde**, born in 1956, holds a degree in economics from France's Université Paris-Sorbonne.

In 1980, he joined Total where he was in charge of Human Resources for both the head office and the refineries. After two years as head of the Human Resources department for the Trading & Middle East division, he took charge of communications for Total in 1996, serving as Director of Communications first for TotalFina, then for TotalFinaElf after the merger in 1999. In 2002, he joined Atofina as Director of Human Resources and Communications and was appointed to Total's Chemicals management committee. He has been a member of Arkema's Executive Committee since its creation in 2006.

**Thierry Lemonnier,** born in 1953, is a graduate of the *École nationale supérieure de géologie* in Nancy, France, and holds a master's degree from Stanford University in the United States.

He joined Total in 1979 as an engineering economist in the Exploration & Production department and then joined Total's Finance department in 1983 before becoming Chief Financial

Officer for Refining & Marketing in 1993. In 2000, he was appointed director of Chemical Affiliates Operations. He then joined Total's Chemicals business in 2001 and was appointed to the management committee, in charge of finance, management control and accounting. He has been a member of Arkema's Executive Committee since its creation in 2006.

**Bernard Pinatel**, born in 1962, is a graduate of France's École polytechnique and Institut d'Études Politiques (IEP) de Paris, and has an MBA from INSEAD business school. He is also a statistician-economist (École nationale de la statistique et de l'administration économique - ENSAE).

He began his career at Booz Allen & Hamilton, later joining the Total group in 1991, where he held a number of operational positions in its industrial facilities and at head offices of subsidiaries, including Hutchinson and Coates Lorilleux. He subsequently served as Chief Executive Officer France and Chief Executive Officer Europe for Bostik from 2000 to 2006, and later as Chairman and Chief Executive Officer of Cray Valley from 2006 to 2009. He has served as Chairman and Chief Executive Officer of Bostik S.A. since 2010. At Total, he was a member of the Executive Committee of the Chemicals business between 2007 and 2011, a member of the Group management committee from 2011 and a member of the Refining & Chemicals Executive Committee from 2012. He has been a member of Arkema's Executive Committee since 3 February 2015.

Marc Schuller, born in 1960, is a graduate of France's École supérieure des sciences économiques et commerciales (ESSEC).

He joined Orkem in 1985 as acrylics product manager. In 1990, he joined the Strategic Planning department of Total Chimie and in 1992 he became Deputy Managing Director of the Structural Resins department at Cray Valley. In 1995, he was appointed Sales Director, Petrochemicals/Special Fluids at Total, and later Director, Base Petrochemicals at Total-Fina. In 2000, Marc Schuller was appointed director of Atofina's Butadiene/Aromatics business unit, and special project manager for the Chairman. In 2003, he became director of the Thiochemicals and Fine Chemicals business unit. After being a member of Atofina's management committee, he became a member of the Group's Executive Committee at its creation in 2006.

# 3.2.3 Additional information concerning members of the Board of Directors and executive management

## 3.2.3.1 ABSENCE OF FAMILY TIES

To the best of the Company's knowledge, and at the date of this reference document, there are no family ties between (i) the members of the Board of Directors, (ii) the members of the Executive Committee, and (iii) between the members of the Board of Directors and those of the Executive Committee.

# 3.2.3.2 ABSENCE OF ANY CONVICTION FOR FRAUD, INVOLVEMENT IN A BUSINESS FAILURE, OR PUBLIC INCRIMINATION AND/OR SANCTION

To the best of the Company's knowledge, and at the date of this reference document, no member of the Board of Directors or the Executive Committee has been:

convicted of fraud during the past five years;

- implicated in a bankruptcy, receivership or liquidation as a member of an administrative, management or supervisory body during the past five years;
- charged with any offense or had any official public sanction made against them by statutory or regulatory authorities during the past five years.

To the best of the Company's knowledge, during the past five years, no director has been prohibited by a court from serving as a member of the administrative, management or supervisory body of an issuer, or from participating in the management or governance of an issuer's business.

#### 3.2.3.3 ABSENCE OF CONFLICTS OF INTERESTS

The Company has put in place measures to prevent potential conflicts of interests between the directors and the Company.

In accordance with corporate governance best practice and the recommendations of the AFEP-MEDEF Code in particular, the Board of Directors' Internal Rules provide that:

- each director must undertake to maintain under all circumstances
  their independence of analysis, judgment, decision-making
  and action and, in this respect, to report to the Board any
  potential or actual direct or indirect conflicts of interests with
  the Company. Any director in this situation must abstain from
  voting on any decision by the Board where he or she is faced
  with a conflict of interests. In addition, directors must confirm
  the absence of any conflicts of interests between them and the
  Company whenever so requested for the preparation of the
  reference document or at any time by the Chairman and Chief
  Executive Officer; and
- each director must undertake to notify the Board of Directors of any agreement between them and the Company, entered into directly, indirectly or via an intermediary, prior to entering into such agreement. Furthermore, each director must undertake not to assume any duties in companies or business activities that are in competition with the Company without previously notifying the Board of Directors and the Chairman of the Nominating, Compensation and Corporate Governance Committee.

In accordance with the Board of Directors' Internal Rules, Claire Pedini, director of Arkema and Senior Vice-President in charge of Human Resources of Compagnie Saint-Gobain, informed the Board of Directors in late 2014 of a potential conflict of interest arising from the Compagnie Saint-Gobain project to acquire the Sika group, a competitor of Bostik, launched in December 2014. As a result, Claire Pedini indicated to the Board of Directors that she would resign from her position as director of Arkema once the acquisition would be completed. In the interim, in accordance with the provisions of the Internal Rules applicable to conflicts of interests, the Board of Directors decided that Claire Pedini shall not take part in any discussions or vote on any resolutions that may concern any matter associated with Bostik. This rule was applied during all meetings of the Board of Directors and of the Audit and Accounts Committee attended by Claire Pedini in 2015.

To the best of the Company's knowledge, there are no other potential conflicts of interests between the duties of members of the Board of Directors or of executive management *vis-àvis* the Company and their private interests. To the best of the Company's knowledge, no arrangements or agreements resulting in the selection of a member of the Board of Directors or of executive management have been made with the Company's main shareholders, customers or suppliers.

To the best of the Company's knowledge, there are no restrictions accepted by the members of the Board of Directors or executive management concerning the transfer of their holding in the Company's share capital, other than those set out in section 3.4.3.3 of this reference document.

# 3.2.3.4 INFORMATION REGARDING SERVICE CONTRACTS

To the best of the Company's knowledge, there are no service contracts between the members of the Board of Directors or the Executive Committee and the Company or any of its subsidiaries providing for the granting of benefits under the terms of such a contract. The members of the Executive Committee, however, are all employees of the Company except for Thierry Le Hénaff.

# 3.3 OPERATING PROCEDURES OF ADMINISTRATIVE AND MANAGEMENT BODIES

The duties and operating rules of the Company's administrative and management bodies are defined by law, by the Company's Articles of Association and by the Internal Rules of the Board of Directors. The latter documents can be found on the Company's website (www.arkema.com) under Investor Relations – Governance.

# 3.3.1 Management and limitation of powers of the Chairman and Chief Executive Officer

The Chairman and Chief Executive Officer is vested with the most extensive powers to act in the Company's name in all circumstances. He exercises these powers within the limits of the Company's corporate purpose and subject to those powers expressly vested by law in the general shareholders meetings and the Board of Directors. He represents the Company in its relations with third parties.

The Board of Directors may set limits on the powers of the Chairman and Chief Executive Officer. In 2006, the Board of Directors introduced a right of preliminary review by the Board of Directors whereby the Chairman and Chief Executive Officer shall inform the Board of the most significant transactions or submit them to the Board for prior approval.

Consequently, the Board of Directors must give prior approval to:

- · the overall capital expenditure budget;
- any industrial investment in excess of 80 million euros;
- any acquisition or divestment project with an enterprise value in excess of 130 million euros; and

- any capital expenditure budget overrun in excess of 10%. In addition, the Board of Directors must be informed after the event of:
- any industrial investment in excess of 30 million euros; and
- any acquisition or divestment project with an enterprise value in excess of 50 million euros.

The general powers of the Chairman and Chief Executive Officer were confirmed by the Board of Directors meeting of 23 May 2012.

At its meeting of 22 January 2015, the Board of Directors also authorized the Chairman and Chief Executive Officer, or any person duly authorized to act on his behalf, to issue deposits, commitments and guarantees in the name of the Company, up to a limit of 90 million euros, and to continue the deposits, commitments and guarantees previously made.

This authorization was renewed under the same terms for 2016 up to a limit of 90 million euros.

# 3.3.2 Duties and operating procedures of the Board of Directors

#### 3.3.2.1 **DUTIES**

The Board of Directors is a collegiate body which takes decisions collectively. It is mandated by and accountable to all of the shareholders.

The Company's Board of Directors exercises the powers it is assigned by law in order to act in the Company's best interests in all circumstances. In this regard, it decides the Company's overall business strategy and oversees its implementation. Subject to those powers expressly conferred upon the shareholders and within the limits of the Company's corporate purpose, the Board

of Directors considers any issue involving the proper operation of the Company and decides on any issue concerning the Company.

To this end, it must in particular monitor and review the Group's strategic developments, appoint the executive directors responsible for managing the Company in line with corporate strategy, monitor the implementation of this strategy, make decisions regarding major transactions, ensure the quality of information supplied to shareholders and the markets, particularly in the financial statements, and guarantee the quality of the Board of Directors' operations.

Operating procedures of administrative and management bodies

The Board of Directors can decide to set up one or more specialized committees. It defines the composition and remit of these committees, which operate under the responsibility of the Board of Directors. In accordance with the Internal Rules of the Board of Directors and each of its committees, some matters are therefore subject to prior review by the appropriate committee before being submitted to the Board of Directors for approval.

#### 3.3.2.2 OPERATING PROCEDURES

The operating procedures of the Board of Directors are determined by current laws and regulations, the Company's Articles of Association and its Internal Rules as adopted by the Board of Directors meeting of 12 May 2006, and regularly updated, most recently on 2 March 2016 to allow for the appointment of a Senior Independent Director.

In accordance with its Internal Rules, the Board of Directors meets at least four times a year and whenever the interests of the Company so require. Meetings of the Board are convened by its Chairman. The convening notice may be delivered by any means, even verbally, eight days before the date of the meeting and, in urgent cases, without notice. It specifies where the meeting will take place.

The Board of Directors' meetings are chaired by the Chairman of the Board or, in his absence, by the oldest director in attendance.

The Board of Directors may legitimately deliberate even in the absence of a notice of meeting if all members are present or represented. In accordance with its Internal Rules, in all cases permitted by law and if specified in the notice of meeting, directors attending the meeting by means of videoconferencing or any other telecommunication method that meets the requisite technical specifications set by current laws and regulations, are deemed present for the purpose of quorum and majority requirements.

Decisions are taken by majority vote of the members present, deemed present or represented. In the case of a split vote, the Chairman has the casting vote.

In accordance with corporate governance best practice and recommendations of the AFEP-MEDEF Code in particular, the Board of Directors' Internal Rules also set out the rights and obligations of the directors and notably impose the following:

- before accepting their duties as director of the Company, the
  directors must ensure that they are familiar with the Company's
  Articles of Association, the Board of Directors' Internal Rules,
  and the legal and regulatory provisions governing the functions
  of a director of a French joint stock corporation (société
  anonyme), and in particular the rules relating to the definition
  of the powers of the Board of Directors, multiple directorships,
  the agreements falling within the scope of article L. 225-38 of
  the French Commercial Code, the holding and use of insider
  information, the declarations of trading in the Company's
  shares and the black-out periods during which directors may
  not trade in those shares;
- the directors are elected by all the shareholders and must act in all circumstances in the Company's best interests;
- the directors must devote the necessary time and attention to their duties. Consequently, the directors may not hold more

than four other directorships in listed companies, including foreign companies, outside the Group. Accordingly, the directors undertake to inform the Chairman of the Nominating, Compensation and Corporate Governance Committee of any new non-executive or executive directorship that they might accept in a company outside the Group or outside the group of which he or she is a member, including their participation in the committees of these companies' boards; executive directors may not hold more than two other directorships in listed companies outside the Group and must seek the opinion of the Board of Directors prior to accepting any new directorship in a listed company;

- the directors must be committed and, where possible, take part in all the Company's Board of Directors' meetings and the meetings of the committees to which they have been appointed, as well as general shareholders' meetings;
- prior to each Board of Directors' meeting, except in the event of an emergency justified by exceptional circumstances, the agenda and information on items on the agenda that require special analysis and prior consideration, are sent to each director with the notice of the meeting or at least in sufficient time before the meeting, whenever this can be accomplished without any breach of confidentiality. The directors may also request from the Chairman and Chief Executive Officer any additional information they may consider necessary to properly fulfill their duties, particularly in the light of the meetings' agenda;
- if they deem it necessary, the directors may also request additional training on the Group's specific features, businesses, and sector of activity, at the time of their appointment or during their term of office. This training is organized by the Company, which pays the related costs;
- all documents provided for Board of Directors meetings and all information collected during or outside Board of Directors meetings are confidential, without exception, whether or not the information collected is presented as being confidential. In this regard, the directors must consider themselves bound by strict professional confidentiality beyond the simple duty of discretion provided for by the law. Furthermore, the directors undertake not to express their individual views outside the boardroom on matters discussed during Board of Directors' meetings, or on the opinions expressed by individual directors; and
- as required by law and regulations, the directors must refrain
  from trading in the Company's securities (including derivative
  financial instruments) insofar as, by virtue of their duties, they
  have access to insider information. Furthermore, the directors
  must disclose any transactions they have entered into in respect
  of the Company's securities.

The Board of Directors' Internal Rules as amended on 2 March 2016 also provide that, when the positions of Chairman and Chief Executive Officer are held by the same person, the Board of Directors shall appoint one of the independent directors to serve as Senior Independent Director, based on the recommendation of the Nominating, Compensation and Corporate Governance Committee. The role and responsibilities of the Senior Independent Director, as described in the Internal Rules, are set out in section 3.3.3 of this reference document.

#### 3.3.2.3 ACTIVITIES OF THE BOARD OF DIRECTORS

The Board of Directors met six times in 2015 (versus seven in 2014) with a high attendance rate of 93% (versus 96% in 2014 and 92% in 2013). On average, the meetings lasted approximately three hours.

The agenda of the Board of Directors' meetings included recurring annual topics, in particular (i) approval of the Company's annual and half-yearly consolidated financial statements and review of the quarterly financial information as well as the Company's financial communication, the annual budget, and preparation of the annual general meeting, including approval of the draft resolutions, (ii) management forecast documents, (iii) approval of the strategy presented during the annual seminar, (iv) approval of the Chairman of the Board of Directors' report on the composition of the Board of Directors, the application of the principle of gender balance, the conditions of preparation and organization of the work of the Board of Directors as well as the internal control procedures put in place by the Company and, more generally, of governance matters, (v) setting the compensation conditions for the Chairman and Chief Executive Officer and Executive Committee members, as well as setting and allocating attendance fees among Board and Committee members, (vi) review of reports on the work of the specialized committees, and (vii) the annual assessment of the Board of Directors.

In 2015, the Board of Directors also reviewed the following:

- the re-election as directors of Laurent Mignon, Victoire de Margerie and François Enaud and the renewal of the appointment as members of the Nominating, Compensation and Corporate Governance Committee of the latter two;
- the proposal to appoint Hélène Moreau-Leroy as director and her appointment as member of the Audit and Accounts Committee;
- various strategic acquisition or divestment projects and the Group's overall strategy in particular during the annual strategy seminar;
- the Bostik integration process and progress made on the implementation of synergies between this new business and the rest of the Group;
- major operating priorities;
- the Group's main risk exposures;
- the 2015 performance share plan;
- the Group's environmental and safety situations;
- the Group's human resources situation;
- management policy of executives;
- · changes in the competitive environment;
- feedback from the 2015 road shows;
- the option to pay the dividend in shares and the resulting capital increase;
- renewal of the Euro Medium Term Notes (EMTN) program and of the authorization to issue bonds;

- the changes in the Executive Committee and its succession plan, including for the Chairman and Chief Executive Officer; and
- the proposed share capital increase reserved for employees and former employees of the Group.

At each meeting, the Chairman reviewed the transactions concluded since the previous meeting, and sought the authorization of the Board of Directors for the main projects underway that were likely to be completed before the next meeting. The Board of Directors was also informed at least once a quarter of the Company's financial situation, cash position and commitments.

Since the beginning of 2016, the Board of Directors has met twice with an attendance rate of 96%.

Matters discussed during these meetings included risk mapping, the 2016 insurance program, the assessment of the Board of Directors' operating procedures in 2015 conducted by an independent advisory firm, the assessment of directors' independence, confirmation of the Company's governance structure, proposal to re-elect Thierry Le Hénaff, Chairman and Chief Executive Officer, as director, appointment of a Senior Independent Director and amendment of the Board's Internal Rules to reflect this appointment, the closing of the consolidated and Company financial statements for the year ended 31 December 2015, the proposed allocation of profit and dividend distribution, and all related documents (the management report, the Chairman of the Board of Directors' report prepared pursuant to article L. 225-37 of the French Commercial Code, and more generally the 2015 reference document); preparation of the annual general meeting, and in particular the resolutions to be submitted to shareholders, the financial forecasts for the Company required by French law, the conditions governing the exercise of the Chairman and Chief Executive Officer's powers, including defining his powers to issue deposits, commitments and guarantees for 2016, the Chairman and Chief Executive Officer's compensation package (fixed compensation for 2016, variable compensation for 2015 and the criteria for determining his variable compensation for 2016), his termination benefit entitlement and changes to his supplementary pension rights, the compensation packages of Executive Committee members (fixed compensation for 2016, their variable compensation for 2015 and the criteria for determining their variable compensation for 2016), the annual reports of the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee, and the industrial situation of Group sites.

# 3.3.2.4 ASSESSMENT OF THE OPERATING PROCEDURES OF THE BOARD OF DIRECTORS

In accordance with the AFEP-MEDEF Code and its Internal Rules, the Board of Directors conducts an annual assessment of its operating procedures by means of a formal questionnaire. Every three years in principle, an assessment is conducted by an external consultant. The form and terms of the Board's assessment are discussed by the Nominating, Compensation and Corporate Governance Committee every year.

Operating procedures of administrative and management bodies

The Board of Directors' 2015 operating procedures were assessed at the beginning of 2016 by Spencer Stuart, which conducted individual interviews of each director based on a guide that was approved by the Chairman of the Nominating, Compensation and Corporate Governance Committee and the Secretary of the Board of Directors. Prior to the interviews, each director was invited to complete an on-line questionnaire. The findings from this assessment procedure were detailed in a report that was first presented to the Nominating, Compensation and Corporate Governance Committee on 19 February 2016 and then to the Board of Directors on 2 March 2016.

The assessment showed that the operating procedures of the Board of Directors are very good. More than three-quarters of the directors who also sit on other companies' boards ranked Arkema's board as the best. The assessment found that the Board of Directors has demonstrated its efficiency, has become more mature and has continued to improve since the previous independent assessment conducted by an external advisor in 2012

In terms of corporate governance, all directors considered that the current governance structure with the combined role of Chairman and Chief Executive Officer was fully adapted to Arkema. The Board of Directors was unanimous in stating that the Board's dynamics (the interaction between directors during the decisionmaking process) and performance were very satisfactory and had improved since 2012. The directors also believe that the roles of the Board of Directors and executive management are well defined, with the Board of Directors being responsible for the consideration and formulation of all key decisions. Matters discussed during Board meetings are considered relevant and appropriate for Arkema with an active involvement of the Board in setting the Group's strategy, in particular during the annual seminar dedicated to strategy. The directors underlined that the way debates are conducted by the Chairman and Chief Executive Officer allows for an open expression of opinions and that their commitment is real and strong.

Concerning the composition of the Board of Directors, the directors consider that the current number of members is appropriate and should not be increased and that the procedures for reappointment and appointment of new directors are fully appropriate and effective. The directors acknowledge however the need for the Board to continue to benefit from the experience of a Chief Executive Officer in the chemical industry and to further develop the internationalization of the Board.

Following the assessment and the presentation of the report, the following areas for improvements have been identified and agreed by the Board:

- start to organize periodic field visits and possibly a Board of Directors' meeting on site;
- improve the definition of the roles of the Board of Directors and the Audit and Accounts Committee in relation to the monitoring of risks and organize a meeting of the Board of Directors dedicated to this matter to be presented by the Audit and Accounts Committee;
- plan changes in the composition of the Board of Directors in order to keep current skills and consider the opportunity to appoint a director with previous experience as an executive in the chemical sector, maintain the proportion of active CEO directors and consider the opportunity to have a Frenchspeaking foreign director.

It is underlined that Bertrand Richard, partner with Spencer Stuart, who conducted the assessment stated about Arkema's Board of Directors: "The assessment shows that the quality of the operating procedures of Arkema's corporate governance bodies is unanimously recognized, and in particular the Board's dynamic and performance which are considered very satisfactory by all members. This places the operating procedures of Arkema's Board of Directors among the best practice in France."

# 3.3.3 Senior Independent Director

As part of the drive to constantly improve its governance and in line with best practice, on a proposal by the Chairman and Chief Executive Officer, supported by the Nominating, Compensation and Corporate Governance Committee, the Board of Directors decided at its meeting on 2 March 2016 to appoint one of the independent directors to serve as Senior Independent Director. The primary role of the Senior Independent Director is to oversee the efficient running of the Company's governance structure and the absence of conflicts of interests and to ensure that shareholders' concerns on corporate governance matters are taken into consideration.

According to the Board of Directors' Internal Rules, as amended by the Board, a Senior Independent Director is appointed when the Chairman of the Board of Directors also serves as Chief Executive Officer.

The Senior Independent Director is selected from among the independent members of the Board, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, and is appointed for his or her term as a director. He or she may be re-appointed.

The Senior Independent Director's duties and responsibilities are as follows:

### 1. Concerning the operating procedures of the Board of Directors

- he or she may propose additional items on the agenda of Board meetings, if necessary;
- he or she may ask the Chairman of the Board of Directors to call a Board meeting with a specific agenda under exceptional circumstances;
- he or she oversees the application of the Internal Rules for the preparation of Board meetings as well as during the meetings;
- following the annual assessment of the Board of Directors' operating procedures led by the Nominating, Compensation and Corporate Governance Committee, he or she may organize and chair a meeting of non-executive directors, from which executive or employee directors are excluded, to discuss the operating procedures of the Company's governance structures; he or she reports the meeting's conclusions to the Chairman and Chief Executive Officer; and
- he or she reports on his or her activities to the Board of Directors at least once a year and at any time if he considers it necessary.

#### 2. Concerning conflicts of interests

He or she advises his or her fellow directors on the related risks. He or she reviews with the Chairman of the Board of Directors and the Nominating, Compensation and Corporate Governance Committee any potential conflicts of interests that he or she has identified or been informed of, and informs the Board of Directors of his or her thoughts on the matter as well as those of the Chairman.

#### 3. Concerning shareholder relations

He or she is informed of comments and suggestions received from significant shareholders not represented on the Board of Directors about corporate governance matters. He or she oversees that they receive answers to their questions and, after consulting the Chairman and Chief Executive Officer, makes himself or herself avaible to communicate with them if necessary. The Board of Directors is informed about these contacts.

The Board of Directors decides on the compensation paid to the Senior Independent Director on his or her appointment or renewal.

His or her functions may be terminated by the Board of Directors at any time.

At its meeting on 2 March 2016, the Board of Directors appointed François Enaud as Senior Independent Director. François Enaud is an independent director and has served on the Nominating, Compensation and Corporate Governance Committee since the Company's stock market listing in 2006. In making its choice, the Board took into account François Enaud's very high attendance rate at meetings of the Board and the Nominating, Compensation and Corporate Governance Committee over the past ten years, and his resulting excellent understanding of the Group and its transformation, as well as his long experience of working with his fellow directors. In addition, his participation in regular reviews by the Nominating, Compensation and Corporate Governance Committee of best governance practices and developments in this area, will ensure that he successfully fulfills the role of Senior Independent Director. Lastly, as former Chairman and Chief Executive Officer of a listed group, François Enaud has acquired over many years in-depth knowledge of investor relations, making him well qualified to answer questions about the Company's governance.

# 3.3.4 Committees of the Board of Directors

The Board of Directors has two permanent specialized committees: the Audit and Accounts Committee and the Nominating, Compensation and Corporate Governance Committee. The role of the committees is to examine and prepare certain matters to be discussed by the Board of Directors; accordingly, the committees put forward their opinions, proposals and recommendations to the Board.

Each committee's role, organization and operating procedures are set out in their respective Internal Rules, as defined and approved by the Board of Directors. The Internal Rules of each committee state that:

- the term of office of committee members corresponds to their term of office as directors, although the Board of Directors may modify the composition of the committees at any time;
- at least two members must be present for a meeting of the committees to be valid;
- no committee member may be represented by another person; and

 each committee reports on its work to the Board of Directors and presents an annual assessment of its operating procedures drawn up on the basis of the requirements of its Internal Rules, as well as any suggestions for improving its operating procedures.

Committee members may only receive attendance fees from the Company in respect of their term of office as directors and members of a committee.

### 3.3.4.1 THE AUDIT AND ACCOUNTS COMMITTEE

#### Composition and operating procedures

At 31 December 2015, the Audit and Accounts Committee was made up of four directors: Philippe Vassor (Chairman), Claire Pedini, Isabelle Boccon-Gibod (permanent representative of the Fonds Stratégique de Participations (FSP)) and Hélène Moreau-Leroy.

Operating procedures of administrative and management bodies

In accordance with the AFEP-MEDEF Code, none of the members of the Audit and Accounts Committee holds an executive position within the Company. At the date of this reference document, all members of this Committee were qualified as independent by the Board of Directors except for Isabelle Boccon-Gibod, permanent representative of the FSP. The appointment or reappointment of the Chairman of the Audit and Accounts Committee recommended by the Nominating, Compensation and Corporate Governance Committee is subject to particular scrutiny by the Board of Directors.

In accordance with article L. 823-19 of the French Commercial Code, it should be noted that the Chairman of the Audit and Accounts Committee, Philippe Vassor, has specific expertise in finance and accounting as he spent most of his career (from 1975 to 2005) with the accounting firm Deloitte and served as its Chairman and Chief Executive Officer in France. Furthermore, in accordance with the AFEP-MEDEF Code, all the members of the Audit and Accounts Committee have financial or accounting expertise (see biographies of the members under sections 3.2.1.2 and 3.2.1.3 of this reference document).

The members of the Audit and Accounts Committee also have the opportunity to attend a presentation focusing on the Group's accounting, financial and operational specifics.

The Audit and Accounts Committee generally meets six times a year, in particular to review the consolidated financial statements. Two meetings are primarily devoted to discussing internal control matters. It meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The dates of Audit and Accounts Committee meetings are set by its Chairman. The Chairman of the Audit and Accounts Committee has appointed the Chief Financial Officer as secretary to the Committee.

The statutory auditors are invited to every Audit and Accounts Committee meeting. The Audit and Accounts Committee hears their conclusions after the meeting without the presence of Company representatives. The Committee also meets privately with the Internal Audit and Internal Control Vice-President after the Committee meetings attended by him.

The Chairman and Chief Executive Officer does not take part in the meetings of the Audit and Accounts Committee.

Unless there is a decision to the contrary by the Board of Directors, no Audit and Accounts Committee member may be a member of the audit and accounts committees of more than two other listed companies in France or abroad. The Board also ensures that it does not appoint to this Committee a director from a company that has appointed one of the Company's directors to its own audit and accounts committee.

#### **Duties**

In order to enable the Company's Board of Directors to ensure the quality of internal control and the reliability of information provided to shareholders and to the financial markets, the Audit and Accounts Committee exercises the prerogatives of a specialized committee as defined under article L. 823-19 of the French Commercial Code and in the AMF working group's final report on the audit committee dated 22 July 2010. Accordingly, the Audit and Accounts Committee is responsible for monitoring (i) the financial information preparation process, (ii) the effectiveness of the internal control and risk management systems,

(iii) the audit of the annual Company and consolidated financial statements by the statutory auditors, and (iv) the independence of the statutory auditors. Therefore, in accordance with its Internal Rules, it has particular responsibility for the following:

- submitting recommendations on the appointment of the statutory auditors and their fees, in compliance with independence requirements;
- ensuring compliance with all applicable laws and regulations when statutory auditors are commissioned to perform work other than auditing the financial statements;
- reviewing the options and assumptions used in the preparation
  of the financial statements, the annual consolidated financial
  statements, half-yearly and quarterly financial information and
  the full-year financial statements and forecasts of the Company
  prior to their consideration by the Board of Directors, and the
  accounting content of press releases prior to their publication;
- overseeing the audit of the annual Company and consolidated financial statements by the statutory auditors, and the procedures involved in preparing the financial information;
- assessing the suitability and consistency of accounting principles and policies;
- reviewing internal control procedures;
- reviewing external and internal auditor work programs;
- reviewing audit work;
- assessing the organization of delegations of authority;
- overseeing the efficiency of internal control and risk management systems;
- reviewing the conditions for the use of derivatives;
- assessing major transactions planned by the Group, when appropriate;
- remaining regularly updated on developments of significant claims and disputes;
- reviewing the main off-balance sheet commitments, particularly the most significant new contracts; and
- preparing and submitting reports as set out in the Internal Rules
  of the Board of Directors, and presenting to the Board in draft
  form the sections of the annual report and any documents
  required under applicable regulations that fall within its remit.

# **Activity of the Audit and Accounts Committee**

The Audit and Accounts Committee met six times in 2015 with an attendance rate of 100%, as in 2014.

The Group's Chief Financial Officer (appointed as secretary of the Committee), the Accounting Vice-President, and the statutory auditors attended all of these meetings.

The work of the Audit and Accounts Committee in 2015 focused mainly on: (i) the review of the 2014 financial statements (consolidated and Company, including a review of provisions at 31 December 2014), the draft 2014 management report, the draft 2014 reference document, the 2015 quarterly financial information, the half-yearly financial statements at 30 June 2015 and the draft half-yearly financial report, draft press releases relating to the quarterly, half-yearly and annual results, and

the review of the Company's management forecasts, (ii) the approval of the statutory auditors' fees for 2015, (iii) the review of internal control procedures and internal and external audit work programs, as well as the review of the Group's risks and, consequently, risk mapping, in the presence of the Internal Audit and Internal Control Vice-President, (iv) the commitments related to pensions and similar benefits, off-balance sheet commitments and derivative instruments, (v) closing options, (vi) the Group's tax situation, (vii) information systems security and general security issues, and (viii) the integration of Bostik.

Since the beginning of 2016, the Audit and Accounts Committee has met once with an attendance rate of 100%. At that meeting, the Committee focused, in particular, on the review of the 2015 consolidated and Company financial statements and of provisions at 31 December 2015, the draft 2015 management report, including social, environmental and societal information as required under article L. 225-102-1 of the French Commercial Code, the draft of the section of the Chairman of the Board of Directors' report concerning internal control and risk management in 2015, the draft press release relating to the 2015 results as well as the Committee's activity report to the Board of Directors.

In accordance with the AFEP-MEDEF Code and its Internal Rules, the Audit and Accounts Committee conducts an annual self-assessment of its work. The assessment for 2015 shows that the Committee members were very satisfied with meeting preparation and proceedings.

# 3.3.4.2 THE NOMINATING, COMPENSATION AND CORPORATE GOVERNANCE COMMITTEE

#### Composition and operating procedures

The Nominating, Compensation and Corporate Governance Committee is made up of four directors: Thierry Morin (Chairman), François Enaud, Bernard Kasriel, and Victoire de Margerie. In accordance with the AFEP-MEDEF Code, none of its members holds an executive position in the Company. At the date of this reference document, all members of this Committee were qualified as independent by the Board of Directors.

The Nominating, Compensation and Corporate Governance Committee meets several times a year. It meets at the request of its Chairman, two of its members, or the Chairman of the Board of Directors. The dates of the Nominating, Compensation and Corporate Governance Committee meetings are set by its Chairman. The Chairman of the Nominating, Compensation and Corporate Governance Committee has appointed the Group's Executive Vice-President Human Resources and Communication as secretary to the Committee.

The Chairman and Chief Executive Officer attends the Committee's meetings and is closely involved in its discussions, especially concerning nominations and governance issues. However, he does not take part in the Committee's discussions relating to him.

#### Duties

In accordance with its Internal Rules, the Nominating, Compensation and Corporate Governance Committee is responsible for (i) recommending the persons to be proposed for election as non-executive or executive directors, (ii) examining the process and practices regarding the succession plans for Executive Committee members and the career path of the Group's managers, (iii) reviewing the Group's compensation policies for executives, and proposing to the Board of Directors the compensation packages of the Company's directors, and (iv) recommending to the Board of Directors the corporate governance principles to be implemented in the Group.

Accordingly, its duties include:

#### (i) nominations:

- making recommendations to the Board of Directors on the composition of the Board of Directors and its committees;
- performing annual reviews of the process and practices regarding the succession plans for Executive Committee members and the appointment of the Group's managers, and making recommendations in this regard;
- every year, submitting to the Board of Directors the list of directors who can be considered as independent, in accordance with the provisions of article 2.1 of the Internal Rules of the Company's Board of Directors;
- assisting the Board of Directors in choosing and evaluating executive directors, non-executive directors and the directors serving on the Committees set up by the Board of Directors; and
- preparing and submitting an annual report on the Committee's operation and work;

### (ii) compensation:

- reviewing the compensation packages of the Company's executives (members of the Executive Committee) and directors, as well as the main objectives proposed by executive management for stock option and performance share plans, pension schemes, death/disability insurance and benefits in kind;
- making policy recommendations and proposals to the Board of Directors on compensation, pension schemes and death/ disability insurance, benefits in kind, and allocations of stock options or performance shares;
- reviewing the principles for allocating attendance fees among members of the Board of Directors and the rules governing expense reimbursements; and
- preparing and submitting the reports set out in the Internal Rules, and presenting to the Board in draft form the sections of the annual report and any documents required under applicable regulations that fall within its remit, in particular information on the compensation of executive directors, stock options and performance shares; and

#### Compensation and benefits awarded to executives and directors

#### (iii) corporate governance:

- analyzing and supervising corporate governance principles;
- making recommendations on corporate governance best practices;
- preparing the annual assessment of the Board of Directors' work;
- examining any cases of conflicts of interest;
- discussing corporate governance and ethical issues referred by the Board of Directors or its Chairman for review; and
- reviewing the Code of Conduct and Business Ethics and proposing modifications when necessary.

# Activity of the Nominating, Compensation and Corporate Governance Committee

In 2015, the Nominating, Compensation and Corporate Governance Committee met four times, with a 100% attendance rate.

The Group's Executive Vice-President Human Resources and Communication (appointed secretary to the Committee) attended every meeting.

The work of the Nominating, Compensation and Corporate Governance Committee in 2015 mainly focused on the compensation of the Chairman and Chief Executive Officer, of the members of the Executive Committee and of the executive directors, the annual assessment of the Board of Directors and the Committee itself, the review of the profiles of candidates for election or re-election to the Board of Directors or for appointment or re-appointment to the Board committees, in particular Hélène Moreau-Leroy, the implementation of performance share plans, the succession plan for Executive Committee members, feedback from governance road shows, changes in the Company's governance, and the proposed share capital increase reserved for employees and former employees of the Group.

Since the beginning of 2016, the Nominating, Compensation and Corporate Governance Committee has met twice, with a 100% attendance rate. The matters discussed during these meetings concerned, in particular, the 2015 annual reports of France's Autorité des marchés financiers (AMF) and of the French AFEP-MEDEF Haut comité de gouvernement d'entreprise, and the latest legal and regulatory developments in the area of corporate governance, the 2015 assessment of the operating procedures of the Board of Directors and the Committee itself, the situation of each individual director in relation to the applicable independence criteria, the total amount of attendance fees to be proposed for 2016, conflicts of interests, the Company's governance structure and the proposed re-election to the Board of Thierry Le Hénaff, Chairman and Chief Executive Officer, the appointment of a Senior Independent Director and the definition of his or her role and responsibilities, the Chairman and Chief Executive Officer's proposed compensation package (variable compensation due for 2015, fixed compensation for 2016 as from the date of his re-election, criteria for determining his variable compensation for 2016), the proposal to maintain the termination indemnity that would be due to him in the event of forced departure, the proposed changes to his supplementary pension rights, the proposed compensation packages of the Executive Committee members (variable compensation due for 2015, fixed compensation for 2016, criteria for determining their variable compensation for 2016), principles and conditions applicable to the performance share plans for the years 2016 to 2018, resolution to be presented at the annual general meeting concerning the advisory vote by shareholders on the components of Thierry Le Hénaff's 2015 compensation, as recommended in the AFEP-MEDEF Code and the corporate governance section of the Chairman and Chief Executive Officer's report provided for in article L. 225-37 of the French Commercial Code.

# 3.4 COMPENSATION AND BENEFITS AVVARDED TO EXECUTIVES AND DIRECTORS

The principles and rules for determining the compensation and benefits awarded to executives and directors of the Company are set out by the Company's Board of Directors based on recommendations by the Nominating, Compensation and Corporate Governance Committee which comprises only independent directors.

The following information is disclosed in application of the AFEP-MEDEF Code, the AMF recommendation on the

compensation of executive directors dated 22 December 2008, mentioned in AMF recommendation no. 2012-02 on corporate governance and executive compensation dated 9 February 2012 and revised most recently on 22 December 2015, the 2015 AMF annual report on corporate governance and executive compensation for listed companies dated 9 November 2015 and the recommendations of the *Haut comité de gouvernement d'entreprise* in its activity report of October 2015.

# 3.4.1 Compensation of non-executive directors

The annual general meeting of 15 May 2014 set the maximum annual amount of attendance fees that the Board of Directors may allocate between its members and those of the specialized committees at 550,000 euros.

Attendance fees awarded to directors for 2015 amounted to 444,670 euros (compared to 501,500 euros for 2014), allocated as follows:

# TABLE OF ATTENDANCE FEES AND OTHER COMPENSATION RECEIVED BY NON-EXECUTIVE DIRECTORS (TABLE 3 IN THE AMF RECOMMENDATIONS)

[In euros]	Amounts paid for 2015	Amounts paid for 2014
Patrice Bréant, Director representing shareholder employees Attendance fees	None*	None*
François Enaud, Director Attendance fees	46,000	48,500
Bernard Kasriel, Director Attendance fees	46,000	48,500
Victoire de Margerie, Director Attendance fees	43,000	48,500
Laurent Mignon, Director Attendance fees	29,000	36,500
Hélène Moreau-Leroy, Director Attendance fees	26,670**	-
Thierry Morin, Director Attendance fees	54,000	54,500
Marc Pandraud, Director Attendance fees	38,000***	42,500***
Claire Pedini, Director Attendance fees	50,000	56,500
Philippe Vassor, Director Attendance fees	62,000	70,500
Isabelle Boccon-Gibod, permanent representative of the FSP, Director Attendance fees	50,000	36,000
TOTAL	444,670	501,500

- Patrice Bréant is on the payroll of Arkema France as an expert engineer in experimental methodology and statistical process control, and, as such, does not receive any attendance fees.
- \*\* Hélène Moreau-Leroy has been a director of the Company since 2 June 2015.
- \*\*\* At the request of Marc Pandraud, the Company donated his attendance fees to charity.

With the exception of Patrice Bréant, director representing shareholder employees who is paid a salary by Arkema France, the non-executive directors received no other compensation or benefits in 2015 from the Company, nor were they awarded any stock options or performance shares. Furthermore, no compensation other than that mentioned above and paid by the Company was paid to non-executive directors by other Group companies during 2015.

Since 2014, and as confirmed by the Board of Directors on 21 January 2016, the attendance fees payable to directors have been determined as follows:

- an annual fixed amount of 20,000 euros per director paid on a *prorata* basis in the event of a change during the year; and
- a predominant variable amount based on directors' attendance, as follows:
  - 3,000 euros per director present at a Board of Directors' meeting, except for exceptional meetings held by conference call and of a shorter duration for which the variable amount is set at 1,500 euros per director present, and

Compensation and benefits awarded to executives and directors

 2,000 euros per member present at a meeting of one of the specialized committees, except for the Chairman who receives 4,000 euros.

Directors who so wish may receive their attendance fees at the end of each quarter as the year progresses, as follows:

• payment of the annual fixed amount on a prorata basis, i.e., 25% of the fixed amount per quarter; and

 payment of the variable amount based on directors' attendance at Board meetings and specialized committee meetings during the quarter concerned.

The Board of Directors has confirmed these compensation principles and the associated amounts for the 2016 financial year.

# 3.4.2 Compensation of Executive Committee members (1)

#### 3.4.2.1 COMPENSATION PRINCIPLES

Every year, the Nominating, Compensation and Corporate Governance Committee examines the fixed and variable compensation structure proposed by the Chairman and Chief Executive Officer for Executive Committee members. This compensation comprises:

- (i) two short-term components:
- an annual fixed amount based on the scope of the respective duties and responsibilities of each Executive Committee member,
- an annual variable amount based on (a) general quantitative targets identical to those set for the Chairman and Chief Executive Officer, and closely aligned with the Group's financial performance and the implementation of its strategy and (b) quantitative and qualitative targets designed to reward the individual performance of each Executive Committee member within their area of responsibility; and
- (ii) a long-term incentive through the award of performance share rights fully subject to performance conditions.

In the past, Executive Committee members also received stock options (see section 3.5 and note 28 to the consolidated financial statements in section 4.3.3 of this reference document).

Since 2010, Executive Committee members have been required to retain at least 20% of their vested shares in registered form for as long as they remain in office, as well as a number of shares obtained upon the exercise of stock options corresponding to at least 40% of the net capital gain on acquisition. These obligations are suspended once the total value of the Arkema shares held, whatever their origin, is equivalent to 150% of their gross annual fixed compensation. The Chairman and Chief Executive Officer is subject to specific individual holding requirements (see section 3.4.3.3 of this reference document).

In view of these stringent obligations, Executive Committee members are not required to purchase additional shares before the lock-up on vested performance shares is lifted.

Each year, Executive Committee members certify that they have not used any financial instruments to hedge the risk of losses on the stock options or performance share rights that have been, or will be, awarded to them by the Company.

Furthermore, as is the case with any Group employee, in exceptional circumstances, a specific contribution may be rewarded with an additional bonus approved by the Nominating, Compensation and Corporate Governance Committee.

The amount and structure of Executive Committee members' compensation packages are regularly compared to the market practices for equivalent positions in companies operating in the same industry with similar market capitalizations.

Executive Committee members do not receive any attendance fees as directors of Group companies.

# 3.4.2.2 ANNUAL COMPENSATION OF EXECUTIVE COMMITTEE MEMBERS (1)

The total gross fixed compensation awarded by the Company to Executive Committee members for 2015 amounted to 1,979,876 euros.

The total variable compensation paid by the Company to Executive Committee members in 2015 in respect of 2014 amounted to 932,546 euros as a result from lower performance in 2014.

Based on the targets approved by the Board of Directors' meeting of 4 March 2015, namely (i) general quantitative targets identical to those that apply to the Chairman and Chief Executive Officer and relating mainly to growth in EBITDA, recurring cash flow, and margin on variable costs of new developments, and (ii) individual quantitative and qualitative targets for each member, the Board of Directors meeting of 2 March 2016, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, approved Executive Committee members' variable compensation for 2015, which may amount to up to 85% of fixed compensation awarded to Executive Committee members (1) for 2015 stood at 1,627,787 euros.

In addition, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors set Executive Committee members' compensation for 2016 as follows:

- total gross fixed compensation has been set at 2,131,000 euros, in line with the market and with the changes to the Group's compensation policy for the 2016 financial year;
- variable compensation will continue to be based on general quantitative criteria related to the Group's financial performance as measured by targets for EBITDA, recurring cash flow and margin on variable costs of new developments, as well as on quantitative and qualitative criteria specific to each member.
   Variable compensation may amount to up to 85% of fixed compensation for each member.

Consequently, compensation due and paid to Executive Committee members, excluding the Chairman and Chief Executive Officer, for 2015 and 2014 was as follows:

		2015 (Gross amounts in euros)		<b>2014</b> (Gross amounts in euros)	
	Due for the year	Paid during the year	Due for the year	Paid during the year	
Fixed compensation	1,979,876	1,979,876	1,760,520	1,760,520	
Variable compensation	1,627,787	932,546	932,546	1,067,180	
TOTAL	3,607,663	2,912,422	2,693,066	2,827,700	

# 3.4.2.3 BENEFIT SCHEMES

Executive Committee members are covered by the same benefit schemes (death/disability and health insurance) as employees of Arkema France. They also benefit from a defined contribution pension scheme based on the part of their compensation that exceeds eight times the annual ceiling for social security contributions and is excluded from the contribution base for compulsory pension schemes.

At the date of this reference document, there is also a supplementary defined benefit pension scheme, applicable to

certain executives of the Group who benefited from a similar scheme prior to the Company's spin-off and stock market listing, which is described in section 3.4.3.4 of this reference document. Following the Board's decision on 2 March 2016 to terminate the Chairman and Chief Executive Officer's supplementary defined benefit pension scheme, effective from his re-election as a director at the annual general meeting on 7 June 2016, the Company is examining the rationalization measures that could be implemented for the other beneficiaries.

# 3.4.3 Compensation of executive directors

The Chairman and Chief Executive Officer is the Company's sole executive director.

#### 3.4.3.1 COMPENSATION PRINCIPLES

The policy and principles governing the compensation of the Chairman and Chief Executive Officer are globally defined by the Board of Directors on the recommendation of the Nominating, Compensation and Corporate Governance Committee which comprises only independent directors, in accordance with the AFEP-MEDEF Code recommendations, at each renewal of his term of office.

The compensation policy is also reviewed and discussed every year by the Company's Board of Directors, which conducts

an overall assessment of the Chairman and Chief Executive Officer's compensation package as well as a detailed review of its components, to ensure that the package is simple, easy to understand, balanced and consistent. The Board of Directors ensures in particular that the compensation policy is aligned with the Group's medium and long-term strategic priorities and is linked both to the Group's financial performance and to the Chairman and Chief Executive Officer's individual performance and responsibilities.

The compensation policy for the Chairman and Chief Executive Officer aims to provide incentives and secure loyalty, in accordance with market practice for equivalent positions in similar chemical companies and in French companies with similar market capitalizations. It is also consistent with the policy applicable to all executives of the Group.

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The Chairman and Chief Executive Officer does not take part in the discussions of the Nominating, Compensation and Corporate Governance Committee or those of the Board of Directors concerning his own compensation.

On the basis of the above, the structure of the Chairman and Chief Executive Officer's annual compensation comprises:

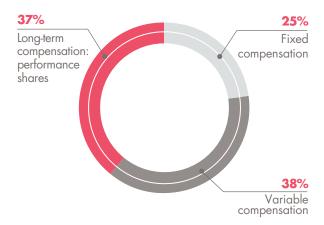
- (i) two short-term components:
- an annual fixed amount;
- an annual variable amount based on both quantitative and qualitative targets; and
- (ii) a long-term incentive through the award of performance share rights, which, at the date of this reference document, may not exceed 12% of the total rights allocated in any single financial year and fully subject to performance conditions.

The Chairman and Chief Executive Officer also has the use of a company car and is covered by director unemployment insurance.

In accordance with the recommendations of the AFEP-MEDEF Code, the Chairman and Chief Executive Officer is not bound to any Group company by an employment contract.

He does not receive any attendance fees from the Company and is not entitled to any compensation resulting from a non-compete agreement.

By way of illustration, and based on the value of the performance share rights awarded in November 2015, the structure of the Chairman and Chief Executive Officer's compensation for 2015 was as follows:



# SUMMARY OF COMPENSATION, STOCK OPTIONS AND SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER (TABLES 1 AND 2 IN THE AMF RECOMMENDATIONS)

_	<b>2015</b> (Gross amounts in euros)		<b>2014</b> (Gross amounts in euros)	
	Due for the year	Paid during the year	Due for the year	Paid during the year
Fixed compensation	750,000	750,000	750,000	750,000
Variable compensation*	1,125,000	688,500	688,500	800,250
Exceptional compensation	None	None	None	None
Attendance fees	None	None	None	None
TOTAL	1,875,000	1,438,500	1,438,500	1,550,250
Benefits in kind - Car	6,720	6,720	6,720	6,720
Director unemployment insurance	16,453	16,453	16,453	16,453
Value of stock options allocated during the year calculated according to the method used in the consolidated financial statements (detailed in note 28.1 to the consolidated financial statements at 31 December 2015 in section 4.3.3 of this reference document)		N/A		N/A
Value of performance share rights awarded during the year calculated according to the method used in the consolidated financial statements (detailed in note 28.2 to the consolidated financial statements at 31 December 2015 in section 4.3.3 of this reference document)		1,100,060		868,660

<sup>\*</sup> Variable compensation is paid in the year following the period for which it is calculated based on the criteria set out in section 3.4.3.2. of this reference document.

# 3.4.3.2 ANNUAL COMPENSATION OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

In accordance with the compensation policy described in section 3.4.3.1 above, the annual compensation of Thierry Le Hénaff, Chairman and Chief Executive Officer, consists of:

- 1. annual fixed compensation, which is reviewed each time the Chairman and Chief Executive Officer's term of office is renewed in accordance with the AFEP-MEDEF Code and is based in particular on a market analysis of comparable companies. This fixed compensation was last adjusted on 23 May 2012 to bring it closer to the compensation of executives of comparable industrial companies in terms of profile, size, market capitalization and profitability.
  - At its meeting of 2 March 2016, the Board of Directors decided that, subject to his re-election as a director at the annual general meeting to be held on 7 June 2016, the basis for calculating Thierry Le Hénaff's annual gross fixed compensation would remain unchanged at 750,000 euros for the period in 2016 up to the date of his re-election and re-appointment as Chairman and Chief Executive Officer, when it would be increased to 900,000 euros per year for the duration of his new term of office. This increase, which is only reviewed every four years when his appointment as Chairman and Chief Executive Officer comes up for renewal, is based on:
- a benchmarking study, carried out by Towers Watson, comparing the compensation packages offered by 17 French industrial companies that are comparable to Arkema in terms of their sales, complexity, number of employees and market capitalization, and four European chemical companies of a similar size to the Group. Such analysis showed that as of the date of this document, Thierry Le Hénaff's annual fixed compensation was 12% below the median of the panel and even below the last quartile; and
- the increase in the size of Arkema's business following the acquisition of Bostik which has annual sales of some 1.6 billion euros and around 4,900 employees. With this acquisition, which has had a profound, favorable impact on the Group's profile, Group sales have expanded by over 25% and the High Performance Materials business has nearly doubled in size. At the same time, the Group's geographic footprint has become more balanced, with a decrease in Europe, which now represents less than 40% of Group sales, in favor of the United States and emerging markets. The Group's very good 2015 results reflect the change in its positioning.

Taking into account the increase, Thierry Le Hénaff's annual fixed compensation will be slightly above the median of the panel defined above.

2. annual variable compensation, which is determined on the basis of performance in relation to specific, detailed, precise and demanding quantitative and qualitative targets aligned with the Group's strategy and priorities; these targets are reviewed and may be adjusted annually by the Board of Directors on the recommendation of the Nominating, Compensation and Corporate Governance Committee.

For 2015, at its meeting of 4 March 2014, the Board of Directors decided that the annual variable compensation determined on the basis of the quantitative and qualitative

criteria adopted by the Board of Directors on the recommendation of the Nominating, Compensation and Corporate Governance Committee, could represent up to 150% of the annual fixed compensation, as in previous years.

The criteria adopted were as follows:

- three quantitative criteria representing a maximum of 110% of annual fixed compensation (and 73.5% of the criteria used to determine the variable compensation):
  - EBITDA, for a maximum of 55% of annual fixed compensation; this target aligns the compensation of the Chairman and Chief Executive Officer with the annual financial performance of the Group and rewards the achievements of the Group, its ability to adapt to changing market conditions and the good day-to-day management of the Group by the Chairman and Chief Executive Officer,
  - recurring cash flow, for a maximum of 27.5% of annual fixed compensation. This target rewards the Group's ability to generate the cash necessary to finance its strategic ambitions and in particular its capital expenditure plans, acquisition program and dividend policy while maintaining a solid balance sheet, and
  - contribution of new developments, for a maximum of 27.5% of annual fixed compensation; this target promotes innovation, the development of new customers, the launch of new applications and major investment projects in line with the Group's targeted growth strategy; and
- around fifteen qualitative criteria precisely defined every year, representing a maximum of 40% of annual fixed compensation (and 26.5% of the criteria used to determine the variable compensation), which are mainly linked to (i) the implementation of the Group's long-term strategy by the Chairman and Chief Executive Officer, and in particular changes in the Group's profile to strengthen a balanced geographical presence, the management of acquisitions, the development of innovation platforms and the secure access to strategic raw materials, (ii) the day-to-day management of the Company with quantified operational criteria (safety, fixed costs, working capital, capital expenditure and balance sheet structure) and (iii) the implementation of major industrial projects for the Group.

It should be noted that although the targets to be met have been described in detail and quantified, the amounts involved are not disclosed for confidentiality purposes, in particular with regard to competitors.

Given the criteria adopted above and actual performance for the year ended 31 December 2015, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors at its meeting of 2 March 2016 set the amount of the variable compensation for 2015 as follows:

 concerning the three quantitative criteria, linked to the financial performance of the Group (EBITDA, recurring cash flow and margin on variable costs of new developments) the achievement rates were as follows in 2015: Compensation and benefits awarded to executives and directors

- 100% for the first criterion (level of EBITDA) taking into account the very good performance of the Group, with EBITDA up 35% in 2015 compared to 2014 in a soft and volatile global economic environment. The Board also noted that, excluding the effect of changes in the scope of business, EBITDA was 13% higher than in 2014;
- 100% for recurring cash flow. In 2015, recurring cash flow reached an excellent level at 478 million euros with a very high EBITDA to cash conversion ratio of over 40%. This very strong growth reflected good control over capital expenditure, with a lower ratio of capital expenditure to sales, and over working capital supported by the positive effect of lower raw materials costs in 2015. In addition, the Board observed that, just eleven months after the Bostik acquisition, the Group's gearing was back below 40%;
- 100% for the contribution of new developments. The Board took into account, in particular, the very successful start-up of the Kerteh thiochemicals platform using an innovative technological process, the success of the technical polymers used in new sports applications, promising developments in the areas of consumer electronics and new energies, the discovery of new applications in oil additives, developments for Coatex and coating resins in several specialty segments, new low odor grades developed by Bostik, the growth in sales of hydrogen peroxide specialties and advances in 3D printing and thermoplastic compounds.

After applying the calculation formula defined by the Nominating, Compensation and Corporate Governance Committee, the variable compensation due in respect of quantitative criteria amounted to 110% of the annual fixed compensation; and

• concerning the qualitative criteria relating for the most part to the implementation of the Group's strategy and operating priorities, the performance was deemed excellent at the end of a particularly busy year, in light of the successful implementation of several projects of significant importance to the Group. In particular, the Board of Directors noted the completion or progress of several industrial projects that were complex, significant and fundamental in establishing the Group's long term positioning. They include the successful technical start-up and rapid ramp-up of the thiochemicals platform in Malaysia, the smooth integration of Bostik and the implementation of the first synergies between the two groups, renegotiation of the contractual conditions governing the Sunke acrylics joint venture set up with Jurong Chemical in China, in challenging market conditions for these products in Asia, gradual deployment of the recovery plan for the fluorogases business, progress in implementing the divestment program with the divestment of Sunclear which represented annual sales of around 180 million euros, ongoing deployment of the SAP global management system for the Group's supply chain, the successful outcome of the Klesch arbitration, efficient management of fixed costs and working capital (with a pro forma ratio of working capital to sales of 14.6% in 2015 versus 16.1% in 2014), and lower capital intensity (with capital expenditure representing 5.6% of sales in 2015 compared

to 7.9% in 2014). Lastly, improvements in the safety records exceeded the original targets to reach levels among the best in the industry (TRIR of 1.5 accidents per million hours worked in 2015 compared to 1.9 accidents in 2014). Consequently, the variable compensation due in respect of qualitative criteria was set at 40% of the annual fixed compensation.

In total, the variable compensation for 2015 approved by the Board of Directors amounts to 1,125,000 euros, around 63% more than the variable compensation for 2014 which reflected a challenging year overall. Such an increase reflects the very strong earnings growth and the successful implementation of a number of projects. It represents 150% of 2015 annual fixed compensation and an overall achievement rate of 100% (100% in respect of quantitative criteria and 100% in respect of qualitative criteria), after a very significant decline in variable compensation in 2013 and 2014.

On the recommendation of the Nominating, Compensation and Corporate Governance Committee, at its meeting of 2 March 2016, the Board of Directors also decided that the Chairman and Chief Executive Officer's variable compensation for 2016 could reach, as for 2015, a maximum of 150% of his annual fixed compensation, and will continue to be based on quantitative criteria of the same type as in previous years and linked to the Group's financial performance: EBITDA, recurring cash flow and contribution of new developments, with the weighting of each criterion to remain unchanged. In addition to the quantitative criteria, qualitative criteria will continue to be based on the Group's priority areas: implementation of the Group's long-term strategy by the Chairman and Chief Executive Officer, day-to-day management of the Company with quantified operational criteria (safety, fixed costs, working capital, capital expenditure and balance sheet structure) and implementation of major industrial projects that are important to the Group. The Board will focus in particular on the Group's success in maintaining its current very good safety record, progress made in the area of sustainable development, the further implementation of integration synergies with Bostik, the divestment program and the main development projects currently in progress or planned, as well as on operational excellence and talent management. The weighting of the different criteria used to determine variable compensation remains unchanged.

# 3.4.3.3 STOCK OPTION GRANTS AND PERFORMANCE SHARE AWARDS

Proposed performance share awards to the Chairman and Chief Executive Officer are examined in detail each year by the Nominating, Compensation and Corporate Governance Committee and are discussed by the Board of Directors <sup>(1)</sup>.

Like a number of Group employees, the Chairman and Chief Executive Officer receives stock options and/or performance shares under the plans put in place by the Board of Directors as described in section 3.5 and in note 28 to the consolidated financial statements at 31 December 2015 in section 4.3.3 of this reference document.

(1) Stock options have also been granted in the past.

Pursuant to the law, the AFEP-MEDEF Code and market recommendations, the Board of Directors has adopted the following principles regarding the award of performance share rights to the Chairman and Chief Executive Officer:

- all performance share rights awarded to the Chairman and Chief Executive Officer are subject to performance conditions evaluated over a period of at least 3 years; and
- since 2013, the rights awarded to the Chairman and Chief Executive Officer in respect of performance share plans may not exceed 12% of all rights awarded in any one year; effective from 2016, this percentage will be reduced to 10%.

Furthermore, since 2010, the Chairman and Chief Executive Officer has been required to retain at least 30% of his vested shares for as long as he remains in office as well as a number of shares obtained upon exercise of stock options corresponding to at least 40% of the net capital gain on acquisition. These obligations are suspended once the total value of the Arkema shares held, whatever their origin, is equivalent to 200% of his annual gross fixed compensation. However, when the total value of the shares held by the Chairman and Chief Executive Officer, whatever their origin, represents the equivalent of two years' gross annual fixed compensation, the holding obligation applies to:

- at least 10% of the shares that vest after this threshold is reached; and
- a number of shares obtained upon the exercise of stock options corresponding to at least 10% of the net capital gain on acquisition.

Given these stringent holding obligations, and notwithstanding the provisions of section 23.2.4 of the AFEP-MEDEF Code, the Board of Directors, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, did not consider it necessary to require the Chairman and Chief Executive Officer to purchase additional shares before the lock-up on vested performance shares is lifted. In this regard, it should be noted that the Chairman and Chief Executive Officer held 124,675 Arkema shares at 31 December 2015, which represent a significant part of his financial assets. His stake in the Company's share capital has increased regularly and significantly, over and above the award of performance shares, especially through the exercise of stock options.

As a result, on 2 March 2016, in accordance with the AFEP-MEDEF Code, the Board of Directors on a recommendation of the Nominating, Compensation and Corporate Governance Committee, confirmed the abovementioned holding requirements.

During the 2015 financial year, within the general framework of the Group's stock-based compensation policy, the principles of which are set out in section 3.5 of this reference document, at its meeting of 9 November 2015, the Board of Directors, on the recommendation of the Nominating, Compensation and Corporate Governance Committee, decided to award 26,000 performance shares to Thierry Le Hénaff (out of a total of 345,120 shares awarded to around 1,100 grantees in 2015, representing 7.5% of the total out of a maximum 12%); the shares will vest if three demanding performance targets (EBITDA growth, EBITDA to cash conversion rate (net cash flow/EBITDA), and comparative Total Shareholder Return (TSR)) are fullfilled at the end of a four-year period and he is still with the Group at the end of this period. These criteria are detailed in section 3.5.1 of this reference document.

# PERFORMANCE SHARES GRANTED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER IN 2015 (TABLE 6 IN THE AMF RECOMMENDATIONS)

	No. and date* of plan	Number of shares granted in 2015	Vesting date/End of lock-up period	Value of shares by method used in the consolidated financial statements
Thierry Le Hénaff	2015 Plan (4+0)			
	Date: 9 November 2015	26,000**	10 November 2019	€1,100,060

<sup>\*</sup> Date of Board of Directors meeting.

The conditions applicable to the 2015 performance share plan are set out in section 3.5.1 of this reference document.

In accordance with the recommendations of the AFEP-MEDEF Code revised in June 2013 and his own past practice, Thierry Le Hénaff formally undertook not to use any financial instruments to hedge the risk of losses on the stock options or performance shares that have been, or will be, awarded to him by the Company at any time during his tenure as Chairman and Chief Executive Officer.

In 2015, following the acknowledgment by the Board of Directors of the fulfillment in 2014 of all the performance conditions

applicable to the 2012 performance share plans, 13,000 performance shares awarded to Thierry Le Hénaff under AP Plan no. 2 of 2012 vested. These shares are subject to a two-year lock-up period.

Further details on these plans may be found in the history of the performance share plans set out in section 3.5 of this reference document.

During 2015, the lock-up period expired for 8,200 shares received under AP Plan no. 1 of 2011. Restrictions on the sale of these shares were therefore lifted, subject to Thierry Le Hénaff's compliance with the specific holding requirements set out above.

<sup>\*\*</sup> Representing 0.03% of share capital.

# PERFORMANCE SHARES AWARDED TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER FOR WHICH THE LOCK-UP PERIOD EXPIRED IN 2015 (TABLE 7 IN THE AMF RECOMMENDATIONS)

	No. and date* of plan	Number of shares for which the lock-up period ended in 2015	Requirement to purchase additional shares
Thierry Le Hénaff	AP Plan no. 1 2011 Date: 4 May 2011	8,200	None (see section 3.5.1 of this reference document)

Date of Board of Directors meeting.

In accordance with the AFEP-MEDEF Code and AMF recommendations, the number of stock options exercised in 2015 by Thierry Le Hénaff is set out in the following table:

# STOCK OPTIONS EXERCISED DURING 2015 BY THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER (TABLE 5 IN THE AMF RECOMMENDATIONS)

	No. and date* of plan	Number of options exercised	Exercise price
Thierry Le Hénaff	2010 Plan Date: 10 May 2010	34,000	€29.33
	2007 Plan Date: 14 May 2007	10,389	€42.96

<sup>\*</sup> Date of Board of Directors' meeting.

In accordance with the AFEP-MEDEF Code and AMF recommendations, the history of stock option and performance share awards is set out in the tables presented in section 3.5 of this reference document.

# 3.4.3.4 POST-TERMINATION BENEFITS OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

Since the Company's spin-off and stock market listing, Thierry Le Hénaff has not been bound to the Company by an employment contract. The compensation of Thierry Le Hénaff is therefore entirely linked to his position as an executive director of the Company. In this regard, he has been and continues to be, as of the date of this reference document, covered by the retirement and termination benefit plans described below, as authorized by the Board of Directors and approved by the Company's annual general meetings of 5 June 2007 and 23 May 2012.

As part of the renewal of the term of office as a director of Thierry Le Hénaff proposed to the annual general meeting on 7 June 2016, and as from his re-appointment as Chairman and Chief Executive Officer, the Board of Directors decided to modify these benefits undertakings as described below.

The Chairman and Chief Executive Officer does not benefit from any non-compete indemnity.

#### Supplementary pension benefits

At the date of this reference document, Thierry Le Hénaff benefits from a supplementary defined benefit pension scheme governed by Article L.137-11 of the French Social Security code, offered to certain executives of the Group who benefited from an equivalent

scheme before the spin-off provided that they complete their career in the Group.

The benefit of this supplementary pension scheme was authorized by the Board of Directors in 2006 as part of the compensation package as Chairman and Chief Executive Officer, and was approved by the shareholders at the annual general meeting of 5 June 2007, in accordance with the standard procedure relating to related-party agreements and commitments.

The annual amount of this supplementary pension scheme, calculated on the retirement date, is determined by multiplying the calculation base by:

- 1.8% for the reference compensation falling within a range of 8 to 40 times the annual social security ceiling, and
- 1% for the reference compensation falling within a range of 40 to 60 times the annual social security ceiling,

multiplied in each case by the number of years of service, limited to 20 years, and adding these two amounts together.

Benefits paid under this scheme would therefore represent a maximum of 36% of the compensation falling within a range of 8 to 40 times the annual social security ceiling, and 20% of the reference compensation falling within a range of 40 to 60 times the annual social security ceiling, the reference compensation being equal to the average of the last three years of fixed and variable compensation for his professional activity.

At 31 December 2015, benefits payable under this scheme would represent 28.3% of the reference compensation.

At the date of this reference document, Thierry Le Hénaff had completed the maximum number of years of service taken into account under the scheme and consequently acquired all rights he is entitled to under this scheme.

The Chairman and Chief Executive Officer also benefits from a defined contribution pension scheme put in place to a large extent to help reduce the employment liabilities resulting from the supplementary defined benefit pension scheme mentioned above. Contributions are set at 20% of annual compensation exceeding eight times the annual social security ceiling and capped at the maximum amount deductible for tax purposes. The benefits received under this defined contribution scheme are deducted from the supplementary pension benefits receivable under the scheme described above.

The contributions paid in respect of the Chairman and Chief Executive Officer's defined contribution pension scheme amounted to 24,345 euros in 2015.

The aggregate annual benefits receivable under the supplementary defined benefit pension scheme, the defined contribution pension scheme and the mandatory scheme may in no event represent more than 45% of the reference compensation. Should this be the case, the benefit receivable under the supplementary defined benefit pension scheme is reduced accordingly.

The provisions made for these amounts in Arkema's accounts are shown in note 5 to the Company financial statements in section 4.4.3 of this reference document.

No pension payments under these schemes are currently outstanding.

In accordance with the provisions of decree no. 2016-182 of 23 February 2016, at 31 December 2015 the estimated gross amount of any benefits payable under the supplementary defined benefit pension scheme calculated using an average of the compensation received in 2013, 2014 and 2015 and based on the Chairman and Chief Executive Officer's years of service, amounts to 459,000 euros per year. As the scheme is governed by Article L.137-11 of the French Social Security Code, the employer is responsible for paying contributions based either on the benefits payable or the financing of the scheme (contributions paid to an insurer or additions to provisions in the event of internal financing). Arkema has chosen to make contributions based on benefits payable, at a current rate of 32%.

On the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors decided at its meeting on 2 March 2016 that the supplementary defined benefit pension scheme from which Thierry Le Hénaff had benefited since his appointment in 2006 and described above (governed by article L.137-11 of the French Social Security Code), would be terminated with effect from the date of the reelection of Thierry Le Hénaff as a director at the annual general meeting of 7 June 2016.

In exchange for withdrawing this benefit, the Board of Directors decided to award Thierry Le Hénaff:

- an additional annual compensation corresponding to 20% of his total fixed and variable compensation for the year concerned, to enable him to build up his supplementary retirement benefits; and
- a one-off lump sum paid as compensation for the loss of pension rights accumulated in the terminated scheme. This compensation consists of the payment of 1,500,000 euros in cash and of the award of 50,000 free shares that will vest in 2017, 2018 and 2019 in three tranches of 16,667, 16,667

and 16,666 shares respectively, the definitive award being contingent to a condition of presence in the Group, and that will be subject in each case to a two-year holding period. The free shares to be awarded will be the subject of a specific plan to be submitted to shareholders for approval at the annual general meeting on 7 June 2016. As this one-off grant of free shares is intended to compensate for the loss of rights accumulated in the past, the Board of Directors has decided that the shares should not be subject to any performance conditions.

The one-off compensation has been determined based on an amount corresponding to the cumulative annual additional compensation that would have been paid to the beneficiary since the Company's spin-off in May 2006 if the new pension scheme had been in place since he was appointed as Chairman and Chief Executive Officer. By deciding to pay part of this one-off compensation in Arkema shares and spreading the vesting period over three years, the Board of Directors has included a retention component in the scheme.

Thierry Le Hénaff has committed to invest the cash component of the one-off and the additional annual compensation, net of any contributions and tax, in investment vehicles dedicated to the financing of his supplementary retirement benefits.

According to the calculations performed by an independent actuary, the new scheme will imply, from the beneficiary's standpoint, giving up around 70% of the net value of the benefits he would have been entitled to under the current system. For the Company, the overall cost of the new system will be divided by two compared to the existing pension scheme. The new system will lead to the reversal in 2016 of a provision amounting to around 20 million euros carried in the Company's accounts.

#### **Termination indemnity**

As Chairman and Chief Executive Officer, Thierry Le Hénaff would be entitled to compensation for termination of office in the event of forced departure (termination or non-renewal of term of office) or linked to a change of control of the Company or a change of strategy decided by the Board of Directors, except in the event of serious or gross misconduct.

It should be noted that the recommendation of the AFEP-MEDEF Code linking forced departure to a change of control or strategy had not been taken into account previously in order to compensate for the loss of benefits, in particular in terms of seniority, related to the 17 years he was employed as an executive of the Total group, which Arkema belonged to prior to its spin-off and stock market listing, and at the time of his appointment as Chairman and Chief Executive Officer of the Company.

The compensation for termination of office would be due only in the event of forced departure as Chairman and Chief Executive Officer, and the amount would not exceed twice his total annual gross fixed and variable compensation. The basis for calculating the termination indemnity will be the fixed annual compensation for the year in which the forced departure occurs and the average of the last two years of variable compensation paid prior to the departure.

This termination indemnity was approved by the shareholders, in accordance with article L. 225-42-1 of the French Commercial Code, at the annual general meeting of 23 May 2012, following prior authorization by the Board of Directors.

Compensation and benefits awarded to executives and directors

The amount of this indemnity will be calculated on the basis of the fulfillment of the following five stringent performance conditions:

- TRIR: the total recordable injury rate (TRIR) shall have decreased by at least 5% per year (average compound rate) between 31 December 2005 and the date at which the performance condition was assessed;
- comparative EBITDA margin: this financial performance indicator would be compared to that of competitors in the chemicals industry comparable to the Arkema Group. The growth in the Group's EBITDA margin would have to be at least equal to the average growth in the EBITDA margin of the companies in the peer group between 31 December 2005 and the date at which the performance condition was assessed;
- working capital: the year-end working capital over annual sales ratio shall have decreased by at least 2.5% per year (average compound rate) between 31 December 2005 and the date at which the performance condition was assessed;
- EBITDA margin: the EBITDA over sales margin shall have grown by at least 3% per year (average compound rate) between 31 December 2005 and the date at which the performance condition was assessed;
- return on capital employed: the average of net operating income over capital employed ((recurring operating income actual income tax<sup>(1)</sup>)/(capital employed provisions)) for the last three years prior to the termination date, shall exceed the cost of capital (8.5%). Capital employed and provisions are those at year-end, and recurring operating income of companies acquired during the year would be included on a full year basis and that of divested companies would be excluded.

Thierry Le Hénaff was appointed Chairman and Chief Executive Officer at the beginning of 2006, therefore the reference index applicable when computing these five performance conditions is based on Group data at 31 December 2005. This date corresponds to the last financial period preceding the Company's stock market listing and the implementation of a separate, independent strategy.

The value of the end-of-period index to be taken into account in the computation of the criteria below would be the average of the indices calculated at Group level over the two years for which financial statements have been published prior to the termination date.

If 4 or 5 conditions were met, Thierry Le Hénaff would receive 100% of the compensation for termination of office.

If 3 out of 5 conditions were met, Thierry Le Hénaff would receive 75% of the compensation for termination of office.

If 2 out of 5 conditions were met, Thierry Le Hénaff would receive 50% of the compensation for termination of office.

If fewer than 2 conditions were met, Thierry Le Hénaff would receive no compensation for termination of office.

On the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors decided on 2 March 2016, to renew the commitment to pay compensation for termination of office to Thierry Le Hénaff as Chairman and Chief Executive Officer, in the event of forced departure, subject to his re-election as a director at the annual general meeting on 7 June 2016.

In compliance with the recommendation of the AFEP-MEDEF Code, the Board decided to link the payment of this termination indemnity to a forced departure linked to a change of control or strategy. As a result, the Chairman and Chief Executive Officer would be entitled to compensation for termination of office only in the event of forced departure, regardless of the form of this departure, including dismissal before the end of the term of office or the non-renewal of such term of office on expiry, linked to a change in control or strategy. No compensation for termination of office will be paid in the event of serious or gross misconduct.

As was the case previously, the termination indemnity will amount to a maximum of twice his total annual gross fixed and variable compensation, it being specified that the calculation base of this total annual compensation would correspond to the fixed annual compensation for the year in which the forced departure occurs and the average of the last two years of variable compensation paid prior to the departure.

The amount of this termination indemnity would be calculated by reference to the achievement of five demanding performance conditions, which have been partly modified as follows in order to further increase the level of requirements compared to the previous term of office:

- TRIR: the total recordable injury rate (TRIR) would have to have decreased by at least 5% per year (average compound rate) between 31 December 2010 and the date at which the performance condition was assessed. For this condition, the Board decided to change the reference year from 2005 to 2010, when the Group started implementing its global safety improvement program. Given that significant progress was made in this area between 2005 and 2010, with TRIR nearly halved over the period, the change in reference year makes this performance condition significantly more demanding;
- annual variable compensation: on average, the annual variable compensation paid during the three years preceding departure would have to be at least 50% of the maximum amount payable. This demanding new condition is also consistent with the Board's objective of avoiding any form of "pay for failure";
- return on capital employed: the average of net operating income over capital employed ((recurring operating income actual income tax<sup>(1)</sup>/(capital employed provisions)) for the last three years prior to the termination date would have to exceed the Group's cost of capital for the year preceding his re-election, i.e.: 7% in 2015. The cost of capital has been adjusted to take into account current interest rate levels. Capital employed and provisions are those at year-end, and recurring
- (1) On recurring income (in particular excluding impact of M&A, restructuring operations).

operating income of companies acquired during the year would be included on a full year basis and that of divested companies would be excluded;

- working capital: the year-end working capital over annual sales ratio would have to have decreased by at least 2.5% per year (average compound rate) between 31 December 2005 and the date at which the performance condition was assessed;
- comparative EBITDA margin: this financial performance indicator will continue to be measured against that of competitors in the chemicals industry comparable to the Arkema Group. The growth in the Group's EBITDA margin would have to be at least equal to the average growth in the EBITDA margin of the companies in the peer group between 31 December 2005 and the date at which the performance condition was assessed.

For the last two conditions only, the Board of Directors decided to leave the reference year as 2005, which was the last financial year prior to the Company's stock market listing and the implementation by the current Chairman and Chief Executive Officer of his own, independent strategy. Indeed the Board wants the termination indemnity to be also determined by reference to the Group's long-term performance under Thierry Le Hénaff's leadership. The use of 2005 as the reference year will enable the Board to better assess the magnitude of the Group's transformation initiated ten years ago and set to continue at least until 2020. The process to reshape Arkema as an innovative chemicals and specialty materials manufacturer is a key factor in understanding the Group and assessing its value.

The value of the end-of-period index to be taken into account in the computation of the above criteria would be the average of the indices calculated at Group level over the three years for which financial statements have been published prior to the termination date.

The Board of Directors also decided to make the allocation scale more demanding, as follows:

- if 5 conditions were met, Thierry Le Hénaff would receive 100% of the maximum of the termination indemnity;
- if 4 out of 5 conditions were met, Thierry Le Hénaff would receive 90% of the maximum of the termination indemnity;
- if 3 out of 5 conditions were met, Thierry Le Hénaff would receive 70% of the maximum of the termination indemnity;
- if 2 out of 5 conditions were met, Thierry Le Hénaff would receive 40% of the maximum of the termination indemnity;
- if fewer than two conditions were met, no termination indemnity would be paid.

In addition, to take into account the change in Thierry Le Hénaff's supplementary pension scheme as from his re-election to the Board, in accordance with the AFEP-MEDEF Code's recommendations concerning the accumulation of the termination indemnity and supplementary pension benefits, the Board of Directors has decided to gradually reduce the termination indemnity that would be payable to Thierry Le Hénaff beyond the age of 60, as follows:

- 18 months' total annual gross compensation (fixed and variable) beyond the age of 60; and
- 12 months' total annual gross compensation (fixed and variable) beyond the age of 62-and-a-half.

No compensation would be paid in the event of departure beyond the age of 65.

In accordance with Article L.225-42-1 of the French Commercial Code, the commitment to pay compensation for termination of office will be submitted to shareholders for approval at the annual general meeting to be held on 7 June 2016. For further information on this resolution, see section 6.2.2 of this reference document.

# SUMMARY OF EMPLOYMENT CONTRACT, PENSION BENEFITS AND OTHER BENEFITS IN 2015 (TABLE 11 IN THE AMF RECOMMENDATIONS)

		oyment contract	Supplementary defined benefit pension scheme		Compensation or benefits due or potentially due upon termination or change of position		Indemnities resulting from non-compete agreement	
	Yes	No	Yes	No	Yes	No	Yes	No
Thierry Le Hénaff		Χ	Х		Χ			Χ

# 3.4.4 Components of compensation due or allocated to the Chairman and Chief Executive Officer for 2015 submitted to the advisory vote of the shareholders

In accordance with the recommendations of section 24.3 of the AFEP-MEDEF Code, at the annual general meeting of 7 June 2016 (7<sup>th</sup> resolution) the components of compensation due or awarded to Thierry Le Hénaff, Chairman and Chief Executive Officer of the Company, for the year ended 31 December 2015 are submitted to the advisory vote by shareholders. These components are as follows:

# COMPONENTS OF COMPENSATION DUE OR AWARDED TO THIERRY LE HÉNAFF FOR 2015 SUBMITTED TO THE ADVISORY VOTE OF THE SHAREHOLDERS

Components of compensation due or awarded for 2015	Amounts or accounting valuation submitted to vote	Presentation
Fixed compensation	€750,000	Thierry Le Hénaff's annual fixed compensation was adjusted on 23 May 2012 when he was re-appointed as Chairman and Chief Executive Officer to bring it closer to that of the chief executive officers of comparable industrial companies.  At its meeting on 4 March 2015, the Board of Directors decided to maintain the fixed compensation due for 2015 at 750,000 euros, which, taking into account the increase in the compensation of his peers since 2012, places Thierry Le Hénaff's annual fixed compensation 12% below the median of the panel.
Annual variable compensation	€1,125,000	Variable compensation due for 2015, which could, as in previous years, represent up to 150% of the annual fixed compensation, was set by the Board of Directors at its meeting of 2 March 2016, taking into account the quantitative and qualitative criteria approved by the Board in 2015 and the achievements noted as of 31 December 2015, as follows:  • concerning the three quantitative criteria, linked to the financial performance of the Group (EBITDA, recurring cash flow and margin on variable costs of new developments), the achievement rates were as follows in 2015:

- 100% for the first criterion (level of EBITDA) taking into account the very good performance of the Group, with EBITDA up 35% compared to 2014 in a soft and volatile global economic environment. The Board also noted that, excluding the effect of changes in the scope of business, EBITDA was 13% higher than in 2014;
- 100% for recurring cash flow. In 2015, recurring cash flow reached an excellent level at 478 million euros with a very high EBITDA to cash conversion ratio of over 40%. This very strong growth reflected good control over capital expenditure, with a lower ratio of capital expenditure to sales and over working capital supported by the positive effect of lower raw materials costs in 2015. In addition, the Board observed that, just eleven months after the Bostik acquisition, the Group's gearing ratio was back below 40%:
- 100% for the contribution of new developments. The Board took into account, in particular, the very successful start-up of the Kerteh thiochemicals platform using an innovative technological process, the success of the technical polymers used in new sports applications, promising developments in the areas of consumer electronics and new energies, the discovery of new applications in oil additives, developments for Coatex and coating resins in several specialty segments, new low odor grades developed by Bostik, the growth in sales of hydrogen peroxide specialties and advances in 3D printing and thermoplastic compounds.

After applying the calculation formula defined by the Nominating, Compensation and Corporate Governance Committee, the variable compensation due in respect of quantitative criteria amounted to 110% of the annual fixed compensation; and

• concerning the qualitative criteria relating for the most part to the implementation of the Group's strategy and operating priorities, the performance was deemed excellent at the end of a particularly busy year, in light of the successful implementation of several projects of significant importance to the Group. In particular, the Board of Directors noted the completion or progress of several industrial projects that were complex, significant and fundamental in establishing the Group's long term positioning. They include the successful technical start-up and rapid ramp-up of the thiochemicals platform in Malaysia, the smooth integration of Bostik and the implementation of the first synergies between the two groups, renegotiation of the contractual conditions governing the Sunke acrylics joint venture set up with Jurong Chemical in China, in challenging market conditions for these products in Asia, gradual deployment of the recovery plan for the fluorogases business, progress in implementing the divestment program with the divestment of Sunclear which represented annual sales of around 180 million euros, ongoing deployment of the SAP global management system for the Group's supply chain, the successful outcome of the Klesch arbitration, efficient management of fixed costs and working capital (with a pro forma ratio of working capital to sales of 14.6% in 2015 versus 16.1% in 2014), and lower capital intensity (with capital expenditure representing 5.6% of sales in 2015 compared to 7.9% in 2014). Lastly, improvements in the safety records exceeded the original targets to reach levels among the best in the industry (TRIR of 1.5 accidents per million hours worked in 2015 compared to 1.9 accidents in 2014).

Components of compensation due or awarded for 2015	Amounts or accounting valuation submitted to vote	Presentation
		Consequently, the variable compensation due in respect of qualitative criteria was set at 40% of the annual fixed compensation.  In total, the variable compensation for 2015 approved by the Board of Directors amounts to 1,125,000 euros, around 63% more than in 2014 when the variable compensation reflected the impact on Group performance of a generally challenging year. Such an increase reflects the very strong earnings growth and the successful implementation of a number of projects. It represents 150% of 2015 annual fixed compensation and an overall achievement rate of 100% (100% in respect of quantitative criteria and 100% in respect of qualitative criteria), after a very significant decline in variable compensation in 2013 and 2014.  Further details on the criteria may be found in section 3.4.3.2 of this reference document.
Deferred variable compensation	N/A	Thierry Le Hénaff receives no long-term variable compensation.
Exceptional compensation	N/A	Thierry Le Hénaff was not awarded any exceptional compensation.
Attendance fees	N/A	Thierry Le Hénaff receives no attendance fees from Arkema.
Stock options	N/A	The Board of Directors decided at the beginning of 2013 not to grant any further stock options.
Performance shares	€1,110,060	Making use of the authorization granted by the annual general meeting of 4 June 2013 (12th resolution), on the recommendation of the Nominating, Compensation and Corporate Governance Committee, at its meeting of 9 November 2015, the Board of Directors awarded 26,000 performance shares (representing 0.03% of share capital) to Thierry Le Hénaff (out of a total of 345,120 shares granted to around 1,100 grantees, representing 7.5% out of a maximum of 12%).  The shares will vest at the end of a four-year period if three performance targets are met (EBITDA growth, EBITDA to cash conversion rate (net cash flow/EBITDA) and comparative Total Shareholder Return (TSR)) subject to Thierry Le Hénaff still being with the Group at the end of this period. These three criteria apply to 35%, 30% and 35% of rights awarded, respectively.  Further details on the criteria may be found in section 3.5.1 of this reference document.
Benefits in kind	€6,720	Thierry Le Hénaff has a company car.

# COMPONENTS OF COMPENSATION DUE OR AWARDED FOR 2015 ALREADY SUBMITTED TO THE GENERAL SHAREHOLDERS MEETING FOR APPROVAL AS PART OF THE PROCEDURES FOR RELATED-PARTY AGREEMENTS AND COMMITMENTS

Termination benefit	No payment	Thierry Le Hénaff could be entitled to compensation for termination of office of an amount not exceeding two years' gross fixed and variable compensation, calculated based on the achievement of five quantitative targets set by the Board of Directors and approved by the general shareholders meeting (total recordable injury rate (TRIR), comparative EBITDA margin, working capital, EBITDA margin, and return on capital employed). In accordance with the related-party agreements and commitments procedure, this commitment was authorized by the Board of Directors' meeting of 7 March 2012 and approved by the annual general meeting of 23 May 2012 (6th resolution).  Further details on the conditions governing the award of this compensation may be found in section 3.4.3.4 of this reference document.
Non-compete compensation	N/A	Thierry Le Hénaff would not be entitled to any non-compete compensation.
Supplementary pension benefits	No payment	Thierry Le Hénaff benefits from a supplementary defined benefit pension scheme offered to certain executives of the Group whose annual compensation exceeds eight times the annual social security ceiling, provided that they complete their career in the Group. The future benefits from this supplementary pension scheme will be paid after deducting benefits received under the defined contribution scheme applicable to certain executives of the Group. The Company's pension commitments for the Chairman and Chief Executive Officer corresponded, on 31 December 2015, to an annual pension, the calculation of which is based in particular on the average compensation paid over the last three years, equal to 28.3% of his current annual compensation. In accordance with the related-party agreements and commitments procedure, this commitment was authorized by the Board of Directors' meeting of 4 July 2006, and approved by the annual general meeting of 5 June 2007 (4th resolution).  Further details on this pension commitment may be found in section 3.4.3.4 of this reference document.

# 3.4.5 Stock transactions by the Company's executives and directors

Pursuant to article 223–26 of the AMF general regulation, the following table details the transactions declared by the individuals concerned by article L. 621-18-2 of the French Monetary and Financial Code in 2015:

	Financial instrument	Nature of transaction	Date of transaction	Place of transaction	Unit price	Amount of transaction
Luc Benoît-Cattin	Shares	Scrip dividends	8 July 2015	Paris	€61.64	€14,670.32
Bernard Boyer	FCPE units	Sale	11 March 2015	Paris	€70.89	€22,443.81
	Shares	Exercised stock options	16 March 2015	Paris	€34.85	€69,700.00
	Shares	Sale	16 March 2015	Paris	€70.70	€141,400.00
	Shares	Scrip dividends	8 July 2015	Paris	€61.64	€24,840.92
	Shares	Exercised stock options	3 August 2015	Paris	€29.33	€19,064.50
	Shares	Sale	3 August 2015	Paris	€71.13	€46,239.51
	Shares	Exercised stock options	3 August 2015	Paris	€34.85	€53,425.05
	Shares	Sale	3 August 2015	Paris	€71.52	€109,644.91
	Shares	Exercised stock options	27 November 2015	Paris	€29.33	€29,330.00
	FCPE units	Sale	25 November 2015	Paris	€65.74	€10,483.14
Michel Delaborde	Shares	Exercised stock options	23 March 2015	Paris	€34.85	€121,975.00
	Shares	Sale	23 March 2015	Paris	€69.40	€242,900.00
	Shares	Scrip dividends	8 July 2015	Paris	€61.64	€29,587.20
	Shares	Exercised stock options	17 August 2015	Paris	€34.85	€121,975.00
	Shares	Sale	17 August 2015	Paris	€70.50	€246,778.70
	FCPE units	Sale	18 August 2015	Paris	€70.48	€32,739.04
	Shares	Exercised stock options	20 August 2015	Paris	€29.33	€29,330.00
François Enaud	Shares	Purchase	13 April 2015	Paris	€75.73	€5,452.99
	Shares	Purchase	16 April 2015	Paris	€74.95	€13,341.05
Thierry Le Hénaff	Shares	Exercised stock options	9 March 2015	Paris	€42.96	€343,680.00
	Shares	Sale	9 March 2015	Paris	€68.42	€547,360.00
	Shares	Exercised stock options	19 March 2015	Paris	€42.96	€102,631.44
	Shares	Sale	19 March 2015	Paris	€69.85	€166,871.65
	Shares	Scrip dividends	8 July 2015	Paris	€61.64	€30,265.24
	Shares	Exercised stock options	4 August 2015	Paris	€29.33	€351,960.00

	Financial instrument	Nature of transaction	Date of transaction	Place of transaction	Unit price	Amount of transaction
	Shares	Sale	4 August 2015	Paris	€71.94	€863,288.40
	Shares	Exercised stock options	6 August 2015	Paris	€29.33	€293,300.00
	Shares	Exercised stock options	11 August 2015	Paris	€29.33	€351,960.00
Thierry Lemonnier	Shares	Exercised stock options	9 March 2015	Paris	€42.96	€1,294,298.88
	Shares	Scrip dividends	8 July 2015	Paris	€61.64	€24,039.60
	Shares	Exercised stock options	3 August 2015	Paris	€34.85	€261,375.00
	Shares	Sale	3 August 2015	Paris	€71.67	€537,551.25
	FCPE units	Sale	7 December 2015	Paris	€66.47	€79,129.00
	Shares	Exercised stock options	9 December 2015	Paris	€34.85	€219,555.00
Marc Schuller	Shares	Exercised stock options	19 March 2015	Paris	€34.85	€139,400.00
	Shares	Sale	19 March 2015	Paris	€70.00	€280,000.00
	Shares	Scrip dividends	8 July 2015	Paris	€61.64	€24,162.88
	Shares	Exercised stock options	3 August 2015	Paris	€34.85	€240,813.50
	Shares	Sale	3 August 2015	Paris	€70.90	€489,965.30
	Shares	Exercised stock options	3 August 2015	Paris	€29.33	€149,319.03
	Shares	Sale	3 August 2015	Paris	€70.85	€360,713.64

# 3.5 STOCK-BASED COMPENSATION

Since Arkema's stock-market listing in 2006, the Group has been eager to put in place stock-based compensation instruments in order to incentivize executives and certain employees and involve them more closely to the Group's future growth as well as its stock market performance.

Accordingly, in 2006, the Board of Directors put in place stock option and performance share plans, as detailed below.

From 2010 onwards, all stock-based compensation awarded to the Chairman and Chief Executive Officer and to Executive Committee members has been contingent upon the fulfillment of performance conditions. In addition, since 2010, in accordance with the law and the AFEP-MEDEF Code, for every stock option and performance share plan, the Board of Directors has set a fixed number of vested shares that must be retained by the Chairman and Chief Executive Officer and by each Executive

Committee member (see sections 3.4.2.1 and 3.4.3.3 of this reference document).

No stock option plans have been set up since 2013.

# STOCK-BASED COMPENSATION PRINCIPLES

The stock-based compensation policy by way of performance share grants adopted by the Board of Directors as from 2013 on the recommendation of the Nominating, Compensation and Corporate Governance Committee, is as follows:

 to involve members of executive management and certain employees who have performed exceptionally well or that the Group wants to keep, closely in the Group's future growth and stock market performance in the medium term. Since 2006, around 750 employees were concerned; following the acquisition of Bostik, that number has risen to around 1,100;

- to increase the vesting period of the rights to a minimum of three years in order to firmly establish the idea that part of the overall compensation package rewards medium-term performance;
- to set demanding performance criteria. Since 2015, awards without performance conditions have been limited to allocations representing no more than 100 shares;
- to avoid any dilution for shareholders by allocating existing shares acquired under the buyback program to holders of performance share rights; and
- in accordance with the AFEP-MEDEF Code, to grant performance share plans in the same period every year, *i.e.*, in November since 2013.

#### PERFORMANCE CRITERIA

Until the end of 2013, the two performance criteria, each applying to 50% of the total award, were as follows:

- one internal criterion related to the growth of the Group's EBITDA, fully consistent with the financial targets disclosed to the market,
- one external criterion based on a comparison of the Group's average EBITDA margin with the average EBITDA margin of a peer group over an identical period of at least three years.

To take into account changes in the competitive landscape and in the Group's portfolio of businesses, the peer group was adjusted between 2013 and 2014 to include only European competitors and to add Evonik, which was listed on the stock exchange in April 2013. Indeed, the Group's American competitors benefit from very favorable conditions to access energy and raw materials following the development of shale gas. Comparisons with competitors outside the eurozone were also significantly impacted by the fluctuations in exchange rates, especially for the US dollar against the euro. Consequently, in 2014, the demanding and quality peer group includes AkzoNobel (Specialty Chemicals), BASF (excluding Oil and Gas), Clariant, Lanxess, Solvay and Evonik.

From 2014, a third criterion – Total Shareholder Return (TSR) compared with a peer group – was introduced to align the interests of the holders of performance share rights even more closely with those of shareholders. The composition of the peer group in 2014 was the same as that used to compare EBITDA margins. In 2015, the Board of Directors decided to add in the panel the CAC 40 index which is considered as a reference by employee shareholders and French individual shareholders of Arkema, which together own a signifiant shareholding.

These three criteria apply to 35%, 30% and 35% of rights awarded, respectively, since 2014.

In 2015, the Board of Directors decided to drop the EBITDA margin criterion to replace it with a cash generation target fully in line with the Group's target to increase its EBITDA to the cash conversion rate announced at the Capital Markets Day in June 2015 and which aligns the interests of holders of performance share rights even more closely with those of the shareholders.

Since 2015, performance share rights holders are also rewarded if the Group outperforms its targets; if any of the targets are significantly exceeded, the maximum fulfillment rate for each of the three criteria may range from 120% to 130% depending on the criterion; however, in all cases the number of shares received will not exceed 100% of the award.

All the targets set for these criteria are fully consistent with the medium and long-term targets announced to the financial market and are similar to the internal targets.

# RENEWAL OF THE AUTHORIZATION TO GRANT PERFORMANCE SHARES

On the recommendation of the Nominating, Compensation and Corporate Governance Committee, at its meeting of 2 March 2016, the Board of Directors decided to propose to the annual general meeting on 7 June the renewal of the authorization given to the Board in 2013 to grant performance shares. Under this new 38-month authorization, the Board would be authorized to grant up to 1,450,000 performance shares, representing less than 2% of the share capital at the date of the general meeting.

The Board of Directors has confirmed the stock-based compensation policy described above, it being specified that effective from 2016:

- the vesting period applicable for performance shares awarded to the Chairman and Chief Executive Officer and the members of the Executive Committee would be of three years, and would be followed by a lock-up period of two years, such that a total of five years would elapse between the grant date and the date when restrictions on the sale of the shares would be lifted;
- the reward for outperformance introduced in 2015 if the Group significantly exceeded its targets, with the maximum achievement rate for each of the three criteria ranging from 120% to 130% depending on the criterion, may lead to a global allocation representing up to 110% of the grant;
- the rights awarded to the Chairman and Chief Executive Officer in respect of annual performance share plans may not exceed 10% of all rights awarded in any annual plan (versus 12% previously).

Additional information about the resolution proposed to the vote at the annual general meeting on 7 June 2016 is provided in section 6.2 of this reference document.

The accounting treatment of these stock-based compensation instruments is described in note 28 to the consolidated financial statements in section 4.3.3 of this reference document.

# 3.5.1 Free share and performance share plans

#### 2015 PERFORMANCE SHARE PLANS

In accordance with the stock-based compensation policy in force within the Group, the authorization given by the annual general meeting of 4 June 2013 and the recommendation of the Nominating, Compensation and Corporate Governance Committee, at its meeting of 9 November 2015, the Board of Directors decided to award 345,120 performance shares (i.e., 27% of the total performance share grants that may be made pursuant to the shareholder authorization) to be allocated out of treasury shares to some 1,100 beneficiaries, including the Chairman and Chief Executive Officer and the Executive Committee members. The performance shares will vest after a period of four years, applicable to all beneficiaries, subject to their continuing presence within the Group and the fulfillment of three challenging performance criteria.

As explained at the beginning of section 3.5 of this reference document, to take into account expectations of certain institutional investors, and on the recommendation of the Nominating, Compensation and Corporate Governance Committee, the Board of Directors decided to change certain principles as from the 2015 performance share plan as follows:

- a new cash generation criterion has been introduced that is fully in line with the objective of increasing the EBITDA to cash conversion rate as announced at the Capital Markets Day organized by the Group in June 2015. This criterion, which will strengthen the focus put on cash generation, will align the interests of the holders of performance share rights even more closely with those of shareholders. It replaces the criterion based on comparative EBITDA margin;
- a better reward of outperformance has been introduced: if any
  of the targets are significantly exceeded, the maximum vesting
  rate for each of the three criteria may range from 120% to
  130% depending on the criterion; however, in all cases the
  number of shares received will not exceed 100% of the award;
- awards of shares without performance conditions only apply to grants representing no more than 100 shares. Grants of more than 100 shares are now fully subject to performance conditions.

The three performance criteria applicable for the 2015 plan are therefore as follows:

• EBITDA growth: for 35% of awarded rights.

The target for all of the shares to vest according to this performance criterion is the 2018 EBITDA. The actual target, which is not disclosed to avoid providing competitors with confidential information, is fully in line with the medium and long-term targets (for 2017 and 2020) announced to the financial markets.

The number of shares that vest declines in proportion of the achievement versus the target, with no shares vesting if EBITDA does not increase compared with 2015. Between these two extremes, the vesting rate will be determined in accordance with a linear and continuous scale.

If 2018 EBITDA exceeds the target by 5% or more, the vesting rate for this criterion will be 120%. Between these two extremes, the vesting rate will be determined in accordance with a linear and continuous scale.

EBITDA will be determined based on the annual consolidated financial statements published by the Group in accordance with articles L. 233-16 and L. 233-20 of the French Commercial Code

In addition, the performance share rights will vest in full only if gearing (ratio of net debt to equity) at 31 December 2018 does not exceed 40%. Should gearing exceptionally exceed the 40% threshold, a recommendation to revise the target EBITDA would be put forward by the Nominating, Compensation and Corporate Governance Committee to the Board of Directors.

 EBITDA to cash conversion rate (net cash flow/EBITDA): for 30% of awarded rights.

The net cash flow used for this criterion corresponds to net cash flow from operating and investing activities, excluding the impact of portfolio management transactions, exceptional investments and any unrealized gains or losses on foreign currency financing of non-recurring investments with no impact on net debt.

For the period 2012 to 2014, the average rate was 25%. The Group's medium-term target is to increase the average rate to 35%.

In line with the target announced to the financial markets, if the average net cash flow to EBITDA rate for the 2017 and 2018 financial years (*Ratio*) is at least 35%, all the shares subject to this performance criterion will vest.

If the *Ratio* is 25%, none of the shares will vest under this criterion.

If the *Ratio* is between 25% and 35%, the vesting rate will be determined in accordance with a linear and continuous scale.

If the *Ratio* is 40%, the vesting rate under this criterion will be 120%.

If the *Ratio* is between 35% and 40%, the vesting rate under this criterion will be between 100% and 120%.

• comparative Total Shareholder Return (TSR): for 35% of awarded rights.

The Group's TSR over a three-year period, from 2016 to 2018, will be compared to those of a panel of European competitors and an index, *i.e.*, respectively: AkzoNobel, BASF, Clariant, DSM, Lanxess, Solvay and Evonik, and the CAC 40. The Board of Directors chose to add the CAC 40 index in the panel as it is considered as a reference by the Group's shareholder employees and individual French shareholders representing together a significant shareholding.

The vesting rate under this third criterion will be as follows:

Group's position after ranking the TSR of each company in the peer group in declining order	Vesting rate in respect of the criterion
1 <sup>st,</sup> with a 2-percentage point advance over the 2 <sup>nd</sup>	130%
] st	120%
2 <sup>nd</sup>	100%
3 <sup>rd</sup>	85%
$\mathcal{A}^{ ext{th}}$	65%
5 <sup>th</sup>	50%
6 <sup>th</sup>	25%
7 <sup>th</sup> to 9 <sup>th</sup>	0%

The purpose of granting a vesting rate of 25% when the Group's ranking is below the median is to keep Group employees engaged and motivated throughout the vesting period. It is reasonable given the quality and high standards of the panel, particularly in terms of value creation.

TSR is calculated as follows: (share price at end of period - share price at beginning of period + sum of dividends per share paid out during the period)/share price at beginning of period.

To limit the effects of market volatility on the share price, an average share price observed over a two-month period is used. Hence the share price at the beginning of the period will be the average of the opening prices between 1 November 2015 and 31 December 2015, and the share price at the end of the period will be the average of the opening prices between 1 November 2018 and 31 December 2018.

#### 2015

Date of annual general meeting	4 June 2013
Authorized performance share awards as a % of the Company's share capital	2%
Date of Board of Directors' meeting	9 November 2015
Number of rights awarded	345,120
of which to the Chairman & CEO	26,000
Total by authorization	887,238 shares, <i>i.e.</i> , 1.41% of the share capital at the date of the annual general meeting <sup>(1)</sup>
Origin of shares to be allocated when the rights vest	-
Number of canceled rights (2)	1,490
Number of vested shares (3)	-
Number of rights still to vest at 31 December 2015	343,630
Vesting period	4 years
Lock-up period	0
Performance conditions	EBITDA growth over the period to 2018 (35%), EBITDA to cash conversion rate over the period from 2017 to 2018 (30%), comparative TSR over the period from 2016 to 2018 (35%)
Vesting rate	-

- (1) 2013, 2014 and 2015 plans.
- (2) Performance share rights canceled because the holders left the Group.
- (3) Shares awarded to the grantees (including shares awarded before the end of the four-year period, in the case of death for example).

## PREVIOUS FREE SHARE PLANS

The plans implemented in 2006, 2007, 2008 and 2009 have similar characteristics:

- the shares vest at the end of a two-year period, subject to the rights holders' continuing presence within the Group and the fulfillment of the performance criteria; and
- following this vesting period, the shares must be held for a further two years (lock-up period).

The performance conditions are relative to the Group's financial performance, measured principally in relation to EBITDA or the EBITDA margin.

The table below details the performance conditions for each plan, as well as the vesting rate for each objective.

Note that in 2009 the Executive Committee members declined the awards decided by the Board of Directors in the light of the economic crisis.

The total rights awarded for 2006, 2007, 2008 and 2009 represented 1% of the Company's share capital at the date of the annual general meeting that authorized the award.

# HISTORY OF PERFORMANCE SHARE PLANS BETWEEN 2006 AND 2009 (TABLE 10 IN THE AMF RECOMMENDATIONS)

	2006	2007	2008	2009			
Date of annual general meeting	10 May 2006	10 May 2006	10 May 2006	10 May 2006			
Authorized performance share awards as a % of the Company's share capital	3%						
Date of Board of Directors' meeting	4 July 2006	14 May 2007	13 May 2008	12 May 2009			
Number of rights awarded	150,000	125,000	180,000	184,850			
of which to the Chairman & CEO	8,000	7,000	14,000	14,000			
Total by authorization		639,850, i.e.	, 1% of share cap	ital at date of AGM			
Origin of shares to be allocated when the rights vest	Share issue	Share buyback	Share buyback	Share buyback			
Number of canceled shares (1)	8,895	37,400	137,873	52,650			
Number of vested shares (2)	141,105	87,600	42,127	132,200			
Number of rights still to vest at 31 December 2015	-	-	-	-			
Vesting period	2 years	2 years	2 years	2 years			
Lock-up period	2 years	2 years	2 years	2 years			
Performance conditions	EBITDA growth in 2007 versus 2005	2008 EBITDA margin	2009 EBITDA margin	41			
Vesting rate	100%	71.3%	0%				

<sup>(1)</sup> Performance share rights canceled because the holders left the Group or because the performance conditions were not met.

<sup>(2)</sup> Shares awarded to the grantees (including shares awarded before the end of the two-year period, in the case of death for example).

From 2010 to 2013, the Board of Directors amended the provisions applicable to the plans as follows:

 in accordance with the AFEP-MEDEF Code, the performance shares will vest upon the fulfillment of (i) performance conditions assessed over a number of years, and (ii) external criteria, comparing the Group's financial performance to that of a peer group.

The table below details the performance conditions for each plan as well as the achieved vesting rates. The target level to be reached is not disclosed, as an *a posteriori* interpretation of these figures is not relevant given the changes in the Group's portfolio of businesses as well as the economic climate in which the Group has been operating;

- implementation of separate plans for employees of companies outside France, providing for a four-year vesting period with no lock-up period, in order to match the vesting of the shares with the resulting tax liability (2010 to 2012 plans); the plans implemented from 2013 onwards provide for a vesting period of four years for all categories of beneficiaries; and
- reinforcement of the retention component of this compensation tool by increasing the vesting period: in cases where rights to more than 200 free shares are granted, 50% of the shares vest after a two-year vesting period and 50% after a three-year vesting period (2010 to 2012 plans); the plans implemented from 2013 onwards have further reinforced the retention component by introducing a four-year vesting period, as described above.

#### HISTORY OF PERFORMANCE SHARE PLANS BETWEEN 2010 AND 2012

	2010		2011			2012			
Date of annual general meeting	15 June 2009	15 June 2009	15 June 2009	15 June 2009	15 June 2009	15 June 2009	15 June 2009	15 June 2009	15 June 2009
Authorized performance share awards as a % of the Company's share capital	3%								
Date of Board of Directors'	10 May 2010	10 May 2010	4 May 2011	4 May 2011	4 May 2011	9 May 2012	9 May 2012	9 May 2012	9 May 2012
Number of rights awarded	153,705	50,795	88,305	59,380	52,315	101,860	74,805	65,335	17,163
of which to the Chairman & CEO	18,800	-	8,200	8,200	-	13,000	13,000	-	
Total by authorization		663,663, i.e., 1% of share capital at date of AGM							
Origin of shares to be allocated when the rights vest	Share buyback	Share buyback	Share buyback	Share buyback	Share buyback		Share buyback	-	-
Number of canceled rights (1)	3,870	4,247	1,245	1,555	4,130	1,630	1,355	2,670	190
Number of vested shares (2)	149,835	46,548	87,060	57,825	48,185	100,230	73,450	-	2,914
Number of rights still to vest at 31 December 2015	-	-	-	-	-	-	-	62,665	14,059
Vesting period	2 years	4 years	2 years	3 years	4 years	2 years	3 years	4 years	4 years (3)
Lock-up period	2 years	-	2 years	2 years	-	2 years	2 years	-	_ (4)
Performance conditions	2010 EBITDA (50%), growth in the Group's 2010/2011 average margin versus 2005 compared to a peer group (50%)		growth in the Group's 2011/2012 average margin compared to a peer group (50%)  2012 EBITDA (50%), growth in the Group's 2012/2013 average margin compared to a peer group (50%)			)12/2013 compared	None		
Vesting rate	100%	100%			100%			100%	

<sup>(1)</sup> Performance share rights canceled because the holders left the Group or because the performance conditions were not met.

<sup>(2)</sup> Shares awarded to the grantees (including shares awarded before the end of the four-year period, in the case of death for example).

<sup>(3)</sup> Except Italy and Spain where the vesting period is 3 years.

<sup>(4)</sup> Except Italy and Spain where the lock-up period is 3 years.

#### 2013 AND 2014 PERFORMANCE SHARE PLANS

	2013		2014			
	2013		2014			
Date of annual general meeting	4 June 2013	4 June 2013	4 June 2013	4 June 2013		
Authorized performance share awards as a % of the Company's share capital	2%					
Date of Board of Directors' meeting	6 November 2013	6 May 2014	6 May 2014	13 November 2014		
Number of rights awarded	250,000	750	16,368	275,000		
of which to the Chairman & CEO	26,000	-	-	26,000		
Total by authorization		See 2015 s	hare plan			
Origin of shares to be allocated when the rights vest	-	-	-	-		
Number of canceled shares (1)	3,820	335	-	1,105		
Number of vested shares (2)	70	-	-	-		
Number of rights still to vest at 31 December 2015	246,110	415	16,368	273,895		
Vesting period	4 years	4 years	4 years (3)	4 years		
Lock-up period	-	-	_ (4)	-		
Performance conditions	EBITDA growth over the period to 2016 (50%), growth in average EBITDA margin over the period from 2013 to 2016 compared to that of a peer group (50%)	-	-	EBITDA growth over the period to 2017 (35%), 2017 EBITDA margin compared to a peer group (30%), comparative TSR over the period from 2015 to 2017 (35%)		
Vesting rate	-	-	-			

<sup>(1)</sup> Performance share rights canceled because the holders left the Group or because the performance conditions were not met.

<sup>(2)</sup> Shares awarded to the grantees (including shares awarded before the end of the four-year period, in the case of death for example).
(3) Except Italy and Spain where the vesting period is 3 years.
(4) Except Italy and Spain where the lock-up period is 3 years.

# 3.5.2 Stock option plans

In accordance with and in anticipation of the stock-based compensation policy decided by the Board of Directors in 2013, no stock option plan has been implemented since 2012.

#### STOCK OPTION PLANS PRIOR TO 2012

The plans implemented from 2006 to 2008 have common characteristics:

- exercise price set by taking the average opening price of the shares during the twenty trading days prior to the date of the Board of Directors' meeting, with no discount applied;
- stock option vesting period of two years, and an additional lock-up period of two years, i.e., four years from the grant date: and
- beneficiaries must still be employed by the Group at the time of exercise of options.

The option grants authorized by the Board of Directors for 2006, 2007 and 2008 represented 2.64% of the Company's share capital at the date of the general shareholders meeting that authorized the plans.

At 31 December 2015, 69,313 stock options resulting from these plans remained outstanding following the adjustments made as described below.

In 2009, in light of the economic crisis, it was decided not to grant any stock options.

From 2010, the Board of Directors amended the provisions pertaining to the plans:

 in accordance with the AFEP-MEDEF Code and stakeholders' requirements in this regards, stock options were made subject to performance criteria chosen to align medium-term stock-based compensation with the Group's strategy.

The chosen criteria were therefore indicators reflecting the Group's financial performance, as well as its relative performance compared to a panel of comparable chemicals companies made up of AkzoNobel (Specialty Chemicals only), BASF (excluding Oil & Gas), Clariant, DSM, Lanxess and Solvay.

The table below details the performance conditions for each plan.

The target level to be attained is not disclosed, as an *a posteriori* interpretation of these figures is not relevant given the changes in the Group's portfolio of businesses as well as the economic climate in which the Group has been operating. However, the target achievement rates are mentioned for information purposes for each of the plans in the following table;

 the stock option vesting period was extended in order to reinforce the retention component of this compensation tool.

Hence, the plans decided in 2010 and 2011 have the following characteristics:

- beneficiaries: executives in 2010 (74 beneficiaries) and Executive Committee members only in 2011 in order to restrict the most high-risk plans to executives with the greatest responsibilities;
- exercise price set by taking the average opening price of the shares during the twenty trading days prior to the date of the Board of Directors' meeting, with no discount applied;
- 50% of rights may be exercised after a two-year vesting period, while the remaining 50% of rights may be exercised after five years for the 2010 plan, and after four years for the 2011 plan;
- beneficiaries must still be employed by the Group at the time of exercise of options; and
- application of performance criteria as detailed in the table below.

The stock option grants authorized by the Board of Directors for 2010 and 2011 represented 1% of the Company's share capital at the date of the general shareholders meeting that authorized the plans.

At 31 December 2015, 483,710 stock options from the 2010 and 2011 plans were still outstanding.

At 31 December 2015, the total number of stock options still outstanding was 553,023, *i.e.*, 0.74% of the Company's share capital on that date.

In accordance with the law, and in order to preserve beneficiaries' rights, an adjustment was made to the number of outstanding options and their exercise price as a result of the share capital increase with preferential subscription rights carried out on 15 December 2014.

#### HISTORY OF STOCK OPTION PLANS (TABLE 8 IN THE AMF RECOMMENDATIONS)

	2006	2007	2008	20	10	20	11
Date of annual general meeting	10 May 2006	10 May 2006	10 May 2006	15 June 2009	15 June 2009	15 June 2009	15 June 2009
Authorized stock option grants as a % of the Company's share capital		5%			59	%	
Date of Board of Directors' meeting	4 July 2006	14 May 2007	13 May 2008	10 May 2010	10 May 2010	4 May 2011	4 May 2011
Number of stock options granted	540,000	600,000	460,000	225,000	225,000	105,000	105,000
Number of options granted following adjustments	540,000	603,074	465,437	230,044	233,513	109,082	109,082
of which to the Chairman & CEO	55,000	70,000	52,500	35,000	35,000	29,250	29,250
of which to the Chairman & CEO following adjustments	55,000	70,389	52,676	36,361	36,361	30,386	30,386
Number of outstanding options at 31 December 2015	-	-	69,313	98,708	166,838	109,082	109,082
Total by authorization		e., 2.7% of the sl the annual gene		660,000, i.e.,	1% of the share of general		te of the annual
Vesting period (1)	2 years	2 years	2 years	2 years	5 years	2 years	4 years
Lock-up period (2)	2 years	2 years	2 years	2 years	-	2 years	-
Expiry date	4 July 2014	14 May 2015	13 May 2016	10 May 2018	10 May 2018	4 May 2019	4 May 2019
Exercise price (in euros)	€28.36	€44.63	€36.21	€30.47	€30.47	€68.48	€68.48
Exercise price (in euros) following adjustments	-	€42.96	€34.85	€29.33	€29.33	€65.92	€65.92
Performance conditions (other than exercise price)	-	-	-	2010 EBITDA (50%), growth in the Group's 2010/2011 average EBITDA margin versus 2005 compared to a peer group (50%)	2014 EBITDA margin	2011 ROCE	2011/2014 average EBITDA margin
Vesting rate	-	-	-	100%	93.3%	100%	100%

<sup>(1)</sup> Provided that the grantee is still employed by the Group when the options are exercised.

<sup>(2)</sup> From end of vesting period.

# 3.6 STATUTORY AUDITORS' REPORT IN ACCORDANCE WITH ARTICLE L. 225-235 OF THE FRENCH

#### KPMG Audit **Département de KPMG S.A.**

Tour EQHO 2, avenue Gambetta CS 60055 92066 Paris-La Défense Cedex

Statutory auditors Member of the "Compagnie régionale de Versailles"

#### **ERNST & YOUNG Audit**

1/2, place des Saisons 92400 Courbevoie – Paris-La Défense 1 S.A.S. à capital variable

Statutory auditors Member of the "Compagnie régionale de Versailles"

This is a free translation into English of a report issued in the French language and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

#### Arkema S.A.

Registered office: 420, rue d'Estienne d'Orves - 92700 Colombes

Share capital: €744,721,010

Statutory auditors' report in accordance with article L. 225-235 of the French Commercial Code (Code de Commerce) on the report prepared by the Chairmain of the Board of Directors of Arkema

Year ended 31 December 2015

To the shareholders
Ladies and Gentlemen,

In our capacity as statutory auditors of Arkema S.A., and in accordance with the provisions of article L. 225-235 of the French Commercial Code (Code de commerce), we hereby report on the report prepared by the Chairman of your Company in accordance with article L. 225-37 of the French Commercial Code (Code de commerce) for the year ending 31 December 2015.

It is the Chairman's responsibility to prepare and submit to the Board of Directors' approval a report describing the internal control and risk management procedures implemented by the Company, and providing the other information required under article L. 225-37 of the French Commercial Code (Code de commerce) relating in particular to the corporate governance plan.

#### Our role is to:

- report to you on the information contained in the Chairman's report in respect of the internal control and risk management procedures relating to the preparation and processing of the accounting and financial information;
- confirm that this report contains the other information required under article L. 225-37 of the French Commercial Code (Code de commerce), it being specified that we are not responsible for verifying the fairness of this other information.

We conducted our work in accordance with French professional standards.

## Information concerning the internal control and risk management procedures relating to the preparation and processing of accounting and financial information

The professional standards require that we perform the necessary procedures to assess the fairness of the information provided in the Chairman's report in respect of the internal control and risk management procedures relating to the preparation and processing of accounting and financial information.

These procedures consisted in particular in:

- obtaining an understanding of the internal control and risk management procedures relating to the preparation and processing
  of the accounting and financial information on which the information presented in the Chairman's report is based, as well as of
  existing documentation;
- obtaining an understanding of the work involved in the preparation of this information, and of the existing documentation;
- determining if any material weaknesses in the internal control procedures relating to the preparation and processing of the accounting
  and financial information that we would have noted in the course of our assignment were duly disclosed in the Chairman's report.

On the basis of our work, we have nothing to report on the information in respect of the Company's internal control and risk management procedures relating to the preparation and processing of the accounting and financial information contained in the report prepared by the Chairman of the Board of Directors in accordance with article L. 225-37 of the French Commercial Code (Code de commerce).

#### Other information

We hereby confirm that the report prepared by the Chairman of the Board of Directors contains the other information required by article L. 225-37 of the French Commercial Code (Code de commerce).

Paris La Défense, 2 March 2016 The statutory auditors French original signed by

**KPMG Audit** Département de KPMG S.A. **ERNST & YOUNG Audit** 

Jacques-François Lethu Partner François Quédiniac Partner Denis Thibon Partner

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# Financial and accounting information



The different parts constituting the Annual Financial Report are identified in the content by the pictogram  $$\Delta F\!_{\rm L}$$ 

## 4.1 COMMENTS AND ANALYSIS ON CONSOLIDATED FINANCIAL STATEMENTS

This section should be read jointly with the notes to the consolidated financial statements at 31 December 2015 in paragraph 4.3.3 of this reference document, and in particular with the accounting policies described in note B – Accounting policies to the consolidated financial statements.

All figures contained in this section are provided on a consolidated basis and in accordance with the Group's organization into three divisions. 2014 figures have been restated to reflect the new division structure as presented at the Capital Markets Day in June 2015 and detailed in paragraph 1.1.1.2 of this reference document

#### 4.1.1 Indicators used in management analysis

The main performance indicators used by the Group are defined in note B.17 of the notes to the consolidated financial statements presented in section 4.3.3 of this reference document.

In analysing changes in its results, particularly changes in sales, the Group identifies the influence of the following effects (such analysis is unaudited):

- effect of changes in scope of business: effects of changes in scope of business arise on acquisition or disposal of an entire business or on first-time consolidation or deconsolidation of an entity. An increase or reduction in capacity is not analysed as creating a change in the scope of business;
- effect of foreign currency movements: the effect of foreign currency movements is the mechanical impact of consolidation of accounts denominated in currencies other than the euro at

- different exchange rates from one period to another. The effect of foreign currency movements is calculated by applying the foreign exchange rates of the prior period to the figures of the current period;
- effect of changes in prices: the impact of changes in average sales prices is estimated by comparing the average weighted unit net sales price of a range of related products in the current period with their average weighted unit net sales price in the prior period, multiplied, in both cases, by the volumes sold in the reference period;
- effect of changes in volumes: the impact of changes in volumes is estimated by comparing quantities delivered in the reference period with the quantities delivered in the prior period, multiplied, in both cases, by the average weighted unit net sales prices of the relevant prior period.

#### 4.1.2 Impact of seasonality

The Group's standard pattern of business shows seasonality effects. Various characteristics contribute to these effects:

- demand for products manufactured by the Group is generally softer in the summer months (July-August) and in December, notably as a result of the slowdown in industrial activity during these months, particularly in France and Europe;
- in some of the Group's businesses, particularly those serving the paint and coatings as well as the refrigeration and airconditioning markets, sales are generally higher in the first half
- of the year than in the second half. By contrast, in adhesives, both halves of the year are relatively well balanced;
- the major multi-annual maintenance turnarounds at the Group's production plants also have an impact on seasonality.

These seasonal effects in the past are not necessarily representative of future trends, but can have a material effect on the changes in earnings and working capital from one quarter of the year to another.

#### 4.1.3 Impact of changes to accounting standards

IFRIC 21 "Levies" came into force on 1 January 2015 with retroactive effect from 1 January 2014. Pursuant to this text, the Group now accounts in the first quarter of the year for the whole of certain taxes previously evenly spread over the four quarters of

the year. The impact of this interpretation is neutral on the EBITDA and the net income Group share published for 2014 and 2015. In 2015, Bostik accounted for all such taxes in January.

## 4.1.4 Description of main factors which affected sales and results in the period

In a continuing volatile macro-economic environment marked by significant fluctuations in oil prices and exchange rates, in particular of the euro versus the US dollar, the Arkema Group achieved very solid results in 2015 supported by the benefit of several major projects and its in-depth transformation undertaken over the last ten years. Accordingly, a number of factors had some impact to a greater or lesser degree on the performance reported by the Group's activities, including:

- two major developments that will continue to support the Group's growth over the next few years, with:
  - the acquisition of Bostik on 2 February 2015, its smooth integration and the quick implementation and benefit of first synergies. Bostik achieved very good growth in 2015 with 183 million euros EBITDA for the full year (eleven months of which as part of the Group), 16% up over 2014. The acquisition is accretive in net income and cash from 2015. This initial successful year within the Group confirms the relevance of this acquisition and the medium term development potential of this activity, and
  - the ramp-up of the new thiochemicals platform in Malaysia, which came on stream in first quarter 2015 and represents a real technical and commercial success. The contribution in 2015 of this investment exceeded the Group's initial plan, supported by the very strong demand in the methionine market for animal feed in Asia. In 2016, this investment will contribute one additional quarter versus prior year;
- the ongoing implementation of the operational excellence program which combines productivity initiatives and variable cost optimization;
- market conditions specific to some of the Group's product lines, and in particular:
  - for acrylic monomers, which account for around 10% of the Group's sales, unit margins were in low cycle conditions throughout 2015, as expected, and down on 2014. The Coating Solutions division, however, held up well with

- EBITDA and EBITDA margin close to last year's thanks in particular to the downstream integration developed by the Group since its spin-off which mitigates the impact of the cycle in monomers. In 2016, unit margins should remain at their current low levels in the first part of the year but could start to gradually recover towards the end of the year,
- for fluorogases, higher prices in some gases, in particular in the United States, and benefit of productivity initiatives in Europe contributed to improve the results of this business in 2015 following a challenging 2014. This progress is part of the gradual recovery plan of this activity over the period from 2015 to end 2018 which combines a gradual improvement in prices with the benefit from productivity initiatives and internal development projects, and
- for PMMA, which continued to benefit from very favourable market conditions sustained by very high demand in the automotive sector and a tight balance between supply and demand following industrial problems encountered by some MMA producers in particular in Europe. These market conditions could normalize gradually over time; and
- a macro-economic environment marked by moderate global growth and a low visibility, with:
  - market conditions that differ between the regions in which the Group operates. In line with 2014, growth remained weak in Europe. However, demand in the automotive sector and in export-oriented markets was good overall, supported in particular by a significant drop of euro versus the US dollar in 2015. By contrast, demand in construction and in decorative paints remained disappointing. Growth remained solid in North America, where the Group achieves 34% of its sales, sustained in particular by good demand in the automotive market and some improvement in the construction market. On the other hand, industrial export-oriented markets were affected by a stronger US dollar. Finally, China reported more moderate growth than in the past. The most capital-intensive

- activities, e.g. acrylics in which several new world-scale production capacities came on stream in recent years in the region, and fluorogases, were the most affected by current demand in China. On the other hand, specialty activities driven by innovation continued to report good growth,
- a strengthening of the US dollar compared to euro in 2015, with an average rate of 1.11 against 1.33 in 2014.
   Accordingly, the currency impact in 2015 (translation only) resulted in a +7.8% currency translation effect on full year
- sales and around +80 million euros on EBITDA. Currency impact on the balance sheet was also significant given primarily the strong US dollar versus the euro at the accounts closing date compared to the end of 2014, and
- a drop in oil prices, and, as a result, in the price of certain petrochemical raw materials which had a temporary positive effect on margins and contributed to a significant decrease in working capital.

#### 4.1.5 Analysis of Arkema's income statement

(In millions of euros)	2015	2014	Variation
Sales	7,683	5,952	+29.1%
Operating expenses	(6,206)	(4,926)	+26.0%
Research and development expenses	(209)	(155)	+34.8%
Selling and administrative expenses	(664)	(424)	+56.6%
Recurring operating income	604	447	+35.1%
Other income and expenses	(116)	(83)	-
Operating income	488	364	+34.1%
Equity in income of affiliates	10	1	-
Financial result	(92)	(74)	+24.3%
Income taxes	(118)	(120)	-1.7%
Net income	288	171	+68.4%
Minority interests	3	4	-
Net income – Group share	285	167	+70.7%
EBITDA	1,057	784	+34.8%
Adjusted net income	312	246	+26.8%

#### **SALES**

Sales reached 7.7 billion euros, +29.1% up on 2014, supported by a +25.8% scope effect essentially related to the acquisition of Bostik (finalised on 2 February 2015) which generated 1,497 million euros sales since its integration. This effect also includes the impact of the acquisition of a stake in Taixing Sunke Chemicals in acrylics in China in October 2014 and of the disposal of the Sunclear companies finalized in November 2015. The currency effect (translation only) was favourable at +7.8% mostly due to a stronger US dollar versus the euro with an average 1.11 parity over 2015 against an average of 1.33 in 2014. Volumes remained stable overall (+0.2%) in a moderate global growth environment. Higher volumes in Thiochemicals following the start-up of the Kerteh platform in Malaysia in first quarter

2015 and in Technical Polymers offset lower volumes in Coating Solutions resulting from ongoing soft demand in construction and decorative paints in Europe as well as inventory adjustments in a context of high volatility of raw material prices seen in particular in the superabsorbent market. Variation in prices over the year (-4.7%) resulted from the acrylics cycle and the effect on sales prices of lower raw materials.

Rebalancing of sales by region continued with Europe representing 38% of the Group's total sales (41% in 2014), North America 34% (35% in 2014), Asia 24% (20% in 2014), and the rest of the world 4% (4% in 2014).

Sales by division reflected an acceleration in the development of High Performance Materials thanks to Bostik acquisition. High Performance Materials accounted in 2015 for 44% of the Group's

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sales (29% in 2014), Industrial Specialties 32% (38% in 2014), and Coating Solutions 24% (33% in 2014).

#### EBITDA AND RECURRING OPERATING INCOME

EBITDA rose sharply (+35%) to 1,057 million euros against 784 million euros in 2014. At constant scope of business, EBITDA grew by 13%. In a global economic environment marked by low growth, a significant drop in oil prices and a strong US dollar versus the euro, most product lines improved significantly compared to the previous year. However, acrylic monomers were, as expected, in low cycle conditions. Several structural drivers contributed to this strong improvement, including the integration of Bostik, the ramp-up of the new thiochemicals plant in Malaysia and the gradual improvement in the performance of fluorogases. A positive currency effect (translation) of around 80 million euros and some lower raw material costs also contributed to this performance. Finally, operational excellence initiatives helped offset two thirds of fixed cost inflation through fixed and variable cost savings.

EBITDA margin grew to 13.8% (13.2% in 2014) despite the mechanically dilutive effect of the Bostik integration and the acrylics cycle.

Operating expenses stood at 6,206 million euros against 4,926 million euros in 2014. This increase mainly results from the Bostik integration and the unfavourable currency effect mainly related to the strengthening of the US dollar versus the euro. These effects were partly offset by lower costs of some oil-based raw materials and operational excellence initiatives.

Research and development (R&D) expenses amounted to 209 million euros, *i.e.* 2.7% of sales against 155 million euros and 2.6% of sales in 2014. This increase was essentially due to the Bostik integration, where the R&D expenses to sales ratio stood at 2.8%, and, to a lesser extent, to a currency effect related to a stronger US dollar versus the euro.

Selling and administrative expenses stood at 664 million euros against 424 million euros in 2014. This increase reflects the Bostik integration, a currency effect mostly related to a stronger US dollar versus the euro, and the part of wage inflation not compensated by cost savings.

In line with higher EBITDA, recurring operating income stood at 604 million euros (447 million euros in 2014). It includes 453 million euros depreciation and amortization, up on last year (337 euros million), mostly due to the acquisition of Bostik, the purchase of a stake in Taixing Sunke Chemicals, the impact of currencies, and the start-up of new production plants. Depreciation and amortization in 2015 included impairments totalling 12 million euros.

#### **OPERATING INCOME**

Operating income stood at 488 million euros against 364 million euros in 2014. This includes other income and expenses amounting to -116 million euros against -83 million euros in 2014.

In 2015, other income and expenses mainly corresponded to:

- -73 million euros impairments relating to the assets of the company MLPC International, which manufactures rubber additives, and part of the goodwill recognized at the time of the acquisition of the company Hebei Casda in order to reflect slower development prospects in the plant-based sebacic acid market, in a competitive environment exacerbated by a drop in raw material costs for oil-based products;
- the consequences of the Bostik's purchase price allocation totalling -71 million euros corresponding to the step-up of inventories at market price for -36 million euros and to depreciation and amortization related to the revaluation at fair value of tangible and intangible fixed assets totalling -35 million euros;
- the consequences of disposal and acquisition operations (excluding consequences of the Bostik purchase price allocation) totalling +39 million euros;
- -27 million euros restructuring charges accounted for in particular at the time of the announcement of projects to close down production of coating resins at the Villers-Saint-Paul site (France) and of PMMA extruded sheets at Bernouville (France);
- a 21 million euros exceptional gain recognized as part of the closure and in some cases transfer to external management of defined benefit pension schemes at Bostik entities.

In 2014, other income and expenses mainly corresponded to the recognition of 53 million euros restructuring charges as part of restructuring plans announced in coating resins and Fluorogases activities (closure of fluorogas production at the Zaramillo site in Spain) and various expenses related to divestment and acquisition operations totalling 21 million euros mostly related to the Bostik acquisition and the sale of securities of Canada Fluorspar Inc.

#### **EQUITY IN INCOME OF AFFILIATES**

Equity in the income of affiliates amounted to 10 million euros against 1 million euros in 2014, reflecting primarily the contribution of the company CJ Bio Malaysia Sdn. Bhd. in which the Group owns a 14% stake.

#### FINANCIAL RESULT

The financial result stood at -92 million euros against -74 million euros in 2014. It mostly reflects a higher cost of debt related to the financing of the Bostik acquisition and to the increase in the part of the debt financed in currencies other than the euro. In 2014, the financial result included an 8 million euros unrealized foreign exchange loss related to the financing in US dollars of the Thiochemicals investment in Malaysia, the subsidiary keeping its accounts in Malaysian ringgit. It now keeps its accounts in US dollars since fourth quarter 2015, with retroactive effect to 1 January.

#### **INCOME TAXES**

Income taxes amounted to 118 million euros against 120 million euros in 2014. It includes a 82 million euros tax income accounted for as part of Bostik purchase price allocation and the valuation at fair value of assets acquired and liabilities assumed. This income correspond to a 22 million euros provision reversal for deferred tax liabilities and the recognition of 60 million euros deferred tax assets in France. The tax charge also includes a 1 million euros

tax due on the dividend paid in cash for 2014. Excluding these items, the tax rate amounted to 33% of the recurring operating income. This rate reflects the geographic breakdown of the results, and in particular the weight of North America in the Group's results. At end 2015, unrecognized deferred tax assets amounted to 681 million euros.

## NET INCOME GROUP SHARE AND ADJUSTED NET INCOME

Net income Group share stood at 285 million euros in 2015 (167 million euros in 2014).

Excluding the after-tax impact of non-recurring items, adjusted net income amounted to 312 million euros in 2015, against 246 million euros in 2014. The 2014 adjusted net income was restated to exclude the impact of financing in US dollars of the investments made in Malaysia in Thiochemicals. Since fourth quarter 2015 with retroactive effect to 1 January, the accounts of the Thiochemicals subsidiary in Malaysia have been kept in US dollars rather than Malaysian ringgits. The 2015 adjusted net income was not restated in this respect.

#### 4.1.6 Analysis of results by division

#### 4.1.6.1 HIGH PERFORMANCE MATERIALS

(In millions of euros)	2015	2014	Variation
Sales	3,358	1,730	+94.1%
Recurring operating income	354	213	+66.2%
Other income and expenses	(69)	(7)	-
Operating income	285	206	+38.3%
EBITDA	506	314	+61.1%
EBITDA margin	15.1%	18.2%	-

High Performance Materials sales amounted to 3,358 million euros, +94% up on 2014 with Bostik's contribution amounting to 1,497 million euros over eleven months and a +7.2% translation effect mostly corresponding to the strengthening of the US dollar versus the euro. Volumes were stable overall with good growth in volumes in Technical Polymers driven by growing new applications offsetting weaker demand in certain applications for the oil and gas market. The price effect was limited to -0.5% over the year.

EBITDA increased by 61% to 506 million euros (against 314 million euros in 2014) supported by a strong contribution from Bostik. Over 2015 as a whole (eleven months of which as part of the Group), Bostik generated 183 million euros EBITDA, 16% up on 2014, and an 11.2% EBITDA margin (10.3% in

2014). The success of development projects, lower costs, the benefit of first synergies and a positive translation effect all contributed to this significant improvement which confirms the development potential of adhesives within the Group for the medium term. The acquisition is accretive in earnings and cash from first year. Excluding Bostik, EBITDA for the division also improved. Within the filtration and adsorption business, molecular sieves recorded a good year, up on 2014. In this activity, 2016 should reflect a less favourable project timeline before seeing a renewed upward trend from 2017.

At 15.1%, the EBITDA margin reflects the mechanically dilutive effect of Bostik's integration.

Recurring operating income amounted to 354 million euros against 213 million euros in 2014, in line with EBITDA growth

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and a 51 million euros increase in the division's depreciation and amortization (152 million euros), primarly related to the acquisition of Bostik and the impact of currencies.

Operating income stood at 285 million euros in 2015. It includes other income and expenses for a total of -69 million euros (-7 million euros in 2014), mostly related to consequences of Bostik purchase price allocation totalling -71 million euros and in

particular the step-up of inventories at market value for -36 million euros and depreciation and amortization related to the revaluation of tangible and intangible fixed assets totalling -35 million euros. They also include an exceptional gain recognized as part of the closure of defined benefit pension schemes at Bostik entities as well as charges related to the acquisition of Bostik.

#### 4.1.6.2 INDUSTRIAL SPECIALTIES

(In millions of euros)	2015	2014	Variation
Sales	2,450	2,269	+8.0%
Recurring operating income	237	169	+40.2%
Other income and expenses	(21)	(47)	-
Operating income	216	122	+77.0%
EBITDA	418	312	+34.0%
EBITDA margin	17.1%	13.8%	-

Industrial Specialties sales grew by +8% over 2014 to 2,450 million euros. The translation effect was favourable at +8.6% and the scope effect (-2.0%) reflected the disposal of the companies Sunclear completed in November 2015. At constant exchange rates and scope of business, sales grew by +1.5% while volumes were +1.7% up, sustained by the ramp-up of the new thiochemicals plant in Malaysia which came on stream in first quarter 2015. The price effect was limited (-0.2%).

EBITDA, +34% up on 2014, stood at 418 million euros. EBITDA margin also improved significantly to 17.1%, close to its historic levels. All of the division's product lines contributed to this performance. The excellent performance of Thiochemicals reflected the ramp-up, faster than first anticipated by the Group, of the new Kerteh platform in Malaysia which benefited from a strong demand in the animal feed market in Asia. In line with our forecasts, Fluorogases results improved gradually over 2014, supported by higher prices in some gases, in particular in the

United States, and the benefit of productivity initiatives. PMMA results remained at very good levels throughout 2015, supported by a favourable price environment in MMA. However, signs of normalization were observed towards the end of the year. Finally, Hydrogen Peroxide reported a solid performance, significantly up on the previous year.

Recurring operating income amounted to 237 million euros and included 181 million euros depreciation and amortization, up over the previous year (143 million euros) due primarily to the start-up of new production plants and the impact of currencies.

Operating income stood at 216 million euros. It includes other income and expenses for a total of -21 million euros, mostly related to asset impairment, a net capital gain from the divestment of the companies Sunclear and restructuring charges accounted for in particular in connection with the proposed shutdown of PMMA extruded sheet production at Bernouville (France).

#### 4.1.6.3 COATING SOLUTIONS

(In millions of euros)	2015	2014	Variation
Sales	1,849	1,930	-4.2%
Recurring operating income	72	112	-35.7%
Other income and expenses	(36)	(13)	-
Operating income	36	99	-63.6%
EBITDA	190	203	-6.4%
EBITDA margin	10.3%	10.5%	-

Coating Solutions sales amounted to 1,849 million euros, 4.2% down over 2014. The translation effect was positive at +7.5%, and the purchase of a stake in Taixing Sunke Chemicals in China resulted in a +3.6% scope effect. A -1.4% decrease in volumes reflects the caution shown by customers given the high volatility of raw materials and a continuing soft demand in construction and decorative paints in Europe. The -13.9% price effect results from the acrylics cycle and lower raw material costs.

Thanks to its solid downstream integration, Coating Solutions overall held up well despite a low cycle environment in acrylic monomers with 190 million euros EBITDA, close to the 203 million euros achieved in 2014, and an EBITDA margin just above 10% like the previous year. The division benefited from new developments at Coatex and in coating resins, a good control of costs, as well as the positive impact of currencies. These elements offset to a large extent the level of margins in acrylic monomers. In this business, which accounts for 10% of the Group's sales, unit margins were at low cycle levels, particularly in Asia. Against this background, the Group decided not to exercise the option

to significantly increase its rights to acrylic acid capacity as part of the Taixing Sunke Chemicals joint venture which owns and operates acrylic acid and butyl acrylate production plants at Taixing in China, as the financial conditions for exercising the option no longer reflected the market conditions prevailing in Asia in this activity. Over 2016, unit margins overall for acrylic monomers should remain close to current levels for the first part of the year but could start to gradually improve towards the end of the year.

Recurring operating income reached 72 million euros and includes 118 million euros depreciation and amortization, up over 2014 (91 million euros) due mostly to the purchase of a stake in Taixing Sunke Chemicals and the impact of currencies.

Operating income stood at 36 million euros against 99 million euros in 2014 and includes other expenses and income amounting to -36 million euros corresponding in particular to restructuring charges accounted for at the time of the announcement of the project to shutdown coating resin production at Villers-Saint-Paul (France).

#### 4.1.7 Balance sheet analysis

(In millions of euros)	31/12/2015	31/12/2014	Variation
Non-current assets (1)	5,399	3,607	+49.7%
Working capital	1,067	958	+11.4%
Capital employed	6,466	4,565	+41.6%
Deferred tax assets	193	76	-
Provisions for pensions and employee benefits	571	456	+25.2%
Other provisions	407	361	+12.7%
Total provisions	978	817	+19.7%
Long-term assets covering some provisions	71	66	+7.6%
Total provisions net of non-current assets	907	751	+20.8%
Deferred tax liabilities	307	57	-
Net debt	1,379	154	-
Shareholders' equity	3,949	3,573	+10.5%

(1) Excluding deferred tax and including pension assets.

Between 31 December 2014 and 31 December 2015, noncurrent assets increased by 1,792 million euros. This variation was due primarily to:

- 1,692 million euros resulting from the integration of Bostik assets (amount as at the date of integration within the Group, namely 2 February 2015), including a final goodwill of 599 million euros;
- 431 million euros intangible assets and property, plant, and equipment additions excluding capital expenditure related to portfolio management operations. Capital expenditure related to portfolio management totalled 62 million euros corresponding mainly to the acquisition by the Taixing Sunke Chemicals joint venture of a third acrylic acid production line with an increase in fixed assets payables and consequently no impact on the net debt at 31 December 2015. In 2015,

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capital expenditure <sup>(1)</sup> represented 5.6% of the Group sales, significantly down over 2014 (7.9%) and in line with the Group's ambition to reduce its capital intensity;

- net depreciation and amortization amounting 568 million euros including (i) 92 million euros impairments relating to part of the goodwill from the acquisition of the company Hebei Casda, to the assets of the company MLPC International, and to various restructuring projects, and (ii) 35 million euros depreciation and amortization related to the revaluation of tangible and intangible fixed assets recognized as part of Bostik purchase price allocation; and
- a 155 million euros positive currency effect related to the strengthening of the US dollar versus the euro at year end.

At 31 December 2015, working capital increased by 109 million euros compared to 31 December 2014, including (i) +34 million euros relating to the currency effect given the strengthening of the US dollar versus the euro at 31 December 2015 compared to 31 December 2014 and (ii) +316 million euros corresponding to Bostik's working capital acquired beginning February 2015, as at the date of its integration within the Group. These items were offset to a large extent by the impact of lower prices of some raw materials and the optimization drive conducted in several activities. Working capital also includes 54 million euros fixed asset payable as at 31 December 2015 relating to the transfer to the Taixing Sunke Chemicals joint venture in China of a third acrylic acid production line. Excluding this latter amount, the working capital over annual proforma sales (2) ratio stood at 14.6% against 16.1% at 31 December 2014.

Consequently, between 31 December 2014 and 31 December 2015 the Group's capital employed increased by 1,901 million euros to 6,466 million euros at 31 December 2015. In 2015, the breakdown of capital employed by division (excluding corporate) was as follows: 53% for High Performance Materials, significantly up on the previous year given the integration of Bostik beginning 2015 (32% in 2014), 27% for Industrial Specialties (39% in 2014), and 20% for Coating Solutions (29% in 2014). The breakdown of capital employed by region was as follows: the share of Asia and the rest of the world stood at 23% (26% in 2014), the share of North America remained stable at 26%, and the share of Europe stood at 51% against 48% in 2014.

Deferred tax assets amounted to 193 million euros at 31 December 2015, 117 million euros up on 31 December 2014, including +60 million euros related to the recognition of deferred tax assets in France, given the Group's tax position in this country, accounted for as part of the Bostik purchase price allocation. Most of the remainder of the variation was due to the integration of Bostik.

At 31 December 2015, gross provisions amounted to 978 million euros. Some of these provisions, accounting for a total of 71 million euros at 31 December 2015, are mostly covered by the guarantee facility granted by Total and described in note 30.2 of

the notes to the consolidated financial statements at 31 December 2015 (section 4.3.3 of this reference document) and therefore by long term assets recognized on the balance sheet. These consist mainly of provisions related to former industrial sites in the United States. Accordingly, at 31 December 2015, provisions net of these non-current assets amounted to 907 million euros against 751 million euros at 31 December 2014.

The breakdown of net provisions by type was as follows: pension liabilities of 388 million euros (348 million euros in 2014), other employee benefit obligations of 183 million euros (107 million euros in 2014), environmental contingencies of 134 million euros (125 million euros in 2014), restructuring provisions of 51 million euros (55 million euros in 2014), and other provisions of 151 million euros (116 million euros in 2014).

Between 31 December 2014 and 31 December 2015, net provisions for pension liabilities and other employee benefit obligations (mainly healthcare costs, welfare costs, long-service awards) increased by 115 million euros. This variation is due essentially to (i) the integration of Bostik totalling 177 million euros as at the date of the integration, (ii) a higher discount rate and a revaluation of financial assets over the period which resulted in a 55 million euros reduction in the amount of provisions, (iii) an 18 million euros positive currency impact, and (iv) a 21 million euros provision reversal recognized as part of the closure, and in certain cases the transfer to external management, of defined benefit pension schemes at Bostik entities. The other net provisions increased by 40 million euros over the same period, due primarily to the Bostik integration.

Long-term deferred tax liabilities amounted to 307 million euros at 31 December 2015, 250 million euros up on 31 December 2014. This increase mostly corresponds to the deferred tax liabilities accounted for as part of Bostik purchase price allocation.

Net debt amounted to 1,379 million euros at 31 December 2015 (against 154 million euros at 31 December 2014), i.e. 34.9% gearing. It has dropped significantly since the acquisition of Bostik finalized in first quarter 2015. The variation can be explained by cash flows, as detailed in paragraph 4.1.9 of this reference document.

Shareholders' equity amounted to 3,949 million euros against 3,573 million euros at end 2014. The 376 million euros increase primarily includes (i) the payment of a dividend of 1.85 euro per share totalling 135 million euros, (ii) 33 million euros interests paid in relation to the 700 million euros hybrid bond issued as part of the financing of Bostik acquisition and accounted for under item "Dividends paid", (iii) a share capital increase conducted as part of the option for the payment of the dividend in shares amounting to 88 million euros, (iv) 288 million euros net income for the year, (v) 116 million euros net positive currency translation adjustments, and (vi) a 47 million euros variation in actuarial differences on pension provisions recognized in net equity, net of deferred tax.

<sup>(1)</sup> Excluding investments related to portfolio management operations.

<sup>(2) 2015</sup> sales + sales generated by Bostik in January 2015 – sales generated by Sunclear companies over the first nine months of 2015 + sales generated by Oxido over the first two months of 2015.

#### 4.1.8 Financing resources

## 4.1.8.1 BORROWING TERMS AND CONDITIONS AND FINANCING STRUCTURE OF THE GROUP

The Group has diversified financing resources including bond issues, multicurrency credit facilities and a commercial paper programme, as detailed below. At the date of this reference document and without taking into account the issue of perpetual hybrid bonds completed on 29 October 2014 and classified as equity, these resources amounted to some 2,700 million euros.

#### **Bond** issues

As part of the Group's long-term financing policy aimed at diversifying its financing resources as well as extending the maturity of its debt, the Company conducted the following five bond issues:

- on 25 October 2010, an initial bond issue for 500 million euros over seven years and with a 4% annual interest rate;
- on 26 April 2012, a bond issue for 230 million euros over eight years and with a 3.85% interest rate and on 5 October 2012, the issue of an additional 250 million euros tranche, bringing the total of the bond issue to 480 million euros;
- on 6 December 2013, a bond issue for 150 million euros over ten years with a 3.125% interest rate; and
- on 20 January 2015, a bond issue for 700 million euros with a 1.5% interest rate.

The documentation for the first two bond issues was filed with the AMF (*Autorité des marchés financiers*) on 22 October 2010, under no. 10-380, and, on 5 October 2012, under no. 12-478 respectively.

The 2013 and 2015 bond issues were part of the Euro Medium Term Notes ("EMTN") program put in place by the Group in 2013 in order to gain easier access to the bond markets and renewed in December 2014. The documentation for this program and for its renewal was filed with the AMF under no. 13-535 on 9 October 2013 and under no. 14-664 on 19 December 2014 respectively. The documentation includes usual bond default cases, in particular non-payment, early repayment consecutive to non-payment, collective proceedings, or cessation of activity of the issuer or a major subsidiary. These default cases may be conditional upon thresholds being exceeded or the expiry of grace periods.

Furthermore, all four bond issues are accompanied by an early repayment option at bondholders' request in the event of a change of control of Arkema also involving a downgrading of its credit rating to non investment grade, or a simple downgrading thereof if it was non investment grade prior to the change of control.

Finally, the documentation for the 2010 and 2012 bond issues includes an interest rate adjustment clause in the event of a downgrading of the Group's credit rating to non investment grade.

The Company also conducted, for the purpose of financing the acquisition of Bostik, the issuance on 29 October 2014 of perpetual hybrid bonds for 700 million euros. These bonds entail an initial early repayment call option on 29 October 2020 and carry an annual coupon of 4.75% until that date. The coupon will then be reset every 5 years. These bonds are subordinated to any senior debt and are recognized in equity in accordance with IFRS rules. They are treated as equity for 50% of their amount by rating agencies Standard and Poor's and Moody's, which have rated them BB+ and Ba1 respectively. The prospectus for this issue was filed with the AMF on 27 October 2014 under no. 14-574.

Further details may be found in the EMTN programme base prospectus and in the four above-mentioned prospectuses, all five being available on the Company's website (www.finance.arkema.com) in the "Financials / Debt" section.

#### Revolving multi-currency credit facility for 900 million euros

On 29 October 2014, the Company and Arkema France (the **Borrowers**) and a syndicate of banks signed a revolving multicurrency credit facility in the maximum amount of 900 million euros which can be used in renewable drawings. This credit facility is for an initial period of 5 years and may be extended for a further one or two years at the banks' option (the **Facility**). The banks have exercised in 2015 their option to extend it for one additional year. The purpose of the Facility is to finance, in the form of drawings and bank guarantees, the Group's general corporate purposes, and serves as a back-up facility for the commercial paper programme. This credit line was not used as at 31 December 2015.

Other Group companies have the possibility to become borrowers under the Facility, in the same capacity as the Company and Arkema France

The Facility provides for early repayment in certain cases, including a change of control over the Company (defined as any person, acting alone or in concert, holding, directly or indirectly, more than one third of the voting rights of the Company). Should this clause be triggered by a lender, it could lead to early repayment and cancellation of the commitments of such lender.

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The Facility contains representations to be made by each Borrower relating, among other things, to the accounts, litigation, or the absence of events of default. Some of these representations have to be reiterated at the time of each utilisation request.

The Facility also contains the standard undertakings for this type of agreement, including:

- information undertakings (mainly accounting and financial information);
- undertakings relating, among other things, to certain restrictions in connection with (but not limited to) the granting of securities, the completion of merger or restructuring transactions, the sale or purchase of assets, and the Group's indebtedness.
   Depending on the case, such restrictions will not apply to ordinary operations or to transactions involving amounts below certain thresholds:
- a financial undertaking: the Company undertakes to maintain a ratio of consolidated net debt to consolidated EBITDA (tested twice a year) equal to or less than 3.5.

The Facility also provides for default cases similar to those described in the documentation of the above-mentioned bond issues.

Lastly, Arkema guarantees on a joint and several basis to the banks the obligations of Arkema France under the terms of the Facility, as well as those of the other borrowers, where applicable. The Facility is not subject to any other personal guarantee or security.

#### Commercial paper programme

The Group put in place in April 2013 a commercial paper programme with a ceiling of 1 billion euros. This programme was not used as at 31 December 2015.

## 4.1.8.2 INFORMATION ON RESTRICTIONS ON THE USE OF CAPITAL THAT HAS SIGNIFICANTLY INFLUENCED OR MAY SIGNIFICANTLY INFLUENCE, DIRECTLY OR INDIRECTLY, THE GROUP'S BUSINESS

Subject to the stipulations of the syndicated facility described above, the Arkema Group has no restrictions on the use of capital that may significantly influence, either directly or indirectly, its business.

## 4.1.8.3 ANTICIPATED SOURCES OF FINANCING FOR FUTURE INVESTMENTS

Given the Group's cash position as at 31 December 2015 and its financing resources described in paragraph 4.1.8.1 of this reference document, the Group considers that it is in a position to finance its future investments, in particular those described in section 1.3 of this reference document.

#### 4.1.9 Group cash flow analysis

(In millions of euros)	2015	2014
Cash flow from operating activities	858	507
Cash flow from investing activities	(1,635)	(670)
Net cash flow	(777)	(163)
Of which:		
Non-recurring items including non-recurring investments	(36)	(184)
Net cash flow from portfolio management	(1,219)	(184)
Recurring cash flow (1)	478	205
Free cash flow (2)	442	21
Cash flow from financing activities	371	928
Variation in cash and cash equivalents	(406)	765

- (1) Net cash flow excluding impact of portfolio management and non-recurring items.
- (2) Net cash flow excluding impact of portfolio management

#### CASH FLOW FROM OPERATING ACTIVITIES

In 2015, cash flow from operating activities amounted to 858 million euros, up by 351 million euros compared to 2014, the strong increase in EBITDA and the significant drop in working capital largely offsetting higher taxes.

This cash flow includes (i) a +127 million euros  $^{(1)}$  variation in working capital reflecting in particular lower costs of some oil-based raw materials, (ii) -201 million euros current income taxes, (iii) -79 million euros cash items in the financial result, (iv) -38 million euros non-recurring items corresponding to restructuring expenses, and (v) -18 million euros non-recurring items related to portfolio management operations.

In 2014, cash flow from operating activities amounted to 507 million euros. It includes (i) -120 million euros current income taxes, (ii) cash items in the financial result of -56 million euros, (iii) -60 million euros non-recurring items mostly corresponding to restructuring expenses and the cash-out of most of the provisions recognized at 31 December 2013 in relation to the exit of the vinyl activities, and (iv) a -13 million euros variation in working capital excluding cash flows related to non-recurring items.

#### CASH FLOW FROM INVESTING ACTIVITIES

Cash flow from investing activities amounted to -1,635 million euros in 2015. It includes primarily:

- 431 million euros intangible assets and property, plant, and equipment additions [2] corresponding to (i) growth projects such as the doubling of specialty molecular sieve production capacity at Honfleur in France in the filtration and adsorption activity, and the construction of a fluorogas 1234 yf production plant in China, (ii) capital expenditure made as part of the "Ambition" project designed to put in place the SAP global information system for the Group's supply chain, and (iii) maintenance, safety and environment capital expenditure; and
- 1,201 million euros net cash outflow recorded with regard to acquisitions and divestments made in the period, corresponding primarily to the acquisition of Bostik and the disposal of the Sunclear companies. This cash outflow includes in particular the price of shares of the companies acquired net of available cash and of expenses and investments related to these acquisitions. The global gross amount cashed-out for the Bostik acquisition was 1,603 million euros.

In 2014, cash flow from investing activities stood at -670 million euros. It included mainly (i) recurring capital expenditure of 346 million euros, (ii) exceptional capital expenditure included

in non-recurring items of 124 million euros corresponding essentially to the last phase of the investments made as part of the construction of a thiochemicals platform in Malaysia, and (iii) the net impact of portfolio management operations for a total amount of -184 million euros finalised in 2014 corresponding mainly to the purchase of a stake in Taixing Sunke Chemicals in acrylics in China and the divestment of coating resins activities in South Africa.

#### RECURRING CASH FLOW AND FREE CASH FLOW

Excluding non-recurring items and portfolio management operations, recurring cash flow stood at 478 million euros in 2015 against 205 million euros in 2014.

Free cash flow, which corresponds to net cash flow excluding the impact of portfolio management, stood at 442 million euros in 2015 against 21 million euros in 2014. This cash flow represents 42% of 2015 EBITDA. This high ratio, above the medium term target of 35%, reflects the good control of capital expenditure and of working capital, the latter also benefiting from the positive impact of lower prices for some raw materials. This performance illustrates the Group's ambition set out at the Capital Markets Day held on 29 June 2015 to increase the EBITDA to cash conversion ratio.

#### **NET GROUP CASH FLOW**

After taking account of the impact of portfolio management, the Group's net cash flow stood at -777 million euros in 2015. In 2014, net cash flow stood at -163 million euros.

#### CASH FLOW FROM FINANCING ACTIVITIES

Cash flow from financing activities amounted to 371 million euros in 2015 against 928 million euros in 2014. This includes the bond issued in January 2015, for a net amount of 691 million euros, as part of the Bostik acquisition. It also includes a dividend of 1.85 euro per share paid for 2014 totalling 135 million euros which gave rise to a payment in new shares in the Company and therefore an 88 million euros share capital increase and a 47 million euros cash payment. It also includes 33 million euros interests due with regard to a hybrid bond, accounted for under item "Dividends paid to shareholders of the parent company". In 2014, it mostly comprised the financing operations conducted as part of the Bostik acquisition.

<sup>(1)</sup> Excluding flows related to non-recurring items totalling + 58 million euros which mostly included a 36 million euros non-cash flow related to the step-up of inventories conducted as part of the Bostik purchase price allocation.

<sup>(2)</sup> Excluding capital expenditure related to portfolio management operations relating mostly to the transfer to the Taixing Sunke Chemicals joint venture of a third acrylic acid production line, corresponding to an increase in accounts payable and with no impact on the net debt at 31 December 2015.

## 4.2 TRENDS AND OUTLOOK

#### **4.2.1** Trends

#### 4.2.1.1 MAIN TRENDS

The business environment in which the Group operates is characterized, at the date of this reference document, by (i) a strong volatility in oil prices that are, in early 2016, much lower than the average in recent years, very low natural gas prices in the United States, electricity and natural gas prices that are significantly down in Europe, prices of main petrochemicals raw materials in the three main regions of the world that overall reflect the drop in oil prices with some exceptions when supply and demand balances are tight, (ii) a US dollar which remains strong versus the euro at a rate comparable to the average of 2015, and volatility in the exchange rates of emerging countries currencies, with the first two items i) and ii) having had, in 2015 and up until now, a positive impact on the Group's results, (iii) a mixed macroeconomic environment by region with slow growth in Europe and more solid growth in North America, (iv) continuing growth in China and in emerging countries albeit at a more moderate pace than in the past which impacts the more capital-intensive businesses, such as acrylic esters and fluorogases, in which new production capacities have started locally in the past few years, thereby increasing the risk of exports of certain products to Europe and North America, (v) additional opportunities related, especially in Asia, to the major sustainable development trends, such as lightweight materials, access to drinking water, development of new energies, and the use of bio-based raw materials, (vi) the tightening of regulations (e.g. REACH regulations in Europe), and (vii) the ongoing productivity drive and repositioning of the Group's main competitors.

In the first quarter 2016, the Group has seen a continuity in these external drivers described above. Moreover, the Group should benefit from the contribution of Bostik for an additional month and of its thiochemicals platform in Malaysia whose contribution was limited in first quarter 2015 following its startup early 2015. In Fluorogases, market conditions should continue to improve gradually. In acrylic monomers, unit margins should remain stable at low levels. Finally, taking into account the current euro versus US dollar exchange rate, the impact of currencies should be limited compared to the same period in the previous year.

At the date of this reference document, there is nothing to indicate that the long-term prospects of the Group's main markets as described in chapter 1 of this reference document might be significantly and durably affected. However, given the uncertainties surrounding changes to the economic environment, to the markets in which the Group is present, to the cost of raw materials and energy, to the exchange rates, and to the continuous developments in the regulatory environment, there is no guarantee that these trends will endure.

## 4.2.1.2 FACTORS LIKELY TO AFFECT THE GROUP'S OUTLOOK

Some of the statements regarding the Group's outlook contained in this reference document are based on the current opinions and assumptions of the Group's executive management. This information is subject to certain risks, both known and unknown, and to uncertainties, one consequence of which might be that actual results, performance or events may differ substantially from such outlook. The various factors that may influence future results include but are not limited to:

- general market and competition-related factors on a global, national or regional scale;
- changes in the competitive, customer, supplier and regulatory environment in which the Group operates;
- fluctuations in raw materials and energy prices;
- the Group's sensitivity to fluctuations in interest rates and in currencies other than the euro, particularly the US dollar and currencies influenced by the US dollar;
- the Group's capacity to introduce new products and to continue to develop its production processes;
- · concentration of customers and of the market;
- risks and uncertainties relating to conducting business in many countries that may in the future be exposed or have recently been exposed to economic or political instability;
- changes in economic and technological trends; and
- potential complaints, costs, commitments or other obligations relating to the environment.

#### 4.2.2 Outlook

The current macro-economic environment remains characterized by a moderate worldwide growth and low visibility with contrasted dynamics by region and volatility in currencies, energy and raw material prices.

In this contrasted environment, Arkema will continue to focus on its internal drivers. The Group will continue to develop Bostik and implement synergies in line with its ambition and the medium and long term targets set for this business. The Group will also pursue its plan to gradually improve its fluorogas business and the rampup of its thiochemicals platform in Malaysia with a contribution in 2016 which will benefit from one additional quarter. Finally, the ongoing roll-out of operational excellence initiatives will help offset part of the impact of inflation on fixed costs.

Based on these drivers and assuming energy cost and currencies in line with current levels, the Group is confident in its ability to grow EBITDA in 2016.

For the medium term, in normalized market conditions, the Group aims to generate 1.3 billion euros EBITDA in 2017 versus 784 million euros in 2014. The underlying assumptions for this target were presented at the Capital Markets Day held in June 2015. Hence, this target is based on:

- (i) the expected contribution from a number of major projects for a total amount of 180 million euros in additional EBITDA in 2017 compared to 2014. These projects primarily entail the ramp-up of the thiochemicals platform in Malaysia, Bostik's organic growth amounting to some 50 million euros, the benefit of internal measures taken to improve the profitability of Fluorogases representing around 40 million euros, the development of applications for petrochemicals in the filtration and adsorption business, and the benefits of the investment plan finalized in Acrylics in North America in 2014. In addition, organic growth in other product lines and the benefits of the operational excellence program, which should generate a total of 100 million euros in fixed and variable costs savings over the period 2015 to 2017, should help offset the impact of inflation on fixed costs;
- (ii) the impact of portfolio management which should represent a net EBITDA contribution of some 190 million euros. This amount includes the initial contribution of Bostik, acquired in early February 2015, of 158 million euros (corresponding to the EBITDA generated by Bostik in 2014) and the full-year contribution in mid-cycle conditions of one acrylic acid line representing 160,000 tonnes of production capacity in China. It also included the contribution of a second acrylic acid line in China for which the Group had an option allowing it to access this additional capacity until early 2016. Taking into account market conditions in acrylics in China, the Group has decided not to exercise this option. The Group could however allocate an equivalent amount to make bolt-on acquisitions in High Performance Materials, notably in adhesives. It also takes account of the expected impact of the divestment program

which should entail the divestment of non-core businesses accounting for overall sales of some 700 million euros by end 2017. As part of this program, the Group finalized in November 2015 the divestment of Sunclear, representing sales of some 180 million euros;

(iii) certain assumptions reflecting a normalized economic environment and representing an expected net EBITDA contribution of some 150 million euros. Hence, the Group has assumed a return to mid-cycle market conditions in Acrylics, a gradual improvement in fluorogases prices that could represent some 40 million euros EBITDA, a return to normalized market conditions in PMMA, a 1.15 euro versus US dollar exchange rate, and a brent oil price of 70 US dollars per barrel.

Furthermore, in order to maintain a solid balance sheet, the Group has set itself a target to return to gearing of some 40% by end 2017.

Over the longer term, still in the normalized conditions defined in (iii) above, the Group aims to achieve, by 2020, 10 billion euros sales and an EBITDA margin close to 17%, while maintaining a net debt to EBITDA ratio of around 1.5. To achieve these ambitious targets, the Group is implementing a targeted growth strategy detailed in paragraph 1.1.2.2. of this reference document.

The Group has detailed its long-term objectives for each division. Over the longer term, High Performance Materials should thus represent around 50% of Group sales (compared to 44% of 2014 proforma Group sales and 44% of 2015 Group sales), Industrial Specialties 25% (30% of 2014 proforma and 32% of 2015 Group sales) and Coating Solutions 25% (26% of 2014 proforma and 24% of 2015 Group sales). The potential EBITDA margin range between low cycle and peak cycle would stand at between 17 and 18% for High Performance Materials, between 17 and 19% for Industrial Specialties, and between 12 and 18% for Coating Solutions.

From a geographic standpoint, the Group aims to have in the longer term a perfectly balanced breakdown between Europe, North America, and Asia/rest of the world, with one third of its sales in each of these three regions.

The Group notes that the achievement of its objectives is based on assumptions deemed reasonable by the Group, as of the date of this reference document and within this time frame (in particular regarding future development of global demand, conditions relating to raw material and energy costs, balance between supply and demand for products marketed by the Group and their price levels, and currency exchange rates). However, it takes no account of the occurrence, as the case may be, of certain risks described more precisely in section 1.7.2 of this reference document, or any unknown factors related to the economic, financial, competitive or regulatory environment in which the Group operates, which could affect the achievement of its objectives.

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## **4.3** CONSOLIDATED FINANCIAL STATEMENTS

## 4.3.1 Statutory auditors' report on the consolidated financial statements

This is a free translation into English of the statutory auditors' report on the consolidated financial statements issued in French and it is provided solely for the convenience of English-speaking users.

The statutory auditors' report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the consolidated financial statements and includes an explanatory paragraph discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the consolidated financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions or disclosures.

This report also includes information relating to the specific verification of information given in the group's management report.

This report should be read in conjunction with and construed in accordance with French law and professional auditing standards applicable in France.

**KPMG Audit** Département de KPMG S.A.

Tour EQHO 2, avenue Gambetta CS 60055 92066 Paris-La Défense Cedex

Statutory auditors Member of the "compagnie régionale de Versailles"

#### **ERNST & YOUNG Audit**

1/2, place des Saisons 92400 Courbevoie – Paris-La Défense 1 S.A.S. à capital variable

Statutory auditors Member of the "compagnie régionale de Versailles"

#### Arkema

Year ended 31 December 2015

#### Statutory auditors' report on the consolidated financial statements

To the Shareholders,

In compliance with the assignment entrusted to us by your annual general meetings, we hereby report to you, for the year ended 31 December 2015, on:

- the audit of the accompanying consolidated financial statements of Arkema;
- the justification of our assessments;
- the specific verification required by law.

These consolidated financial statements have been approved by the board of directors. Our role is to express an opinion on these consolidated financial statements based on our audit.

#### I. Opinion on the consolidated financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. An audit also includes evaluating the appropriateness of accounting

policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the consolidated financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the consolidated financial statements give a true and fair view of the assets and liabilities and of the financial position of the group as at 31 December 2015 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards as adopted by the European Union.

#### II. Justification of our assessments

In accordance with the requirements of article L. 823-9 of the French commercial code (*Code de commerce*) relating to the justification of our assessments, we bring to your attention the following matters:

- Each year, the group tests its tangible and intangible assets for impairment following the methodology described in note 6 of chapter B "Accounting policies" to the consolidated financial statements. We examined the methodology used for these impairment tests together with the underlying data and assumptions used and reviewed the calculations and the sensitivity tests made by the group. We also verified that the disclosures made in note 6 of chapter B of the notes to the consolidated financial statements "Accounting policies", as well as notes 4, 10 and 11 of chapter C "Notes to the consolidated financial statements" provide an appropriate level of information.
- The group books provisions for liabilities notably to cover environmental risks, litigations in respect of competition law and restructuring costs and suspended business activities, following the principles disclosed in note 10 of chapter B "Accounting policies" to the consolidated financial statements. On the basis of available information, our work consisted in analyzing the procedures used by management to identify and measure risks subject to these provisions and in examining the data and assumptions underlying the estimates provided by the group to support such provisions, including some correspondence with lawyers, in order to assess their reasonableness. We also verified that the disclosures in note 4 regarding other income and expenses, in notes 20.2, 20.3, 20.4 and 20.5 regarding other provisions, in notes 21.1, 21.2.2 and 21.2.4 regarding contingent liabilities, and in notes 30.1, 30.2.1 and 30.2.2 regarding commitments granted and received, of chapter C "Notes to the consolidated financial statements" provide an appropriate level of information.
- The group books provisions to cover its employee pensions and other post-employment benefit liabilities using the method described in note 9 of chapter B "Accounting policies" to the consolidated financial statements. These liabilities were measured by independent actuaries. We examined the underlying data and assumptions used, and verified that the disclosures made in note 9 of chapter B "Accounting policies" and note 19, regarding provisions for pensions and other employee benefits, of chapter C "Notes to the consolidated financial statements" provide an appropriate level of information.

These assessments were made as part of our audit of the consolidated financial statements taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

#### III. Specific verification

As required by law we have also verified, in accordance with professional standards applicable in France, the information presented in the group's management report.

We have no matters to report as to its fair presentation and its consistency with the consolidated financial statements.

Paris-La Défense, 2 March 2016 The statutory auditors French original signed by

KPMG Audit Département de KPMG S.A. **ERNST & YOUNG Audit** 

Jacques-François Lethu

François Quédiniac

Denis Thibon

### 4.3.2 Consolidated financial statements at 31 December 2015

#### CONSOLIDATED INCOME STATEMENT

(In millions of euros)	Notes	2015	2014
Sales	(C1&C2)	7,683	5,952
Operating expenses		(6,206)	(4,926)
Research and development expenses	(C3)	(209)	(155)
Selling and administrative expenses		(664)	(424)
Recurring operating income (1)	(C1)	604	447
Other income and expenses (1)	(C4)	(116)	(83)
Operating income (1)	(C1)	488	364
Equity in income of affiliates	(C12)	10	1
Financial result	(C5)	(92)	(74)
Income taxes	(C7)	(118)	(120)
Net income		288	171
Of which: non-controlling interests		3	4
Net income - Group share	(C6)	285	167
Earnings per share (amount in euros) (2)	(C9)	3.87	2.53
Diluted earnings per share (amount in euros) (2)	(C9)	3.85	2.51
Depreciation and amortization	(C1)	(453)	(337)
EBITDA (1)	(C1)	1,057	784
Adjusted net income (1) (3)	(C6)	312	246
Adjusted earnings per share (amount in euros) (2)	(C9)	4.23	3.72
Diluted adjusted earnings per share (amount in euros) (2)	(C9)	4.22	3.70

<sup>(1)</sup> See note B17 "Main accounting and financial indicators".

The accounting policies applied in preparing the consolidated financial statements at 31 December 2015 are identical to those used in the consolidated financial statements at 31 December 2014, except for the policies described at the start of note B "Accounting policies".

<sup>(2)</sup> The weighted average number of shares in circulation used to calculate earnings per share has been restated to reflect the dividend distributed in shares during 2015.

<sup>(3)</sup> The adjusted net income for 2014 has been restated to reflect the unrealized exchange difference on foreign currency financing for investments of an exceptional nature.

#### CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

(In millions of euros)	Notes	2015	2014
Net income		288	171
Hedging adjustments	(C24)	(8)	(6)
Other items		1	(4)
Deferred taxes on hedging adjustments and other items		1	1
Change in translation adjustments		119	172
Other recyclable comprehensive income		113	163
Actuarial gains and losses	(C19)	60	(89)
Deferred taxes on actuarial gains and losses		(14)	21
Other non-recyclable comprehensive income		46	(68)
TOTAL INCOME AND EXPENSES RECOGNIZED DIRECTLY THROUGH EQUITY		159	95
Comprehensive income		447	266
Of which: non-controlling interests		6	5
Comprehensive income – Group share		441	261

#### CONSOLIDATED BALANCE SHEET

(In millions of euros)	Notes	31 December 2015	31 December 2014
ASSETS			
Intangible assets, net	(C10)	2,410	1,094
Property, plant and equipment, net	(C11)	2,727	2,272
Equity affiliates: investments and loans	(C12)	29	18
Other investments	(C13)	29	33
Deferred tax assets	(C7)	193	76
Other non-current assets	(C14)	204	190
TOTAL NON-CURRENT ASSETS		5,592	3,683
Inventories	(C15)	1,129	977
Accounts receivable	(C16)	1,051	839
Other receivables and prepaid expenses	(C16)	190	137
Income taxes recoverable	(C7)	33	27
Other current financial assets	(C24)	15	2
Cash and cash equivalents	(C17)	711	1,149
TOTAL CURRENT ASSETS		3,129	3,131
TOTAL ASSETS		8,721	6,814
LIABILITIES AND SHAREHOLDERS' EQUITY			
Share capital		745	728
Paid-in surplus and retained earnings		2,864	2,626
Treasury shares		(3)	(3)
Translation adjustments		294	178
SHAREHOLDERS' EQUITY - GROUP SHARE	(C18)	3,900	3,529
Non-controlling interests		49	44
TOTAL SHAREHOLDERS' EQUITY		3,949	3,573
Deferred tax liabilities	(C7)	307	57
Provisions for pensions and other employee benefits	(C19)	571	456
Other provisions and non-current liabilities	(C20)	453	401
Non-current debt	(C22)	1,873	1,196
TOTAL NON-CURRENT LIABILITIES		3,204	2,110
Accounts payable	(C25)	884	704
Other creditors and accrued liabilities	(C25)	378	274
Income taxes payable	(C7)	68	33
Other current financial liabilities	(C24)	21	13
Current debt	(C22)	217	107
TOTAL CURRENT LIABILITIES		1,568	1,131
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY		8,721	6,814

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#### CONSOLIDATED CASH FLOW STATEMENT

n de C	AL.	0015	0014
(In millions of euros)	Notes	2015	2014
Net income		288	171
Depreciation, amortization and impairment of assets		568	351
Provisions, valuation allowances and deferred taxes		(102)	(54)
(Gains)/losses on sales of assets		(82)	4
Undistributed affiliate equity earnings		(9)	6
Change in working capital	(C29)	186	21
Other changes		9	8
Cash flow from operating activities		858	507
Intangible assets and property, plant, and equipment additions		(493)	(470)
Change in fixed asset payables		47	(16)
Acquisitions of operations, net of cash acquired	(C8)	(1,292)	(189)
Increase in long-term loans		(46)	(53)
Total expenditures		(1,784)	(728)
Proceeds from sale of intangible assets and property, plant, and equipmen	t	9	8
Change in fixed asset receivables		1	-
Proceeds from sale of operations, net of cash sold		101	-
Proceeds from sale of unconsolidated investments		0	15
Repayment of long-term loans		38	35
Total divestitures		149	58
Cash flow from investing activities		(1,635)	(670)
Issuance (repayment) of shares and other equity	(C18.1)	96	378
Issuance of hybrid bonds	(C18.2)	0	689
Purchase of treasury shares	(C18.3)	(7)	(2)
Dividends paid to parent company shareholders	(C18.2 & C18.4)	(168)	(117)
Dividends paid to non-controlling interests		(3)	(5)
Increase / decrease in long-term debt		446	(15)
Increase / decrease in short-term borrowings and bank overdrafts		7	-
Cash flow from financing activities		371	928
Net increase/(decrease) in cash and cash equivalents		(406)	765
Effect of exchange rates and changes in scope		(32)	7
Cash and cash equivalents at beginning of period		1,149	377
CASH AND CASH EQUIVALENTS AT END OF PERIOD		711	1,149

#### CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

	Share	Paid-in	Hybrid	Retained	Translation	Treasury	Shareholders' equity –	Non-controlling	Sharoholdors'
(In millions of euros)	capital	surplus	bonds		adjustments	shares		interests	
At 1 January 2014	630	868	-	819	7	(12)	2,312	37	2,349
Cash dividend	-	(55)	-	(62)	-	-	(117)	(5)	(122)
Issuance of share capital	98	280	-	-	-	-	378	-	378
Purchase of treasury shares	-	-	-	-	-	(2)	(2)	-	(2)
Grants of treasury shares to employees	-	14	-	(25)	-	11	-	-	-
Share-based payments	-	(14)	-	21	-	-	7	-	7
Other	-	-	689	1	-	-	690	7	697
Transactions with shareholders	98	225	689	(65)	-	9	956	2	958
Net income	-	-	-	167	-	-	167	4	171
Total income and expenses recognized directly through equity	-	-	_	(77)	171	-	94	1	95
Comprehensive income	-	-	-	90	171	-	261	5	266
At 31 December 2014	728	1,093	689	844	178	(3)	3,529	44	3,573

(In millions of euros)	Share capital	Paid-in surplus	Hybrid bonds	Retained earnings	Translation adjustments	Treasury shares		Non-controlling interests	Shareholders' equity
At 1 January 2015	728	1,093	689	844	178	(3)	3,529	44	3,573
Dividend paid	-	-	-	(168)	-	-	(168)	(3)	(171)
Issuance of share capital	17	79	-	-		-	96	-	96
Purchase of treasury shares	-	-	-	-	-	(7)	(7)	-	(7)
Grants of treasury shares to employees	-	-	-	(7)	-	7	-	-	-
Share-based payments	-	-	-	7	-	-	7	-	7
Other	-	-	-	2	-	-	2	2	4
Transactions with shareholders	17	79	-	(166)	-	-	(70)	(1)	(71)
Net income	-	-	-	285	-	-	285	3	288
Total income and expenses recognized directly through equity	-	-	-	40	116	-	156	3	159
Comprehensive income	-	-	-	325	116	-	441	6	447
At 31 December 2015	745	1,172	689	1,003	294	(3)	3,900	49	3,949

## 4.3.3 Notes to the consolidated financial statements

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#### A. Highlights

#### PORTFOLIO MANAGEMENT

#### **Acquisition of Bostik**

On 2 February 2015 the Arkema Group completed the acquisition of Bostik, which is a new Business Line <sup>(1)</sup> in the High Performance Materials segment. The final stage of financing for this operation took place on 13 January 2015 through issuance of a 700 million euros bond with a 10-year maturity and a fixed 1.50% annual coupon.

#### Acquisition of acrylic assets in China

On 17 February 2015, the Arkema Group and Jurong Chemical announced that they had reached a new agreement extending until January 2016 the exercise period for the Arkema Group's option to increase its share in Taixing Sunke Chemicals, the production joint venture that holds the acrylic assets at the Taixing site in China. During the extended period, the joint venture was operated jointly by the two partners.

On 29 January 2016 the Arkema Group announced that it had decided not to exercise this option, as its financial terms no longer reflect current market conditions for acrylics in China. Jurong Chemical could therefore dilute the Arkema Group's investment in Taixing Sunke Chemicals; if it does so, the joint venture will continue to be accounted for as a joint operation.

#### Disposals

On 12 November 2015 the Arkema Group finalized the disposal of the three Sunclear companies that were part of the PMMA Business Line for an enterprise value of 105 million euros. These companies report annual sales of some 180 million euros.

#### Other operations

In the High Performance Materials segment, on 2 March 2015 the Arkema Group finalized the acquisition of Oxido, which specializes in the formulation of organic peroxides used in crosslinking of synthetic rubbers, and generates sales of some 20 million euros.

#### 2. ORGANIC GROWTH

Early in 2015 the Arkema Group started up its Thiochemicals plant in Malaysia. This new world-scale unit, which represented an investment of some 200 million euros, strengthens the Group's position as world leader in high value-added sulphur intermediates, and will contribute to its development in a fast-growing region, particularly on the animal feed, petrochemicals and refining markets. In the final three quarters of 2015 the Group benefited from a speedy ramp-up on this new production platform.

#### IMPROVING COMPETITIVENESS

During the first half of 2015, the Group announced that it was planning to discontinue coatings resins production at its Villers-Saint-Paul site in France and extruded acrylic sheet manufacturing at the Altuglas site at Bernouville in France.

As a result of these announcements, exceptional expenses and asset impairment were recognized in other income and expenses (see note C4 "Other income and expenses").

#### 4. OTHER HIGHLIGHTS

On 2 June 2015 the combined general meeting of Arkema's shareholders approved the distribution of a 1.85 euro dividend per share in respect of the 2014 financial year. Each shareholder could elect to receive payment of the entire dividend either in cash or in new Arkema shares. 1,430,888 new shares were issued and the cash dividend payable to shareholders who did not elect to receive the dividend in shares amounted to 47 million euros (see note C18 "Shareholders' equity").

In the arbitration proceedings initiated by the Klesch group against Arkema France in March 2013, a decision was issued by the International Chamber of Commerce Court of Arbitration (see note C21.2.4 "Other litigation").

(1) See note C1, "Information by business segment".

#### **B.** Accounting policies

Arkema is a French limited liability company (société anonyme) with a Board of Directors, subject to the provisions of book II of the French Commercial Code and all other legal provisions applicable to French commercial companies.

The Company's head office is at 420 rue d'Estienne d'Orves, 92700 Colombes (France). It was incorporated on 31 January 2003 and the shares of Arkema have been listed on the Paris stock exchange (Euronext) since 18 May 2006.

The Group's consolidated financial statements at 31 December 2015 were prepared under the responsibility of the Chairman and CEO of Arkema and were approved by the Board of Directors of

Arkema on 2 March 2016. They will be submitted to the approval of the shareholders' general meeting of 7 June 2016.

The consolidated financial statements at 31 December 2015 were prepared in accordance with the international accounting standards issued by the IASB (International Accounting Standards Board) as released at 31 December 2015 and the international standards endorsed by the European Union at 31 December 2015.

The accounting framework and standards adopted by the European Commission can be accessed from the following website: http://ec.europa.eu/internal\_market/accounting/ias/index\_en.htm.

The accounting policies applied in preparing the consolidated financial statements at 31 December 2015 are identical to those used in the consolidated financial statements at 31 December 2014, except for IFRS standards, amendments and interpretations, as adopted by the European Union and the IASB, that are obligatorily applicable for accounting periods commencing on or after 1 January 2015 (and which had not been applied early by the Group), namely:

IFRIC 21	Levies	Adopted by the European Union on 14 June 2014		
	Annual improvements to IFRS cycle 2011-2013	Adopted by the European Union on 19 December 2014		

The standards, amendments and interpretations published by the IASB and the IFRS IC (IFRS Interpretations Committee) which were not yet in force for years beginning on or after 1 January 2015 and have not been applied early by the Group, are:

Amendments to IAS 1	Presentation of financial statements	Adopted by the European Union on 19 December 2015		
Amendments to IAS 16 and IAS 38	Clarification of acceptable methods of depreciation and amortization	Adopted by the European Union on 3 December 2015		
Amendments to IAS 19	Defined benefit plans: employee contributions	Adopted by the European Union on 9 January 2015		
Amendments à IAS 27	Equity method in separate financial statements	Adopted by the European Union on 23 December 2015		
Amendments to IFRS 9 and IFRS 7	Mandatory effective date and transition disclosures	Not adopted by the European Union at 31 December 2015		
Amendments to IFRS 9	Hedge accounting and amendments to IFRS 9, IFRS 7 and IAS $39$	Not adopted by the European Union at 31 December 2015		
Amendments to IFRS 10 and IAS 28	Sale or contribution of assets between an investor and its associate/joint venture	Not adopted by the European Union at 31 December 2015		
Amendments to IFRS 10, IFRS 12 and IAS 28	Investment Entities: Applying the Consolidation exception	Not adopted by the European Union at 31 December 2015		
Amendments to IFRS 11	Accounting for acquisitions of interests in joint operations	Adopted by the European Union at 25 November 2015		
Amendments to IFRS 15	Effective Date of IFRS 15: 01/01/2018	Not adopted by the European Union at 31 December 2015		
IFRS 9	Financial instruments	Not adopted by the European Union at 31 December 2015		
IFRS 14	Regulatory deferral accounts	Not adopted by the European Union at 31 December 2015		
IFRS 15	Revenue from contracts with customers	Not adopted by the European Union at 31 December 2015		
	Annual improvements to IFRS cycle 2010-2012	Adopted by the European Union on 9 January 2015		
	Annual improvements to IFRS cycle 2012-2014	Adopted by the European Union on 16 December 2015		

Preparation of consolidated financial statements in accordance with IFRS requires Group management to make estimates and retain assumptions that can have an impact on the amounts recognized in assets and liabilities at the balance sheet date, and have a corresponding impact on the income statement. Management made its estimates and determined its assumptions on the basis of past experience and taking into account different factors considered to be reasonable for the valuation of assets and liabilities. Use of different assumptions could have a material effect on these valuations. The main assumptions made by management in preparing the financial statements are those used for measuring the recoverable value of property, plant and equipment and intangible assets, pension benefit obligations, deferred taxes and provisions. The disclosures provided concerning contingent assets and liabilities and off-balance sheet commitments at the date of preparation of the consolidated financial statements also involve the use of estimates.

The consolidated financial statements are prepared in accordance with the historical cost convention, except for certain financial assets and liabilities which are recognized at fair value.

The consolidated financial statements are presented in millions of euros, rounded to the nearest million, unless otherwise indicated.

The principal accounting policies applied by the Group are presented below.

#### CONSOLIDATION PRINCIPLES

All material transactions between consolidated companies, and all intercompany profits, have been eliminated.

#### 1.1 Control and joint control

The Group controls an entity when all of the three following conditions are fulfilled:

- the Group holds power over the entity (has effective rights conferring a current ability to direct the entity's relevant activities);
- (ii) the Group is exposed or entitled to variable returns;
- (iii) the Group has the ability to use its power over the investee to influence the amount of the returns received.

Joint control is the contractually agreed sharing of control over an arrangement. It exists only when the decisions about the relevant activities require the unanimous consent of the parties sharing control.

#### 1.2 Full consolidation

Companies controlled directly or indirectly by the Group are fully consolidated.

#### 1.3 Joint arrangements

A joint arrangement is an operation over which two or more parties have joint control.

There are two categories of joint arrangements:

- a joint operation is a joint arrangement in which the parties have rights to the assets and obligations for the liabilities. The Group recognizes the assets, liabilities, income and expenses in proportion to its percentage of interest in the capital of the joint operation;
- a joint venture is a joint arrangement in which the parties have rights to the net assets of the arrangement. The Group applies the equity method to this type of joint arrangement.

To determine the type of joint arrangement, the Group must take the following factors into consideration:

- the structure of the joint arrangement (identifying whether it takes the form of a separate vehicle);
- when the joint arrangement takes the form of a separate vehicle: the legal form, the terms of the contractual arrangements and other facts and circumstances.

Assessment of other facts and circumstances has led the Group to classify a certain number of joint arrangements as joint operations.

#### 1.4 Investments in associates

An associate is an entity over which the Group exercises significant influence. If the Group directly or indirectly holds 20% or more of the voting rights in the issuing entity, it is presumed to exercise significant influence. If it holds less than 20%, significant influence must be demonstrated.

Investments in associates are accounted for under the equity method.

#### 1.5 Non-controlling interest

Shares owned in companies which do not meet the criteria set out in 1.1 to 1.4 are included in Other investments and recognized as available-for-sale assets in accordance with IAS 39 (see note B7.1, "Other investments").

#### FOREIGN CURRENCY TRANSLATION

#### 2.1 Translation of financial statements of foreign companies

The functional operating currency of foreign companies in the scope of consolidation is their local currency, in which most of their transactions are denominated. Their balance sheets are translated into euros on the basis of exchange rates at the end of the period; the statements of income and of cash flows are translated using the average exchange rates during the period. Foreign exchange differences resulting from translation of the financial statements of these subsidiaries are recorded either in "Translation adjustments" in shareholders' equity in the consolidated financial statements for the Group share or in "Non-controlling interests" for the share not directly or indirectly attributable to the Group. In exceptional cases the functional currency of a foreign company may differ from its local currency.

#### 2.2 Transactions in foreign currencies

In application of IAS 21 "The effects of changes in foreign exchange rates", transactions denominated in foreign currencies are translated by the entity carrying out the transaction into its functional currency at the exchange rate applicable on the transaction date. Monetary balance sheet items are restated at the closing exchange rate at the balance sheet date. Gains and losses resulting from translation are recognized in recurring operating income, unless they result from unhedged financing, in which case they are included in the financial result.

#### 3. GOODWILL AND BUSINESS COMBINATIONS

#### Operations after 1 January 2010

The Group uses the acquisition method for the recognition of business combinations, in accordance with IFRS 3 (Revised).

The identifiable assets acquired and liabilities assumed are stated at fair value at the acquisition date.

Where the business combination agreement provides for a purchase price adjustment, the Group includes the fair value of this adjustment at the acquisition date in the cost of the business combination, even if the adjustment is optional.

Non-controlling interests are measured at the acquisition date, either at fair value (the full goodwill method) or the NCI's proportionate share of net assets of the entity acquired (the partial goodwill method). The decision of which option to use is made for each business combination. Subsequent acquisitions of investments are always recorded in equity, regardless of the choice made at the time of the acquisition.

At the acquisition date, goodwill is measured as the difference between:

- the acquisition price plus the amount of any non-controlling interests in the acquired entity and the fair value of the acquirer's previously-held equity interest in that acquired entity; and
- the fair value of identifiable assets and liabilities.

Goodwill is recognized in the balance sheet assets. Any negative goodwill arising on an acquisition on favourable terms, and direct acquisition expenses, are recognized immediately in the income statement under "Other income and expenses" (see note B17 "Main accounting and financial indicators").

Contingent liabilities are recognized in the balance sheet when the obligation concerned is current at the acquisition date and their fair value can be reliably measured.

The Group has a maximum of 12 months to finalize determination of the acquisition price and goodwill.

#### Operations prior to 31 December 2009

The Group applied IFRS 3. The main points affected by IFRS 3 (revised) are the following:

- Goodwill was calculated as the difference between the purchase price, as increased by related costs, of shares of consolidated companies and the Group share of the fair value of their net assets and contingent liabilities at the acquisition date;
- for any subsequent acquisition in the same entity, the difference between the acquisition cost and book value of non-controlling interests was included in goodwill;
- price adjustments were included in the cost of the business combination if the adjustment was probable and could be measured reliably;
- contingent liabilities arising from potential obligations were recognized.

#### INTANGIBLE ASSETS

Intangible assets principally include goodwill, patents and technologies, trademarks, software and IT licences, capitalized contracts, leasehold rights, customer relations, and capitalized research expenses. Intangible assets are recognized in the balance sheet at their acquisition or production cost, less any accumulated amortization and impairment losses recognized.

Intangible assets other than goodwill and trademarks with indefinite useful lives are amortized on a straight-line basis over 3 to 20 years depending on the pattern according to which the entity envisages using the future economic benefits related to the asset.

The main categories of intangible assets and the amortization periods applied by the Group are as follows:

- Patents: residual period until expiry of patent protection;
- Technologies: average useful life;
- Softwares: 3 to 10 years;
- Licences: term of the contract;
- Capitalized contracts: term of the contract;
- Customer relations: average useful life;
- Capitalized research expenses: useful life of the project;
- REACH registration fees: protection period of study data.

#### 4.1 Goodwill

Goodwill is not amortized. It is subject to impairment tests as soon as any indicators of potential impairment are identified. Impairment tests are performed at least annually. The methodology used for the performance of impairment tests is described in paragraph B6 "Impairment of long-lived assets".

Goodwill is measured and recognized as described in note B3 "Goodwill and business combinations".

#### 4.2 Trademarks

Trademarks with an indefinite useful life are not amortized and are subject to impairment tests. The methodology used for the performance of impairment tests is described in paragraph B6 "Impairment of long-lived assets".

#### 4.3 Softwares and IT licences

Software development expenses for the design, programming and test phases are capitalized.

Training costs, expenses related to change management, data transfer and subsequent maintenance costs are recorded as expenses.

#### 4.4 Research and development costs

Research costs are recognized in expenses in the period in which they are incurred. Grants received are recognized as a deduction from research costs.

Under IAS 38 "Intangible assets", development costs are capitalized as soon as the Group can demonstrate, in particular:

- its intention and its financial and technical ability to complete the development project;
- that it is probable that future economic benefits attributable to the development costs will flow to the enterprise, which also implies having successfully completed the main non-toxicity studies relating to the new product; and
- that the cost of the asset can be measured reliably.

Grants received in respect of development activities are recognized as a deduction from capitalized development costs if they have been definitively earned by the Group. The Group also receives public financing in the form of repayable advances for the development of certain projects. Repayment of these advances is generally related to the future revenues generated by the development. The Group recognizes these advances in balance sheet liabilities (in the "Other non-current liabilities" caption) taking account of the probability of their repayment.

The Group recognizes the research tax credit as a deduction from operating expenses.

#### 4.5 REACH

As no specific IFRS IC interpretations exist on the subject, the Group applies the following methods based on IAS 38:

- when most of the tests required for preparing the registration file have been acquired from a third party, the Group records an operating right in the intangible assets;
- when most of the expenses involved in preparing the registration file have been carried out internally or outsourced, the Group capitalizes the development costs that meet the requirements for capitalization defined by IAS 38 (see 4.4).

#### PROPERTY, PLANT & EQUIPMENT

#### 5.1 Gross value

The gross value of items of property, plant and equipment corresponds to their acquisition or production cost in accordance with IAS 16 "Property, plant & equipment". Gross value is not subject to revaluation.

Equipment subsidies are deducted directly from the cost of the assets which they financed. With effect from 1 January 2009 and in accordance with the revised version of IAS 23, borrowing costs that are directly attributable to financing tangible assets that necessarily take a substantial period of time to get ready for their intended use or sale are eligible for capitalization as part of the cost of the assets for the portion of the cost incurred over the construction period.

Routine maintenance and repairs are charged to income in the period in which they are incurred. Costs related to major maintenance turnarounds of industrial facilities which take place at intervals greater than 12 months are capitalized at the time they are incurred and depreciated over the period between two such turnarounds.

Fixed assets which are held under finance lease contracts, as defined in IAS 17 "Leases", which have the effect of transferring substantially all the risks and rewards inherent to ownership of the asset from the lessor to the lessee, are capitalized in assets at their market value or at the discounted value of future lease payments if lower (such assets are depreciated using the methods and useful lives described below). The corresponding lease obligation is recorded as a liability. Leases which do not meet the above definition of finance leases are accounted for as operating leases.

#### 5.2 Depreciation

Depreciation is calculated on a straight-line basis on the basis of the acquisition or production cost. Assets are depreciated over their estimated useful lives by category of asset. The principal categories and useful lives are as follows:

Machinery and tools: 5 -10 years;
Transportation equipment: 5 -20 years;
Specialized complex installations: 10 -20 years;
Buildings: 10 -30 years.

These useful lives are reviewed annually and modified if expectations change from the previous estimates. Such changes in accounting estimate are accounted for on a prospective basis.

#### 6. IMPAIRMENT OF LONG-LIVED ASSETS

The recoverable amount of property, plant and equipment and intangible assets is tested as soon as any indication of impairment is identified. A review to identify if any such indication exists is performed at each year-end. An impairment test is performed at least once a year in respect of goodwill and trademarks with indefinite useful lives.

An asset's recoverable amount corresponds to the greater of its value in use and its fair value net of costs of disposal.

Tests are performed for each autonomous group of assets, termed Cash Generating Units (CGUs). A CGU is a group of assets whose continued use generates cash flows that are substantially independent of cash flows generated by other groups of assets. They are worldwide business operations, which bring together groups of similar products in strategic, commercial and industrial terms. For the Arkema Group, the CGUs are the activities (formerly called Business Units) presented in note C1 "Information by business segment". The value in use of a CGU is determined on the basis of the discounted future cash flows that are expected to be generated by the assets in question, based upon Group management's expectation of future economic and operating conditions over the next 5 years or, when the asset is to be sold, by comparison with its market value. In 2015, the terminal value was determined on the basis of a perpetuity annual growth rate of 1.5% (the same rate as used in 2014) and midcycle cash flow. An after-tax rate of 7.5% in 2015 (7% in 2014) is used to discount future cash flows and the terminal value in 2014. Any impairment is calculated as the difference between the recoverable amount and the carrying amount of the CGU. Because of its unusual nature, any such impairment is presented separately in the income statement under the "Other income and expenses" caption. Impairment may be reversed, to the maximum carrying amount that would have been recognized for the asset had the asset not been impaired. Impairment losses on goodwill are irreversible (in application of IFRIC 10, impairment losses on goodwill recognized in previous interim accounting periods cannot be written back).

Sensitivity analyses carried out at 31 December 2015 evaluating the impact of reasonable changes in the basic assumptions, and in particular the impact of a change of plus or minus 1 point in the discount rate and plus or minus 0.5 point in the perpetuity growth rate, have confirmed the carrying amounts of the different CGUs.

#### 7. FINANCIAL ASSETS AND LIABILITIES

Financial assets and liabilities principally comprise:

- other investments;
- loans and financial receivables included in other non-current assets:
- accounts receivable;
- cash and cash equivalents;
- debt and other financial liabilities (including accounts payable);
- derivatives, reported as part of other current assets and liabilities.

#### 7.1 Other investments

These securities are accounted for, in accordance with IAS 39, as available-for-sale assets and are thus recognized at their fair

value. In cases where fair value cannot be reliably determined, the securities are recognized at their historical cost. Changes in fair value are recognized directly through shareholders' equity.

If an objective indicator of impairment in the value of a financial asset is identified, an irreversible impairment loss is recognized, in general through recurring operating income. Such impairment is only reversed via income at the date of disposal of the securities.

#### 7.2 Loans and financial receivables

These financial assets are recognized at amortized cost. They are subject to impairment tests involving a comparison of their carrying amount to the present value of estimated recoverable future cash flows. These tests are carried out as soon as any indicator inferring that the present value of these assets is lower than their carrying amount is identified. As a minimum such tests are performed at each balance sheet date. Any impairment loss is recognized in recurring operating income.

#### 7.3 Accounts receivable

Accounts receivable are initially recognized at their fair value. Subsequent to initial recognition, they are recognized at amortized cost. If required, a bad debt provision is recognized on the basis of the risk of non-recovery of the receivables.

#### 7.4 Cash and cash equivalents

Cash and cash equivalents are liquid assets and assets which can be converted into cash within less than 3 months that are subject to a negligible risk of change in value.

### 7.5 Non-current and current debt (including accounts payable)

Non-current and current debt (other than derivatives) is recognized at amortized cost.

#### 7.6 Derivatives

The Group may use derivatives to manage its exposure to foreign currency risks and risks of changes in the prices of raw materials and energy. Derivatives used by the Group are recognized at their fair value in the balance sheet, in accordance with IAS 39. The fair value of these unlisted derivatives is determined by reference to current prices for contracts with similar maturity. They therefore correspond to the "Level 2" category defined in IFRS 7.

Changes in the fair value of these derivatives are recognized within operating income and, for foreign currency instruments, in financial result for the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the differences between the spot exchange rate and the forward exchange rate, except for those on instruments which are considered to meet the criteria for cash flow hedge accounting or hedge accounting of a net investment in a foreign operation under IAS 39.

For items that qualify for cash flow hedge accounting, the effective portion of the change in fair value is recognized in shareholders' equity under the "Income and expense recognized directly through equity" caption until such time as the underlying hedged item is recognized through the income statement. Any ineffective portion is recognized in operating income.

A hedge of a net investment in a foreign operation hedges the exposure to foreign exchange risk of the net assets of the foreign operation (IAS 21, "The effects of changes in foreign exchange rates"). The effects of this hedge are recorded directly in shareholders' equity under the "Income and expense recognized directly through equity" caption.

#### 8. INVENTORIES

Inventories are valued in the consolidated financial statements at the lower of cost and net realizable value, in accordance with IAS 2 "Inventories". Cost of inventories is generally determined using the weighted average cost (WAC) method.

Cost of manufactured products inventories includes raw material and direct labour costs, and an allocation of production overheads and depreciation based on normal production capacity. Start-up costs and general and administrative costs are excluded from the cost of manufactured products inventories.

The net realizable value is the sale price as estimated for the normal course of business, less estimated costs for completion and sale.

## PROVISIONS FOR PENSIONS AND OTHER LONG-TERM BENEFITS

In accordance with IAS 19 (Revised) "Employee benefits":

- payments made in the context of defined contribution plans are recognized in expenses of the period;
- obligations in respect of defined benefit plans are recognized and valued using the actuarial projected unit credit method.

#### Post-employment benefits

For defined benefit plans, the valuation of obligations under the projected unit credit method principally takes into account:

- an assumption concerning the date of retirement;
- a discount rate which depends on the geographical region and the duration of the obligations;
- an inflation rate;
- assumptions in respect of future increases in salaries, rates of employee turnover and increases in health costs;
- the most recent mortality statistics for the countries concerned.

Returns on plan assets are in line with discount rates.

Differences which arise between the valuation of obligations and forecasts of such obligations (on the basis of new projections or assumptions) and between forecasts and outcomes of returns on plan assets are termed actuarial gains and losses, and are recorded in other non-recyclable comprehensive income.

When a plan is amended or created, the entire past service cost is immediately recognized in the income statement.

A pension asset may be generated where a defined benefit plan is overfunded. The amount at which such an asset is recognized in the balance sheet may be subject to a ceiling, in application of IAS 19.64 and IFRIC 14.

#### Other long-term benefits

In respect of other long-term benefits, and in accordance with applicable laws and regulations, provisions are recognized using a simplified method. Thus, if an actuarial valuation using the projected unit cost method is required, actuarial gains and losses and all past service costs are recognized immediately in the provision, with a corresponding entry being recognized to the income statement.

The net expense related to pension benefit obligations and other employee benefit obligations is recognized in recurring operating income, with the exception of:

- the effect of curtailments or settlements of plans, which are presented under the "Other income and expenses" caption in the case of substantial modifications to such plans;
- the net interest expense and the actuarial gains and losses related to changes in the discount rate on other long-term benefits, which are classified within the financial result caption.

## 10. OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

A provision is recognized when:

- the Group has a legal, regulatory or contractual obligation to a third party resulting from past events. An obligation can also result from Group practices or public commitments that create a reasonable expectation among the third parties in question that the Group will assume certain responsibilities;
- it is certain or probable that the obligation will lead to an outflow of resources to the benefit of the third party;
- its amount can be estimated reliably and corresponds to the best possible estimate of the commitment. In exceptional cases where the amount of the obligation cannot be measured with sufficient reliability, disclosure is made in the notes to the financial statements in respect of the obligation (see note C21 "Liabilities and contingent liabilities").

When it is expected that the Group will obtain partial or total reimbursement of the cost that was provided against, the expected reimbursement is recognized in receivables if, and only if, the Group is virtually certain of the receipt.

Legal expenses required for defence of the Group's interests are covered by a provision when significant.

Long-term provisions, other than provisions for pensions and post-employment benefit obligations, are not inflation-indexed or discounted as the Group considers that the impact of such adjustments would not be significant.

The current (less than one year) portion of provisions is maintained within the "Other provisions and other non-current liabilities" caption.

## 11. GREENHOUSE GAS EMISSIONS ALLOWANCES (EUA) AND CERTIFIED EMISSION REDUCTIONS (CER)

In the absence of an IFRS standard or interpretation relating to accounting for  $CO_2$  emissions allowances, the following treatment has been adopted:

- allowances allocated without payment of consideration are recognized for a nil value;
- transactions carried out in the market are recognized at the transaction amount.

At this point, greenhouse gas emissions allowances (EUA) allocated are adequate to cover the operational needs of the Arkema Group's European entities and a deficit is not currently forecast. The Group does not carry out a trading activity in respect of  $\rm CO_2$  emissions allowances. However, in the normal course of its operations, the Group may carry out cash or forward sales of its surpluses. These sales do not enter into the scope of application of IAS 39 because of the "own use" exception.

The CERs produced by the Group in the context of projects to reduce its greenhouse gas emissions are recognized in inventories, and sales are recorded at their net-of-tax value on delivery of the CERs.

#### 12. RECOGNITION OF SALES

Sales are measured at the fair value of the consideration received or receivable, net of returns, trade discounts and volume rebates. Sales are recognized on transfer to the purchaser of the risks and rewards related to ownership of the goods, which is determined mainly on the basis of the terms and conditions of the sales contracts.

#### 13. INCOME TAXES

#### 13.1 Current taxes

Current taxes are the amount of income taxes that the Group expects to pay in respect of taxable profits of consolidated companies in the period. They also include adjustments to current taxes in respect of prior periods.

The French tax consolidation regime enables certain French companies in the Group to offset their taxable results in determining the tax charge for the entire French tax group. The overall tax charge is payable by Arkema, as the parent company of the tax group. Tax consolidation regimes also exist in countries outside France.

The French Finance Act for 2010 introduced the local tax named CET (*Contribution Economique Territoriale*). One of its components is the contribution based on companies' value added

(Cotisation sur la Valeur Ajoutée des Entreprises – CVAE). After analyzing the methods for determining this contribution in the light of the positions of the IFRS IC and France's Accounting Standards Authority ANC (Autorité des Normes Comptables) in late 2009, the Group considered that in this specific case, the contribution meets the requirements to be treated as a current tax under IAS 12. The CVAE is therefore classified under "Income taxes" from 1 January 2010.

#### 13.2 Deferred taxes

The Group uses the liability method whereby deferred taxes are recognized based upon the temporary differences between the financial statement and tax basis of assets and liabilities, as well as on tax loss carry forwards and other tax credits, in accordance with IAS 12 "Income taxes".

Deferred tax assets and liabilities are valued at the tax rates that are expected to apply in the year in which the asset will be realized or the liability settled, on the basis of tax rates (and tax legislation) that have been enacted or virtually enacted at the balance sheet date. The effect of any changes in tax rates is recognized in income for the period, unless it relates to items that were previously debited or credited through equity. Deferred tax assets and liabilities are not discounted.

Deferred tax assets are recognized to the extent that their recovery is probable. In order to assess the likelihood of recovery of such assets, account is notably taken of the profitability outlook determined by the Group and historical taxable profits or losses.

A deferred tax liability is recognized for all taxable temporary differences related to investments in subsidiaries, associates and joint ventures, unless:

- the Group controls the timing of the reversal of the temporary difference; and
- it is probable that this difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are offset if a legally enforceable right to offset current tax assets and liabilities exists and if they relate to income taxes levied by the same tax authority.

#### 14. CASH FLOW STATEMENTS

Cash flows in foreign currencies are translated into euros using the average exchange rates of each period. Cash flow statements exclude foreign exchange differences arising from the translation into euros of assets and liabilities recognized in balance sheets denominated in foreign currencies at the end of the period (except for cash and cash equivalents). In consequence, cash flows cannot be recalculated on the basis of the amounts shown in the balance sheet.

#### 15. SHARE-BASED PAYMENTS

In application of IFRS 2 "Share-based payments", the stock options and free shares granted to management and certain Group employees are measured at their fair value at the date of grant, which generally corresponds to the date of the Board of Directors' meeting that granted the stock options and free shares.

The fair value of the options is calculated using the Black & Scholes model, adjusted, in the case of plans awarded from 2011, for an illiquidity cost due to the non-transferability of instruments; the expense is recognized in personnel expenses on a straight-line basis over the period from the date of grant to the date from which the options can be exercised.

The fair value of rights under free share grants corresponds to the opening market price of the shares on the day of the Board of Directors' meeting that decides on the grant, adjusted for dividends not received during the vesting period and, in the case of plans awarded from 2011, for an illiquidity cost related to the period of non-transferability. The expense recognized also reflects the probability that the presence condition will be fulfilled. This expense is included in personnel expenses on a straight-line basis over the vesting period of the rights.

#### EARNINGS PER SHARE

Earnings per share corresponds to the division of net income (Group share) by the weighted average number of ordinary shares in circulation since the start of the year.

Diluted earnings per share corresponds to the division of net income (Group share) by the weighted number of ordinary shares, both of these figures being adjusted to take account of the effects of all dilutive potential ordinary shares.

The effect of dilution is thus calculated taking account of stock options and grants of free shares to be issued.

## MAIN ACCOUNTING AND FINANCIAL INDICATORS

The main performance indicators used are as follows:

- Operating income: this includes all income and expenses other than financial result, equity in income of affiliates and income taxes:
- Other income and expenses: these correspond to a limited number of well-identified non-recurring items of income and expense of a particularly material nature that the Group presents separately in its income statement in order to facilitate understanding of its recurring operational performance. These items of income and expense notably include:
  - impairment losses in respect of property, plant and equipment and intangible assets,
  - gains or losses on sale of assets, acquisition costs, negative goodwill on acquisitions on favourable terms and the valuation difference on inventories between their fair value at the acquisition date and their production cost,

- large restructuring and environmental expenses which would hamper the interpretation of recurring operating income (including substantial modifications to employee benefit plans and the effect of onerous contracts),
- expenses related to litigation and claims or major damages, whose nature is not directly related to ordinary operations;
- depreciation and amortization associated with revaluation of identifiable tangible and intangible assets for allocation of the purchase price of Bostik.
- Recurring operating income: this is calculated as the difference between operating income and other income and expenses as previously defined;
- Adjusted net income: this corresponds to "net income Group share" adjusted for the "Group share" of the following items:
  - other income and expenses, after taking account of the tax impact of these items,
  - income and expenses from taxation of an exceptional nature, the amount of which is deemed significant,
  - net income of discontinued operations;
  - unrealized exchange differences on foreign currency financing for investments of an exceptional nature.
- EBITDA: this corresponds to recurring operating income increased by depreciation and amortization;
- Working capital: this corresponds to the difference between inventories, accounts receivable, other receivables and prepaid expenses, income tax receivables and other current financial assets on the one hand and accounts payable, other creditors and accrued liabilities, income tax liabilities and other current financial liabilities on the other hand. These items are classified in current assets and liabilities in the consolidated balance sheet:
- Capital employed: this is calculated by aggregating the net carrying amounts of intangible assets, property, plant and equipment, equity affiliate investments and loans, other investments, other non-current assets (excluding deferred tax assets) and working capital;
- Capital expenditure (CAPEX): investments in tangible and intangible assets, excluding a limited number of investments of an exceptional nature that the Group presents separately in order to facilitate cash flow analysis in its financial reporting. These exceptional investments are unusual in size or nature, and are presented either as non-recurring investments or included in acquisitions and divestments;
- Net debt: this is the difference between current and non-current debt and cash and cash equivalents.

# Notes to the consolidated financial statements

#### Note 1

# INFORMATION BY BUSINESS SEGMENT

As required by IFRS 8, "Operating Segments", segment information for the Group is presented in accordance with the business segments identified in the internal reports that are regularly reviewed by general management in order to allocate resources and assess financial performance.

The Arkema Group has three business segments: High Performance Materials, Industrial Specialties and Coating Solutions. Two members of the Executive Committee supervise these segments; they report directly to the Chairman and CEO, the

Group's chief operating decision-maker as defined by IFRS 8, and are in regular contact with him for the purpose of discussing their sector's operating activity, financial results, forecasts and plans.

As announced in late June 2015, the Group has reorganized its three business segments. The new reporting structure is applied retroactively from 1 January 2015, and the financial information by segment presented in these notes for 2014 has been restated.

Details of changes to the business segments are as follows:

	High Performance Materials	Industrial Specialties	Coating Solutions
Addition	• Sartomer (Performance additives)	<ul> <li>Functional polyolefins (PMMA)</li> <li>Casda (Fluorochemicals)</li> </ul>	Acrylic impact modifiers (Coatings Resins and Additives)
Removal	<ul> <li>Functional polyolefins         (filtration and adsorption)</li> <li>Casda (Technical Polymers)</li> <li>Acrylic impact modifiers         (organic peroxides)</li> </ul>		• Sartomer

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The content of the business segments is as follows:

- High Performance Materials includes the following Business
  - · Specialty Adhesives (Bostik) since completion of the acquisition of Bostik on 2 February 2015,
  - Technical Polymers, comprising specialty polyamides and
  - Performance Additives, comprising the filtration and adsorption (CECA), organic peroxides and photocure resins (Sartomer) activities.

High Performance Materials provide innovative solutions with high value added, used in varied sectors such as transport, oil extraction, renewable energies (photovoltaics, lithium-ion batteries), consumer goods (beauty products, sports equipment, packaging, etc), electronics, construction, coatings and water

 Industrial Specialties groups the following Business Lines: Thiochemicals, Fluorochemicals, PMMA and Hydrogen Peroxide. These integrated industrial niche markets on which the Arkema Group is among the world leaders concern products used in several industrial sectors such as production of cold (refrigeration and air conditioning), petrochemicals, refining, paper pulp, animal nutrition, electronics and the automotive industry.

- Coating Solutions comprises the following Business Lines:
  - Acrylics,
  - Coatings Resins and Additives, comprising the coatings resins and Coatex rheological additives activities (formerly called Business Units).

This segment proposes solutions for decorative paints, industrial coatings, adhesives and high-growth acrylic applications (superabsorbers for disposable nappies, water treatment, oil and gas extraction).

Functional and financial activities which cannot be directly allocated to operational activities (notably certain research costs and central costs) are brought together in a Corporate section.

Operating income and assets are allocated between business segments prior to inter-segment adjustments. Sales prices between segments approximate market prices.

(1) Business Lines are activities (formerly called Business Units) or groups of activities.

	High Performance	Industrial	Coating		
2015 (In millions of euros)	Materials	Specialties	Solutions	Corporate	Total
Non-Group sales	3,358	2,450	1,849	26	7,683
Inter-segment sales	12	121	64	-	
Total sales	3,370	2,571	1,913	26	
EBITDA	506	418	190	(57)	1,057
Depreciation and amortization	(152)	(181)	(118)	(2)	(453)
Recurring operating income	354	237	72	(59)	604
Other income and expenses	(69)	(21)	(36)	10	(116)
Operating income	285	216	36	(49)	488
Equity in income of affiliates	-	10	-	-	10
Intangible assets and property, plant, and equipment additions	167	183	137	6	493
Employees at year end	9,876	5,762	3,168		18,806
Goodwill, net	925	89	298	8	1,320
Intangible assets other than goodwill, and property, plant and equipment, net	1,797	1,202	772	45	3,816
Investments in equity affiliates	8	21	-	-	29
Other investments and other non-current assets	61	60	22	92	235
Working capital*	613	364	167	(78)	1,066
Capital employed*	3,404	1,736	1,259	67	6,466
Provisions and other non-current liabilities	(379)	(289)	(82)	(274)	(1,024)

<sup>\*</sup> See note B17 "Main accounting and financial indicators".

2014 (restated, using the new reporting structure)	High Performance Materials	Industrial Specialties	Coating Solutions	Corporate	Total
Non-Group sales	1,730	2,269	1,930	23	5,952
Inter-segment sales	15	113	77	-	·
Total sales	1,745	2,382	2,007	23	
EBITDA	314	312	203	(45)	784
Depreciation and amortization	(101)	(143)	(91)	(2)	(337)
Recurring operating income	213	169	112	(47)	447
Other income and expenses	(7)	(47)	(13)	(16)	(83)
Operating income	206	122	99	(63)	364
Equity in income of affiliates	1	-	-	-	1
Intangible assets and property, plant, and equipment additions **	112	268	86	4	470
Employees at year end	4,924	6,128	3,083		14,135
Goodwill, net	296	149	295	7	747
Intangible assets other than goodwill, and property, plant and equipment, net	683	1,166	728	42	2,619
Investments in equity affiliates	8	10	-	-	18
Other investments and other non-current assets	47	51	22	103	223
Working capital*	363	329	245	21	958
Capital employed*	1,398	1,705	1,289	173	4,565
Provisions and other non-current liabilities	(200)	(295)	(85)	(277)	(857)

<sup>\*</sup> See note B17 "Main accounting and financial indicators".

\*\* Of which: 346 million euros on recurring capital expenditure at 31 December 2014

Breakdown of non-Group sales by Business Line:

	2015	2014*
High Performance Materials	44%	29%
Technical Polymers	10%	12%
Performance Additives	14%	17%
Speciality Adhesives (Bostik)	20%	0%
Industrial Specialties	32%	38%
Thiochemicals	9%	10%
Fluorochemicals	8%	9%
PMMA	11%	15%
Hydrogen Peroxide	4%	4%
Coating Solutions	24%	33%
Acrylics	10%	15%
Coatings Resins and Additives	14%	18%

<sup>\*</sup> Restated, using the new reporting structure

# Note 2 INFORMATION BY GEOGRAPHICAL AREA

Non-Group sales are presented on the basis of the geographical location of customers. Capital employed, Intangible assets and property, plant, and equipment additions, and Employees at year end are presented on the basis of the location of the assets.

2015 (In millions of euros)	France	Rest of Europe	NAFTA*	Asia	Rest of the world	Total
Non-Group sales	738	2,163	2,584	1,820	378	7,683
Capital employed	2,707	565	1,682	1,454	58	6,466
Intangible assets and property, plant, and equipment additions	180	33	113	164	3	493
Employees at year end	7,266	2,858	3,568	4,430	684	18,806

2014 (In millions of euros)	France	Rest of Europe	NAFTA*	Asia	Rest of the world	Total
Non-Group sales	653	1,764	2,068	1,206	261	5,952
Capital employed	1,865	306	1,206	1,152	36	4,565
Intangible assets and property, plant, and equipment additions	186	23	96	157	8	470
Employees at year end	6,700	1,729	2,609	2,888	209	14,135

<sup>\*</sup> NAFTA: USA, Canada, Mexico

#### Note 3

# RESEARCH AND DEVELOPMENT EXPENSES

Research and development expenses are reported net of subsidies. They amount to 209 million euros in 2015 (155 million euros in 2014) and comprise salaries, purchases, sub-contracting costs, depreciation and amortization.

#### Note 4

# OTHER INCOME AND EXPENSES

	2015			2014		
(In millions of euros)	Expenses	Income	Net	Expenses	Income	Net
Restructuring and environment	(32)	21	(11)	(55)	-	(55)
Goodwill impairment	(60)	-	(60)	-	-	-
Asset impairment (other than goodwill)	(13)	-	(13)	(2)	-	(2)
Litigation and claims	-	1	1	(5)	-	(5)
Gains (losses) on sales and purchases of assets	(73)	75	2	(21)	-	(21)
Depreciation and amortization related to allocation of the acquisition price for Bostik	(35)	-	(35)	-	-	-
Other	-	-	-	-	-	_
TOTAL OTHER INCOME AND EXPENSES	(213)	97	(116)	(83)	-	(83)

In 2015, restructuring and environment expenses include a provision of 7 million euros (of which 3 million euros corresponds to asset impairment) related to the closure of the Saulkville site in the United States, and a provision of 13 million euros (of which 2 million euros corresponds to asset impairment) related to the discontinuation of coating resins production at Villers St Paul and extruded acrylic sheet manufacturing at Bernouville (PMMA activity), both in France. The reorganization of Bostik's pension plans, with the closure and in some cases transfer to external management of defined benefit plans, is reflected in a reversal of 21 million euros from provisions (see note C19, "Provisions for pensions and other employee benefits").

Goodwill impairment of 60 million euros concerns Casda (see note C10.1 "Goodwill") and other asset impairment of 13 million euros concerns MLPC International (see note C10 "Intangible assets" and note C11 "Property, plant and equipment").

Losses on sales and purchases of assets include the acquisition costs for Bostik amounting to 46 million euros, the principal factor

being the revaluation of Bostik inventories (36 million euros), and the expenses recorded in connection with changes in the Group's investment in Taixing Sunke Chemicals (China); gains on sale mainly consist of the gain on the disposal of Sunclear.

Depreciation and amortization related to revaluation of Bostik's tangible and intangible assets amount to 35 million euros.

In 2014, the net restructuring and environmental expense amounts to 55 million euros. This includes asset impairment and provisions recorded following the announcement that production would be discontinued at the Zaramillo site in Spain and the Stallingborough site in the United Kingdom (42 million euros including 12 million euros of asset impairment).

Gains and losses on sales and purchases of assets mainly comprise expenses related to the Bostik acquisition, costs on acquisition of Taixing Sunke Chemicals and losses on disposal of shares in Canada Fluorspar Inc. and Arkema Resins South Africa (the Coatings Resins Business Line).

### Note 5

# FINANCIAL RESULT

Financial result includes the cost of debt adjusted for capitalized financial expenses, and as regards provisions for pensions and employee benefits, the interest cost, the expected return on plan assets and the actuarial gains and losses related to changes in the discount rate on other long-term benefits. It also includes the portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the difference between the spot exchange rate and the forward exchange rate, and the foreign exchange gain/loss on unhedged financing.

(In millions of euros)	2015	2014
Cost of debt	(68)	(52)
Financial income/expenses on provisions for pensions and employee benefits  Spot/forward exchange rate difference and foreign exchange gain/loss on unhedged	(13)	(18)
financing*	(13)	(11)
Capitalized interest	2	7
Other	-	-
FINANCIAL RESULT	(92)	(74)

<sup>\*</sup> The Malaysian company holding the Thiochemicals investments has used the US dollar as its functional currency since 1 January 2015. As a result of this change, unrealized foreign exchange differences relating to financing of the company in US dollars are no longer recognized (a loss of 8 million euros was recognized at 31 December 2014).

### Note 6

# ADJUSTED NET INCOME

Net income - Group share may be reconciled to adjusted net income as follows:

(In millions of euros)	Notes	2015	2014
NET INCOME - GROUP SHARE		285	167
Other income and expenses	(C4)	116	83
Exchange differences on foreign currency financing for investments of an exceptional nature		_ (1)	7
Taxes on other income and expenses		(29)	(11)
Non-current taxation	(C7)	(60) (2)	-
ADJUSTED NET INCOME		312	246

<sup>(1)</sup> See note C5 "Financial result".

<sup>(2)</sup> Non-current taxation corresponds to the amount of deferred tax assets recognized in France in view of the Group's tax position in that country, following recognition of deferred tax liabilities in connection with the fair value measurements of the assets acquired and liabilities transferred from Bostik (see note C7 "Income taxes").

# Note 7 INCOME TAXES

# 7.1 INCOME TAX EXPENSE

The income tax expense is broken down as follows:

(In millions of euros)	2015	2014
Current income taxes	(203)	(118)
Deferred income taxes	85	(2)
TOTAL INCOME TAXES	(118)	(120)

The income tax expense amounts to 118 million euros for 2015 including 13 million euros for the CVAE, compared with 120 million euros for 2014 including 7 million euros for the CVAE (expense of 9 million euros in current taxes and income of 2 million euros in deferred taxes) (see B13 "Income taxes"). This expense includes 60 million euros of deferred tax assets recorded in non-current taxation (see note C6 "Adjusted net income").

### 7.2 ANALYSIS BY SOURCE OF NET DEFERRED TAX ASSETS (LIABILITIES)

The analysis by source of the net deferred tax assets (liabilities) is as follows, before offset of assets and liabilities at fiscal entity level:

(In millions of euros)	31/12/2014	Changes in scope	Changes recognized in shareholders' equity	Changes recognized in the income statement	Translation adjustments	31/12/2015
Tax loss and tax credit carryforwards	3	2	-	2	0	7
Provisions for pensions and similar benefits	130	52	(20)	(4)	7	165
Other temporarily non-deductible provisions	169	38	4	(5)	4	210
Deferred tax assets	302	92	(16)	(7)	11	382
Valuation allowance on deferred tax assets	(63)	(17)	5	67	3	(5)
Excess tax over book depreciation	143	9	1	(5)	13	161
Other temporary tax deductions	77	268	0	(20)	5	330
Deferred tax liabilities	220	277	1	(25)	18	491
NET DEFERRED TAX ASSETS (LIABILITIES)	19	(202)	(12)	85	(4)	(114)

Most of the changes in scope result from the acquisition of Bostik.

After offsetting assets and liabilities at fiscal entity level, deferred taxes are presented as follows in the balance sheet:

(In millions of euros)	31/12/2015	31/12/2014
Deferred tax assets	193	76
Deferred tax liabilities	307	57
NET DEFERRED TAX ASSETS (LIABILITIES)	(114)	19

As the Group is able to control the timing of the reversal of temporary differences related to investments in subsidiaries and joint ventures, it is not necessary to recognize deferred taxes in respect of these differences.

### 7.3 RECONCILIATION BETWEEN INCOME TAX EXPENSE AND PRE-TAX INCOME

(In millions of euros)	2015	2014
Net income	288	171
Income taxes	(118)	(120)
Pre-tax income	406	291
French corporate tax rate	34.43%	34.43%
Theoretical tax expense	(140)	(100)
Difference between French and foreign income tax rates	6	(4)
Tax effect of equity in income of affiliates	4	0
Permanent differences	(6)	0
Change in valuation allowance against deferred tax assets ceiling	67	68
Deferred tax assets not recognized (losses)	(49)	(84)
INCOME TAX EXPENSE	(118)	(120)

The French corporate tax rate includes the standard tax rate (33.33%) and the additional social contribution. In view of the Group's tax position in France, the additional 10.7% contribution has not been included in calculating the overall income tax rate, which therefore stands at 34.43%.

The net impact of the CVAE is included in permanent differences.

### 7.4 EXPIRY OF TAX LOSS CARRYFORWARDS AND TAX CREDITS

The Group's unrecognized tax loss carryforwards and tax credits can be used up to their year of expiry, indicated in the table below:

	31/12/2	015	31/12/	2014
(In millions of euros)	Base	Income taxes	Base	Income taxes
2016	6	1	4	1
2017	39	8	29	7
2018	37	7	26	6
2019	53	11	41	11
2020 and beyond	79	18	1	0
Tax losses that can be carried forward indefinitely	1,823	631	1,681	575
TOTAL	2,037	676	1,782	600
Carry back deductible	-	-	-	-

#### Note 8

# BUSINESS COMBINATION

On 2 February 2015 the Arkema Group finalized the acquisition of Bostik for an enterprise value of 1.74 billion euros and a final price of 1,603 million euros.

In compliance with IFRS 3 (revised), the Group used the acquisition method for the accounting treatment of this operation.

The fair value of the identifiable assets acquired and the liabilities assumed at the acquisition date breaks down as follows:

(In millions of euros)	Fair value acquired from Bostik
Intangible assets	736
Property, plant and equipment	354
Deferred tax assets	67
Other non-current assets	3
Total non-current assets	1,160
Inventories	233
Accounts receivable	278
Cash and cash equivalents	347
Other current assets	41
Total current assets	899
Total assets	2,059
Non-controlling interests	2
Deferred tax liabilities	258
Provisions and other non-current liabilities	218
Non-current debt	261
Total non-current liabilities	737
Accounts payable	156
Other current liabilities	160
Total current liabilities	316
Fair value of net assets	1,004
Goodwill	599

The intangible assets measured at fair value mainly comprise the Bostik® brand, and technologies which are amortized over an average period of 18 years. Revaluations of property, plant and equipment essentially concern buildings and equipment, and will be amortized over a residual useful life of 3 years. The revalued inventories were consumed during the first half-year of 2015. Liabilities amounting to 218 million euros were recorded, essentially consisting of 168 million euros of provisions for pensions and other employee benefits.

These adjustments are now final.

The resulting goodwill of 599 million euros is final, and principally comprises future business developments, expected synergies, and

potential improvements in the profitability of Bostik. There is no potential tax impact associated with the residual goodwill in the various countries concerned.

The expenses incurred for the whole of this operation are recorded in Other income and expenses at the amount of 17 million euros (7 million euros in 2014 and 10 million euros in 2015).

If the Bostik acquisition had been completed at 1 January 2015, additional sales of some 130 million euros and additional EBITDA of some 4 million euros would have been recognized; this EBITDA includes the full impact of IFRIC 21 on Bostik.

	2015	2014*
Weighted average number of ordinary shares	73,691,797	66,066,492
Dilutive effect of stock options	235,170	320,279
Dilutive effect of free share grants	36,244	97,566
Weighted average number of potential ordinary shares	73,963,211	66,484,337

Earnings per share is determined below:

	2015	2014*
Earnings per share (€)	3.87	2.53
Diluted earnings per share (€)	3.85	2.51

Adjusted earnings per share is determined below:

	2015	2014*
Adjusted earnings per share (€)	4.23	3.72
Diluted adjusted earnings per share (€)	4.22	3.70

<sup>\*</sup> The weighted average number of shares in circulation used to calculate earnings per share has been adjusted to reflect the dividend distributed in shares during 2015.

# Note 10 INTANGIBLE ASSETS

# 10.1 GOODWILL

		31/12/2015		31/12/2014
(In millions of euros)	Gross book value	Accumulated amortization and impairment	Net book value	Net book value
Goodwill	1,879	(559)	1,320	747

The breakdown by segment, with allocation by Business Line for goodwill above 50 million euros, is as follows:

(In millions of euros)	31/12/2015 Net book value	31/12/2014 Net book value*
High Performance Materials	925	296
Specialty adhesives (Bostik)	605	-
Performance additive	178	160
Technical Polymers	142	136
Industrial Specialties	89	149
Fluorochemicals	41	100
Coating Solutions	298	295
Acrylics	171	168
Coatings Resins and Additives	127	127
Corporate	8	7
TOTAL	1,320	747

<sup>\*</sup> Restated, using the new reporting structure

Changes in the net book value of goodwill are as follows:

(In millions of euros)	2015	2014
NET BOOK VALUE		
At 1 January	747	661
Acquisitions	-	
Impairment	(60)	
Disposals	-	
Changes in scope	606	64
Translation adjustments	27	22
Reclassifications	-	-
At 31 December	1,320	747

The change in goodwill during 2015 results mainly from acquisition of Bostik (goodwill of 599 million euros) (see note C8, "Business Combination"). In application of IAS 36, partial impairment of 60 million euros has been recognized in respect of the goodwill arising on acquisition of Casda; a one-point

variation in the discount rate would lead to additional impairment of 13 million euros.

Changes in goodwill in 2014 principally correspond to the acquisition of Taixing Sunke Chemicals (62 million euros).

#### 10.2 OTHER INTANGIBLE ASSETS

		31/12/2015		31/12/2014
(In millions of euros)	Gross book value	Accumulated amortization and impairment	Net book value	Net book value
Patents and technologies	383	(135)	248	26
Trademarks	447	(5)	442	24
Software and IT licences	236	(143)	93	52
Capitalized REACH costs	38	(14)	24	24
Other capitalized research expenses	5	(2)	3	3
Capitalized contracts	286	(217)	69	77
Asset rights	61	(11)	50	43
Customer relations	59	(2)	57	-
Other intangible assets	22	(13)	9	10
Intangible assets in progress	95	-	95	88
TOTAL	1,632	(542)	1,090	347

The increase in 2015 in brands, patents, technologies and customer relations mainly results from the acquisition of Bostik (see note C8 "Business combination").

Changes in the net book value of intangible assets are as follows:

(In millions of euros)	2015	2014
NET BOOK VALUE		
At 1 January	347	312
Acquisitions	60	45
Amortization and impairment	(63)	(33)
Disposals	O	(1)
Changes in scope	736	11
Translation adjustments	9	8
Reclassifications	1	5
At 31 December	1,090	347

In 2015, changes in scope correspond to the acquisition of Bostik. The Group has also recorded impairment of 6 million euros on its other intangible assets.

In 2014, the Group did not recognize any impairment on its other intangible assets.

# Note 11 PROPERTY, PLANT AND EQUIPMENT

		31/12/2015		31/12/2014
(In millions of euros)	Gross book value	Accumulated amortization and impairment	Net book value	Net book value
Land and buildings	1,842	(1,099)	743	535
Complex industrial facilities	3,596	(2,786)	810	856
Other property, plant and equipment	2,796	(1,920)	876	462
Construction in progress	304	(6)	298	419
TOTAL	8,538	(5,811)	2,727	2,272

The increase in 2015 in land and buildings and other property, plant and equipment mainly results from the acquisition of Bostik (see note C6 "Business combination").

Other property, plant and equipment at 31 December 2015 mainly comprise machinery and tools with a gross value of 2,174 million euros (1,349 million euros at 31 December 2014),

and accumulated depreciation and provisions for impairment of 1,496 million euros (1,055 million euros at 31 December 2014).

The Arkema Group recorded impairment losses of 26 million euros on property, plant and equipment (21 million euros in 2014).

Changes in the net book value of property, plant and equipment are as follows:

(In millions of euros)	2015	2014
NET BOOK VALUE		
At 1 January	2,272	1,943
Acquisitions	433	426
Depreciation and impairment	(444)	(318)
Disposals	(4)	(4)
Changes in scope	359	115
Translation adjustments	112	115
Reclassifications	(1)	(5)
At 31 December	2,727	2,272

The figures above include the following amounts in respect of assets held under finance lease arrangements:

	31/12/2015				31/12/2014	
(In millions of euros)	Gross value	Depreciation and impairment	Net value	Gross value	Depreciation and impairment	Net value
Complex industrial facilities and buildings	25	(12)	13	27	(13)	14

They mainly correspond to leases of a hydrogen production unit located at Lacq and a production unit at Carling.

# Note 12 EQUITY AFFILIATES

The amounts of the Arkema Group's commitments to joint ventures and associates are non-significant.

# 12.1 ASSOCIATES

	% own	ership	Equity	value	Equity in in	come (loss)	Sal	es
(In millions of euros)	31/12/2015	31/12/2014	31/12/2015	31/12/2014	31/12/2015	31/12/2014	2015	2014
Arkema Yoshitomi Ltd.	49%	49%	4	3	1	1	16	15
Meglas*	- %	33%	-	-	-		3	8
CJ Bio Malaysia Sdn. Bhd.	14%	14%	19	9	8	-	236	-
Ihsedu Agrochem Private Ltd.	25%	25%	4	4	0	-	130	119
Investments			27	16	9	1		
Loans			-	-	-	-		
TOTAL			27	16	9	1	385	142

<sup>\*</sup> Until the date of sale of the investment in Meglas.

The Group sold its investment in Meglas during 2015.

# 12.2 JOINT VENTURES

	% own	ership	Equity	value	Equity in in	come (loss)	Sal	es
(In millions of euros)	31/12/2015	31/12/2014	31/12/2015	31/12/2014	31/12/2015	31/12/2014	2015	2014
Daikin Arkema Refrigerants Asia Ltd.	40%	40%	1	1	1	-	21	19
Daikin Arkema Refrigerants Trading Ltd.	40%	40%	1	1	0	-	30	47
Investments			2	2	1	-		-
Loans			-	-	-	-		
TOTAL			2	2	1		51	66

# Note 13 OTHER INVESTMENTS

Other investments include the Group's investments in various listed and non-listed companies, which are stated at historical cost. The main movements in 2014 and 2015 are as follows:

(In millions of euros)	2015	2014
At 1 January	33	52
Acquisitions	2	1
Disposals	-	(22)
(Increases) / Reversals of impairment	(3)	4
Changes in scope	(3)	(2)
Translation adjustments	-	-
Other changes	-	-
At 31 December	29	33

Movements in other investments in 2014 mainly include the sale of 100% of the shares of Canada Fluorspar Inc., Arkema Resins (Pty) Ltd. and Harveys Composites South Africa.

# Note 14 OTHER NON-CURRENT ASSETS

	31/12/2015				31/12/2014	
(In millions of euros)	Gross value	Impairment	Net value	Gross value	Impairment	Net value
Loans and advances	188	(8)	180	179	(8)	171
Security deposits paid	24	-	24	19	-	19
TOTAL	213	(8)	204	198	(8)	190

Loans and advances include amounts receivable from the French tax authorities in respect of the research tax credit (CIR), and from 2013, the tax credit for competitiveness and employment (CICE). Loans and advances also include 38 million euros of receivables on Total related to the remediation costs in respect of closed industrial sites in the United States (see note C20.3 "Other Provisions and other non-current liabilities / Provisions for environmental contingencies").

The CIR for 2011, amounting to 21 million euros, was reimbursed during the fourth quarter of 2015.

The CIR for 2012, amounting to 21 million euros, will be reimbursed during 2016.

# Note 15 INVENTORIES

(In millions of euros)	31/12/2015	31/12/2014
INVENTORIES (COST)	1,229	1,063
Valuation allowance	(100)	(86)
INVENTORIES (NET)	1,129	977
Of which:		
Raw materials and supplies	327	262
Finished products	802	715

# Note 16

# ACCOUNTS RECEIVABLE, OTHER RECEIVABLES AND PREPAID EXPENSES

At 31 December 2015, accounts receivable are stated net of a bad debt provision of 37 million euros (25 million euros at 31 December 2014). Other receivables and prepaid expenses notably include receivables from governments in an amount of 129 million euros at 31 December 2015 (84 million euros at 31 December 2014), including 108 million euros of VAT. Details of accounts receivable net of valuation allowances are presented in note C23.4 "Credit risk".

# Note 17 CASH AND CASH EQUIVALENTS

(In millions of euros)	31/12/2015	31/12/2014
Short-term cash advances	14	14
Monetary mutual funds	549	1,046
Available cash	148	89
CASH AND CASH EQUIVALENTS	711	1,149

# Note 18 SHAREHOLDERS' EQUITY

At 31 December 2015, Arkema's share capital amounted to 745 million euros, divided into 74,472,101 shares with nominal value of 10 euros.

#### 18.1 CHANGES IN SHARE CAPITAL AND PAID-IN SURPLUS

	2015	2014
Number of shares at 1 January	72,822,695	63,029,692
Issuance of shares following the capital increase related to payment of dividends (C 18.4)	1,430,888	_
Issuance of shares following the capital increase reserved for employees	-	491,502
Issuance of shares following the exercise of subscription options	218,518	198,877
Issuance of shares following the capital increase with preferential subscription rights	-	9,102,624
Number of shares at 31 December	74,472,101	72,822,695

Following the exercise of 218,518 share subscription options, 218,518 shares were issued, giving rise to a capital increase in the total nominal amount of 2 million euros.

#### 18.2 HYBRID BONDS

As part of the refinancing of its proposed acquisition of Bostik, the Group issued a perpetual hybrid bond in October 2014 in the total amount of 689 million euros net of an issuance premium of 7 million euros and 4 million euros arrangement costs. These bonds include a first call option on October 29, 2020 and carry an annual coupon of 4.75% until that date. The coupon will then be reset every 5 years. At each coupon date, the interest can be paid or carried over at the issuer's convenience. Coupons carried over generate late payment interest and become due in the event of certain contractually defined circumstances under the control of the issuer.

In compliance with IAS 32, when there is an unconditional right to avoid delivering cash or another financial asset in the form of repayment of principal or interest, an instrument is recognized in shareholders' equity. In application of this principle, the hybrid bonds are recorded in shareholders' equity in the Group's consolidated financial statements.

The Group paid out a coupon of 33 million euros on 29 October 2015.

#### 18.3 TREASURY SHARES

In May 2015, Arkema definitively granted 124,608 free shares to Group employees, principally in application of plans 2011-3 and 2012-2. The Company bought back 106,519 treasury shares in 2015.

	2015	2014
Number of treasury shares at 1 January	55,014	226,974
Repurchases of treasury shares	106,519	32,643
Grants of treasury shares	(124,608)	(204,603)
Number of treasury shares at 31 December	36,925	55,014

#### 18.4 DIVIDENDS

The combined shareholders' general meeting of 2 June 2015 approved the distribution of a 1.85 euro dividend per share in respect of the 2014 financial year, or a total amount of 135 million euros. Each shareholder could elect to receive payment of the entire dividend either in cash or in new Arkema shares.

The issue price for the new shares was set at 61.64 euros. By the end of the option period on 25 June 2015, 65.2% of rights to payment of the dividend in shares had been exercised, and consequently 1,430,888 new shares were issued with total value of 88 million euros. The cash dividend payable to shareholders who did not elect to receive the dividend in shares amounts to 47 million euros, and was paid out on 8 July 2015.

#### 18.5 NON-CONTROLLING INTERESTS

Non-controlling interests do not represent a significant share of the Group's consolidated financial statements.

# Note 19 PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS

(In millions of euros)	2015	2014
Pension obligations	388	349
Healthcare and similar coverage	123	56
Post-employment benefits	511	405
Long service awards	55	47
Other long-term benefits	5	4
Other long-term benefits	60	51
PROVISIONS FOR PENSIONS AND OTHER EMPLOYEE BENEFITS	571	456

In accordance with the laws and practices of each country, the Arkema Group participates in employee benefit plans offering retirement, healthcare and similar coverage, and special termination benefits. These plans provide benefits based on various factors including length of service, salaries, and contributions made to the national bodies responsible for the payment of benefits.

These plans are either defined contribution plans or defined benefit plans. In certain cases they can be either partly or totally funded by investments in dedicated plan assets, mutual funds, general funds of insurance companies or other assets.

Post-employment benefits are detailed in the tables in 19.1, 19.2, and 19.3 below.

The main features of the principal defined benefit plans are as follows:

- In the United States, the largest defined benefit plan is the "Employee Pension Plan". This plan is now frozen and no new rights can be earned except in the case of a few employees. Under this plan, beneficiaries receive a lump sum or an annuity when they retire. The assets funding this plan are externally managed and are subject to the minimum funding rules laid down in the federal Pension Protection Act. A complementary healthcare plan covering certain medical expenses or insurance premiums for retired employees and their dependants is still open to new members; this plan is not funded;
- In France, the two top-up pension plans are closed to new members. One of them is managed by an insurance company and funded by plan assets. The beneficiaries of these plans

receive an annuity once they retire. The top-up health coverage plan for retired employees is also closed and is not funded. Other benefit plans (bonuses, long service awards and retirement gratuities) pay out lump sums; they are open to all employees and are partly-funded;

- In Germany, all defined benefit plans are closed to new members. Plan participants receive a monthly payment once they retire (the normal retirement age is set at 65). Only certain plans are funded, involving non-significant amounts;
- In the Netherlands, Arkema's plans are covered through an insurance company. These plans are still open to new members and pay out an annual amount once the employees retire. Bostik's defined benefit plans were open until 31 December 2015 and have now been replaced by defined contribution plans from 1 January 2016; rights vested at 31 December 2015 have been transferred to external management. The impacts of these changes are recorded in Other income and expenses in the financial statements at 31 December 2015.
- In the United Kingdom, the two Arkema plans were frozen as of 1 August 2013 and no further rights have been earned since that date. These plans are covered by a pension fund.
   For the Bostik Ltd plan, no further rights will be earned from 1 February 2016. The effects of this plan closure are recorded in Other income and expenses in the financial statements (see Note C.4) at 31 December 2015.

# 19.1 EXPENSE IN THE INCOME STATEMENT

The expense related to defined benefit plans is broken down as follows:

	2015			2014				
[In millions of euros]	Total		Healthcare and similar coverage	Total		Healthcare and similar coverage		
Current service cost	25	20	5	12	11	1		
Past service cost	(15)	(15)	0	1	1	0		
Settlements	(8)	(8)	-	0	0	-		
Interest expense	29	25	4	22	21	1		
Expected return on plan assets	(15)	(15)	-	(12)	(12)	-		
Other	0	0	0	0	0	0		
(INCOME) / EXPENSE	16	7	9	23	21	2		

# 19.2 CHANGE IN NET PROVISIONS OVER THE PERIOD

	Healthcare and similar Pension obligations coverage		Total post-employment benefits			
(In millions of euros)	2015	2014	2015	2014	2015	2014
Net liability / (asset) at beginning of year	348	264	56	46	404	310
Expense for the year	7	21	9	2	16	23
Contributions made to plan assets	(20)	(16)	-	-	(20)	(16)
Net benefits paid by the employer	(10)	(10)	(5)	(4)	(15)	(14)
Changes in scope	96	0	71	0	167	0
Other	14	10	4	3	18	13
Actuarial gains and losses recognized in shareholders' equity	(47)	79	(12)	9	(59)	88
Net liability / (asset) at end of year	388	348	123	56	511	404

Changes in scope concern the acquisition of Bostik.

# 19.3 VALUATION OF OBLIGATIONS AND PROVISIONS AT 31 DECEMBER

# a) Present value of benefit obligations

	Pension ol	oligations	Healthcare and similar coverage	
(In millions of euros)	2015	2014	2015	2014
Present value of benefit obligations at beginning of year	678	530	56	46
Current service cost	20	11	5	1
Net interest expense	25	21	4	1
Past service cost (including curtailments)	(15)	1	-	-
Settlements	(32)	(3)	-	-
Plan participants' contributions	1	0	-	-
Benefits paid	(39)	(25)	(5)	(4)
Actuarial (gains) and losses	(69)	107	(12)	9
Changes in scope	225	-	71	-
Translation adjustment and other	42	36	4	3
Present value of benefit obligations at end of year	836	678	123	56

# b) Change in fair value of plan assets

Plan assets are mainly located in the United States, France, the Netherlands and the United Kingdom

	Pension o	bligations
(In millions of euros)	2015	2014
Fair value of plan assets at beginning of year	(330)	(266)
Interest income	(15)	(12)
Settlements	24	3
Plan participants' contributions	(1)	0
Employer contributions	(20)	(16)
Benefits paid from plan assets	29	15
Actuarial (gains) and losses	21	(28)
Changes in scope	(128)	
Translation adjustment and other	(28)	(26)
Fair value of plan assets at end of year	(448)	(330)

### c) Provisions in the balance sheet

	Pension of	oligations	Healthcare and similar coverage		
(In millions of euros)	2015	2014	2015	2014	
Present value of unfunded obligations	229	234	123	56	
Present value of funded obligations	607	444	-	-	
Fair value of plan assets	(448)	(330)	-	-	
(Surplus) / Deficit of assets relative to benefit obligations	388	348	123	56	
Asset ceiling	-	-	-	-	
Net balance sheet provision	388	348	123	56	
Provision recognized in liabilities	388	349	123	56	
Amount recognized in assets	0	(1)	-	-	

Changes in recent years in the obligation, the value of the plan assets and actuarial gains and losses are as follows:

(In millions of euros)	2015	2014	2013	2012
Obligations for pensions, healthcare and similar coverage	959	734	576	654
Plan assets	(448)	(330)	(266)	(271)
Net obligations	511	404	310	383
Actuarial (gains) / losses on accumulated rights				
<ul> <li>experience adjustments</li> </ul>	3	(18)	(3)	6
<ul> <li>effects of changes in financial assumptions</li> </ul>	(84)	117	(51)	101
effects of changes in demographic assumptions	0	17	(1)	<u>-</u>

# d) Pre-tax amount recognized through equity (SORIE) during the valuation period

	Pension obligations		Healthcare and similar coverage	
(In millions of euros)	2015	2014	2015	2014
Actuarial (gains) and losses generated in the period (A)	(47)	79	(12)	9
Effect of the surplus cap and the asset ceiling (B)	-	-	-	-
Total amount recognized in equity (A+B)	(47)	79	(12)	9
Cumulative actuarial (gains) and losses recognized in equity	144	191	(27)	(15)

#### e) Composition of the investment portfolio

ъ.	obligations
Pansian	Obligations
1 61131011	Obligations

	^	At 31 December 2015				t 31 Decemb	nor 2014	
	France	UK	Rest of Europe	USA	France	UK	Rest of Europe	USA
Shares	16%	31%	4%	54%	3%	26%	-	55%
Bonds	32%	30%	7%	35%	31%	29%	-	33%
Property	1%	-	-	10%	-	-	-	11%
Monetary/Cash assets	2%	0%		-	4%	1%	-	-
Investment funds	-	38%		1%	-	44%	-	-
Funds held by an insurance company	49%	-	85%	-	62%	-	100%	-
Other	-	1%	3%	-	-	-	-	1%

Pension assets are mainly invested in listed financial instruments.

### f) Actuarial assumptions

The main assumptions for pension benefit commitments and healthcare and similar obligations are as follows:

		2015				20	14	
	France	UK	Rest of Europe	USA	France	UK	Rest of Europe	USA
Discount rate	2.00	3.50	2.00	4.50	1.50	3.50	1.50	4.00
Rate of increase in salaries	1.95-2.50	N/A	1.50-3.50	4.00	2.10-2.50	N/A	2.60-2.80	4.00

The discount rate is determined based on indexes covering bonds by AA-rated issuers, with maturities consistent with the duration of the above obligations.

The rate of increase in healthcare costs has a negligible impact in the United States as a ceiling has been applied since mid-2006, and in Europe since 2008 the impact has been limited to the rate of inflation during the period over which rights vest.

A change of plus or minus 0.50 points in the discount rate has the following effects on the present value of accumulated benefit obligations at 31 December:

Pension obligations, healthcare and similar coverage	201	5
(In millions of euros)	Europe	USA
Increase of 0.50	(40)	(27)
Decrease of 0.50	46	29

A change of plus or minus 0.50 points in the salary increase rate has the following effects on the present value of accumulated benefit obligations at 31 December:

Pension obligations, healthcare and similar coverage	2015	
(In millions of euros)	Europe	USA
Increase of 0.50	11	4
Decrease of 0.50	(10)	(4)

### g) Provisions by geographical area

2015	France	Germany	Rest of Europe	USA	Rest of the world	Total
Pension obligations	132	86	30	131	9	388
Healthcare and similar coverage	38	-	-	85	-	123

2014	France	Germany	Rest of Europe	USA	Rest of the world	Total
Pension obligations	136	83	17	107	6	349
Healthcare and similar coverage	41	-	-	15	-	56

#### h) Cash flows

The contributions to be paid by the Group in 2016 for funded benefits are estimated at 29 million euros.

The benefits to be paid by the Group in 2016 in application of defined benefit plans are valued at 11 million euros for pension obligations, and 6 million euros for healthcare and similar coverage.

Note 20

# OTHER PROVISIONS AND OTHER NON-CURRENT LIABILITIES

### 20.1 OTHER NON-CURRENT LIABILITIES

Other non-current liabilities amount to 47 million euros at 31 December 2015 as against 40 million euros at 31 December 2014.

# 20.2 OTHER PROVISIONS

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
At 1 January 2015	181	55	125	361
Increases in provisions	31	19	48	98
Reversals from provisions on use	(14)	(27)	(31)	(72)
Reversals of unused provisions	(18)	(1)	(8)	(27)
Changes in scope	5	5	23	33
Translation adjustments	9	-	5	14
Other	-	-	-	-
At 31 December 2015	194	51	162	407
Of which less than one year	18	26	45	89
Of which more than one year	176	25	117	318

In addition, certain provisions are covered by non-current assets (receivables and deposits):

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
Total provisions at 31 December 2015	194	51	162	407
Portion of provisions covered by receivables or deposits	38	-	11	49
Deferred tax asset related to amounts covered by the Total indemnity	22	-	-	22
Provisions at 31 December 2015 net of non-current assets	134	51	151	336

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
At 1 January 2014	171	50	176	397
Increases in provisions	12	29	23	64
Reversals from provisions on use	(11)	(24)	(67)	(102)
Reversals of unused provisions	-	-	(13)	(13)
Changes in scope	-	-	-	-
Translation adjustments	9	-	5	14
Other	-	-	1	1
At 31 December 2014	181	55	125	361
Of which less than one year	16	29	24	69
Of which more than one year	165	26	101	292

In addition, certain provisions are covered by non-current assets (receivables and deposits):

(In millions of euros)	Environmental contingencies	Restructuring	Other	Total
Total provisions at 31 December 2014	181	55	125	361
Portion of provisions covered by receivables or deposits	35	-	9	44
Deferred tax asset related to amounts covered by the Total indemnity	21	-	0	21
Provisions at 31 December 2014 net of non-current assets	125	55	116	296

# 20.3 PROVISIONS FOR ENVIRONMENTAL CONTINGENCIES

Provisions for environmental contingencies are recognized to cover expenses related to soil and water table clean-up, mainly:

- in France for 84 million euros (81 million euros at 31 December 2014);
- in the United States for 84 million euros (75 million euros at 31 December 2014), of which 60 million euros in respect of former industrial sites covered 100% by the Total Group indemnity (receivable recognized in "Other non-current assets" for an amount of 38 million euros and 22 million euros recognized in deferred tax assets).

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#### 20.4 RESTRUCTURING PROVISIONS

Restructuring provisions are mainly in respect of restructuring measures in France for 29 million euros (29 million euros at 31 December 2014), in Europe outside France for 17 million euros (24 million euros at 31 December 2014) and in the United States for 5 million euros (1 million euros at 31 December 2014).

Increases in such provisions in the year correspond to the restructuring plans described in note C4 "Other income and expenses".

#### 20.5 OTHER PROVISIONS

Other provisions amount to 162 million euros and mainly comprise:

- provisions for labour litigation for 49 million euros (39 million euros at 31 December 2014);
- provisions for commercial litigation and warranties for 47 million euros (24 million euros at 31 December 2014);
- provisions for tax litigation for 25 million euros (20 million euros at 31 December 2014);
- provisions for other risks for 41 million euros (42 million euros at 31 December 2014).

#### Note 21

# LIABILITIES AND CONTINGENT LIABILITIES

### 21.1 ENVIRONMENT

The Group's business activities are subject to constantly changing local, national and international regulations on the environment and safety, which entail meeting increasingly complex and restrictive requirements. In this regard, these activities can involve a risk of the Group's liability being called upon, particularly in respect of clean-up of sites and industrial safety.

Taking account of the information available, agreements signed with Total, and the provisions for environmental contingencies recognized, the Group's general management considers that the environmental liabilities identified at this point are valued and recognized to the best of their knowledge in the financial statements. However if laws, regulations or government policy in respect of environmental matters were to change, the Group's obligations could change, which could lead to additional costs.

#### Clean-up of sites

The competent authorities have made, are making or may in the future make specific demands that the Group rehabilitate or control emissions at certain sites that it is currently operating, or that it operated or disposed of in the past, at neighbouring sites or at sites where the Group stored or disposed of waste.

#### 21.1.1 Sites currently in operation

The Group has many sites of which a certain number are probably polluted in view of their age and the range of activities that are carried out on them, or that were carried out on them in the past. As regards these sites, certain situations have been identified and the Group has already carried out certain clean-up work, or otherwise developed action plans and recognized provisions in order to cover future clean-up work.

However, in the light of (i) the uncertainties over the technical means to be implemented, (ii) potential issues that are unknown, (iii) uncertainties over the actual time required for remediation compared with the estimated time (e.g. "pump and treat"), and (iv) potential changes in regulations, the possibility that the expenses the Group will incur will be higher than the amounts covered by provisions cannot be excluded. These potential excess costs relate mainly to the sites in Calvert City (United States), Carling (France), Günzburg (Germany), Jarrie (France), Lannemezan (France), Loison (France), Mont (France), Pierre-Bénite (France), Riverview (United States), Rotterdam (the Netherlands), Saint-Auban (France), Porto Marghera (Italy) and Zaramillo (Spain) and could adversely affect the Group's business, results and financial condition.

### Spinetta (Arkema Srl)

In late 2009, a certain number of managers and directors of Arkema Srl were named in a criminal investigation for underground water pollution at the Spinetta site and withholding information from the authorities of the true extent of existing pollution. This investigation also concerns employees of the main industrial operator on the site.

After hearing all the parties, the Preliminary Hearing Judge decided in early 2012 that the only charge applicable to representatives of Arkema Srl is the failure to take remedial action against the pollution observed.

Arkema Srl considers that it is still difficult to determine with certainty whether the company and/or the managers or directors cited in this new phase of the criminal investigation could be considered to have liability. The court could issue its ruling in 2016. A provision is recorded in the financial statements in an amount which the Group considers adequate.

#### 21.1.2 Closed industrial sites (former industrial sites)

Total directly or indirectly took over the closed industrial sites at the date of the Spin-Off of Arkema's Businesses on 10 May 2006.

Since the Spin-Off, the former Dorlyl SNC sites and the Bonn site in Germany belonging to Arkema GmbH have been closed and sold. The Wetteren site in Belgium belonging to Résil Belgium has also been closed and is in the process of divestment.

#### 21.1.3 Sites sold

#### Saint-Fons (Arkema France)

In the sale of the Group's Vinyl Products segment to the Klesch Group in early July 2012, all industrial installations on the Saint Fons site were transferred to Kem One, apart from the land, which is held under a long-term lease. The agreements for the sale stipulate that Arkema France remains liable for legacy pollution to the site.

The Prefect of the Rhône region issued a decision on 14 May 2007 concerning the Saint-Fons site, ordering Arkema France to carry out quality monitoring on underground water and propose a plan to manage the legacy pollution to the zone known as T112. The Lyon Administrative Court in its ruling of 29 September 2011, the Lyon Administrative Appeal Court in a decision of 11 April 2013, and finally the French Council of State in a decision of 9 November 2015, all rejected Arkema France's petition against the initial decision.

The Prefect of the Rhône region wanted to expand and separate the requirements concerning monitoring and management of the legacy pollution of the Saint-Fons site (T112 and other pollutants) prior to formal administrative recognition of Kem One as the new operator. He consequently issued two additional decisions against Arkema France, dated 19 June and 27 June 2012. The Lyon administrative court rejected Arkema France's two petitions for cancellation of these decisions in rulings of 7 May 2015, which Arkema France appealed on 22 June 2015 before the same court. Should Arkema France lose this appeal, rehabilitation of the site affected by the legacy pollution would be the Company's responsibility. A provision has been established in the consolidated financial statements in connection with this matter.

Following the legal action instigated by Arkema France against Rhodia Chimie, the previous operator of this site, the Bobigny commercial court declared Arkema France's action inadmissible 2012. This ruling was upheld by the Paris Appeal Court on 27 May 2014. Arkema France took the case before the French Supreme Court (Cour de Cassation) on 26 August 2014.

### Parrapon mining concession (SCIA Parapon)

Under a prior commitment made by the Arkema Group to the French authorities in connection with the transfer of the Parrapon mining concession to Kem One SAS, which was authorized by a ministerial decision of 13 January 2016, the Group will bear the costs that may be incurred by Kem One SAS, as concession operator, as a result of surveillance and safety measures for the 31 salt mines which were permanently closed down on 12 February 2014. As the potential costs cannot be reliably estimated at this stage, no provision has been established in the financial statements.

# 21.2 LITIGATION, CLAIMS AND PROCEEDINGS IN PROGRESS

#### 21.2.1 Labour litigation

#### Occupational illness (France)

In the manufacture of its products, the Group uses and has used toxic or hazardous substances. Despite the safety and monitoring procedures that have been instituted at Group level and for each production site, Group employees may have been exposed to such substances and may develop specific pathologies as a result of such exposure.

In this respect, like most industrial companies, in the past, the Group has used a variety of insulating or heat-proofing materials containing asbestos in its production facilities. Consequently, certain employees may have been exposed to such materials before they were gradually eliminated and replaced with substitute products.

At its French sites, the Group anticipated the regulatory provisions applicable to asbestos (Decrees no. 96–97 and 96-98 of 7 February 1996 and Decree No. 96-1133 of 24 December 1996). The Group made an inventory of building materials within its premises that contained asbestos, notified employees of the results of these investigations and took the collective and individual protective measures required by the applicable laws. However, claims for occupational illness related to past asbestos exposure have been filed against the Group, mostly for periods before 1980. Given the latency period of asbestos-related pathologies, a large number of claims for occupational illness are likely to be filed in the years ahead.

The Group has recognized provisions to cover the risks of employer liability claims related to notified cases of occupational illness.

### Prejudice related to asbestos (Arkema France)

A large number of former employees of Arkema France, who worked on sites included in the list of establishments whose workers were eligible for the early retirement system for asbestos workers, are parties to proceedings before the employee claims court, claiming compensation for the prejudice allegedly caused by the possible risk of developing a malignant condition in the future.

In a ruling of 11 May 2010, the labour chamber of the French Supreme Court (Cour de Cassation) recognized the existence of a prejudice of anxiety, eligible for compensation, for employees exposed to asbestos during their working life. However, it rejected the existence of an economic prejudice resulting from departure under the early retirement system. It also decided that the compensation awarded for a prejudice of anxiety covers all psychological distress associated with the risk of an illness arising at any time during an indefinite period, including the prejudice of upheaval in living conditions that had been argued.

It is possible that other former employees of Arkema France who may have been exposed to asbestos during their employment on sites listed after 2010 may also bring action before an employee

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claims court to claim compensation for the prejudice of anxiety. 570 compensation claims for the prejudice of anxiety are currently in process before the employee claims courts.

A provision has been recognized in the financial statements in respect of the litigations currently in progress, for an amount that the Group considers adequate.

#### 21.2.2 Commercial litigation and warranties

#### **Antitrust litigation**

There are no longer any antitrust litigations or proceedings against any Group entity.

To cover the risks associated with the proceedings in the United States and Europe, which arose prior to completion of the Spin-Off of Arkema's Businesses, Total S.A. and one of its subsidiaries have granted indemnities for the benefit of Arkema and Arkema Amériques SAS, the main terms of which are described in note C30 "Off-balance sheet commitments".

#### **Product conformity (Arkema France)**

Arkema France supplies various products for the coating of items used in a number of European countries in the manufacture of sanitary treatment facilities. These products are subject to inspection on the part of approved laboratories which must certify their conformity with the applicable sanitary regulations. Arkema France has an interpretation of the regulations applicable in France that diverges from that of a French laboratory and the public authorities as regards regulatory clearance in France of a product, even though this product is approved in other European Union countries. The Group takes the view that this problem is essentially administrative in nature, and no provision has been recognized in the financial statements. However, the possibility of legal action cannot be ruled out.

### Environmental engineering activities (CECA)

The past environmental engineering activities of CECA have given rise to various claims by third parties. These claims have been transmitted to the Group's insurers. The Group has recognized provisions that it considers adequate. The possibility cannot be excluded that this activity, which has now ceased, may give rise to further claims in the future.

#### 21.2.3 Tax litigations

#### Arkema Quimica Ltda

Following a declaration as to the unconstitutional nature of certain taxes, Arkema's Brazilian subsidiary Arkema Quimica

Ltda, offset certain tax assets and liabilities commencing in 2000. The Brazilian government contests the justification for this offset and in 2009 claimed repayment of 19.5 million reais (around 6 million euros).

Arkema Quimica Ltda lodged a counter-claim in mid-June 2009 for cancellation of the tax administration's demands concerning the current portion of the liability. During the first quarter of 2010 Arkema Quimica Ltda applied to benefit from the tax amnesty law that would allow it to pay only part of its overall tax liability. The tax authorities accepted the terms for payment of the liability subject to amnesty, and only an amount of 9.2 million reais or around 3 million euros remains concerned by an appeal before the courts, which the Group considers has reasonable chances of success. No provision has been established in the financial statements.

#### Arkema Srl

In 2013 the Lombardy Regional Tax office (Italy) conducted a tax inspection of Arkema Srl for the 2008, 2009 and 2010 financial years after which among other observations, it contested the purchase prices of products for resale and the level of commission paid to the company in intragroup transactions, and applied a withholding tax on intragroup financing. The tax reassessments concerning payments made to companies located in countries on the "blacklist" have been cancelled. After discussions, the tax office upheld the reassessments concerning the transfer prices and withholding taxes on financing. The reassessments notified for 2008, 2009 and 2010 amount to 9 million euros including interest and penalties. An amicable procedure between Italy and France began in early 2015 to avoid double taxation and a local tax dispute. A provision considered adequate by the Group has been established in the financial statements.

#### 21.2.4 Other litigation

#### **TGAP (Arkema France)**

Under the terms of a services agreement, Arkema France has the effluent produced by its industrial operations at Lacq and Mourenx treated by Total E&P France, which has specific authorization to inject this effluent, together with effluent it produces itself, into a cavity called Crétacé 4000.

The French customs authorities issued a tax demand of 6.7 million euros to Total, covering the years 2003 to 2006, for non-payment of the French general tax on polluting activities (taxe générale sur les activités polluantes, or TGAP) which, according to the authorities, should be applied to these injections of effluent. Total appealed the Court of first instance's rejection of its petition for

cancellation of the tax demand which nonetheless acknowledged that Total's own effluents should be exempt from the TGAP. In February 2013 the Appeal Court rejected Total's appeal. Total then took the case before the French supreme court (Cour de Cassation), but its action was rejected in a decision of 27 May 2015. No provision has been established in the financial statements in connection with this matter.

#### Asbestos risk (Arkema Inc.)

In the United States, Arkema Inc. is involved in a substantial number of asbestos-related proceedings in various State courts. No notable developments have arisen in the proceedings concerning claims by third parties (other than employees) relating to (i) alleged exposure to asbestos on the Group's sites, or (ii) exposure to products containing asbestos and sold by former subsidiaries of the Group in the United States and elsewhere. Most proceedings by employees against Arkema Inc. concerning alleged exposure to asbestos in the United States are covered by the employee insurance policy in each State. However, in 2015 Arkema settled two disputes concerning former employees' alleged exposure to asbestos before State courts. When claims are not covered by insurance policies, provisions have been made for such claims in an amount which the Group considers sufficient. However, due to the continuing uncertainties as to the outcome of these proceedings, the Group is not, as at the date of these financial statements, in a position, having regard to the information available to it, to estimate the total amount of the claims that might finally be upheld against it by the various competent courts after the exhaustion of any avenues of appeal.

#### Kem One

The Group sold its vinyls activities, grouped into the Kem One Group, to the Klesch Group with effect from 1 July 2012.

On 27 March 2013, insolvency proceedings were opened against the company Kem One SAS. In a ruling of 20 December 2013, the Lyon commercial court designated the new owner of Kem One SAS, and put to an end the insolvency proceedings concerning the company.

An arbitration procedure was initiated against Arkema France by Klesch Chemicals Ltd and Klesch Group Ltd on 4 March 2013. In its decision issued on 24 November 2015, the International Chamber of Commerce Court of Arbitration dismissed all the claims made by Klesch Chemicals Ltd and Klesch Group Ltd

against Arkema France, and ordered Klesch Chemicals Ltd to pay Arkema France 73.6 million euros in damages and Klesch Chemicals Ltd and Klesch Group Ltd to reimburse the majority of the costs incurred for this arbitration procedure. A petition by Klesch Chemicals Ltd and Klesch Group Ltd for cancellation of this arbitration ruling was filed with the Paris Appeal Court on 9 December 2015. Given the small number and specificity of cases in which this type of action gives rise to proceedings, Arkema is confident that it should be rejected by the Appeal Court

Meanwhile, the works council of Kem One SAS' Fos-sur-Mer site brought an action on 9 July 2013 before the Lyon district court against Arkema, certain Kem One group entities and the Klesch group, for alleged fraudulent collusion. As part of the takeover of Kem One SAS, the new owner stated that it would handle withdrawal of this action by the works council. This withdrawal is not yet effective. No provision has been booked in the financial statements.

Also, on 29 April 2014, Kem One employees brought action before the Lyon district court against Arkema and certain Klesch group entities, claiming damages on the grounds of the allegedly fraudulent nature of the agreements signed between Arkema and Klesch in connection with the sale of the vinyls activities. No provision has been booked in the financial statements.

#### Coem (Arkema France)

As there were no product supplies by Kem One SAS to the Italian company Coem, Coem issued a written complaint to Arkema France and Kem One in August 2012 that it had suffered injury through breach of commercial relations. Subsequently, a composition was signed with Coem's creditors and approved by Bologna court on 18 December 2013, and Coem was put into liquidation on 21 March 2014. No provision has been recognized in the financial statements.

### 21.2.5 Training

The French law of 5 March 2014 replaced the statutory training entitlement (DIF) with a personal training credit system (Compte Personnel de Formation or CPF) as of 1 January 2015. DIF entitlements at 31 December 2014 were transferred to the new system, under which each individual is credited with up to a maximum 150 hours each year.

The Arkema Group's investment in training represented approximately 3.5% of payroll costs in 2015.

# Note 22 DEBT

Group net debt amounted to 1,379 million euros at 31 December 2015, taking account of cash and cash equivalents of 711 million euros.

### 22.1 ANALYSIS OF NET DEBT BY CATEGORY

(In millions of euros)	31/12/2015	31/12/2014
Bonds	1,828	1,137
Finance lease obligations	2	2
Bank loans	28	42
Other non-current debt	15	15
Non-current debt	1,873	1,196
Finance lease obligations	0	0
Syndicated credit facility	-	-
Commercial paper	-	-
Other bank loans	191	85
Other current debt	26	22
Current debt	217	107
Debt	2,090	1,303
Cash and cash equivalents	711	1,149
NET DEBT*	1,379	154

<sup>\*</sup> see note B17 "Main accounting and financial indicators".

#### **Bonds**

 In October 2010, the Group issued a 500 million euros bond that will mature on 25 October 2017, with a fixed coupon of 4.00%.

At 31 December 2015 the fair value of this bond is 533 million euros.

 In April 2012, the Group issued a 230 million euros bond that will mature on 30 April 2020, with a fixed coupon of 3.85%. A further 250 million euros tap issue was undertaken in October 2012, bringing the total amount of this bond issue to 480 million euros.

At 31 December 2015 the fair value of this bond is 541 million

• In December 2013, the Group issued a 150 million euros bond that will mature on 6 December 2023, with a fixed coupon of 3.125%.

At 31 December 2015 the fair value of this bond is 165 million euros.

 In January 2015 the Group issued a 700 million euros bond that will mature on 20 January 2025, with a fixed coupon of 1.50%. At 31 December 2015 the fair value of this bond is 677 million euros.

These last two issues are part of the Group's 2 billion euros Euro Medium Term Notes (EMTN) programme introduced in October 2013.

#### Commercial paper

In April 2013 the Group introduced a French Commercial paper (billet de trésorerie) programme with a ceiling of 1 billion euros. This has been renewed annually since its introduction.

Issues outstanding as part of this programme amount to nil at 31 December 2015.

#### Syndicated credit facility

On 29 October 2014, the Group put in place a multi-currency syndicated credit facility of 900 million euros, with an initial duration of five years maturing on 29 October 2019, and the possibility of two one-year extensions subject to approval by the lenders, exercisable at the end of the first and the second year. On 9 October 2015 the Group was authorized by its lenders to extend this maturity to 29 October 2020. This credit facility is intended to finance the Group's general requirements as a substitute line for the commercial paper programme, and includes an early repayment clause in the event of certain situations including a change in control of the Arkema Group.

It includes: (i) standard information undertakings and commitments for this type of financing, (ii) a financial undertaking by the Arkema Group to maintain the ratio of consolidated net debt to consolidated EBITDA (tested twice a year) at 3.5 or less.

#### Securitization of sales receivables

The securitization programme for sales receivables, representing a maximum financing of 120 million euros, which was used for an amount of 2 million euros at 31 December 2014, reached its termination date on 15 July 2015 and has not been renewed.

#### 22.2 ANALYSIS OF DEBT BY CURRENCY

The Arkema Group's debt is mainly denominated in euros.

(In millions of euros)	31/12/2015	31/12/2014
Euros	1,878	1,178
US Dollars	31	8
Chinese Yuan	147	100
Other	34	17
TOTAL	2,090	1,303

Part of the debt in Euros is converted through swaps to the accounting currency of internally-financed subsidiaries, in line with the Group's policy.

### 22.3 ANALYSIS OF DEBT BY MATURITY

The breakdown of debt, including interest costs, by maturity is as follows:

(In millions of euros)	31/12/2015	31/12/2014
Less than 1 year	246	135
Between 1 and 2 years	585	65
Between 2 and 3 years	35	562
Between 3 and 4 years	35	32
Between 4 and 5 years	515	24
More than 5 years	928	679
TOTAL	2,344	1,497

Note 23

# MANAGEMENT OF RISKS RELATED TO FINANCIAL ASSETS AND LIABILITIES

The Arkema Group's businesses expose it to various risks, including market risks (risk of changes in exchange rates, interest rates and the prices of raw materials, energy and equities), credit risk and liquidity risk.

#### 23.1 FOREIGN CURRENCY RISK

The Group is exposed to transaction risks and translation risks related to foreign currencies.

The Group hedges the foreign currency risk mainly through spot foreign currency transactions or through forward transactions over maturities generally not exceeding 2 years.

The fair value of the Group's forward foreign currency contracts is an asset of 3 million euros.

The amount of foreign exchange gains and losses recognized in recurring operating income at 31 December 2015 is a negative 20 million euros (negative 1 million euros at 31 December 2014).

The portion of foreign exchange gains and losses corresponding to the interest income/expense reflected by the difference between the spot exchange rate and the forward exchange rate is recorded in financial result. It amounts to a negative 11 million euros at 31 December 2015 (negative 1 million euros at 31 December 2014).

At 31 December 2015, the Group's balance sheet exposure in transaction currencies other than the euro is as follows:

Group exposure to operating foreign currency risk

(In millions of euros)	USD	CNY	Other currencies
Accounts receivable	415	82	187
Accounts payable	(205)	(128)	(51)
Bank balances and loans/borrowings	4	(123)	44
Off balance sheet commitments (forward currency hedging)	(1,188)	(48)	(185)
Net exposure	(974)	(217)	(5)

This net exposure comprises all Group companies' outstanding amounts stated in any of the above currencies, whether their accounting currency is one of those currencies or a different currency.

#### 23.2 INTEREST RATE RISK

Exposure to interest rate risk is managed by the Group's central treasury department and simple derivatives are used as hedging instruments. The Group has not entered into any interest rate hedges at 31 December 2015.

An increase (decrease) of 1% (100 basis points) in interest rates would have the effect of decreasing (increasing) the interest on net debt by 1 million euros.

At 31 December 2015, debt is distributed between variable and fixed rates as follows:

	Variable rates	Fixed I	rates	
(In millions of euros)	overnight – 1 year	1 -5 years	Over 5 years	Total
Current and non-current debt	(249)	(991)	(850)	(2,090)
Cash and cash equivalents	711	-	-	711
Net exposure before hedging	462	(991)	(850)	(1,379)
Hedging instruments	-	-	-	-
Off-balance sheet items	-	-	-	-
Net exposure after hedging	462	(991)	(850)	(1,379)

#### 23.3 LIQUIDITY RISK

The Group's central treasury department manages the liquidity risk associated with the Group's debt.

Liquidity risk is managed with the main objective of providing the Group with sufficient financial resources to honour its commitments, and, in the context of meeting this objective, optimizing the annual financial cost of the debt.

In almost all cases, Group companies obtain their financing from, and manage their cash with, Arkema France or other Group entities that manage cash pooling mechanisms.

The Group reduces the liquidity risk by spreading maturities, favouring long maturities and diversifying its sources of financing. The Group thus has:

- a 700 million euros bond maturing on 20 January 2025;
- a 150 million euros bond maturing on 6 December 2023;
- a 230 million euros bond maturing on 30 April 2020, with an additional tap issue in October 2012 bringing the total nominal value to 480 million euros;

- a 500 million euros bond maturing on 25 October 2017;
- a 900 million euros syndicated credit facility maturing on 29 October 2020 with the possibility of a one-year extension subject to approval by the lenders, exercisable at the end of the second year. This credit facility is used particularly as a substitute line for the commercial paper programme (see note C22, "Debt").

Apart from a change of control, the main circumstances in which early repayment or termination could occur concern the syndicated credit facility (see note C22 "Debt"), if the ratio of consolidated net debt to consolidated EBITDA exceeds 3.5.

At 31 December 2015, the Group's debt maturing in more than one year is rated BBB/negative outlook by Standard & Poor's and Baa2/negative outlook by Moody's.

Commercial paper issues are rated A-2 by Standard & Poor's.

The Group's net debt at 31 December 2015 amounts to 1,379 million euros and represents 1.3 times the consolidated EBITDA for the last 12 months.

At 31 December 2015, the amount of the unused syndicated credit facility is 900 million euros and the amount of cash and cash equivalents is 711 million euros.

Note C22 "Debt" provides details of the maturities of debt.

#### 23.4 CREDIT RISK

The Group is potentially exposed to credit risk on its accounts receivable and as regards its banking counterparties.

Credit risk on accounts receivable is limited because of the large number of its customers and their geographical dispersion. No customer represented more than 2.5% of Group sales in 2015. The Group's general policy for managing credit risk involves assessing the solvency of each new customer before entering into business relations: each customer is allocated a credit limit, which constitutes the maximum level of outstandings (receivables plus orders) accepted by the Group, on the basis of the financial information obtained on the customer and the analysis of solvency carried out by the Group. These credit limits are revised regularly and, in any case, every time that a material change occurs in the customer's financial position. Customers who cannot obtain

a credit limit because their financial position is not compatible with the Group's requirements in terms of solvency only receive deliveries when they have paid for their order.

For several years, the Group has covered its accounts receivable credit risk through a global credit insurance programme. On account of the statistically low bad debt rate experienced by the Group, the rate of cover is significant. Customers with whom the Group wishes to continue commercial relations but which are not covered by this insurance are subject to specific centralized monitoring. This credit insurance programme is currently being rolled out to the recently-acquired Bostik companies, in a procedure that should be completed by 1 April 2016.

In addition, the Group's policy for recognizing bad debt provisions in respect of receivables not covered by credit insurance, or the portion of receivables that are not so covered, has two components: receivables are individually provided against as soon as a specific risk of loss (economic and financial difficulties of the customer in question, entry into receivership, etc.) is clearly identified. The Group may also recognize general provisions for receivables that are overdue for such a period that the Group considers that a statistical risk of loss exists. These periods are adapted depending on the Business Lines and the geographical regions in question.

At 31 December 2015, accounts receivable net of provisions are distributed as follows:

(In millions of euros)	31/12/2015	31/12/2014
Accounts receivable net of provisions	1,051	839
Net receivables by maturity:		
Receivables not yet due	976	799
Receivables overdue by 1-15 days	40	28
Receivables overdue by 16-30 days	23	10
Receivables overdue by more than 30 days	12	2
TOTAL NET RECEIVABLES	1,051	839

Changes in the above items essentially result from the acquisition of Bostik

Banking credit risk is related to financial investments, derivatives and credit facilities granted by banks. The Group limits its exposure to credit risk by only investing in liquid securities with first-class commercial banks.

The net carrying amount of financial assets indicated in note C24 "Presentation of financial assets and liabilities" represents the maximum exposure to credit risk.

#### 23.5 RISK RELATED TO RAW MATERIALS AND ENERGY

The prices of certain raw materials used by the Arkema Group are highly volatile and their fluctuations lead to significant variations in the cost price of the Group's products; in addition, because of the importance of the Group's requirements in terms of energy resources resulting notably from the electrically intensive nature of certain of its manufacturing processes, the Group is also sensitive to changes in the price of energy. In order to limit the impact of

price volatility of the principal raw materials it uses, the Group may decide to use derivatives matched with existing contracts, or negotiate fixed price contracts for limited periods.

Recognition of these derivatives had no impact on the income statement at 31 December 2015 (also no impact at 31 December 2014).

#### 23.6 EQUITY RISK

At 31 December 2015 the Company held 36,925 of its own shares. These shares are used to cover its free share grant plans.

In compliance with IAS 32, changes in share price have no impact on the Group's consolidated net assets.

The equity risk is not material for the Company.

Note 24

# PRESENTATION OF FINANCIAL ASSETS AND LIABILITIES

### 24.1 FINANCIAL ASSETS AND LIABILITIES BY ACCOUNTING CATEGORY

#### 2015

IAS 39 category: Class of instrument (In millions of euros)	Notes	measured at fair value through	shareholders'	Assets/ liabilities measured at amortized cost	Available-for- sale assets	Total net carrying amount
Other investments	(C13)	-	-	-	29	29
Other non-current assets (loans and advances, security deposits paid)	(C14)	-	-	109	-	109
Accounts receivable	(C16)	-	-	1,051	-	1,051
Cash and cash equivalents	(C17)	711	-	-	-	711
Derivatives *	(C24.2)	15	0	-	-	15
FINANCIAL ASSETS		696	0	1,160	29	1,885
Current and non-current debt	(C22)	-	-	2,089	-	2,089
Accounts payable		-	-	884	-	884
Derivatives *	(C24.2)	6	15	-	-	21
FINANCIAL LIABILITIES		6	15	2,973	0	2,994

<sup>\*</sup> Derivatives are carried in the balance sheet in "Other current financial assets" and "Other current financial liabilities".

### 2014

IAS 39 category: Class of instrument (In millions of euros)	Notes	Assets/liabilities measured at fair value through profit or loss	Assets/liabilities measured at fair value through shareholders' equity	Assets/liabilities measured at	Available-for- sale assets	Total net carrying amount
Other investments	(C13)	-	-	-	33	33
Other non-current assets (loans and advances, security deposits paid)	(C14)	-	-	97	-	97
Accounts receivable	(C16)	-	-	839	-	839
Cash and cash equivalents	(C17)	1,149	-	-	-	1,149
Derivatives *	(C24.2)	2	-	-	-	2
FINANCIAL ASSETS		1,151		936	33	2,120
Current and non-current debt	(C22)	-	-	1,303	-	1,303
Accounts payable		-	-	704	-	704
Derivatives *	(C24.2)	6	7	-	-	13
FINANCIAL LIABILITIES		6	7	2,007	-	2,020

<sup>\*</sup> Derivatives are carried in the balance sheet in "Other current financial assets" and "Other current financial liabilities".

At 31 December 2015 as at 31 December 2014, the fair value of financial assets and liabilities is approximately equal to the net carrying amount, except in the case of bonds.

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#### 24.2 DERIVATIVES

The main derivatives used by the Group are as follows:

Notional amount of contracts at 31/12/2015			Notional amount of contracts at 31/12/2014			Fair value of contracts		
(In millions of euros)	< 1 year	<5 years and >1 year	> 5 years	< 1 year	<5 years and >1 year	> 5 years	31/12/2015	31/12/2014
Forward foreign currency contracts	1,457	267	-	458	-	-	3	(8)
Commodities and energy swaps	28	22	-	15	13	-	(10)	(2)
TOTAL	1,485	289	-	473	13	-	(7)	(10)

#### 24.3 IMPACT OF FINANCIAL INSTRUMENTS ON THE INCOME STATEMENT

The income statement includes the following items related to financial assets (liabilities):

(In millions of euros)	2015	2014
Total interest income (expenses) on financial assets and liabilities*	(68)	(56)
Impact on the income statement of valuation of derivatives at fair value	(11)	5
Impact on the income statement of the ineffective portion of cash flow hedge instruments	-	-
Impact on the income statement of valuation of available-for-sale assets	12	6

<sup>\*</sup> Excluding interest costs on pension obligations and the expected return on related plan assets.

The amount of foreign exchange gains and losses recognized in recurring operating income in 2015 represents an expense of 20 million euros (expense of 1 million euros in 2014).

# 24.4 IMPACT OF FINANCIAL INSTRUMENTS ON SHAREHOLDERS' EQUITY

At 31 December 2015, the impact of financial instruments net of deferred taxes on the Group's shareholders' equity is a

negative 12 million euros (negative impact of 5 million euros at 31 December 2014), essentially reflecting the net-of-tax fair value of foreign currency hedges of future cash flows and commodities.

# Note 25 ACCOUNTS PAYABLE, OTHER CREDITORS AND ACCRUED LIABILITIES

Accounts payable amount to 884 million euros at 31 December 2015 (704 million euros at 31 December 2014).

Other creditors and accrued liabilities mainly comprise employeerelated liabilities for 225 million euros at 31 December 2015 (168 million euros at 31 December 2014) and amounts owing to governments for 59 million euros at 31 December 2015 (42 million euros at 31 December 2014), including 25 million euros of VAT (14 million euros at 31 December 2014).

#### Note 26

# PERSONNEL EXPENSES

Personnel expenses, including stock options and free share grants (see note C28 "Share-based payments"), amount to 1,284 million euros in 2015 (946 million euros in 2014).

They comprise 945 million euros of wages and salaries and IFRS 2 expenses (685 million euros in 2014) and 339 million euros of social charges (261 million euros in 2014).

#### Note 27

# RELATED PARTIES

# 27.1 TRANSACTIONS WITH NON-CONSOLIDATED OR EQUITY ACCOUNTED COMPANIES

Transactions between consolidated companies have been eliminated in the consolidation process. In addition, in the normal course of business, the Group has business relationships with certain non-consolidated companies or with companies which are accounted for under the equity method. The values involved are not significant.

# 27.2 COMPENSATION OF KEY MANAGEMENT PERSONNEL

Key management personnel of a group, as defined in IAS 24, are those persons having authority and responsibility for planning, directing and controlling the activities of the entity, directly or indirectly, including any director (whether executive or otherwise) of that entity.

The key management personnel of the Group are the directors and the members of its Executive Committee (Comex).

The compensation recognized in expenses by the Group is as follows:

(In millions of euros)	2015	2014
Salaries and other short-term benefits	6	5
Pensions, other post-employment benefits and contract termination benefits	1	1
Other long-term benefits	-	-
Share-based payments	2	3

These expenses comprise all types of remuneration recorded, including variable amounts, bonuses, attendance fees and benefits in kind. The Chairman and CEO is entitled to a contractual indemnity in the event of non-voluntary departure, up to a maximum of two years' total gross compensation (fixed and variable), subject to achievement of performance criteria.

Note 28

# SHARE-BASED PAYMENTS

# 28.1 STOCK OPTIONS

The Board of Directors has decided not to introduce any further stock option plans.

Movements in the stock option plans granted in previous years and still outstanding at 31 December 2015 are as follows:

	2007 Plan	2008 Plan	2010 Plan 1	2010 Plan 2	2011 Plan 1	2011 Plan 2
Date of annual general meeting	10 May 06	10 May 06	15 June 09	15 June 09	15 June 09	15 June 09
Date of Board of Directors' meeting	14 May 07	13 May 08	10 May 10	10 May 10	4 May 11	4 May 11
Vesting period	2 years	2 years	2 years	5 years	2 years	4 years
Conservation period	4 years	4 years	4 years	5 years	4 years	4 years
Period of validity	8 years	8 years	8 years	8 years	8 years	8 years
Exercise price	44.63	36.21	30.47	30.47	68.48	68.48
Adjusted exercise price	42.96	34.85	29.33	29.33	65.92	65.92
Total number of options granted	600,000	460,000	225,000	225,000	105,000	105,000
Adjustments to options in circulation at 7 November 2014	3,074	5,437	5,044	8,513	4,082	4,082
Total number of options granted after adjustments	603,074	465,437	230,044	233,513	109,082	109,082
to corporate officers: Thierry Le Hénaff	70,389	52,676	36,361	36,361	30,386	30,386
to the 10 largest beneficiaries*	218,128	172,130	105,505	107,851	78,696	78,696
Total number of options exercised	563,643	377,247	124,336	44,501	-	-
by corporate officers	70,389	52,676	12,000	22,000	-	-
by the 10 largest beneficiaries*	218,128	131,610	65,416	8,215	-	-
Total number of options cancelled	39,431	18,877	7,000	22,174	-	
NUMBER OF OPTIONS						
In circulation at 1 January 2013	201,298	261,827	191,485	220,000	105,000	105,000
Cancelled	-	-	2,000	2,000	-	-
Exercised	48,100	67,349	15,970	-	-	-
In circulation at 31 December 2013	153,198	194,478	173,515	218,000	105,000	105,000
In circulation at 1 January 2014	153,198	194,478	173,515	218,000	105,000	105,000
Adjustments	3,074	5,437	5,044	8,513	4,082	4,082
Cancelled	-	-	-	-	-	-
Exercised	74,350	57,337	44,390	-	-	-
In circulation at 31 December 2014	81,922	142,578	134,169	226,513	109,082	109,082
In circulation at 1 January 2015	81,922	142,578	134,169	226,513	109,082	109,082
Cancelled	16,631	-	-	15,174	-	-
Exercised	65,291	73,265	35,461	44,501	-	-
In circulation at 31 December 2015	-	69,313	98,708	166,838	109,082	109,082

<sup>\*</sup> Employees who are not corporate officers of Arkema or any other Group company.

#### Valuation method

The fair value of the options granted was determined using the Black & Scholes method on the basis of assumptions. The main assumptions are as follows:

	2007 Plan	2008 Plan	2010 Plan 1	2010 Plan 2	2011 Plan 1	2011 Plan 2
Volatility	20%	25%	35%	32%	32%	32%
Risk-free interest rate	3.39%	4.00%	0.34%	0.34%	1.29%	1.29%
Maturity	4 years	4 years	4 years	5 years	4 years	4 years
Exercise price (in euros)	44.63	36.21	30.47	30.47	68.48	68.48
Fair value of stock options (in euros)	7.89	8.99	6.69	6.67	12.73	12.73

The volatility assumption was determined on the basis of observation of historical movements in the Arkema share since its admission to listing, restated for certain non-representative days in order to better represent the long-term trend.

The maturity adopted for the options corresponds to the period of unavailability for tax purposes.

The amount of the IFRS 2 expense recognized in respect of stock options at 31 December 2015 was lower than 1 million euros (lower than 1 million euros at 31 December 2014).

#### 28.2 FREE SHARE GRANTS

On 9 November 2015, the Board of Directors decided to put in place two free share award plans for the benefit of Group employees, particularly employees with responsibilities whose exercise influences the Group's results.

Under these plans, the definitive grant of such performance shares will be subject to a vesting period of 4 years, with effect from the Board of Directors' grant.

The first plan awards shares subject to compliance with performance criteria concerning:

- the Arkema Group's EBITDA for 2018 and the net debt to equity ratio;
- the net cash flow/EBITDA ratio for 2016 and 2017; net cash flow excludes the impacts of acquisitions and disposals, exceptional investments, dividend payments, and the cost of the hybrid bond, and is adjusted for any unrealized exchange differences on non-recurring foreign currency financing that has no impact on net debt;
- the Arkema Group's Total Shareholder Return (TSR) over the period 2016 to 2018 compared to the TSR of a selection of other chemicals manufacturers.

TSR is defined as follows:

TSR = (share price at end of period – share price at start of period + sum of dividends paid during the period) / share price at start of period.

The second plan is reserved for employees who receive fewer than 100 shares, and does not include any performance criteria.

The main characteristics of the free share grant plans in force at 31 December 2015 are as follows:

	2011 Plan 3	2012 Plan 2	2012 Plan 3	2013 Plan	2014 Plan 1	2014 Plan 2	2015 Plan 1	2015 Plan 2
Date of annual general meeting	15 June 09	15 June 09	15 June 09	4 June 13	4 June 13	4 June 13	4 June 13	4 June 13
Date of Board of Directors' meeting	4 May 11	9 May 12	9 May 12	6 Nov 13	6 May 14	13 Nov 14	9 Nov 15	9 Nov 15
Vesting period	4 years	3 years	4 years	4 years	4 years	4 years	4 years	4 years
Conservation period	-	2 years	-	-	-	-	-	-
Fair value (in euros per share)	55.36	42.27	45.27	51.60	53.63	33.41	42.31	42.31
Performance condition	Yes (2)	Yes (2)	Yes (2)	Yes (3)	No	Yes (3)	Yes	No
Total number of free shares granted	52,315	74,805	65,335	250,000	750	275,000	285,525	59,595
to corporate officers: Thierry Le Hénaff	-	13,000	-	26,000	-	26,000	26,000	-
to the 10 largest beneficiaries (1)	14,850	36,100	16,400	75,400	50	71,600	79,600	1,000
NUMBER OF FREE SHARES								
In circulation at 1 January 2013	50,995	74,805	64,745	-	-	-	-	-
Granted	-	-	-	250,000	-	-	-	-
Cancelled	70	1,230	105	-	-	-	-	-
Definitively granted	-	-	-	-	-	-	-	-
In circulation at 31 December 2013	50,925	73,575	64,640	250,000	-	-	-	-
In circulation at 1 January 2014	50,925	73,575	64,640	250,000	-	-	-	-
Granted	-	-	-	-	750	275,000	-	-
Cancelled	1,845	125	1,735	3,130	335	-	-	-
Definitively granted	-	-	-	-	-	-	-	-
In circulation at 31 December 2014	49,080	73,450	62,905	246,870	415	275,000	-	_
In circulation at 1 January 2015	49,080	73,450	62,905	246,870	415	275,000	-	-
Granted	-	-	-	-	-	-	285,525	59,595
Cancelled	895	-	240	690	-	1,105	1250	240
Definitively granted	48,185	73,450	-	70	-	-	-	-
In circulation at 31 December 2015	-	-	62,665	246,110	415	273,895	284,275	59,355

<sup>(1)</sup> Employees who are not corporate officers of Arkema or any other Group company.

The amount of the IFRS 2 expense recognized in respect of free shares at 31 December 2015 is 7 million euros (7 million euros at 31 December 2014).

<sup>(2)</sup> Performance conditions apply only to the portion of rights in excess of 80 held under all plans, except for Comex members, all of whose rights are subject to performance criteria.

<sup>(3)</sup> Performance conditions apply only to the portion of rights in excess of 100, except for Comex members, all of whose rights are subject to performance criteria.

### Note 29 INFORMATION ON CASH FLOWS

Additional information on amounts received and paid as operating cash flows are presented below:

(In millions of euros)	31/12/2015	31/12/2014
Interest paid	67	55
Interest received	3	2
Income taxes paid	162	107

Details of the change in working capital are as follows:

(In millions of euros)	31/12/2015	31/12/2014
Inventories	101	(21)
Accounts receivable	68	16
Other receivables including income taxes	(29)	(12)
Accounts payable	(25)	9
Other liabilities including income taxes	71	29
Change in working capital	186	21

Note 30

### OFF-BALANCE SHEET COMMITMENTS

#### 30.1 COMMITMENTS GIVEN

#### 30.1.1 Off-balance sheet commitments given in the Group's operating activities

The main commitments given are summarized in the table below:

(In millions of euros)	31/12/2015	31/12/2014
Guarantees granted	77	80
Comfort letters	-	-
Contractual guarantees	7	6
Customs and excise guarantees	21	12
TOTAL	106	98

Guarantees granted are mainly bank guarantees in favour of local authorities and public bodies (state agencies, environmental

agencies) in respect of environmental obligations or concerning classified sites.

# 30.1.2 Contractual commitments related to the Group's operating activities

#### Irrevocable purchase commitments

In the normal course of business, the Arkema Group has signed multi-year purchase agreements for raw materials and energy for the operational requirements of its factories, in order to guarantee the security and continuity of supply. Signature of such contracts over periods initially of 1 to 30 years is a normal practice for companies in the Group's business sector in order to cover their needs.

These purchase commitments were valued taking into account, on a case-by-case basis, the Arkema Group's financial commitment to its suppliers, as certain of these contracts include clauses which oblige the Group to take delivery of the minimum volumes as set out in the contract or, otherwise, to pay financial compensation to the supplier. Depending on the case, these commitments are reflected in the purchase agreements in the form of notice periods, indemnification to be paid to the supplier in case of early termination of the contract or "take or pay" clauses.

The total amount of the Group's financial commitments is 367 million euros at 31 December 2015 (see maturity schedule below).

(In millions of euros)	31/12/2015	31/12/2014
2015	-	176
2016	167	70
2017	58	53
2018	44	36
2019 until expiry of the contracts	98	92
TOTAL	367	427

#### **Lease commitments**

In the context of its business, the Arkema Group has signed lease contracts, of which the majority are operating lease agreements. Lease agreements signed by the Group are mainly in respect of property rental (head offices, land) and transportation equipment (rail cars, containers).

The amounts presented in the table below correspond to the future minimum payments that will need to be made in accordance with these contracts (only the irrevocable portion of future lease payments has been valued).

	31/12	/2015	31/12/2014	
(In millions of euros)	Capitalized leases	Non- capitalized leases	Capitalized leases	Non- capitalized leases
2015	-	-	0	19
2016	0	17	0	17
2017	0	13	0	14
2018	0	11	0	11
2019 and beyond	1	45	1	40
NOMINAL VALUE OF FUTURE LEASE PAYMENTS	2	86	2	101
Finance cost	0	NA	0	NA
PRESENT VALUE	2	NA	2	NA

# 30.1.3 Off-balance sheet commitments related to changes in the scope of consolidation

#### Warranties related to sales of businesses

When selling businesses, the Arkema Group has sometimes granted the purchaser warranties in respect of unrecorded liabilities. In most cases these warranties are capped and granted for a limited period of time. They are also limited in terms of their coverage to certain types of expenses or litigation. In the majority of cases, they cover risks of occurrence of environmentally related expenses or litigation.

The cumulative residual amount of capped warranties in respect of unrecorded liabilities granted by the Group amounts to 113 million euros at 31 December 2015 (95 million euros at 31 December 2014). These amounts are stated net of provisions recognized in the balance sheet in respect of such warranties.

# 30.1.4 Off-balance sheet commitments related to Group financing

These commitments are described in note C22 "Debt".

#### 30.2 COMMITMENTS RECEIVED

#### Commitments received from Total in 2006

In connection with the Spin-Off of Arkema's Businesses, Total S.A. and certain Total companies have extended certain indemnities, or have assumed certain obligations, for the benefit of the Arkema Group, relating to (i) certain antitrust litigation, (ii) certain actual or potential environmental liabilities of the Group arising from certain sites in France, Belgium and the United States, the operations on which in the majority of cases have ceased, (iii) certain tax matters, and (iv) the Spin-Off of Arkema's Businesses. These indemnities and obligations are described below.

# 30.2.1 Indemnities extended by Total in respect of certain antitrust litigation

In order to cover potential risks in connection with antitrust litigation relating to anti-competitive agreements in Europe and the United States and arising from facts prior to 18 May 2006 (or prior to 7 March 2006, as the case may be), Total S.A. has extended to Arkema and Elf Aquitaine, Inc. has extended to Arkema Amériques SAS, the indemnities, the principal terms of which can be described as follows.

#### Subject-matter of the Indemnities

By an agreement dated 15 March 2006 (the Arkema European Indemnity), Total S.A. agreed to indemnify Arkema for 90% of (i) any payment due by Arkema or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to a money judgment imposed by EU antitrust authorities, or by national antitrust authorities of a Member State of the European Union, for violations of antitrust laws relating to anticompetitive agreements, (ii) any damages payable by Arkema or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to civil proceedings arising from the same facts which form the basis of a judgment referred to in (i), and (iii) certain expenses incurred in connection with such proceedings by

Arkema or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries).

By an agreement dated 15 March 2006 (the Arkema U.S. Indemnity), Total S.A. also agreed to indemnify Arkema for 90% of (i) any payment due by Arkema or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to a money judgment imposed by U.S. courts or antitrust authorities for violations of U.S. federal or state antitrust laws relating to anticompetitive agreements, or in respect of a settlement entered into in the context of such proceedings, (ii) any damages payable by Arkema or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to civil proceedings arising from the same facts which form the basis of a judgment referred to in (i), and (iii) certain expenses incurred in connection with such proceedings by Arkema or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries).

In connection with the sale of Arkema Delaware, Inc. shares by Elf Aquitaine, Inc. to Arkema Amériques SAS, Elf Aquitaine, Inc. agreed, in the agreement dated 7 March 2006 (the Arkema Delaware Indemnity), to indemnify Arkema Amériques SAS for 90% of (i) any payment due by Arkema Amériques SAS or any of its subsidiaries pursuant to a money judgment imposed by U.S. courts or antitrust authorities for violations occurring prior to 7 March 2006 of U.S. federal or state antitrust laws relating to anticompetitive agreements, or in respect of the settlement entered into in the context of such proceedings, (ii) any damages payable by Arkema Amériques SAS or any of its subsidiaries pursuant to civil proceedings arising from the same facts which form the basis of a judgment referred to in (i), and (iii) certain expenses incurred by Arkema Amériques SAS or any of its subsidiaries in connection with such proceedings.

Arkema Amériques SAS has benefited from an indemnification of 19.3 million US dollars under the Arkema Delaware Indemnity. At 31 December 2015, the residual amount covered by this indemnity amounts to 873.7 million US dollars.

Finally, Total S.A. extended to Arkema a supplemental indemnity dated 15 March 2006 (the Supplemental Arkema Delaware Indemnity) covering 90% of sums payable by Arkema Amériques SAS or any of its subsidiaries in respect of litigation relating to anticompetitive agreements in the United States in excess of the maximum amount covered by the Arkema Delaware Indemnity.

The Arkema European Indemnity, the Arkema U.S. Indemnity, the Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity are hereinafter referred to together as the Indemnities and individually as an Indemnity.

#### Liabilities not covered by the Indemnities

The following liabilities are not covered by the Indemnities:

• liabilities arising from facts occurring after 18 May 2006 in the case of the Arkema European Indemnity and the Arkema U.S. Indemnity, or after 7 March 2006 in the case of the Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity (including, in case of liabilities arising from facts occurring both before and after the relevant date, the portion of the liability relating to the period after 18 May 2006 or after 7 March 2006, as the case may be);

- liabilities arising from violations of antitrust laws other than those prohibiting anticompetitive agreements; and
- liabilities imposed by authorities outside the European Union (in the case of the Arkema European Indemnity) or the United States (in the case of the other Indemnities).

# Participation of Total in the management of litigation covered by the Indemnities

The Indemnities provide for the participation by Total S.A. or Elf Aquitaine, Inc., as the case may be, in the management of litigation covered by the Indemnities, which involves a certain number of obligations on the part of Arkema and Arkema Amériques SAS, in particular the obligation to notify Total S.A. or Elf Aquitaine, Inc., as the case may be, of certain events occurring in the context of proceedings covered by the Indemnities and to act in accordance with the advice and instructions of Total S.A. or Elf Aquitaine, Inc., as the case may be, relating to such proceedings. Total S.A. and Elf Aquitaine, Inc., as the case may be, also have the right to assume sole control of the defence of the Group entity in question. Failure by Arkema or Arkema Amériques SAS to comply with these obligations can result, in certain circumstances, in the automatic termination of the Indemnity, as described below.

#### Amount of the indemnification

The Arkema European Indemnity, whose deductible of 176.5 million euros has been exceeded, gave rise to indemnification of 138.5 million euros being received from Total S.A. The Arkema U.S. Indemnity, the Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity do not have a deductible.

#### Cross-indemnities of Arkema and Arkema Inc.

Arkema and Arkema Inc. have agreed to indemnify Total S.A. in respect of any liability covered by the Indemnities but which is borne, not by a Group entity but by Total S.A. or one of its subsidiaries due to facts attributable to a Group company, whether the liability of Total S.A. or one of its subsidiaries is determined to be direct or derivative, exclusive or joint and several, relative to the liability of the Group entity to which the facts are attributable.

However, this cross-indemnity by Arkema and Arkema Inc. will be reduced by the indemnity which would have been paid by Total S.A. or Elf Aquitaine, Inc., as the case may be, under the relevant Indemnity if the liability had been borne by a Group company. Consequently, if the cross-indemnity of Arkema and Arkema Inc. is triggered, Arkema or Arkema Inc., as the case may be, would only be obligated to indemnify Total S.A. for 10% of the liabilities borne by Total S.A. or one of its subsidiaries (in the case of the Arkema European Indemnity, this 10% relates to the amount, if any, that exceeds the deductible).

#### **Duration of the indemnities**

The Arkema European Indemnity and the Arkema U.S. Indemnity are valid for a term of 10 years from 18 May 2006. The Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity are valid for a term of 10 years from 7 March 2006.

The Arkema cross-indemnity is valid for a term of 10 years from 18 May 2006.

The Arkema Inc. cross-indemnity is valid for a term of 10 years from 7 March 2006.

#### Termination of the Indemnities

Indemnities shall terminate in the event that a natural person or legal entity, acting alone or in concert with others, acquires, directly or indirectly, more than one third of the voting rights of Arkema (voting rights are subject to a ceiling of 10% — and 20% in the case of double voting rights — unless a purchaser acquires at least two thirds of the total number of Arkema shares in a public transaction targeting all Arkema shares) or if the Group transfers, directly or indirectly, in one or several times, to the same third party or to several third parties acting in concert, assets representing more than 50% of the Group's "enterprise value" (as defined in the Indemnities) at the time of the relevant transfer.

The Arkema European Indemnity and the Arkema U.S. Indemnity will terminate if Arkema loses control of Arkema France.

The Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity will terminate if Arkema loses control of Arkema Amériques SAS, or if Arkema Amériques SAS loses control of Arkema Delaware Inc.

Finally, the Indemnities will terminate in the event of a material breach by the Group of its obligations under the relevant Indemnity if such breach has remained uncured for 30 days after notice by the indemnifying party demanding its cure.

The Indemnities provide that, upon the occurrence of a termination event, the only liabilities of Group companies that will remain covered by the Indemnities are those, if any, which (i) fell due prior to the termination event and (ii) were notified to Total S.A. or to Elf Aquitaine, Inc., prior to the termination event.

# 30.2.2 Obligations and indemnities given in respect of Former Industrial Sites

In order to cover certain risks relating to certain industrial sites situated in France, Belgium and the United States in respect of which the Group is or could be held liable, and where, for the most part, operations have ceased (the Former Industrial Sites), Total S.A. companies have entered with Arkema or its subsidiaries into indemnity and service agreements the principal terms of which can be described as follows:

#### Agreement relating to former industrial sites located in France

Arkema France has entered into various agreements with Total companies and in particular Retia. Pursuant to these agreements, the Total companies concerned, in consideration of a flat fee already paid by Arkema France, assume all the investigation, restoration and monitoring obligations that could be imposed on Arkema France by the competent administrative authorities in respect of industrial sites located in France the operation of which, for the most part, has ceased. To this end, the agreements provide, in particular, (i) in the majority of cases, for the transfer of ownership of the sites concerned by Arkema France to the Total companies concerned, (ii) for the Total companies concerned to be substituted for Arkema France in the capacity of last operator of those sites whenever that is possible, (iii) for the performance by the Total companies concerned of the restoration obligations of the sites in question in accordance with the applicable rules and (iv) for the indemnity by the Total companies in respect of

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the financial consequences of claims which could be brought against Arkema France by reason of the impact of those sites on the environment.

In most cases, Arkema France retains responsibility for the consequences concerning employees and former employees of Arkema France as well as third parties, in terms of public health or occupational pathologies, of the industrial activities formerly carried out by Arkema France and its predecessors on the sites which are the subject of the aforementioned agreements.

# Agreement relating to the former industrial site at Rieme in Belgium

On 30 December 2005, Arkema France sold all of the shares that it held in the share capital of the Belgian company Resilium Belgium to Septentrion Participations, a subsidiary of Total S.A.

Resilium Belgium is the owner of a Former Industrial Site located at Rieme in Belgium.

Having regard to the future costs that might arise from the restoration of the Former Industrial Site at Rieme, Arkema France has paid Septentrion Participations financial compensation. In exchange, Septentrion Participations has undertaken to assume all restoration obligations in respect of the site at Rieme and to indemnify Arkema France against all claims, actions and complaints relating to Resilium Belgium, its assets and its liabilities.

# Agreement relating to certain former industrial sites located in the United States

In March 2006, Arkema Amériques SAS completed the acquisition from Elf Aquitaine Inc. and Arkema France of Arkema Delaware Inc., a holding company of most of the Group's operations in the United States. The negotiated terms of the stock purchase agreement among Elf Aquitaine Inc., Legacy Sites Services LLC and Arkema Amériques SAS, dated 7 March 2006 (the Arkema Delaware Main SPA) required Elf Aquitaine Inc. to use 270 million US dollars to capitalize a new subsidiary, Legacy Sites Services LLC, that will perform remediation services and indemnify the Group against the cost of environmental contamination liabilities incurred by the Group entities covered by this indemnity, and related personal injury and property damage claims associated with contamination at 35 of the Group's closed and formerly operated facilities and 24 third party sites where the Group's liability arises solely out of waste shipments from the sites other than currently operated sites. In exchange for this indemnification, Arkema Amériques SAS agreed to grant to Legacy Sites Services LLC control over remediation activities and the defence of claims relating to contamination liabilities at these facilities and sites.

The sites currently operated by the Group are excluded from this indemnity, as are sites that received waste associated with current operations of the Group, certain sites where no significant restoration work is currently underway or anticipated, and other sites where the Group could be held liable for environmental pollution. These other sites include, for example, sites where remediation has been conducted in the past or where future remediation costs or liability are believed to be insignificant or non-existent based upon information available at the time when the indemnity was entered into. Arkema Amériques SAS has waived any claims against Legacy Sites Services LLC, Total S.A. or their respective subsidiaries in respect of the sites not covered by the indemnity.

The Legacy Sites Services LLC indemnity covers the costs of restoration and clean-up of the soil and groundwater, the costs of related defence and settlement costs and personal injury, property and natural resource damages. The indemnity does not cover liabilities unrelated to site remediation, in particular liabilities in respect of products manufactured on the said sites, liability arising from certain dangerous and potentially dangerous substances, particularly asbestos exposure and criminal liability.

The indemnity described above is capped at 270 million US dollars. The amount received by Arkema under this indemnity amounted to 90 million US dollars. At the same time as the stock purchase agreement and the indemnity described above, Legacy Site Services LLC and Arkema Inc. entered into a supplemental contamination indemnity agreement pursuant to which Legacy Site Services LLC will indemnify the liabilities of the Group in excess of 270 million US dollars, on the same terms, for the same sites and subject to the same exceptions as the indemnity described in the preceding paragraph.

#### 30.2.3 Tax indemnity granted by Total S.A.

In order to cover potential tax risks related to the business activities transferred by the Group to Total or from the reorganization in connection with the Spin-Off of Arkema's Businesses, Total S.A. has granted an indemnity to Arkema, the main terms of which can be described as follows.

#### **Purpose of the Tax Indemnity**

Under the terms of an agreement dated 15 March 2006 (the Tax Indemnity), Total S.A. has undertaken to indemnify Arkema for (i) liabilities arising from any tax, customs or levies not covered by reserves, for which the Group would remain liable, when such liabilities arise from (x) activities in the petrochemicals and specialties sectors that were transferred by the Group to Total and the triggering event of which occurred prior to the date of such transfer; or (y) the reorganization undertaken for the purpose of spinning off Arkema's Businesses from Total's Chemicals sector, including, in particular, the Elf Spin-Off, the Total Spin-Off, the Merger and certain prior securities reclassification transactions; (ii) interest, fines, penalties, additional charges or other costs related thereto; and (iii) provided that Total S.A. has given its prior consent, the expenses incurred by Arkema or the relevant Group company in connection with such liabilities.

The Tax Indemnity, however, does not cover tax reassessments in connection with Arkema's Businesses (with the exception of reassessments that may affect Arkema UK, as indicated below) and is subject to the specific terms described hereafter.

# Involvement of Total S.A. in the management of litigation covered by the Tax Indemnity

The Tax Indemnity provides for a procedure pursuant to which Arkema must involve Total S.A. in the management of the tax audits or litigation relating to the tax liabilities covered by the Tax Indemnity. In particular, this procedure entails the obligation to notify Total S.A. of any event that is likely to give rise to a liability covered by the Tax Indemnity and to comply with the advice and instructions of Total S.A. in defending the interests of the relevant Group company. In the event of unresolved disagreements on the strategy, means, method or type of such defence, the final decision will be taken by Total S.A. Arkema's failure to comply

with its obligations may result in automatic termination of the Tax Indemnity.

#### Amount of the indemnification

The Tax Indemnity includes no deductible, trigger threshold or cap.

In the event that a liability cannot be clearly connected to the petrochemicals and specialties sector transferred by the Group to Total in relation to Arkema's Businesses, Arkema and Total S.A. will each bear 50% of the said liability.

# Special provisions applying to certain foreign companies of the Group

Tax liabilities arising from the reorganization undertaken for purposes of separating Arkema's Businesses from Total's Chemicals sector in the Netherlands, which may have been incurred by Atotech B.V. and Atotech Nederland B.V. as a result of the Dutch tax group of which Arkema B.V. is the parent company are excluded from the Tax Indemnity. Any other tax liabilities arising from reassessments that may be applied to Atotech B.V. and Atotech Nederland B.V. as a result of the Dutch tax group will be assumed by these companies, which remain under Total S.A.'s control.

Arkema UK will benefit from a UK corporation tax indemnity covering any tax reassessments against it relating to Arkema's Businesses. This indemnity will be limited to the amount of losses generated by the Arkema Businesses that have been transferred by Arkema UK as result of the group relief instituted by Total Holdings UK for corporation tax purposes in the United Kingdom.

#### Payment of the indemnity

The liabilities covered by the Tax Indemnity will give rise to an indemnification payment only if they are definitely determined by an enforceable decision that is not subject to appeal.

#### **Duration of the Tax Indemnity**

The Tax Indemnity shall expire at the end of two months following the statute of limitations effectively applicable to the tax liabilities covered by the Tax Indemnity.

#### Beneficiary of the Tax Indemnity

The Tax Indemnity is only for the benefit of Arkema or, as the case may be, Arkema France, if Arkema is merged into Arkema France.

# 30.2.4 Other indemnities given in the context of the Spin-Off of Arkema's Businesses

As part of the Total Spin-Off Agreement, Total S.A. and Arkema made certain representations and warranties, some of them in connection with the separation of the Arkema Group from Total.

The agreement states that Total S.A. grants no indemnities, other than the indemnities and agreements entered into by the Total entities that are described in this paragraph, particularly with

respect to the assets and the business activities of all Arkema Group entities, or the liabilities or obligations associated with such entities or activities, which Arkema declares that it is aware of and for which Arkema shall be responsible, including in the case of the appearance of any item that is not known as of the date of the Total Spin-Off Agreement, or of an increase in the amount of the aforesaid liabilities or obligations. Arkema releases Total S.A. from any such claim, except in the case of New Claims as defined below.

# Representations and warranties relating to information exchanged in preparing the Spin-Off of Arkema's Businesses

Total S.A. and Arkema have made mutual representations and warranties with respect to the accuracy and completeness of the information exchanged by the two companies in preparing the Spin-Off of Arkema's Businesses.

#### Representations and warranties relating to potential claims

After conducting all necessary and customary due diligence, Arkema has declared, recognized and warranted that, to its knowledge and to the knowledge of the Arkema Group entities, as of the date of the Total Spin-Off Agreement, there were no grounds for claims, actions or complaints by any Arkema Group entity or by any one of its de facto or de jure directors, corporate officers or executives against any Total entity or any one of its de facto or de jure employees, directors, corporate officers or executives (a Total Entity). The claims, actions or complaints mentioned above are hereinafter referred to as the Arkema Group Claim(s).

Consequently, Arkema has undertaken to indemnify Total S.A. and hold it harmless for the consequences of any Arkema Group Claim against any Total Entity. Arkema has waived all Arkema Group Claims other than New Claims, as defined below.

Arkema's indemnity and the waiver mentioned in the two preceding paragraphs do not apply to any potential Arkema Group Claim that would be based on (i) events attributable to a Total Entity or (ii) grounds of which no Arkema Group entity has any knowledge as of the date of the Total Spin-Off agreement, after completing the necessary and customary due diligences, but only if and insofar as such events or grounds do not relate solely to the fact that the Arkema Group companies belonged to Total prior to 18 May 2006, or relate solely to the exercise of corporate offices or management functions by Total Entities within the Arkema Group (the New Claim(s)).

At the same time, Total S.A. has declared, recognized and warranted that to its knowledge and to the knowledge of the Total entities, as of the date of the Total Spin-Off agreement, there were no grounds for claims, actions or complaints by any Total entity or by any one of its de facto or de jure directors, corporate officers or executives against any Arkema Group entity or any one of its de facto or de jure employees, directors, corporate officers or executives (the Group Entity(ies)), arising from the ownership

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or operation by Group entities of the companies or businesses acquired by Total before 18 May 2006 (the Total Claim(s)).

Total S.A. has declared, recognized and warranted that it had no Total Claim(s) arising from the exercise of corporate offices or functions by Arkema Group Entities within Total, and has waived all Total Claims on its part.

Consequently, Total S.A. has agreed to indemnify and hold harmless Arkema for the consequences of any Total Claim against any Arkema Group Entity.

#### **Duration of the indemnities**

No indemnity given in the Total Spin-Off agreement will survive after 10 years from 18 May 2006.

In addition, the Arkema Delaware Main SPA provides that Arkema Amériques SAS, which became a subsidiary of Arkema on 18 May 2006, will indemnify Elf Aquitaine, Inc., a subsidiary of Total S.A., for any taxes that may result from a breach of representations or covenants under the Arkema Delaware Main SPA or the Tax Sharing Agreement dated 1 January 2001, among Total Holdings USA, Inc. and certain of its subsidiaries, by Arkema Amériques SAS, Arkema Delaware Inc., or certain of the subsidiaries of Arkema Delaware Inc. Elf Aquitaine, Inc.

will likewise indemnify Arkema Amériques SAS for any taxes resulting from such breaches by Elf Aquitaine, Inc. Moreover, the Arkema Delaware Main SPA provides that Elf Aquitaine Inc. and its US subsidiaries, on the one hand, and Arkema Delaware Inc. with certain of its US subsidiaries, on the other hand, will each be responsible for their share of US federal and state income taxes before 7 March 2006, as computed under the Tax Sharing Agreement, because for this period Elf Aquitaine, Inc. files a consolidated US federal income tax return that includes Arkema Delaware Inc. and certain of its subsidiaries and pays the taxes due in respect of the consolidated US federal income tax return. Arkema Delaware Inc. and certain of its subsidiaries will be required to pay such amounts to Elf Aquitaine, Inc. For periods after 7 March 2006, Arkema Delaware, Inc. and its US subsidiaries will be responsible to file income tax returns separately from Elf Aquitaine, Inc. and separately to make all tax payments in respect of these returns.

With the exception of the obligations or indemnities described in this section, Total has not given the Arkema Group any other material commitments or indemnities of the kind referred to in the first paragraph of this section "Commitments received from Total in 2006".

### Note 31

### STATUTORY AUDITORS' FEES

	KPA	MG	Ernst & Young	
(In millions of euros)	2015	2014	2015	2014
AUDITING				
Audit, certification, review of individual and consolidated financial statements	2.8	2	2.9	2.1
Issuer	0.6	0.5	0.6	0.5
Fully consolidated subsidiaries	2.2	1.5	2.3	1.6
Other due diligence work and services directly related to the auditors' mission	0.2	0.2	0.7	0.1
Issuer	0.1	0.1	0.7	0.1
Fully consolidated subsidiaries	0.1	0.1	-	-
SUB-TOTAL	3.0	2.2	3.6	2.2
Other services provided by the networks to fully consolidated subsidiaries	-	-	-	0.2
TOTAL	3.0	2.2	3.6	2.4

In application of an internal rule validated by the Audit Committee, the amount of fees for other due diligence work and services directly related to the auditors' mission shall not exceed 30% of fees for the audit of the individual and consolidated financial statements. For 2015, this amount principally concerns work done for the acquisition of Bostik.

#### Note 32

### SUBSEQUENT EVENTS

On 29 January 2016 the Arkema Group announced that it had decided not to exercise its option to increase its share in Taixing Sunke Chemicals, as its financial terms no longer reflect current market conditions for acrylics in China. Jurong Chemical could

therefore dilute the Arkema Group's investment in Taixing Sunke Chemicals; if it does so, the joint venture will continue to be accounted for as a joint operation.

# D. Scope of consolidation at 31 December 2015

(a) Companies consolidated for the first time in 2015

The percentage of control indicated below also corresponds to the Group's ownership interest.

Altuglas International Denmark A/S		Denmark	100.00	FC
Altuglas International Mexico Inc.		United States	100.00	FC
Architectural & structural adhesives Pty Ltd	(b)	Australia	100.00	FC
Altuglas International SAS		France	100.00	FC
American Acryl LP		United States	50.00	JO
American Acryl NA LLC		United States	50.00	JO
Arkema		South Korea	100.00	FC
Arkema		France	100.00	FC
Arkema Afrique SAS		France	100.00	FC
Arkema Amériques SAS		France	100.00	FC
Arkema Asie SAS		France	100.00	FC
Arkema BV		Netherlands	100.00	FC
Arkema Canada Inc.		Canada	100.00	FC
Arkema Changshu Chemicals Co. Ltd		China	100.00	FC
Arkema Changshu Fluorochemical Co. Ltd		China	100.00	FC
Arkema Chemicals India Private Ltd.		India	100.00	FC
Arkema China Investment Co. Ltd.		China	100.00	FC
Arkema Coating Resins Malaysia Sdn. Bhd.		Malaysia	100.00	FC
Arkema Coatings Resins UK	Un	ited Kingdom	100.00	FC
Arkema Co. Ltd		Hong Kong	100.00	FC
Arkema Daikin Advanced Fluorochemicals Co. Ltd		China	60.00	JO
Arkema Delaware Inc.		United States	100.00	FC
Arkema Europe		France	100.00	FC
Arkema France		France	100.00	FC
Arkema GmbH		Germany	100.00	FC
Arkema Hydrogen Peroxide Co. Ltd. Shanghai		China	66.67	FC
Arkema Inc.		United States	100.00	FC
Arkema Insurance Ltd		Ireland	100.00	FC
Arkema KK		Japan	100.00	FC
Arkema Kimya Sanayi ve Ticaret AS	(a)	Turkey	100.00	FC
Arkema Ltd.	Un	ited Kingdom	100.00	FC
Arkema Mexico SA de CV		Mexico	100.00	FC

NB: FC: full consolidation

<sup>(</sup>b) Companies acquired in 2015

JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses

JV: joint venture - consolidation by the equity method

SI: significant influence - consolidation by the equity method

Arkema Mexico Servicios SA de CV		Mexico	100.00	FC
Arkema PEKK Inc.		United States	100.00	FC
Arkema Peroxides India Private Limited		India	100.00	FC
Arkema Pte Ltd.		Singapore	100.00	FC
Arkema Pty Ltd.	(a)	Australia	100.00	FC
Arkema Quimica Ltda		Brazil	100.00	FC
Arkema Quimica SA		Spain	99.92	FC
Arkema (Shanghai) Distribution Co. Ltd		China	100.00	FC
Arkema Spar NL Limited Partnership		Canada	100.00	FC
Arkema sp Z.o.o		Poland	100.00	FC
Arkema Srl		Italy	100.00	FC
Arkema Taixing Chemicals		China	100.00	FC
Arkema Thiochemicals Sdn Bhd		Malaysia	86.00	FC
Arkema Yoshitomi Ltd.		Japan	49.00	SI
ATO Findley Deutschland Gmbh	(b)	Germany	100.00	FC
Bostik AB (Sweden)	(b)	Sweden	100.00	FC
Bostik AS	(b)	Estonia	100.00	FC
Bostik Argentina	(b)	Argentina	100.00	FC
Bostik AS (Denmark)	(b)	Denmark	100.00	FC
Bostik AS (Norway)	(b)	Norway	100.00	FC
Bostik Australia	(b)	Australia	100.00	FC
Bostik Belux NV SA	(b)	Belgium	100.00	FC
Bostik BV	(b)	Netherlands	100.00	FC
Bostik Canada	(b)	Canada	100.00	FC
Bostik Egypt For Production of Adhesives S.A.E	(b)	Egypt	100.00	FC
Bostik Findley (China) Co Ltd.	(b)	China	100.00	FC
Bostik Findley Malaysia Sdn. Bhd.	(b)	Malaysia	100.00	FC
Bostik Gmbh	(b)	Germany	100.00	FC
Bostik Holding Australia Ltd	(b)	Australia	100.00	FC
Bostik Holding BV	(b)	Netherlands	100.00	FC
Bostik Holding Hong Kong Ltd.	(b)	Hong Kong	100.00	FC
Bostik Holding SA	(b)	France	100.00	FC
Bostik Inc.	(b)	United States	100.00	FC
Bostik India Private Ltd.	(b)	India	100.00	FC
Bostik Industries Ltd.	(b)	Ireland	100.00	FC
Bostik Korea Ltd.	(b)	South Korea	100.00	FC
Bostik Ltd.	(b)	United Kingdom	100.00	FC
Bostik Mexicana SA de CV	(b)	Mexico	100.00	FC
Bostik Nederland BV	(b)	Netherlands	100.00	FC
Bostik New Zealand	(b)	New Zealand	100.00	FC
Bostik-Nitta Co. Ltd.	(b)	Japan	66.00	FC

NB: FC: full consolidation

JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses

JV: joint venture - consolidation by the equity method

SI: significant influence - consolidation by the equity method

Bostik OOO (b) Bostik OY (b) Bostik Philippines Inc. (b) Bostik Polska sp Z.o.o (b) Bostik SA (b)	Russia Finland Philippines Poland France Spain Latvia	100.00 100.00 100.00 100.00 100.00	FC FC FC FC
Bostik Philippines Inc. (b) Bostik Polska sp Z.o.o (b) Bostik SA (b)	Philippines Poland France Spain	100.00 100.00 100.00	FC FC
Bostik Polska sp Z.o.o (b) Bostik SA (b)	Poland France Spain	100.00	FC
Bostik SA (b)	France Spain	100.00	
	Spain		FC
D (1 CA (C · )	•	100.00	10
Bostik SA (Spain) (b)	Latvia		FC
Bostik SIA (b)		100.00	FC
Bostik (Shanghai) Management Co. Ltd. (b)	China	100.00	FC
Bostik (Thailand) Co. Ltd (b)	Thailand	100.00	FC
Bostik UAB (b)	Lithuania	100.00	FC
Bostik Vietnam Company Ltd (b)	Vietnam	100.00	FC
Ceca Belgium	Belgium	100.00	FC
Ceca Italiana Srl	Italy	100.00	FC
Ceca LC	France	100.00	FC
Ceca SA	France	100.00	FC
Ceca Watan Saudi Arabia (a) Sc	audi Arabia	51.00	FC
Cekomastik Kimya Sanayi Ve Ticaret A.S (b)	Turkey	100.00	FC
Changshu Coatex Additives Co. Ltd.	China	100.00	FC
Changshu Haike Chemicals Co. Ltd.	China	49.00	FC
CJ Bio Malaysia Sdn. Bhd.	Malaysia	14.00	SI
Coatex Asia Pacific	South Korea	100.00	FC
Coatex Central Eastern Europe sro	Slovakia	100.00	FC
Coatex Inc.	nited States	100.00	FC
Coatex Latin America Industria et Comercio Ltda	Brazil	100.00	FC
Coatex Netherlands BV	Vetherlands	100.00	FC
Coatex SAS	France	100.00	FC
Daikin Arkema Refrigerants Asia Ltd.	Hong Kong	40.00	JV
Daikin Arkema Refrigerants Trading (Shanghai) Co. Ltd.	China	40.00	JV
Delaware Chemicals Corporation U	nited States	100.00	FC
Febex SA	Switzerland	96.77	FC
Hebei Casda Biomaterials Co. Ltd	China	100.00	FC
Ihsedu Agrochem Private Ltd	India	24.90	SI
Jiangsu Bostik Adhesive Co. Ltd (b)	China	100.00	FC
Maquiladora General de Matamoros SA de CV	Mexico	100.00	FC
MEM BAUCHEMIE Gmbh (b)	Germany	100.00	FC
Michelet Finance, Inc.	nited States	100.00	FC
MLPC International	France	100.00	FC
Newspar	Canada	50.00	JO
Mydrin Srl (b)	Italy	100.00	FC
	nited States	100.00	FC
Oxido Srl (b)	Italy	100.00	FC

NB: FC: full consolidation

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JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses JV: joint venture - consolidation by the equity method

SI: significant influence - consolidation by the equity method

Oxochimie		France	50.00	JO
Ozark Mahoning Company		United States	100.00	FC
PT Bostik Indonesia	(b)	Indonesia	100.00	FC
Sartomer Asia Limited		Hong Kong	100.00	FC
Sartomer Guangzhou Chemical Co. Ltd.		China	100.00	FC
Sartomer Shanghai Distribution Company Limited		China	100.00	FC
Seki Arkema		South Korea	51.00	FC
Shanghai Arkema Gaoyuan Chemicals Co. Ltd		China	100.00	FC
Société Marocaine des Colles	(b)	Morocco	97.01	FC
Sovereign Chemicals Ltd	(b)	United Kingdom	100.00	FC
Suzhou Hipro Polymers Co. Ltd		China	100.00	FC
Taixing Sunke Chemicals		China	55.00	JO
Tamer Endustriyel Madencilik Anonim Sirketi		Turkey	50.00	FC
Turkish Products, Inc.		United States	100.00	FC
Usina Fortaleza Industria E commercio de massa fina Ltda	(b)	Brazil	100.00	FC
Vetek		Argentina	60.00	FC
Viking chemical company		United States	100.00	FC
Zhuhai Bostik Adhesive Ltd	(b)	China	100.00	FC

NB: FC: full consolidation

JO: joint operation – consolidated based on shares of assets, liabilities, income and expenses JV: joint venture - consolidation by the equity method
SI: significant influence - consolidation by the equity method

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# **4.4** COMPANY'S ANNUAL FINANCIAL STATEMENTS

### 4.4.1 Statutory auditors' report on the financial statements

This is a free translation into English of the statutory auditors' report on the financial statements issued in French and it is provided solely for the convenience of English-speaking users.

The statutory auditors' report includes information specifically required by French law in such reports, whether modified or not. This information is presented below the audit opinion on the financial statements and includes an explanatory paragraph discussing the auditors' assessments of certain significant accounting and auditing matters. These assessments were considered for the purpose of issuing an audit opinion on the financial statements taken as a whole and not to provide separate assurance on individual account balances, transactions or disclosures.

This report also includes information relating to the specific verification of information given in the management report and in the documents addressed to the shareholders.

This report should be read in conjunction with and construed in accordance with French law and professional auditing standards applicable in France.

#### **KPMG Audit**

Département de KPMG S.A.
Tour EQHO
2, avenue Gambetta
CS 60055
92066 Paris-La Défense Cedex

Statutory auditors Member of the "Compagnie régionale de Versailles"

#### **ERNST & YOUNG Audit**

1/2, place des Saisons 92400 Courbevoie – Paris-La Défense 1 S.A.S. à capital variable

Statutory auditors Member of the "Compagnie régionale de Versailles"

#### Arkema

Year ended 31 December 2015

#### Statutory auditors' report on the financial statements

To the Shareholders,

In compliance with the assignment entrusted to us by your annual general meetings, we hereby report to you, for the year ended 31 December 2015, on:

- the audit of the accompanying financial statements of Arkema;
- the justification of our assessments;
- the specific verifications and information required by law.

These financial statements have been approved by the board of directors. Our role is to express an opinion on these financial statements based on our audit.

#### I. Opinion on the financial statements

We conducted our audit in accordance with professional standards applicable in France; those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit involves performing procedures, using sampling techniques or other methods of selection, to obtain audit evidence about the amounts and disclosures in the financial statements. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made, as well as the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

In our opinion, the financial statements give a true and fair view of the assets and liabilities and of the financial position of the company as at 31 December 2015 and of the results of its operations for the year then ended in accordance with French accounting principles.

#### II. Justification of our assessments

In accordance with the requirements of article L. 823-9 of the French commercial code (*Code de commerce*) relating to the justification of our assessments, we bring to your attention the following matters:

- Note B.1 "Investments" to the financial statements provides the terms within which has been assessed the value in use of the equity interests. As part of our assessments of the accounting principles and policies used by your company, we verified that the above accounting methods were appropriate. We also verified that note D.1 "Investments, loans and financial receivables" to the financial statements and the table of subsidiaries and investments provide an appropriate level of information.
- Note B.8 "Provisions for pensions and similar benefits" to the financial statements describes the valuation methods used to assess provisions for pensions and similar post-employment benefits. These obligations were measured by independent actuaries. We examined the underlying data and the assumptions used. As part of our assessments, we ascertained the reasonableness of these estimates. We also verified that notes D.5 "Contingency and loss provisions" and D.16 "Transactions with related parties" to the financial statements provide an appropriate level of information.

These assessments were made as part of our audit of the financial statements taken as a whole, and therefore contributed to the opinion we formed which is expressed in the first part of this report.

#### III. Specific verifications and information

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by French law.

We have no matters to report as to the fair presentation and the consistency with the financial statements of the information given in the board of directors' management report and in the documents addressed to the shareholders with respect to the financial position and the financial statements.

Concerning the information given in accordance with the requirements of article L. 225-102-1 of the French commercial code (*Code de commerce*) relating to remunerations and benefits received by the directors and any other commitments made in their favour, we have verified its consistency with the financial statements, or with the underlying information used to prepare these financial statements and, where applicable, with the information obtained by your company from companies controlling your company or controlled by it. Based on this work, we attest the accuracy and fair presentation of this information.

In accordance with French law, we have verified that the required information concerning the identity of the shareholders or holders of the voting rights has been properly disclosed in the management report.

Paris-La Défense, 2 March 2016 The statutory auditors French original signed by

KPMG Audit Département de KPMG S.A. **ERNST & YOUNG Audit** 

Jacques-François Lethu

François Quédiniac

Denis Thibon

# 4.4.2 Company's financial statements at 31 December 2015

### **BALANCE SHEET**

(In millions of euros)			31/12/2015		31/12/2014
ASSETS	Note	Gross	Depreciation and impairment	Nets	Nets
Investments	D 1	3,356	1,665	1,691	1,691
Other financial assets	D 1	2,562	-	2,562	1,852
TOTAL FIXED ASSETS		5,918	1,665	4,253	3,543
Advances		0	-	0	0
Trade receivables	D 2	14	-	14	13
Other receivables	D 2	156	-	156	128
Subsidiary current accounts	D 2	1,106	-	1,106	423
Treasury shares	D 2	2	-	2	3
Cash and cash equivalents		0	-	0	0
TOTAL CURRENT ASSETS		1,278	-	1,278	567
Bond premium and issuing costs	D 2	19	-	19	13
Prepaid expenses		0	-	0	0
TOTAL ASSETS		7,215	1,665	5,550	4,123

LIABILITIES AND SHAREHOLDERS' EQUITY	31/12/2015	31/12/2014
Share capital	745	728
Paid-in surplus	1,172	1,093
Legal reserve	73	63
Retained earnings	44	0
Net income for the year	754	189
TOTAL SHAREHOLDERS' EQUITY D 3	2,789	2,073
ADDITIONAL EQUITY D 4	700	700
<b>PROVISIONS</b> D 5	52	51
Bonds and other financial debt D 6	1,871	1,162
Subsidiary current accounts D 8	0	0
Trade payables D 8	9	14
Tax and employee-related liabilities D 8	8	6
Other payables D 8	122	117
TOTAL LIABILITIES	2,010	1,299
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	5,550	4,123

### **INCOME STATEMENT**

(In millions of euros)	2015	2014
Services billed to related companies	18	15
Other purchases and external expenses	(12)	(11)
Taxes other than income taxes	(1)	(2)
Personnel expenses	(14)	(11)
Other operating expenses	3	0
Increases and reversals from provisions	4	(12)
Operating income	(2)	(21)
Dividends from investments	708	81
Interest income	90	51
Interest expenses	(87)	(51)
Net foreign exchange gains (losses)	0	0
Impairment of investments	(O)	98
Increases and reversals of provisions for financial risks	(2)	(1)
Financial result	709	178
Income before tax and exceptional items	707	157
Increases and reversals from exceptional provisions	(2)	6
Other exceptional income	0	0
Income and (expenses) on capital transactions	(3)	(2)
Exceptional items	(5)	4
Income taxes	52	28
Net income	754	189

### **CASH FLOW STATEMENT**

(In millions of euros)	2015	2014
Net income	754	189
Changes in provisions	4	6
Changes in impairment	(O)	(98)
(Gains)/losses on sales of assets	0	0
Gross operating cash flow	758	97
Change in working capital	(32)	(8)
Cash flow from operating activities	725	88
Cost of acquisition of investments	0	0
Change in loans	(711)	(706)
Sale of investments	0	0
Cash flow from investing activities	(711)	(706)
Increase in bonds	708	4
Increase in Additional equity	0	700
Change in share capital and other equity	96	378
Dividends paid to shareholders	(135)	(117)
Cash flow from financing activities	669	965
CHANGE IN NET CASH	684	347
Net cash at beginning of period *	423	76
Net cash at end of period *	1,107	423

<sup>\*</sup> Including subsidiary current accounts.

### TABLE OF SUBSIDIARIES AND INVESTMENTS AT 31/12/2015

(In millions of euros unless otherwise indicated)	Share capital	Share- holders' equity other than capital, exclu- ding net income	Gross value of shares owned	Net carrying amount of shares owned	Number of shares owned	Owner- ship interest (%)	accounts - gross	Gua- rantees given by the company	Sales (excl taxes) for 2015 <sup>(1)</sup>	Net income for 2015 <sup>(1)</sup>	Dividends received by the company
French subsidiaries											
Arkema France 420, rue d'Estienne d'Orves 92705 Colombes Cedex	270	(78)	2,023	377	1,584,253	99.99	3,637	900	2,426	(39)	-
<b>Arkema Amériques SAS</b> 420, rue d'Estienne d'Orves 92705 Colombes Cedex	1,049	70	1,044	1,044	104,354,000	99.46	-	-	-	257	691
Arkema Europe SA 420, rue d'Estienne d'Orves 92705 Colombes Cedex	548	12	188	188	12,370,920	34.32	-	-	-	111	18
<b>Arkema Asie SAS</b> 420, rue d'Estienne d'Orves 92705 Colombes Cedex	120	128	71	71	39,420	59.40	-	-	-	(59)	-
<b>Arkema Afrique SAS</b> 420, rue d'Estienne d'Orves 92705 Colombes Cedex	30	(19)	30	11	300,370	100.00	-	-	-	0	_
TOTAL INVESTMENTS			3,356	1,691			3,637	900	2,426	270	708

<sup>(1)</sup> Financial statements not yet approved by the shareholders at the general meeting.

# 4.4.3 Notes to the Company's financial statements at 31 December 2015

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### A. Highlights

- On 2 February 2015 the Arkema Group completed the acquisition of Bostik. The final stage of financing for this operation took place on 13 January 2015 through Arkema S.A.'s issuance of a 700 million euros bond with a 10-year maturity and a fixed 1.5% annual coupon, which was immediately transferred to the subsidiary Arkema France in the form of a loan with the same maturity and effective rate. This issue is part of the 2 billion euros Euro Medium Term Notes (EMTN) programme introduced by the Group in October 2013.
- On 2 June 2015 the combined general meeting of Arkema's shareholders approved the distribution of a 1.85 euro dividend per share in respect of the 2014 financial year. Each shareholder could elect to receive payment of the entire dividend either in cash or in new Arkema shares. 1,430,888 new shares were issued and the cash dividend payable to shareholders who did not elect to receive the dividend in shares amounted to 47 million euros.
- Arkema S.A. received dividends in the total amount of 708 million euros from its subsidiaries.

# **B.** Accounting policies

- The annual financial statements of Arkema S.A. were prepared under the responsibility of the Chairman and CEO of Arkema S.A. and were approved by the Board of Directors on 2 March 2016.
- The financial statements of Arkema S.A. have been prepared in accordance with French laws and regulations. It is specified that the presentation of the balance sheet and the income statement have been adapted to the holding activity exercised by the Company.
- The usual French accounting conventions have been applied, in compliance with the conservatism principle, under the following basic assumptions:
  - · going concern,
  - consistency of accounting policies from one financial year to the next, and
  - accruals basis of accounting and cut-off.
- The basic method used to value items recorded in the accounting records is the historical cost method.
- The main accounting policies used by the Company are presented below.

#### 1. INVESTMENTS

Investments are stated at the lower of acquisition cost and value in use. Investment acquisition expenses are recognized in the income statement as incurred.

Value in use is assessed by reference to the share held in the investee's net assets. However, value in use may be assessed by reference to an external valuation or by reference to discounted future cash flows where these methods provide more relevant information than the share held in the investee's net assets.

#### COSTS OF CAPITAL INCREASES

In accordance with opinion 2000-D of the urgent issues committee of the French National Accounting Board (*Conseil national de la comptabilité* – CNC), issued on 21 December 2000, the Company opted to recognize the costs of capital increases as a deduction from issue premiums.

#### 3. RECEIVABLES

Receivables are recognized at their book value. A bad debt provision is recognized when the net realizable value is lower than the book value. Receivables denominated in foreign currencies are translated at the exchange rate at 31 December.

#### 4. TREASURY SHARES

Treasury shares held by Arkema S.A. are recognized at acquisition cost in current assets. They are valued in accordance with the FIFO (first-in first-out) method. Treasury shares are normally written down, if necessary, on the basis of the average market price on the Paris stock exchange for the last month preceding the balance sheet date. By exception, and in accordance with opinion n° 2008-17 of the CNC issued on 6 November 2008, these shares are not written down on the basis of their market value where they have been allocated to a plan, because of the commitment to make grants to employees and the provision recognized in this respect in liabilities.

Treasury shares initially allocated to cover share grants to employees are reclassified as financial fixed assets in a "Treasury shares for cancellation" sub-account when a decision is taken to cancel the shares. They are then recorded at their net carrying amount at the date on which their allocation is changed.

#### 5. BONDS

Bonds are recognized at nominal value in the balance sheet liabilities.

Bond issuing costs and bond premiums (arising when the bond is issued at a price below its nominal value) are recognized in the balance sheet as a separate asset. However, if the bond is issued at a price higher than the nominal value, the difference between the issue price and the nominal value minus issuing costs is recognized as a liability under the heading *Bonds*.

Issuing costs comprise bank charges for setting up the bond and legal fees. They are spread over the duration of the bond under the effective interest rate method, with the corresponding expense recognized in operating income.

The bond premium is also spread over the duration of the bond under the effective interest rate method, with the corresponding expense recognized in financial result. If the bond is issued at a price higher than the nominal value, the same method is applied to the difference between the issue price and the nominal value, with the corresponding income recognized in financial result.

The effective interest rate corresponds to the interest rate which, when used to determine the discounted value of expected cash outflows till maturity date, leads to the initial book value of the bond.

#### PERPETUAL HYBRID BONDS

Perpetual bonds whose redemption remains under the exclusive control of the issuer are recorded as "Additional equity".

Costs and the premium related to issuance of such instruments are recorded in the balance sheet assets as prepaid expenses, and will be spread over the duration of the relevant tranche.

The expense resulting from spreading issuing costs is recognized in the operating income by a direct credit to the bond issuing cost account (only the net amount is shown in the balance sheet).

The expense resulting from spreading issue premiums is recognized in financial expenses by a direct credit to the bond issue premium account (only the net amount of the premiums is shown in the balance sheet).

Accrued interest not yet due is included in Debt.

The annual interest expense on these instruments is included in financial expenses in the income statement.

#### 7. STOCK OPTIONS AND FREE SHARE GRANTS

#### 7.1 Stock options

Stock options are accounted for, at the date of exercise, as a capital increase for an amount corresponding to the subscription price paid by the stock option holders. Any difference between the subscription price and the nominal value of the shares created represents an issue premium.

#### 7.2 Free share grants

Arkema S.A. shares will be definitively granted to beneficiaries at the end of a vesting period subject to the beneficiary remaining with the Company and any performance conditions set by the Board of Directors.

#### 7.2.1 Issue of new shares

When a free share grant is carried out by issuing new shares, the capital increase by means of a transfer from reserves of the nominal amount of the shares created is recognized in the financial statements at the end of the defined vesting period.

#### 7.2.2 Buybacks of existing shares

When a free share grant is carried out through buybacks of existing shares (following a decision taken by the Board of Directors in relation to the plan in question), a provision representing the obligation to deliver the shares is recognized at year-end. The amount of this provision is equal to the probable purchase price, valued on the basis of the closing share price if the shares have not yet been purchased, or the net carrying amount of the treasury shares if they have already been purchased. On delivery at the end of the vesting period, the purchase price paid by the Company for the shares granted is recognized in exceptional expenses and the provision previously recorded is reversed. However, the expense related to delivery of definitively granted shares to Arkema S.A. personnel under performance share plans is reclassified from exceptional items to operating income.

The provision is recognized on a time-proportion basis over the vesting period and takes into account, where relevant, the probability of remaining with the Company and fulfilling the performance conditions set by the Board of Directors.

# 7.3 Social security tax on stock options and free share grants

The 2008 French social security financing act (law 2007-1786 of 19 December 2007) created a new employer contribution on stock options and free share grants. This contribution is payable to the mandatory health insurance schemes to which the beneficiaries are affiliated and is paid in the month following the decision to grant stock options or free shares.

For stock options, the contribution is calculated, at the Company's choice, on the basis of either (i) the fair value of the options as estimated in the consolidated financial statements or (ii) 25% of the value of the shares to which these options relate at the date of the Board of Directors' decision to grant them.

For free share grants, the contribution is calculated, at the Company's choice, on the basis of either (i) the fair value of the shares as estimated in the consolidated financial statements or (ii) the value of the shares at the date of the Board of Directors' decision to grant them.

The choice of the basis to be used is made for the entire financial year.

# 8. PROVISIONS FOR PENSIONS AND SIMILAR BENEFITS

Arkema S.A. has granted top-up pension plans and other nonpension benefits (lump sum payments on retirement, long service awards, death and disability benefits, contributions to healthcare bodies) to certain employees.

Provisions are recognized in respect of these obligations in the financial statements.

The amount of the provision corresponds to the actuarial value of employee's vested rights at the balance sheet date.

The valuation of obligations under the projected unit credit method principally takes into account:

- a discount rate which depends on the duration of the obligations (2% at 31/12/2015 compared to 1.5% at 31/12/2014);
- an assumption concerning the date of retirement;
- an inflation rate;
- assumptions in respect of future increases in salaries, rates of employee turnover and increases in health costs.

Actuarial gains and losses are fully recognized in the income statement.

#### TAX CONSOLIDATION

The tax consolidation agreements signed between Arkema S.A. and the other companies in the tax consolidation group refer to a neutrality principle in accordance with which each tax consolidated subsidiary must recognize in its own financial statements, during the entire period of its inclusion in the tax consolidation group, a tax expense (or income) corresponding to income tax and additional levies, identical to that which it would have recognized had it not formed part of the tax consolidation group.

In its accounting records, Arkema S.A. recognizes:

- in "other receivables", with an offsetting entry to income taxes, the amount of income taxes due by profitable companies in the tax consolidation group;
- in "other payables", with an offsetting entry to income taxes, the amount of taxes due by the tax consolidation group.

The tax consolidation agreements also state that Arkema S.A. will benefit from the tax savings generated by the use of its subsidiaries' tax losses without any obligation to refund them (even in the said subsidiaries leave the tax consolidation group). On this basis, in accordance with opinion 2005-G of the urgent issues committee of the French National Accounting Board (CNC), Arkema S.A. does not recognize any provision for taxes.

### c. Subsequent events

None.

## D. Notes to the parent company financial statements

The figures presented in the notes to the parent company financial statements are expressed in millions of euros (unless otherwise indicated).

Note 1

INVESTMENTS AND OTHER FINANCIAL ASSETS

#### 1.1 INVESTMENTS

(In millions of euros)	31/12/2014	Increase	Decrease	31/12/2015
Gross value	3,356	-	-	3,356
Impairment	(1,665)	(0.4)	-	(1,665)
NET VALUE	1,691	(0.4)	-	1,691

The change in investments results from recognition of impairment of 0.4 million euros in respect of shares in Arkema Afrique.

#### 1.2 OTHER FINANCIAL ASSETS

Arkema S.A. has transferred to its subsidiary Arkema France the cash received from the various bond issues (see notes D4 and D6), in the form of loans with the same maturity and same effective interest rates.

The corresponding loans total 2,530 million euros (excluding accrued interest) at 31 December 2015.

Note 2

**CURRENT ASSETS** 

#### 2.1 BREAKDOWN OF RECEIVABLES

The breakdown by maturity of the Company's receivables at 31 December 2015 is as follows:

(In millions of euros)	Gross amount	Maturing within 1 year	Maturing after 1 year
Operating receivables and VAT	16	16	-
Cash advances to subsidiaries (1)	1,106	1,106	-
Other receivables (2)	156	77	79
TOTAL	1,278	1,199	79

<sup>(1)</sup> Arkema France current account.

<sup>(2)</sup> Mainly income tax receivables.

### 2.2 TREASURY SHARES

At 31 December 2015, Arkema S.A. owns 36,925 treasury shares which are recorded at the total value of 2.2 million euros. These shares are allocated to the free share grant plans (see note D13).

No impairment was therefore recognized in the financial statements at 31 December 2015.

### 2.3 BOND PREMIUMS AND COSTS

The following amounts are recognized in this item:

(In millions of euros)	31/12/2014	Increase	Decrease	31/12/2015
Bonds				
Issue premiums	1.6	7.0 (2)	1.1 (1)	7.5
Issuing costs	1.8	1.6 (2)	0.6 (1)	2.8
SUBTOTAL	3.4	8.6	1.7	10.3
Perpetual hybrid bonds				
Issue premiums	6.9		1.0 (1)	5.9
Issuing costs	2.7		0.4 (1)	2.3
SUBTOTAL	9.6	0	1.4	8.2
TOTAL	13.0	8.6	3.1	18.5

<sup>(1)</sup> Amount charged to expenses for the period.

<sup>(2)</sup> Premiums and issuing costs related to the 2015 bond issue totalling 700 million euros gross.

#### Note 3

### SHAREHOLDERS' EQUITY

At 31 December 2015, the share capital is composed of 74,472,101 shares with a nominal value of 10 euros, compared to 72,822,695 shares with a nominal value of 10 euros at 31 December 2014.

Changes in shareholders' equity are as follows:

(In millions of euros)	Opening balance at 01/01/2015	Appropriation of 2014 net income	Distribution of dividends (1) and 2015 net income	Capital increase due to dividend distribution (2)	Capital increase by subscriptions (3)	Capital increase of 2014 (4)	31/12/2015 before appropriation
Share capital	728.2			14.3	2.2		744.7
Issue premium	342.6			73.5	5.5	0.3	421.9
Paid-in surplus	625.9						625.9
Merger surplus	124.8						124.8
Legal reserve	63.0	9.4					72.4
Other reserves	0						0
Retained earnings	0	179.2	(134.7)				44.5
2014 net income	188.6	(188.6)					0
2015 net income	0		753.9				753.9
TOTAL SHARE-HOLDERS' EQUITY	2,073.1	0	619.2	87.8	7.7	0.3	2,788.1

<sup>(1)</sup> On 2 June 2015 the shareholders' general meeting adopted a resolution proposing to distribute a dividend of 1.85 euro per share, or a total amount of 134.7 million euros, in respect of the 2014 financial year.

- (3) Capital increases resulting from the exercise of stock options between 1 January and 31 December 2015.
  - On 30 June 2015, the Company undertook a capital increase of 1.1 million euros with a 3.1 million euros increase in the issue premium, following exercise of stock options between 1 January and 30 June 2015.
  - On 31 December 2015, the Company undertook a capital increase of 1.1 million euros with a 2.4 million euros increase in the issue premium following exercise of stock options between 1 July and 31 December 2015.
- (4) In 2015, the issue premium was adjusted by 0.3 million euros for the costs of the capital increase that took place in December 2014.

Following completion of these operations, the share capital of Arkema S.A. was increased to 744.7 million euros divided into 74,472,101 shares.

<sup>(2)</sup> The combined shareholders' general meeting of 2 June 2015 approved the motion to allow each shareholder to opt for payment of their entire dividend either in cash or in new Arkema shares.

The issue price for the new shares was set at 61.64 euro. By the end of the option period on 25 June 2015, 65.2% of rights to payment of the dividend in shares had been exercised, and consequently 1,430,888 new shares were issued with total value of 88 million euros. The cash dividend payable to shareholders who did not elect to receive the dividend in shares amounts to 47 million euros, and was paid out on 8 July 2015.

### Note 4 ADDITIONAL EQUITY

(In millions of euros)	Gross amount	Maturing within 1 year	Maturing after 1 year
Issuance of perpetual hybrid bonds	700		700

As part of the refinancing of its proposed acquisition of Bostik, Arkema S.A. issued a perpetual hybrid bond in October 2014 in the total amount of 700 million euros with an issue premium and issuing costs (see note 2.3). These bonds include a first call option on 29 October 2020 and will carry an annual coupon of 4.75% until that date. The coupon will then be reset every

5 years. At each coupon date, the interest can be paid or carried over at the issuer's convenience. Coupons carried over generate late payment interest and become due in the event of certain contractually defined circumstances under the control of the issuer. A coupon of 33.25 million euros was paid on 29 October 2015.

### Note 5 PROVISIONS

Changes in provisions recognized in the Company's balance sheet are set out in the table below:

[In millions of euros]	31/12/2014	Increase	Decrease	31/12/2015
Provisions for pensions and similar benefits	38.7	8.9	(13.5)	34.1
Provisions for long service awards	0.5	0.1	(O.1)	0.5
Provision for free share grants (1)	11.8	10.5	(5.7) (2)	16.6
Provisions for risks related to subsidiaries	-	-	-	-
Provisions for other risks	0.1	0.4	(0.1)	0.4
TOTAL	51.1	19.9	(19.4)	51.6

These movements break down as follows:

TOTAL	19.9	(19.4)	
Recognized in exceptional items	10.9	(5.8)	
Recognized in financial result	0	0	
Recognized in operating income	9.0	(13.6)	

<sup>(1)</sup> Increases and reversals from these provisions are recorded in exceptional items

<sup>(2)</sup> Reversal corresponding to an effective expense relating to delivery in May of performance shares under plans 2011-3 and 2012-2.

# 1

#### Note 6

### BONDS AND OTHER FINANCIAL DEBT

This heading covers:

- the 500 million euros bond issued in October 2010 with fixed coupon of 4.00%, that will mature on 25 October 2017;
- the bond issued in April 2012 that will mature on 30 April 2020, with fixed coupon of 3.85% as well as the additional tranche placed in October 2012 bringing its total amount to 480 million euros;
- the 150 million euros bond issued in December 2013 with fixed coupon of 3.125% that will mature on 6 December 2023;
- the 700 million euros bond issued in January 2015 with fixed coupon of 1.5%, that will mature on 20 January 2025.

These last two issues are part of the Group's 2 billion euros Euro Medium Term Notes (EMTN) programme introduced in October 2013;

- the difference between the issue price and the nominal value of the 2012 bond, initially recognized in liabilities at the amount of 13.7 million euros (net of issuing costs); after a 1.8 million euros charge to the period, the balance of this difference amounts to 8.2 million euros at 31 December 2015;
- the accrued interest on bonds, amounting to 26.5 million euros;
- the accrued interest on the perpetual hybrid bond, amounting to 5.8 million euros.

#### Note 7

### COMMERCIAL PAPER

In April 2013 the Company introduced a French Commercial paper (billet de trésorerie) programme with a ceiling of 1 billion euros. Issues outstanding as part of this programme amount to nil at 31 December 2015.

#### Note 8

### **DEBT**

The breakdown by maturity of the Company's debt at 31 December 2015 is as follows:

(In millions of euros)	Gross amount	Maturing within 1 year	Maturing in 1 to 5 years	Maturing after 5 years
Bonds and other financial debt	1,871	41 (3)	980 (1)	850 (1)
Trade payables	9	9	-	-
Tax and employee-related liabilities	8	8	-	-
Other payables	122 (2)	52	70	
TOTAL	2,010	110	1,050	850

- (1) Long-term bonds issued by Arkema S.A. (see note D6 Bonds and other financial debt, above).
- (2) Income tax payables owed to companies in the tax consolidation group.
- (3) Including 5.8 million euros of accrued interest on the perpetual hybrid bond.

### Note 9 DETAILS OF ITEMS CONCERNING RELATED COMPANIES

	millions of euros
Investments	
Investments in other companies	1,691
Receivables related to subsidiaries	2,562
Receivables	
Trade receivables	14
Other receivables (incl. current accounts)	1,106
Other amounts receivable	54
Liabilities	
Financial debt	-
Trade payables	7
Other payables	122
Sales	
Services billed to related companies	18
Financial income and expenses	
Dividends from investments	708
Interest income and expenses	-
Income on loans and current accounts	88

### Note 10 FINANCIAL RESULT

Arkema S.A. received dividends for a total amount of 708.4 million euros of which 690.8 million euros were from Arkema Amériques SAS (including 552 million euros paid out of reserves) and 17.6 million euros were from Arkema Europe SA (including 14 million euros paid out of reserves).

Interest income corresponds to the remuneration of the amounts made available to Arkema France in the context of the Group's cash pooling system.

### Note 11 INCOME TAXES

In 2015, application of the French tax consolidation system resulted in tax income (negative expense) of 53.7 million euros for Arkema S.A. This amount corresponds to the income taxes of the profitable companies. On 12 November 2015 the Arkema Group sold Sunclear, which was removed from the tax consolidation group retrospectively from 1 January 2015.

Arkema S.A. has expensed and paid the 3% additional contribution on distributed income related to the cash dividend paid for 2014, amounting to 1.4 million euros.

### Note 12 DEFERRED TAX POSITION

Temporarily non-deductible expenses relating to provisions for pensions and similar benefits at 31 December 2015 amount to 34.1 million euros, down by 4.6 million euros from 31 December 2014.

The tax loss carry-forward of the Company's tax consolidation group at 31 December 2015 amounts to 1,600 million euros.

### Note 13

### STOCK OPTION PLANS AND FREE SHARE GRANTS

#### STOCK OPTIONS

The Board of Directors has decided not to introduce any further stock option plans.

The main characteristics of the stock option plans still outstanding at 31 December 2015 are as follows:

	2007 Plan	2008 Plan	2010 Plan 1	2010 Plan 2	2011 Plan 1	2011 Plan 2
Date of annual general meeting	10 May 2006	10 May 2006	15 June 2009	15 June 2009	15 June 2009	15 June 2009
Date of Board of Directors' meeting	14 May 2007	13 May 2008	10 May 2010	10 May 2010	4 May 2011	4 May 2011
Vesting period	2 years	2 years	2 years	5 years	2 years	4 years
Conservation period	4 years	4 years	4 years	5 years	4 years	4 years
Period of validity	8 years	8 years	8 years	8 years	8 years	8 years
Exercise price	44.63	36.21	30.47	30.47	68.48	68.48
Adjusted exercise price	42.96	34.85	29.33	29.33	65.92	65.92
Total number of options granted	600,000	460,000	225,000	225,000	105,000	105,000
Adjustments to options in circulation at 7 November 2014	3,074	5,437	5,044	8,513	4,082	4,082
Total number of options granted after adjustments	603,074	465,437	230,044	233,513	109,082	109,082
to corporate officers: Thierry Le Hénaff	70,389	52,676	36,361	36,361	30,386	30,386
to the 10 largest beneficiaries *	218,128	172,130	105,505	107,851	78,696	78,696
Total number of options exercised	563,643	377,247	124,336	44,501	-	_
by corporate officers	70,389	52,676	12,000	22,000	-	-
by the 10 largest beneficiaries *	218,128	131,610	65,416	8,215	-	-
Total number of options cancelled	39,431	18,877	7,000	22,174	-	-
Number of options						
In circulation at 1 January 2013	201,298	261,827	191,485	220,000	105,000	105,000
Granted	-	-	-	-	-	-
Cancelled	-	-	2,000	2,000	-	-
Exercised	48,100	67,349	15,970	-	-	_
In circulation at 31 December 2013	153,198	194,478	173,515	218,000	105,000	105,000
In circulation at 1 January 2014	153,198	194,478	173,515	218,000	105,000	105,000
Adjustments	3,074	5,437	5,044	8,513	4,082	4,082
Granted	-	-	-	-	-	-
Cancelled	-	-	-	-	-	-
Exercised	74,350	57,337	44,390	-	-	-
In circulation at 31 December 2014	81,922	142,578	134,169	226,513	109,082	109,082

	2007 Plan	2008 Plan	2010 Plan 1	2010 Plan 2	2011 Plan 1	2011 Plan 2
In circulation at 1 January 2015	81,922	142,578	134,169	226,513	109,082	109,082
Granted	-	-	-	-	-	-
Cancelled	16,631	-	-	15,174	-	-
Exercised	65,291	73,265	35,461	44,501	-	-
In circulation at 31 December 2015	-	69,313	98,708	166,838	109,082	109,082

<sup>\*</sup> Employees who are not corporate officers of Arkema or any other Group company.

#### FREE SHARE GRANTS

On 9 November 2015, the Board of Directors decided to put in place two performance share plans for the benefit of employees, particularly employees with responsibilities whose exercise influences the Group's results.

Under these plans, the definitive grant of such performance shares will be subject to a vesting period of 4 years, with effect from the Board of Directors' grant.

The first plan awards shares subject to compliance with performance criteria concerning:

- the Arkema Group's EBITDA for 2018 and the net debt to equity ratio;
- the net cash flow/EBITDA ratio for 2016 and 2017; net cash flow excludes the impacts of acquisitions and disposals,

exceptional investments, dividend payments, and the cost of the hybrid bond, and is adjusted for any unrealized exchange differences on non-recurring foreign currency financing that has no impact on net debt;

 the Arkema Group's Total Shareholder Return (TSR) over the period 2016 to 2018 compared to the TSR of a selection of other chemicals manufacturers.

TSR is defined as follows:

TSR = (share price at end of period - share price at start of period + sum of dividends paid during the period)/share price at start of period.

The second plan is reserved for employees who receive fewer than 100 shares, and does not include any performance criteria.

The main characteristics of the free share grant plans in force at 31 December 2015 are as follows:

	2011 Plan 3	2012 Plan 2	2012 Plan 3	2013 Plan	2014 Plan 1	2014 Plan 2	2015 Plan 1	2015 Plan 2
Date of annual general meeting Date of Board of	15 June 2009	15 June 2009	15 June 2009	4 June 2013	4 June 2013	4 June 2013	4 June 2013	4 June 2013
Directors' meeting	4 May 2011	9 May 2012	9 May 2012	6 Nov. 2013	6 May 2014	13 Nov. 2014	9 Nov. 2015	9 Nov. 2015
Vesting period	4 years	3 years	4 years	4 years	4 years	4 years	4 years	4 years
Conservation period	-	2 years	-	-	-	-	-	-
Fair value (in euros per share)	55.36	42.27	45.27	51.60	53.63	33.41	42.31	42.31
Performance condition	Yes (2)	Yes (2)	Yes (2)	Yes (3)	No	Yes (3)	Yes	No
Total number of free shares granted	52,315	74,805	65,335	250,000	750	275,000	285,525	59,595
to corporate officers Thierry Le Hénaff	: -	13,000	-	26,000	-	26,000	26,000	-
to the 10 largest beneficiaries <sup>(1)</sup>	14,850	36,100	16,400	75,400	50	71,600	79,600	1,000
Number of free shares								
In circulation at 1 January 2013	50,995	74,805	64,745	-	-	-	-	-
Granted	-	-	-	250,000	-	-	-	-
Cancelled	70	1,230	105	-	-	-	-	-
Definitively granted	-	-	-	-	-	-	-	-
In circulation at 31 December 2013	50,925	73,575	64,640	250,000	-	-	-	

	2011 Plan 3	2012 Plan 2	2012 Plan 3	2013 Plan	2014 Plan 1	2014 Plan 2	2015 Plan 1	2015 Plan 2
In circulation at 1 January 2014	50,925	73,575	64,640	250,000	-	-	-	-
Granted	-	-	-	-	750	275,000	-	-
Cancelled	1,845	125	1,735	3,130	335	-	-	-
Definitively granted	-	-	-	-	-	-	-	-
In circulation at 31 December 2014	49,080	73,450	62,905	246,870	415	275,000	-	-
In circulation at 1 January 2015	49,080	73,450	62,905	246,870	415	275,000	-	-
Granted	-	-	-	-	-	-	285,525	59,595
Cancelled	895	-	240	690	-	1,105	1,250	240
Definitively granted	48,185	73,450	-	70	-	-	-	-
In circulation at 31 December 2015	-	-	62,665	246,110	415	273,895	284,275	59,355

- (1) Employees who are not corporate officers of Arkema or any other Group company.
- (2) Performance conditions apply only to the portion of rights in excess of 80 held under all plans, except for Comex members, all of whose rights are subject to performance criteria.
- (3) Performance conditions apply only to the portion of rights in excess of 100, except for Comex members, all of whose rights are subject to performance criteria.

Free share grants under performance share plans are issued through acquisition of existing shares.

The definitive grant of shares relating to plans 2011-3 and 2012-2 took place in May 2015.

# INCOME AND EXPENSES IN THE FINANCIAL YEAR IN RESPECT OF THE 2011 TO 2015 PLANS

The delivery of shares in respect of plans 2011-3 and 2012-2 led to recognition in the 2015 exceptional items of a net expense of 1.7 million euros (7.4 million euros exceptional expense offset by a 5.7 million euros reversal from provisions).

The provision for free share grants was increased by 10.5 million euros (of which 0.9 million euros relates to the 2015 plan).

The total amount of provisions in respect of all plans is 16.6 million euros at 31 December 2015.

### Note 14

### OFF-BALANCE SHEET COMMITMENTS

The information set out below concerns Arkema S.A. or certain of its subsidiaries, and is disclosed on account of Arkema S.A.'s holding company status.

#### 14.1 COMMITMENTS GIVEN

#### Syndicated credit facility

On 29 October 2014, the Group put in place a multi-currency syndicated credit facility of 900 million euros, with an initial duration of five years maturing on 29 October 2019, and the possibility of two one-year extensions subject to approval by

the lenders, exercisable at the end of the first and the second year. On 9 October 2015 the Group was authorized by its lenders to extend this maturity to 29 October 2020. This credit facility is intended to finance the Group's general requirements as a substitute line for the commercial paper programme, and includes an early repayment clause in the event of certain situations including a change in control of the Arkema Group. It includes: (i) standard information undertakings and commitments for this type of financing, (ii) a financial undertaking by the Arkema Group to maintain the ratio of consolidated net debt to consolidated EBITDA (tested twice a year) at 3.5 or less.

#### 14.2 COMMITMENTS RECEIVED

#### Commitments received from Total in 2006

In connection with the Spin-Off of Arkema's businesses, Total S.A. and certain Total companies have extended certain indemnities, or have assumed certain obligations, for the benefit of Arkema, relating to (i) certain antitrust litigation, (ii) certain tax matters, and (iii) the Spin-Off of Arkema's businesses. These indemnities and obligations are described below.

# 14.2.1 The Indemnities extended by Total in respect of certain antitrust litigation

In order to cover potential risks in connection with antitrust litigation relating to anti-competitive agreements in Europe and the United States and arising from facts prior to 18 May 2006 (or prior to 7 March 2006, as the case may be), Total S.A. has extended to Arkema S.A. the indemnities, the principal terms of which can be described as follows:

#### Subject-matter of the Indemnities

By an agreement dated 15 March 2006 (the **Arkema European Indemnity**), Total S.A. agreed to indemnify Arkema S.A. for 90% of (i) any payment due by Arkema S.A. or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to a money judgment imposed by EU antitrust authorities, or by national antitrust authorities of a Member State of the European Union, for violations of antitrust laws relating to anticompetitive agreements, (ii) any damages payable by Arkema S.A. or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to civil proceedings arising from the same facts which form the basis of a judgment referred to in (i), and (iii) certain expenses incurred in connection with such proceedings by Arkema S.A. or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries).

By an agreement dated 15 March 2006 (the **Arkema US Indemnity**), Total S.A. also agreed to indemnify Arkema S.A. for 90% of (i) any payment due by Arkema S.A. or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to a money judgment imposed by US courts or antitrust authorities for violations of US federal or state antitrust laws relating to anticompetitive agreements, or in respect of a settlement entered into in the context of such proceedings, (ii) any damages payable by Arkema S.A. or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries) pursuant to civil proceedings arising from the same facts which form the basis of a judgment referred to in (i), and (iii) certain expenses incurred in connection with such proceedings by Arkema S.A. or any of its subsidiaries (with the exception of Arkema Amériques SAS and its subsidiaries).

In connection with the sale of Arkema Delaware, Inc. shares by Elf Aquitaine, Inc. to Arkema Amériques SAS, Elf Aquitaine, Inc. agreed, in the agreement dated 7 March 2006 (the **Arkema Delaware Indemnity**), to indemnify Arkema Amériques SAS for 90% of (i) any payment due by Arkema Amériques SAS or any of its subsidiaries pursuant to a money judgment imposed by

US courts or antitrust authorities for violations occurring prior to 7 March 2006 of US federal or state antitrust laws relating to anticompetitive agreements, or in respect of the settlement entered into in the context of such proceedings, (ii) any damages payable by Arkema Amériques SAS or any of its subsidiaries pursuant to civil proceedings arising from the same facts which form the basis of a judgment referred to in (i), and (iii) certain expenses incurred by Arkema Amériques SAS or any of its subsidiaries in connection with such proceedings.

Arkema Amériques SAS has benefited from an indemnification of 19.3 million US dollars under the Arkema Delaware Indemnity. At 31 December 2015, the residual amount covered by this indemnity amounts to 873.7 million US dollars.

Finally, Total S.A. extended to Arkema S.A. a supplemental indemnity dated 15 March 2006 (the *Supplemental Arkema Delaware Indemnity*) covering 90% of sums payable by Arkema Amériques SAS or any of its subsidiaries in respect of litigation relating to anticompetitive agreements in the United States in excess of the maximum amount covered by the Arkema Delaware Indemnity.

The Arkema European Indemnity, the Arkema US Indemnity, the Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity are hereinafter referred to together as the *Indemnities* and individually as an *Indemnity*.

#### Liabilities not covered by the Indemnities

The following liabilities are not covered by the Indemnities:

- liabilities arising from facts occurring after 18 May 2006 in the case of the Arkema European Indemnity and the Arkema US Indemnity, or after 7 March 2006 in the case of the Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity (including, in case of liabilities arising from facts occurring both before and after the relevant date, the portion of the liability relating to the period after 18 May 2006 or after 7 March 2006, as the case may be);
- liabilities arising from violations of antitrust laws other than those prohibiting anticompetitive agreements; and
- liabilities imposed by authorities outside the European Union (in the case of the Arkema European Indemnity) or the United States (in the case of the other Indemnities).

# Participation of Total in the management of litigation covered by the Indemnities

The Indemnities provide for the participation by Total S.A. or Elf Aquitaine, Inc., as the case may be, in the management of litigation covered by the Indemnities, which involves a certain number of obligations on the part of Arkema S.A. and Arkema Amériques SAS, in particular the obligation to notify Total S.A. or Elf Aquitaine, Inc., as the case may be, of certain events occurring in the context of proceedings covered by the Indemnities and act in accordance with the advice and instructions of Total S.A. or Elf Aquitaine, Inc, as the case may be, relating to such proceedings. Total S.A. and Elf Aquitaine, Inc., as the case may be, also have the right to assume sole control of the defence of the Group entity in question. Failure by Arkema S.A. or Arkema Amériques SAS to

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comply with these obligations can result, in certain circumstances, in the automatic termination of the Indemnity, as described below.

#### Amount of the indemnification

The Arkema European Indemnity, whose deductible of 176.5 million euros has been exceeded, gave rise to indemnification of 138.5 million euros being received from Total SA (paid directly to Arkema France, the indemnities granted by Total also benefitting the subsidiaries). The Arkema US Indemnity, the Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity do not have a deductible.

#### Cross-indemnity of Arkema S.A.

Arkema S.A. has agreed to indemnify Total S.A. in respect of any liability covered by the Indemnities but which is borne, not by a Group entity but by Total S.A. or one of its subsidiaries due to facts attributable to a Group company, whether the liability of Total S.A. or one of its subsidiaries is determined to be direct or derivative, exclusive or joint and several, relative to the liability of the Group entity to which the facts are attributable.

However, this cross-indemnity by Arkema S.A. will be reduced by the indemnity which would have been paid by Total S.A. under the relevant Indemnity if the liability had been borne by a Group company. Consequently, if the cross-indemnity of Arkema S.A. is triggered, Arkema S.A. would only be obligated to indemnify Total S.A. for 10% of the liabilities borne by Total S.A. or one of its subsidiaries (in the case of the Arkema European Indemnity, this 10% relates to the amount, if any, that exceed the deductible).

#### Term of the Indemnities

The Arkema European Indemnity and the Arkema US Indemnity are valid for a term of 10 years from 18 May 2006. The Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity are valid for a term of 10 years from 7 March 2006.

The Arkema S.A. cross-indemnity is valid for a term of 10 years from 18 May 2006.

#### **Termination of the Indemnities**

Indemnities shall terminate in the event that a natural person or legal entity, acting alone or in concert with others, acquires, directly or indirectly, more than one third of the voting rights of Arkema S.A. (voting rights are subject to a ceiling of 10% – and 20% in the case of double voting rights – unless a purchaser acquires at least two thirds of the Total number of Arkema S.A. shares in a public transaction targeting all Arkema S.A. shares) or if the Group transfers, directly or indirectly, in one or several times, to the same third party or to several third parties acting in concert, assets representing more than 50% of the Group's "enterprise value" (as defined in the Indemnities) at the time of the relevant transfer.

The Arkema European Indemnity and the Arkema US Indemnity will terminate if Arkema S.A. loses control of Arkema France S.A.

The Arkema Delaware Indemnity and the Supplemental Arkema Delaware Indemnity will terminate if Arkema S.A. loses control of Arkema Amériques SAS, or if Arkema Amériques SAS loses control of Arkema Delaware Inc.

Finally, the Indemnities will terminate in the event of a material breach by the Group of its obligations under the relevant Indemnity if such breach has remained uncured for 30 days after notice by the indemnifying party demanding its cure.

The Indemnities provide that, upon the occurrence of a termination event, the only liabilities of Group companies that will remain covered by the Indemnities are those, if any, which (i) fell due prior to the termination event and (ii) were notified to Total S.A. or to Elf Aquitaine, Inc., as the case may be, prior to the termination event

#### 14.2.2 Tax Indemnity granted by Total S.A.

In order to cover potential tax risks related to the business activities transferred by the Group to Total or from the reorganization in connection with the Spin-Off of Arkema's businesses, Total S.A. has granted an indemnity to Arkema S.A., the main terms of which can be described as follows.

#### **Purpose of the Tax Indemnity**

Under the terms of an agreement dated 15 March 2006 (the *Tax Indemnity*), Total S.A. has undertaken to indemnify Arkema S.A. for (i) liabilities arising from any tax, customs or levies not covered by provisions, for which the Group would remain liable, when such liabilities arise from (x) activities in the petrochemicals and specialties sectors that were transferred by the Group to Total and the triggering event of which occurred prior to the date of such transfer; or (y) the reorganization undertaken for the purpose of spinning off Arkema's businesses from Total's Chemicals sector, including, in particular, the Elf Spin-Off, the Total Spin-Off, the Merger and certain prior securities reclassification transactions; (ii) interest, fines, penalties, additional charges or other costs related thereto; and (iii) provided that Total S.A. has given its prior consent, the expenses incurred by Arkema S.A. or the relevant Group company in connection with such liabilities.

The Tax Indemnity, however, does not cover tax reassessments in connection with Arkema's businesses and is subject to the terms described hereafter.

# Involvement of Total S.A. in the management of litigation covered by the Tax Indemnity

The Tax Indemnity provides for a procedure pursuant to which Arkema S.A. must involve Total S.A. in the management of the tax audits or litigation relating to the tax liabilities covered by the Tax Indemnity. In particular, this procedure entails the obligation to notify Total S.A. of any event that is likely to give rise to a liability covered by the Tax Indemnity and to comply with the advice and instructions of Total S.A. in defending the interests of the relevant Group company. In the event of unresolved disagreements on the strategy, means, method or type of such defence, the final decision will be taken by Total S.A. Arkema's failure to comply with its obligations may result in automatic termination of the Tax Indemnity.

#### Amount of the indemnity

The Tax Indemnity includes no deductible, trigger threshold or cap.

In the event that a liability cannot be clearly connected to the petrochemicals and specialties sector transferred by the Group to Total in relation to Arkema's businesses, Arkema S.A. and Total S.A. will each bear 50% of the said liability.

# Special provisions applying to Group companies that were included in the Total S.A. French tax group (groupe d'intégration fiscale de Total S.A.).

The tax sharing agreements (conventions d'intégration fiscale) between Total S.A. and the Group companies that were included in the Total S.A. French tax group provide that these companies will be required to pay to Total S.A. any additional taxes and penalties that may be due by Total S.A., as the head company of the tax group, where they relate to the taxable income of such companies during the time they were included in the tax group.

However, these companies will be exempt from such payments to Total S.A. with respect to tax liabilities relating to their taxable income for fiscal years during which they were included in the Total S.A. tax group, if such liabilities are covered by the Tax Indemnity. In exchange, these companies waive the indemnity to which they would have been entitled pursuant to the Tax Indemnity.

Furthermore, in the event of a tax reassessment of a Group company relating to Arkema's businesses (which are not covered by the Tax Indemnity) for a fiscal year during which such company was included in the Total S.A. tax group, such company shall be liable to pay Total S.A. a contribution calculated on the basis of the net amount of the reassessment after the following allowances:

- if, following this reassessment, the Group Company has realized a profit in respect of the fiscal year to which the reassessment applies, a deductible of 3 million euros per company and per fiscal year;
- if, following this reassessment, the Group Company has realized a loss in respect of the fiscal year to which the reassessment applies, an allowance equal to the amount of the losses generated by such company with respect to Arkema's businesses, as determined by Arkema S.A. and Total S.A.

#### Payment of the indemnity

The liabilities covered by the Tax Indemnity will give rise to an indemnification payment only if they are definitely determined by an enforceable decision that is not subject to appeal.

#### **Duration of the Tax Indemnity**

The Tax Indemnity shall expire at the end of two months following the statute of limitations effectively applicable to the tax liabilities covered by the Tax Indemnity.

#### Beneficiary of the Tax Indemnity

The Tax Indemnity is only for the benefit of Arkema S.A. or, as the case may be, Arkema France, if Arkema S.A. is merged into Arkema France.

# 14.2.3 Other indemnities given in the context of the Spin-Off of Arkema's businesses

As part of the Total Spin-Off Agreement, Total S.A. and Arkema S.A. made certain representations and warranties, some of them in connection with the separation of Arkema from Total.

The agreement states that Total S.A. grants no indemnities, other than the indemnities and agreements entered into by the Total entities that are described in this paragraph, particularly with respect to the assets and the business activities of all Arkema entities, or the liabilities or obligations associated with such entities or activities, which Arkema declares that it is aware of and for which Arkema S.A. shall be responsible, including in the case of the appearance of any item that is not known as of the date of the Total Spin-Off Agreement, or of an increase in the amount of the aforesaid liabilities or obligations. Arkema releases Total S.A. from any such claim, except in the case of New Claims as defined below.

# Representations and warranties relating to information exchanged in preparing the Spin-Off of Arkema's businesses

Total S.A. and Arkema have made mutual representations and warranties with respect to the accuracy and completeness of the information exchanged by the two companies in preparing the Spin-Off of Arkema's businesses.

#### Representations and warranties relating to potential claims

After conducting all necessary and customary due diligence, Arkema S.A. has declared, recognized and warranted that, to its knowledge and to the knowledge of the Arkema entities, as of the date of the Total Spin-Off Agreement, there were no grounds for claims, actions or complaints by any Arkema entity or by any one of its *de facto* or *de jure* directors, corporate officers or executives against any Total entity or any one of its *de facto* or *de jure* employees, directors, corporate officers or executives (a *Total Entity*). The claims, actions or complaints mentioned above are hereinafter referred to as the *Arkema Claim(s)*.

Consequently, Arkema S.A. has undertaken to indemnify Total S.A. and hold it harmless for the consequences of any Arkema Claim against any Total Entity.

Arkema S.A. has waived all Arkema Claims other than New Claims, as defined below.

Arkema's indemnity and the waiver mentioned in the two preceding paragraphs do not apply to any potential Arkema Claim that would be based on (i) events attributable to a Total Entity or (ii) grounds of which no Arkema entity has any knowledge as of the date of the Total Spin-Off agreement, after completing the necessary and customary due diligences, but only if and insofar as such events or grounds do not relate solely to the fact that the Arkema companies belonged to Total prior to 18 May 2006, or relate solely to the exercise of corporate offices or management functions by Total Entities within Arkema (the New Claim(s)).

1

At the same time, Total S.A. has declared, recognized and warranted that to its knowledge and to the knowledge of the Total entities, as of the date of the Total Spin-Off agreement, there were no grounds for claims, actions or complaints by any Total entity or by any one of its *de facto* or *de jure* directors, corporate officers or executives against any Arkema entity or any one of its *de facto* or *de jure* employees, directors, corporate officers or executives (the *Arkema Entity(ies)*), arising from the ownership or operation by Arkema entities of the companies or businesses acquired by Total before 18 May 2006 (the *Total Claim(s)*).

Total S.A. has declared, recognized and warranted that it had no Total Claim(s) arising from the exercise of corporate offices or functions by Arkema Entities within Total, and has waived all Total Claims on its part.

Consequently, Total S.A. has agreed to indemnify and hold harmless Arkema S.A. for the consequences of any Total Claim against any Arkema Entity.

#### **Duration of the indemnities**

No indemnity given in the Total Spin-Off agreement will survive after 10 years from 18 May 2006.

With the exception of the obligations or indemnities described in this section, Total has not given to Arkema other material commitments or indemnities of the kind referred to in the first paragraph of this section "Commitments received from Total in 2006".

#### Note 15

#### **EMPLOYEES**

The average number of employees by category of personnel is as follows:

TOTAL	0
Supervisors and technicians	0
Engineers and managerial	9

#### Note 16

#### TRANSACTIONS WITH RELATED PARTIES

The compensation of directors and members of its Executive Committee (Comex) recognized in expenses by Arkema S.A. is as follows

(In millions of euros)	2015	2014
Salaries and other short-term benefits	6	5
Pensions, other post-employment benefits and contract termination benefits *	1	1
Other long-term benefits	-	-
Share-based payments	2	3

Excluding actuarial gains or losses.

Salaries and other short-term benefits comprise all types of remuneration recorded, including variable amounts, bonuses, attendance fees and benefits in kind.

The Chairman and CEO is entitled to a contractual indemnity in the event of non-voluntary departure, up to a maximum of two years' total gross compensation (fixed and variable), subject to achievement of performance criteria. Other transactions with related parties involve subsidiaries directly or indirectly wholly-owned by Arkema S.A. and do not fall within the scope of the article 1 of regulation n° 2010-02 of 2 September 2010 of the French National Accounting Authority (Autorité des normes comptables).

# 4.4.4 Results of the Company in the last 5 years (articles R. 225-81, R. 225-83 and R. 225-102 of the French Commercial Code)

Type of disclosures in millions of euros (unless otherwise indicated)	2011	2012	2013	2014	2015
I - Financial position at year end					
a) Share capital	619	629	630	728	745
b) Number of shares issued	61,864,577	62,877,215	63,029,692	72,822,695	74,472,101
II - Operations and results					
a) Sales (excluding VAT)	12	14	13	15	18
<ul> <li>b) Income before tax, depreciation, impairment and provisions</li> </ul>	5	2	206	70	703
c) Income taxes	31	36	26	28	52
d) Employee profit sharing					
e) Income after tax, depreciation, impairment and provisions	(289)	26	212	189	754
f) Amount of dividends distributed	81	113	117	135	NC
III - Earnings per share (in euros)					
<ul> <li>a) Income after tax but before depreciation, impairment and provisions</li> </ul>	0.58	0.61	3.69	1.34	10.14
b) Income after tax, depreciation, impairment and provisions	(4.68)	0.42	3.37	2.59	10.12
c) Net dividend per share	1.30	1.80	1.85	1.85	NC
IV - Employee data					
a) Number of employees	8	7	7	7	7
b) Total payroll	5	7	4	5	7
c) Amounts paid to employee benefit bodies in the year	2	3	3	3	4

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The different parts constituting the Annual Financial Report are identified in the content by the pictogram  $$\Delta F\!_{\rm L}$$ 

# Information about the Company and its share capital



## 5.1 LEGAL PRESENTATION OF THE GROUP

### 5.1.1 Information about the Company

The Arkema Group was established in October 2004 within Total's Chemical business to bring together the Vinyl Products, Industrial Chemicals and Performance Products business divisions. On 18 May 2006, the Company's stock market listing marked the Group's independence.

Since 2006, a number of major operations, as mentioned below, have enabled the Arkema Group to strengthen its portfolio of businesses and to refocus on specialty chemical activities:

- acquisition in October 2007 of Coatex, a producer of rheology additives;
- acquisition in January 2010 of certain assets from The Dow Chemical Company in acrylics and emulsions in North America;
- acquisition in July 2011 of Total's coating resins (Cray Valley and Cook Composites and Polymers) and photocure resins (Sartomer);
- acquisition in February 2012 of Chinese companies Suzhou Hipro Polymers Co. Ltd. and Hebei Casda Biomaterials Co. Ltd. in specialty polyamides;
- divestment in July 2012 of the vinyl business;
- acquisition in acrylics in China in October 2014 with the creation of the Taixing Sunke Chemicals joint-venture with Jurong Chemical; and
- acquisition on 2 February 2015 of Bostik, in adhesives.

Arkema is a French joint stock corporation (société anonyme) with a share capital of 744,721,010 euros and its registered office at 420, rue d'Estienne d'Orves, 92700 Colombes (phone: +33 1 49 00 80 80). It is governed by French law and, as a result, is subject to the legislative and regulatory provisions of the French Commercial Code (Code de commerce).

The Company is registered with the Nanterre Trade and Companies Registry (*Registre du commerce et des sociétés*) under number 445 074 685 00030. Its NAF code is 2016 Z.

The Company was incorporated on 31 January 2003 for a fixed period of 99 years from its date of registration at the Trade and Companies Registry, until 31 January 2102, unless the term is extended or the Company is wound up earlier.

The Company's corporate purpose (article 3 of its Articles of Association), directly or indirectly, in any country is:

- to carry out all operations directly or indirectly relating to research, production, processing, distribution and marketing of all chemical and plastic products and their derivatives, by-products thereof and of all parachemical products;
- to acquire, hold and manage all securities, negotiable
  or otherwise, in French and foreign companies, through
  newly-created companies, contributions, limited partnerships, or
  by subscribing for or purchasing securities or corporate rights,
  or through mergers, combinations, joint-venture companies or
  by obtaining the use of any property or rights under a lease,
  lease-management agreement or by dation, or otherwise; and
- more generally, to enter into all financial, commercial, industrial, real or personal property transactions that may be directly or indirectly related to any of the objects referred to above or to any other similar or connected objects, and designed to promote the Company's purpose, expansion or development.

The Company's Articles of Association, minutes of annual general meetings, statutory auditors' reports and other Company documents may be consulted at the Group's Legal department at the registered office located at 420, rue d'Estienne d'Orves, 92700 Colombes, France. Furthermore, historical financial information, regulated information, reference documents, annual and sustainable development reports and others are available on the Company's website: www.arkema.com

## 5.1.2 Subsidiaries and shareholdings of the Company

Arkema is the Group's ultimate parent company. It is also the head of the French tax group put in place between companies subject to French corporation tax.

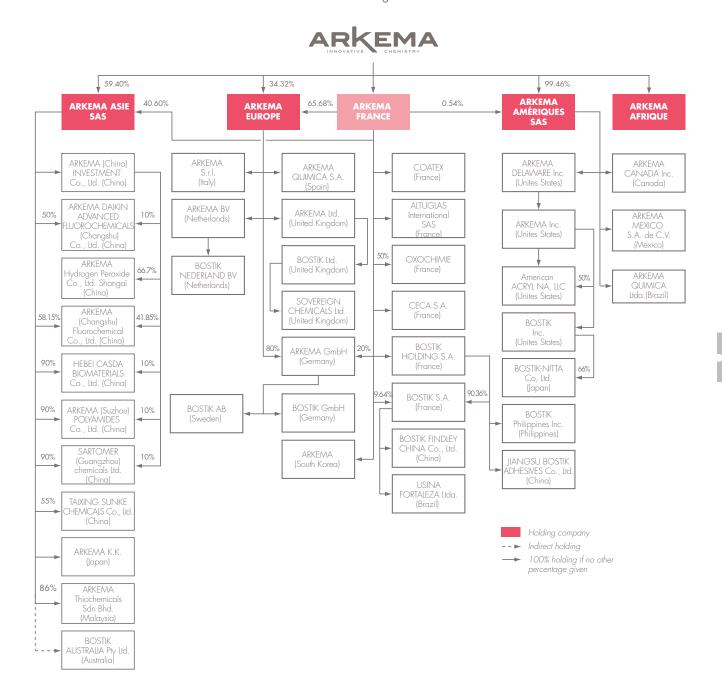
The Company is a holding company that does not have its own operational or industrial activity.

The Company indirectly holds – *via* French sub-holding companies, including Arkema France – all of the Group's French and foreign

subsidiaries, which are grouped by region (France, America, Africa, Asia and Europe).

Arkema France is both a holding and an operating company and holds in particular all of the Group's French operational companies.

The Company's main direct and indirect subsidiaries at the date of this reference document are shown in the following simplified organizational chart.



A comprehensive list of all of the Group's consolidated subsidiaries and their geographical location is given in the consolidated financial statements in section 4.3.3 of this reference document.

Detailed information on the Company's main subsidiaries is also given in section 4.4.2 of this reference document.

For further information on the Group's structure, see sections 1.1 and 1.2 of this reference document. The results of each division are presented in chapter 4 of this reference document.

## 5.1.3 Related-party transactions

Arkema, the Group's ultimate parent company, is a holding company and an administrative service provider dedicated to Group companies. These service agreements are not material and are entered into under ordinary conditions comparable to those applicable to similar transactions with third parties.

Some of the Group's non-consolidated companies sell products or provide services to consolidated Group companies. In addition, certain consolidated Group companies sell products or provide services to certain non-consolidated companies.

These transactions, taken separately or together, are not material. They are carried out under ordinary conditions comparable to those applicable to similar transactions with third parties.

A description of related-party transactions is provided in note 27 to the consolidated financial statements in section 4.3.3 of this reference document and in the statutory auditors' special report on related-party agreements and commitments, which is included in chapter 6 of this reference document.

## 5.2 SHARE CAPITAL

## 5.2.1 Amount of share capital

At 31 December 2015, the Company's share capital was 744,721,010 euros divided into 74,472,101 fully paid-up shares of a single category, with a nominal value of 10 euros per share, compared to 72,822,695 shares at 1 January 2015, of which 36,925 are treasury shares.

In 2015, the number of shares increased by 1,649,406: 1,430,888 resulting from the option for payment of the 2014 dividend in shares and 218,518 from the exercise of the same number of stock options.

# 5.2.2 History of the Company's share capital over the past three years

Date	Amount of capital	Number of shares	Nature of operation
30 June 2013	€629,481,730	62,948,173	Exercise of stock options: capital increase of €709,580, with a share premium of €1,956,359.68, with the issue of 70,958 new shares.
31 December 2013	€630,296,920	63,029,692	Exercise of stock options: capital increase of €815,190, with a share premium of €2,188,091.39, with the issue of 81,519 new shares.
23 April 2014	€635,211,940	63,521,194	Share capital increase reserved for employees: capital increase of €4,915,020 with a share premium of €26,634,493.38, with the issue of 491,502 new shares.
30 June 2014	€636,968,620	63,696,862	Exercise of stock options: capital increase of €1,756,680, with a share premium of €4,911,000.56, with the issue of 175,668 new shares.
7 November 2014	€637,183,740	63,718,374	Exercise of stock options: capital increase of €215,120 with a share premium of €449,335.64, with the issue of 21,512 new shares.
15 December 2014	€728,209,980	72,820,998	Share capital increase with preferential subscription rights: capital increase of €91,026,240, with a share premium of €259,424,784, with the issue of 9,102,624 new shares.
31 December 2014	€728,226,950	72,822,695	Exercise of stock options: capital increase of €16,970, with a share premium of €42,170.45, with the issue of 1,697 new shares.
30 June 2015	€729,298,350	72,929,835	Exercise of stock options: capital increase of €1,071,400 with a share premium of €3,103,652.13, with the issue of 107,140 new shares.
30 June 2015	€743,607,230	74,360,723	Payment in shares of the 2014 dividend: capital increase of €14,308,880 with a share premium of €73,891,056.32, with the issue of 1,430,888 new shares.
31 December 2015	€744,721,010	74,472,101	Exercise of stock options: capital increase of €1,113,780 with a share premium of €2,414,639.94, with the issue of 111,378 new shares.

## 5.2.3 Pledges, guarantees, securities

At 31 December 2015, existing pledges on the Company's pure registered shares and administered registered shares respectively concerned 179 shares held by 4 shareholders, and 1,750 shares held by one shareholder, namely less than 0.01% of the share capital.

The Company has no knowledge of pledges concerning the other shares constituting its share capital.

The shares held by the Company in its subsidiaries are not subject to pledges.

## 5.2.4 Treasury shares

At 31 December 2015, the Company directly held 36,925 treasury shares.

This section includes (i) a review of the share buyback program authorized in 2015, and (ii) the information that must be given in the description of the share buyback program in accordance with article 241-2 of the general regulation of the French financial markets authority (*Autorité des marchés financiers* – AMF) as well as information required under article L. 225-211 of the French Commercial Code.

# REVIEW OF SHARE BUYBACK PROGRAM AUTHORIZED ON 2 JUNE 2015 (2015 SHARE BUYBACK PROGRAM)

The annual general meeting of 2 June 2015 authorized the Board of Directors to implement a share buyback program capped at 10% of the share capital and subject to a maximum purchase price per share of 95 euros. This authorization, which supersedes, for its unused portion, the authorization granted by the annual general meeting of 15 May 2014, was granted for an 18-month period from the annual general meeting of 2 June 2015, i.e., until 2 December 2016. It is therefore still in force at the date of this reference document.

The maximum amount of funds allocated to the implementation of the share buyback program may not exceed 100 million euros.

Under this 2015 share buyback program, the shares may be purchased for any purpose permitted by law, notably for:

implementing market practices allowed by the AMF such as
 (i) purchasing shares of the Company in order to hold them and
 subsequently tender them in exchange or as payment as part
 of any potential external growth transactions, it being specified
 that the shares acquired for this purpose may not exceed 5%

of the Company's share capital at the time of the acquisition or (ii) purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as (iii) any market practice subsequently permitted by the AMF or by law;

- putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to negotiable securities giving access by any means, whether immediately or in the future, to shares of the Company, as well as carrying out any hedging transactions in respect of the Company's obligations related to such negotiable securities, under the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;
- covering stock option plans granted to employees or corporate officers of the Company or its Group;
- granting free shares of the Company to employees or corporate
  officers of the Company or its Group, particularly under the
  conditions provided for in articles L. 225-197-1 et seq. of the
  French Commercial Code;
- offering employees the opportunity to acquire shares, whether directly or via a company savings plan (Plan d'Épargne Entreprise) under the terms provided for by law, and notably articles L. 3332-1 et seq. of the French Labor Code (Code du travail); and
- canceling all or part of the purchased shares in order to reduce the Company's share capital.

At its meeting of 4 March 2015, the Board of Directors decided to implement the share buyback program, subject to the authorization of the annual general meeting of 2 June 2015.

#### TRANSACTIONS CARRIED OUT AS PART OF THE 2015 SHARE BUYBACK PROGRAM

At 2 June 2015, when the annual general meeting approved the 2015 share buyback program, the Company held, directly or indirectly, 1,117 treasury shares.

The following tables give a summary of the transactions carried out as part of the 2015 share buyback program:

#### Summary statement at 31 January 2016

Number of shares comprising the Company's capital at 2 June 2015	72,922,451
Number of treasury shares held directly or indirectly at 2 June 2015	1,117
Number of shares purchased between 2 June 2015 and 31 January 2016	75,878
Weighted average gross price of shares purchased (in euros)	58.47
Number of treasury shares at 31 January 2016	76,925
Number of shares canceled in the last 24 months	None
Book value of portfolio (in euros)	4,512,668.09
Market value of portfolio (in euros) based on closing price at 29 January 2016, i.e. €57.56	4,427,803.00

	Aggregate gros	s movements	Open positions at 31 January 201		
Summary of transactions carried out through the program between 2 June 2015 and 31 January 2016	Purchases	Sales/transfers	Open buying positions	Open selling positions	
Number of shares	75,878	70 (1)	-	-	
Average price of transaction (in euros)	58.47	N/A	-	-	
Amounts (in euros)	4,436,586.60	N/A	-	-	

<sup>(1)</sup> In October 2015, 70 free shares awarded under the 2013 performance share plan, were released early and granted from the Company's treasury shares account.

## BREAKDOWN OF THE TREASURY SHARES BY OBJECTIVE

At 31 January 2016, the 76,925 treasury shares held by the Company were allocated for the purpose of covering the Company's plans to grant free shares to its employees and corporate officers and those of its affiliated companies.

# SHARE BUYBACK PROGRAM SUBMITTED TO THE ANNUAL GENERAL MEETING OF 7 JUNE 2016 (2016 SHARE BUYBACK PROGRAM)

The Board of Directors would like the Company to continue to have a share buyback program.

To this end, the Board of Directors proposes to the annual general meeting of 7 June 2016 to cancel the  $10^{th}$  resolution voted by the annual general meeting of 2 June 2015, for its unused portion, and to authorize the implementation of a new share buyback program in accordance with the provisions of European Council regulation no. 2273/2003 dated 22 December 2003 pertaining to the terms of application of European directive 2003/6/EC dated 28 January 2003.

In accordance with article 241-2 of the AMF's general regulation, the following sections give a description of the share buyback program subject to the authorization of the Company's next annual general meeting mentioned above.

#### Objectives of the 2016 share buyback program

As part of the 2016 share buyback program that is submitted to the annual general meeting of 7 June 2016, the Company is considering repurchasing its own shares for any purpose permitted by law either now or in the future, and notably for the following purposes:

• implementing market practices allowed by the AMF such as (i) purchasing shares of the Company in order to hold them and subsequently tender them in exchange or as payment as part of any potential external growth operations, it being specified that shares acquired for consideration of mergers, spin-offs or contributions may not exceed 5% of the share capital at the time of the acquisition, or (ii) purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as (iii) any market practice subsequently permitted by the AMF or by law;

- putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to negotiable securities giving access by any means, whether immediately or in the future, to shares of the Company, as well as carrying out any hedging transactions in respect of the Company's obligations (or of one of its subsidiaries) related to such negotiable securities, under the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;
- covering stock option plans granted to employees or corporate officers of the Company or its Group;
- granting free shares of the Company to the employees or executive officers of the Company or its Group, particularly under the conditions provided for in articles L. 225-197-1 et seq. of the French Commercial Code;
- offering employees the opportunity to acquire shares, whether directly or via a company savings plan, under the terms provided for by law, and notably articles L. 3332-1 et seq. of the French Labor Code;
- canceling all or part of the purchased shares in order to reduce the Company's share capital.

Purchased shares may be canceled under the 11<sup>th</sup> resolution approved by the annual general meeting of 2 June 2015 and in force until 2 June 2017.

# Maximum portion of share capital to be repurchased and maximum number of shares that may be acquired under the 2016 share buyback program

The maximum portion of the share capital that can be repurchased under the 2016 share buyback program shall be 10% of the total number of shares making up the Company's share capital (i.e., 74,474,450 shares at 31 January 2016).

In accordance with article L. 225-210 of the French Commercial Code, the number of shares held by the Company at any given date may not be greater than 10% of the shares constituting the Company's share capital on that date.

The securities that the Company is considering acquiring are shares.

#### Maximum unit purchase price authorized

The maximum purchase price would be 95 euros per share, it being specified that this purchase price may be adjusted to account for the impact on the share price resulting from

transactions such as: a capitalization of share premiums, reserves or earnings giving rise either to an increase in the par value of the shares or to the issuance and distribution of shares for no consideration; a stock split or reverse stock split; or any other transaction affecting equity.

The maximum amount of cash dedicated to the 2016 share buyback program would be 100 million euros.

#### Terms and conditions for the 2016 share buyback program

The shares may be purchased or transferred at any time, except during public offerings on the Company's shares, under the conditions and within the limits, particularly as regards volume and price, permitted by law at the date of the transaction in question, by any and all means, including on the market or over the counter, by way of block trades or by way of derivatives traded on a regulated or over-the-counter market, under the conditions permitted by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate.

#### Duration of the 2016 share buyback program

In accordance with the resolution to be submitted for the approval of the annual general meeting of 7 June 2016, the 2016 share buyback program would be authorized for a period of 18 months from the date of its approval, *i.e.*, until 7 December 2017.

## 5.2.5 Summary of authorizations and their application

At 31 December 2015, there were no securities, other than the Company's shares, that gave access to the Company's capital.

A summary table of the outstanding delegations of authority and authorizations granted by the annual general meeting to the Board of Directors, in particular to increase the share capital, as well as their application, is provided below:

Description	Date of annual general meeting	Duration of authorization	Maximum authorized nominal value	Use by the Board of Directors (date)
Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company or one of its subsidiaries, with preferential subscription rights *	15 May 2014	26 months	€315 million €600 million (debt securities)	Use at 31 December 2015: share capital increase of €91,026,240 (15 December 2014)
Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company or one of its subsidiaries, by means of a public offering, without preferential subscription rights *	15 May 2014	26 months	10% of the Company's share capital at 15 May 2014 €600 million (debt securities)	None
Delegation of authority granted to the Board of Directors to increase the Company's share capital, without preferential subscription rights, through the issue of shares and/or securities giving access to shares in the Company, via an offering referred to in article L. 411-2 II of the French Monetary and Financial Code (Code monétaire et financier) *	15 May 2014	26 months	10% of the Company's share capital at 15 May 2014 €600 million (debt securities)	None
Authorization granted to the Board of Directors to increase the number of shares to be issued, in the event of a share capital increase with or without preferential subscription rights *	15 May 2014	26 months	15% of the initial issue, subject to the cap stated in the resolution authorizing the issue	None

Description	Date of annual general meeting	Duration of authorization	Maximum authorized nominal value	Use by the Board of Directors (date)
Overall limit of authorizations to increase the Company's share capital immediately and/or in the future *	15 May 2014	26 months	€315 million	Use at 31 December 2015: share capital increase of €91,026,240 (15 December 2014)
Delegation of authority granted to the Board of Directors allowing the issue of shares in the Company reserved for employees subscribing to a company savings plan *	15 May 2014	26 months	€12 million	Use at the date of this reference document: see section 5.2.7 below
Authorization granted to the Board of Directors to carry out a share buyback program *	2 June 2015	18 months	€95 per share €100 million (up to 10% of the share capital at any time)	Use at 31 January 2016: see section 5.2.4 of the reference document
Delegation of authority granted to the Board of Directors to allocate free shares in the Company subject to performance conditions *	4 June 2013	38 months	1,250,000 shares (2% of the share capital as at 4 June 2013)	Use at 31 December 2015: allocation of 250,000 shares (6 November 2013) allocation of 17,118 shares (6 May 2014) allocation of 275,000 shares (13 November 2014) allocation of 345,120 shares (9 November 2015)
Delegation of authority granted to the Board of Directors to reduce share capital by canceling shares	2 June 2015	24 months	10% of the share capital	Use at 31 December 2015: None

<sup>\*</sup> New delegations of authority and authorizations, which are detailed in chapter 6 of this reference document, will be submitted to the vote of the Company's annual general meeting of 7 June 2016.

The Company's share capital at 31 December 2015, which was 744,721,010 euros, divided into 74,472,101 shares, could be increased by 553,023 shares resulting from the exercise of the same number of options, representing a potential maximum dilution of less than 1%.

There are no other securities giving access to the Company's capital either immediately or in the future (see section 5.2.6 of this reference document for a description of these options).

## 5.2.6 Stock options and performance share plans

In order to incentivize executives and certain employees and involve them more closely in the Group's future growth as well as its stock market performance, the Board of Directors has put in place since 2006 stock option plans and free performance share plans, subject to performance conditions.

In accordance with the applicable stock-based compensation policy, the Board of Directors discontinued the use of stock options in 2013.

However, at 31 December 2015, the following are still outstanding:

- 69,313 stock options from stock option plans put in place in 2008; and
- 483,710 stock options from the 2010 and 2011 plans.

At 31 December 2015, the total number of outstanding stock options was therefore 553,023, *i.e.*, 0.74% of the Company's share capital on that date.

Furthermore, since 2007, as free performance share plans in place have been covered by the buyback of shares as part of the Company's share buyback program, these plans do not result in any potential dilution for shareholders.

Additional information on the stock option plans and the performance share plans put in place by the Group is given in section 3.5 of this reference document as well as in note 28 to the consolidated financial statements for the year ended 31 December 2015, set out in section 4.3.3 of this reference document

## 5.2.7 Share capital increase reserved for employees

The Board of Directors regularly reaffirms its intention to pursue a dynamic employee share ownership policy by regularly offering Group employees the opportunity to purchase Arkema shares with preferential terms (20% discount, maximum subscription of 1,000 shares) with, in particular, the allocation of free shares to employees in countries outside France participating in the operation, in order to make the offer more attractive.

Consequently, in accordance with the delegation of authority granted by the annual general meeting of 15 May 2014, the Board of Directors, on 2 March 2016, decided to carry out a share capital increase reserved for employees. The share capital increase took place in 26 countries in which the Group is present, from 7 to 20 March 2016 inclusive.

The subscription conditions were as follows:

 subscription price of 42.16 euros, corresponding to the average opening price quoted in the 20 trading days preceding 2 March 2016, to which a 20% discount was applied;

- for employees of Group companies outside France, allocation
  of one free share for every four subscribed, up to a maximum
  of 25 free shares, with a vesting period of four years, i.e., until
  11 May 2020, with no holding period required, except in Italy
  and Spain where final allocation will take place after three
  years, i.e., on 13 May 2019, with a three-year holding period;
- for employees of French companies, possibility of subscribing to the share capital increase using sums from the incentive scheme or the profit-sharing scheme supplemented, as the case may be, by the employer;
- possibility of spreading payment for the shares over 24 months.

## **5.3** SHARE OVVNERSHIP

# 5.3.1 Breakdown of share ownership and voting rights at 31 December 2015

The breakdown of the share capital was established on the basis of a total number of 74,472,101 shares at 31 December 2015, carrying 83,010,787 voting rights (including double voting rights and after deduction of treasury shares), the threshold disclosures made to the AMF or the Company, and an analysis carried out

by the Company based on identifiable bearer shares (*Titres au Porteur Identifiable* – TPI). TPI procedures were carried out at the end of 2015, 2014 and 2013.

To the best of the Company's knowledge, the breakdown of Arkema's share ownership and voting rights at 31 December 2015 was as follows:

	% of share capital	% of voting rights	% of theoretical voting rights *
Main shareholders owning at least 5% of the share capital and/or voting rights:			
Fonds Stratégique de Participations (1)	6.4	10.5	10.5
Norges Bank	5.0	4.5	4.5
Employee ownership ** (2)	5.0	8.1	8.1
Treasury shares	0	0	0
Public	83.6	76.9	76.9
TOTAL	100	100	100

- \* Pursuant to article 223-11 of the AMF's general regulation, the number of theoretical voting rights is calculated on the basis of all shares to which voting rights are attached, including shares without voting rights.
- \*\* See details presented in section 5.3.4 of this reference document.
- (1) The Fonds Stratégique de Participations (FSP) is a member of the Board of Directors and is represented by Isabelle Boccon-Gibod (see section 3.2.1.2 of this reference document).
- (2) To the Company's knowledge, the Arkema Actionnariat France and Arkema Actionnariat International company mutual funds (Fonds Commun de Placement d'Entreprise FCPE) held 5.5% of the Company's share capital at 31 December 2015, representing 9.3% of the Company's voting rights. These funds include the shareholdings of employees of the Arkema Group (see section 5.3.4 of this reference document), Total and Kem One (the vinyl business divested in July 2012).

To the Company's knowledge, based on its register and except for the pledges described in section 5.2.3 of this reference document, no share of the Company has been pledged, or used as a guarantee or a surety.

The Company has also put in place an American Depositary Receipt (ADR) program in the United States. In this regard, it concluded a deposit agreement with Bank of New York Mellon on 18 May 2006. At 31 December 2015, 757,698 shares were held by Bank of New York Mellon on behalf of ADR bearers.

## 5.3.2 Control of the Company

At the date of this reference document:

- the Company is not controlled, either directly or indirectly, by any single shareholder; and
- to the Company's knowledge, there is no agreement or pact between shareholders, the implementation of which would result in the takeover of the Company.

## 5.3.3 Clauses likely to have an effect on the control of the Company

No provision of the Articles of Association can delay, defer or prevent a change of control over the Company. However, there are provisions pertaining to double voting rights and limitations on voting rights in articles 17.3 and 17.4 of the Articles of Association, which are presented in section 5.5.2 of this reference document.

## 5.3.4 Employee share ownership

According to the definition of employee share ownership under the terms of article L. 225-102 of the French Commercial Code, the number of Arkema shares held by employees at 31 December 2015 was 3,746,181, representing 5.0% of the share capital and, taking account of double voting rights, 8.1% of voting rights. This may be broken down as follows:

TOTAL EMPLOYEE SHARE OWNERSHIP	3,746,181
Free shares	610,722
Shares arising from the exercise of stock options and held as pure registered shares within a Group savings plan	165,558
Pure registered shares held within a Group savings plan	192,624
Shares held by Group employees within the Arkema Actionnariat International FCPE	203,876
Shares held by Group employees within the Arkema Actionnariat France FCPE	2,573,401

## 5.3.5 Legal threshold disclosures in 2015

The following legal threshold disclosures were made to the AMF in 2015 and up to the date this reference document was issued:

Company	Date threshold crossed	Threshold crossed
BlackRock Inc.	6 January 2015	dropped below the 5% share capital threshold
Amundi (1)	12 January 2015	dropped below the 10% voting rights threshold
BlackRock Inc.	13 February 2015	exceeded the 5% share capital threshold
BlackRock Inc.	11 March 2015	dropped below the 5% share capital threshold
BlackRock Inc.	13 April 2015	exceeded the 5% share capital threshold
BlackRock Inc.	13 May 2015	dropped below the 5% share capital threshold
BlackRock Inc.	21 May 2015	exceeded the 5% share capital threshold
Norges Bank	29 May 2015	dropped below the 5% voting rights threshold
BlackRock Inc.	29 May 2015	dropped below the 5% share capital threshold
Norges Bank	5 June 2015	exceeded the 5% voting rights threshold
Norges Bank	9 June 2015	dropped below the 5% voting rights threshold
Norges Bank	22 June 2015	exceeded the 5% voting rights threshold
Norges Bank	23 June 2015	dropped below the 5% voting rights threshold
Norges Bank	24 June 2015	exceeded the 5% voting rights threshold
Norges Bank	25 June 2015	dropped below the 5% voting rights threshold
Norges Bank	26 June 2015	exceeded the 5% voting rights threshold
Norges Bank	29 June 2015	dropped below the 5% voting rights threshold
Fonds Stratégique de Participations (2)	25 July 2015	exceeded the 10% voting rights threshold
Norges Bank	29 July 2015	exceeded the 5% voting rights threshold
Norges Bank	30 July 2015	dropped below the 5% voting rights threshold
Norges Bank	31 July 2015	dropped below the 5% share capital threshold

Company	Date threshold crossed	Threshold crossed
Amundi (3)	26 October 2015	dropped below the 5% share capital threshold
Norges Bank	17 November 2015	exceeded the 5% share capital threshold
Norges Bank	19 November 2015	dropped below the 5% share capital threshold
Norges Bank	23 November 2015	exceeded the 5% share capital threshold
Norges Bank	1 December 2015	dropped below the 5% share capital threshold
Norges Bank	9 December 2015	exceeded the 5% share capital threshold
Norges Bank	21 January 2016	dropped below the 5% share capital threshold
Norges Bank	22 January 2016	exceeded the 5% share capital threshold
Norges Bank	29 February 2016	exceeded the 5% voting rights threshold
Norges Bank	1 March 2016	dropped below the 5% voting rights threshold
Norges Bank	2 March 2016	exceeded the 5% voting rights threshold
Norges Bank	4 March 2016	dropped below the 5% voting rights threshold
Norges Bank	18 March 2016	exceeded the 5% voting rights threshold
Norges Bank	21 March 2016	dropped below the 5% voting rights threshold

- (1) Company acting on behalf of the Arkema Actionnariat France FCPE that it manages. Amundi made this threshold disclosure in October 2015 for regularization purposes.
- (2) On this occasion, the Fonds Stratégique de Participations made the following statement:
  - "Fonds Stratégique de Participations, a mutual fund (Société d'Investissement Professionnelle Spécialisée à Capital Variable SICAV) hereby declares that:
  - the threshold crossing did not result from an acquisition of shares but rather from the granting of double voting rights, and consequently did not require financing;
  - the acquirer acts alone;
  - it does not intend to significantly increase or reduce its stake in the share capital;
  - it does not intend to acquire control of the Company;
  - its strategy with regard to the issuer is a long-term strategy;
  - it does not intend to carry out any of the transactions referred to in paragraph 6 of article 223-17 I of the AMF's general regulation;
  - it has neither entered into any of the agreements nor holds any of the financial instruments referred to in paragraphs 4 and 4 bis of Article L.233-9 of the French Commercial Code;
  - it has not entered into any temporary disposal agreements relating to the Company's shares and/or voting rights;
  - Fonds Stratégique de Participations already has a seat on the Company's Board of Directors and does not intend to request another one."
- (3) Company acting on behalf of the Arkema Actionnariat France FCPE that it manages.

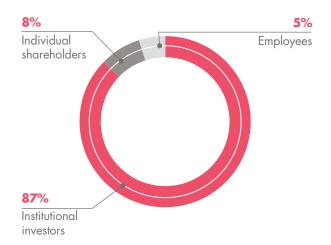
## 5.3.6 Breakdown of share ownership and voting rights

To the best of the Company's knowledge, the estimated share ownership at 31 December 2015, 2014 and 2013 was as follows (1):

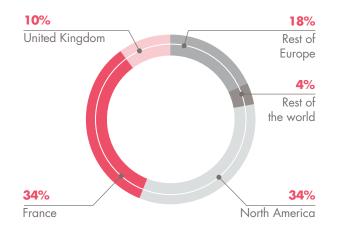
	31 December 2015		31 Decemb	per 2014 31 December 2		er 2013
	% of share capital	% of voting rights	% of share capital	% of voting rights	% of share capital	% of voting rights
Fonds Stratégique de Participations	6.4	10.5	6.5	6.2	6.0	5.7
Norges Bank	5.0	4.5	5.5	5.2	5.4	5.0
BlackRock Inc.	N/A	N/A	5.1	4.8	N/A	N/A
FMR LLC (Fidelity Investments)	N/A	N/A	N/A	N/A	5.4	5.1
Other institutional shareholders	75.7	67.9	69.7	65.5	69.8	65.4
Individual shareholders	7.9	9.0	8.7	10.6	8.9	11.2
Employee share ownership	5.0	8.1	4.4	7.7	4.1	7.6
Treasury shares	0	0	0.1	0.0	0.4	0.0
TOTAL	100	100	100	100	100	100
Number of shares/voting rights	74,472,101	83,010,787	72,822,695	77,338,556	63,029,692	67,267,606

<sup>(1)</sup> For institutional shareholders, only investments in excess of 5% of the share capital threshold are shown in the table above.

#### BY SHAREHOLDER (AT 31 DECEMBER 2015)



#### BY REGION (AT 31 DECEMBER 2015)



## 5

# **5.4** STOCK MARKET

### 5.4.1 Stock market information

The Arkema share is listed on Euronext Paris, compartment A. It is eligible to the Deferred Settlement Service (*Système de Règlement Différé*) as well as the Personal Equity Savings Plan (*Plan d'Épargne en Actions*).

An ADR program has been in place in the United States since 18 May 2006. Each ADR represents one American Depositary Share (ADS), and each ADS in turn represents one Arkema share.

#### **CODES**

ISIN	FR0010313833
Ticker	AKE
Reuters	AKE.PA
Bloomberg	AKE FP

#### **INDEXES**

The Arkema share is included in the following indexes:

- CAC Next 20;
- CAC Large 60;
- SBF 120;
- Euro Stoxx Chemicals; and
- MSCI.

#### ARKEMA SHARE PERFORMANCE IN 2015

Performance since 1 January 2015 (at 31 December 2015)	+17.3%
Last closing price of the year (in euros)	64.59
Average of last 30 closing prices (in euros)	65.27
Highest price of the year (in euros)	75.75
Lowest price of the year (in euros)	50.43

#### ARKEMA SHARE HISTORICAL DATA SINCE 1 JANUARY 2015

Month	Number of securities traded	<b>Trading volume</b> (in millions of euros)	Highest price (in euros)	Lowest price (in euros)
January 2015	8,258,153	480.67	64.24	50.43
February 2015	5,790,048	379.81	67.47	63.41
March 2015	8,285,133	590.11	75.36	64.28
April 2015	5,357,585	392.08	75.75	68.95
May 2015	5,848,760	411.43	74.48	67.24
June 2015	6,425,110	425.73	72.56	62.96
July 2015	6,504,825	435.61	71.24	61.64
August 2015	6,531,016	439.70	73.77	57.32
September 2015	7,025,665	424.64	64.64	54.80
October 2015	5,400,234	341.40	68.66	57.37
November 2015	4,447,014	295.59	69.35	63.15
December 2015	4,341,091	281.85	69.66	61.00
January 2016	6,367,384	364.29	64.00	52.93
February 2016	7,728,659	407.46	59.00	48.17

### **5.4.2** Financial communication

The Group regularly provides information on its activities, results and outlook to its shareholders, investors, analysts, and the financial community at large. Group press releases, financial reports and presentations, and minutes of annual general meetings are available on the website www.finance. arkema.com. Every year, the Group files a reference document with the AMF. This document is available on the AMF website (www.amf-france.org) and on the Group's website (www.finance.arkema.com). An English version of this reference document is also available on the Group's website.

In 2015, the Group was awarded the *Grand Prix de la Transparence* in the "Oil, Gas, Materials and Buildings" category at the 6<sup>th</sup> edition of the *Grands Prix de la Transparence* in recognition of the work carried out by its teams in the area of investor relations. This award recognizes the quality of regulated information provided by the Group to the market in particular in terms of accessibility, accuracy, comparability and availability of information.

## 5.4.3 Relations with investors and financial analysts

The Group is committed to maintaining an active and permanent dialogue with institutional investors and financial analysts, in particular through road shows and conferences. Representatives from the Group's executive management, primarily the Chairman and Chief Executive Officer and the Chief Financial Officer, regularly meet with portfolio managers and financial analysts in the main financial hubs in Europe and North America. The Investor Relations team also regularly meets with the financial community. The purpose of these various meetings is to inform the market of the Group's results and main operations and improve understanding, by investors and analysts, of its activities, strategy and outlook.

At the time of the publication of its annual results, the Group also organizes a presentation for portfolio managers and financial

analysts. On publication of its quarterly and half-yearly results, a conference call with the financial community is hosted by the Chairman and Chief Executive Officer or by the Chief Financial Officer

In 2015, the Group held some 400 meetings and took part in a number of industry conferences in Paris, London, Amsterdam, San Francisco and Lyon. The Group also organized a Capital Markets Day in Paris on 29 June 2015, which was attended by around 65 participants. It was an opportunity for the Chairman and Chief Executive Officer to present the changes to the Group's profile, its strategy and its medium and long-term ambition. Several members of the Executive Committee also gave presentations throughout the day on the various projects the Group is currently working on.

#### 5.4.4 Relations with individual shareholders

The Group aims to inform its individual shareholders about its strategy, results and activities, with an emphasis on open dialogue, discussion and meetings.

The Arkema Group meets with its individual shareholders on a regular basis, in particular at the annual general meeting, which is a dedicated opportunity for discussion about the Group's strategy and outlook. A number of meetings with shareholders are also organized in France every year. In 2015, Arkema met with its shareholders in Bordeaux and the Paris region, as well as at the Actionaria fair in Paris.

Additionally, through its Shareholders' Club, the Group offers its members to participate in various activities throughout the year allowing them to discover the world of chemistry, and the innovations and applications of chemical products in everyday life.

Presentations, interviews, reports and shareholder newsletters are available in the Individual Shareholders section of the website (www.finance.arkema.com).

## 5.4.5 Registered shares

Arkema shares can be registered in the name of the holders. In this case, shareholders are identified by Arkema in its capacity as issuer, or by its agent BNP Paribas Securities Services, which is responsible for the shareholder register.

Advantages of registered shares include:

- double voting rights if shares are held for two years continuously (see section 5.5.2.1 of this reference document); and
- the possibility of directly receiving the notice of the annual general meeting.

Contact details for registered shares:

#### **BNP Paribas Securities Services**

CTS – Services aux Émetteurs Les Grands Moulins de Pantin 9, rue du Débarcadère 93761 Pantin Cedex – France

#### Phone:

- 0 800 115 153 (within France)
- 33 (0)1 55 77 41 17 (outside France)

#### Email address:

• paris\_bp2s\_arkema\_actionnaires@bnpparibas.com

## 5.4.6 Dividend policy

During its Capital Markets Day held in June 2015, the Group reaffirmed the importance of dividends as a key component of its shareholder return policy. In particular, it specified that the dividend increased by an average of 14% a year since 2007, the first year in which a dividend was distributed, and that from 2014 already the Group had achieved its objective of reaching a 30% payout ratio on adjusted net income.

At its meeting of 2 March 2016, the Board of Directors, after closing the 2015 financial statements, decided in light of the Group's performance in 2015, to propose to the annual general meeting of 7 June 2016, a dividend payment of 1.90 euro per share, representing an increase of 2.7% from 2014. This decision reflects the Board of Directors' confidence in the Group's medium-term development prospects and in its solid cash flow generation and balance sheet.

The Board of Directors also reaffirmed Arkema's dividend policy. The Company aims to pay a stable to growing dividend each year.

The Board of Directors proposes the payment of the 2015 dividend in cash only, taking into account a quicker than anticipated reduction of net debt one year after the Bostik acquisition. Shares will be traded ex-dividend on 9 June 2016 and the dividend will be paid as from 13 June 2016. The Board of Directors decided to give shareholders the option to receive the 2014 dividend in the form of new shares in the Company with a 10% discount. This decision was predominantly due to the finalization of three major growth initiatives carried out at the end of 2014 and the beginning of 2015 (the acquisition of Bostik, the completion of the thiochemicals platform in Malaysia and the acquisition of acrylic assets in China).

	2015 *	2014	2013	2012	2011
Dividend per share (in euros) (1)	1.90	1.85	1.85	1.80	1.30
Payout ratio (dividend per share/adjusted net income per share)	45%	51%	32%	25%	14%

<sup>\*</sup> In 2015, dividend proposed to the annual general meeting of 7 June 2016.

<sup>(1)</sup> Dividend eligible for the 40% deduction provided for in the French General Tax Code.

# **5.5** EXTRACT FROM THE ARTICLES OF ASSOCIATION

The following provisions are included in the Company's Articles of Association as of the date this reference document was issued.

# 5.5.1 Annual general meetings (articles 16, 17.1 and 17.2 of the Articles of Association)

## CONVENING NOTICE - PLACE OF MEETING - ADMISSION

Annual general meetings are called under the conditions provided by the applicable laws and regulations.

Meetings are held at the registered office or at any other place indicated in the notice of meeting.

In compliance with current regulatory requirements, all shareholders have the right to attend annual general meetings and to participate in the deliberations or to be represented, regardless of the number of shares they own, provided that it can be proven in accordance with legal and regulatory provisions that the shares have been registered in his or her name or in that of an intermediary duly authorized on their behalf under the terms of paragraph seven of article L. 228-1 of the French Commercial Code, within the regulatory period, either in the registered share accounts held by the Company or in the bearer securities accounts held by an authorized intermediary.

The registration or accounting entry of the shares in bearer securities accounts held by the authorized intermediary shall be evidenced by a certificate of participation issued by the intermediary holding the account under applicable legal and regulatory conditions.

#### **EXERCISE OF VOTING RIGHTS**

As from the time the meeting is called, any shareholder may request from the Company in writing a paper absentee ballot, or, if the Board of Directors provides for this option in both the announcement and notice of meeting, an electronic absentee ballot. Such requests must be delivered to or received at the registered office of the Company no later than six days before the date of the meeting. The Board of Directors has the power to reduce or waive this period.

Paper absentee ballots must be delivered to or received by the Company at least three days before the date of the annual general meeting. Electronic absentee ballots may be delivered to or received by the Company until 3:00 p.m. (CET) on the eve of the annual general meeting. The Board of Directors or Chairman, if so authorized by delegation, has the power to reduce or waive this period.

#### **REPRESENTATION**

A shareholder may be represented at annual general meetings by another shareholder, his or her spouse, civil union partner, or by any other person or legal entity under the terms provided for in articles L. 225-106 et seq. of the French Commercial Code.

Shareholders that are legal entities attend meetings through their legal representatives or any proxy appointed for this purpose.

Any member of the meeting who wishes to be represented by proxy must send a proxy form to the Company, either on paper, or, if the Board of Directors provides for this option in both the announcement and convening notice, in electronic format, at least three days before the meeting. However, the Board of Directors, or by delegation, the Chairman, has the power to reduce or waive such notice periods and to accept proxy forms that do not fall within this limit.

Proxies in electronic format may be filed or received by the Company no later than 3:00 p.m. (CET) on the eve of the annual general meeting. The Board of Directors, or by delegation, the Chairman, has the power to reduce or waive this period.

#### **USE OF TELECOMMUNICATIONS**

The Board of Directors has the power to decide that shareholders who take part in the annual general meeting by video conference or other means of telecommunication that enable them to be identified and where the nature and conditions of such means of participation are determined by the French Commercial Code, shall be deemed present for the purposes of calculating the quorum and majority.

Extract from the Articles of Association

#### CHAIRMAN OF THE ANNUAL GENERAL MEETING

Annual general meetings are chaired by the Chairman of the Board of Directors or, in his or her absence, by a director who is appointed specifically for this purpose by the Board of Directors. Failing this, the meeting elects its own Chairman.

#### QUORUM AND MAJORITY

Annual general meetings, whether they are ordinary, extraordinary, combined or special, are duly constituted when they meet the quorum and majority conditions provided for by applicable laws and regulations governing such meetings, and exercise the powers ascribed to them by the law.

# 5.5.2 Voting rights (articles 17.3 and 17.4 of the Articles of Association)

# VOTING RIGHTS, DOUBLE VOTING RIGHTS (ARTICLE 17.3 OF THE ARTICLES OF ASSOCIATION)

Subject to the provisions set forth below, each member of the meeting is entitled to as many voting rights and votes as the number of shares he owns or represents, providing that all payments due for such shares have been met.

However, double voting rights are conferred on all fully paid up shares in registered form that have been registered in the name of the same shareholder for at least two years, under the conditions applicable by law and by regulations.

Furthermore, in the event of a capital increase by capitalization of reserves, profits or share premiums, double voting rights are conferred, as of their issue, to shares in registered form allocated to shareholders on the basis of existing shares held by such shareholders and conferring such entitlement.

The merger or spin-off of the Company has no effect on double voting rights, which may be exercised within the beneficiary company or companies if the Articles of Association of such company provide for such rights.

Any share converted to a bearer share or the ownership of which is transferred loses the double voting rights gained under the three provisions above. However, transfer resulting from inheritance, the separation of assets between spouses or an *inter vivos* gift to a spouse or close relative does not result in the loss of rights acquired nor interrupt the qualifying period indicated above.

# LIMITATION ON VOTING RIGHTS (ARTICLE 17.4 OF THE ARTICLES OF ASSOCIATION)

In an annual general meeting, no shareholder may, directly or through a proxy, express more than 10% of the total voting rights attached to the Company's shares, taking into account single voting rights attached to shares that he directly or indirectly holds and to the powers conferred to him. However, if such a shareholder also holds double voting rights personally or as a proxy, the 10% limit may be exceeded, taking into account only

the additional voting rights resulting therefrom, and the combined voting rights expressed shall not exceed 20% of the total voting rights attached to the Company's shares.

In application of the foregoing provisions:

- the total number of voting rights attached to the Company's shares that is taken into consideration is calculated as of the date of the annual general meeting and the shareholders are notified thereof at the beginning of the annual general meeting;
- the number of voting rights held directly or indirectly means those that are attached to shares held by an individual, either personally or jointly, or by a company, group, association or foundation, and those that are attached to shares held by a company that is controlled within the meaning of article L. 233-3 of the French Commercial Code, by another company or by an individual, association, group or foundation; and
- a shareholder's proxy returned to the Company without stating the name of the proxy is subject to the foregoing limitations. However, such limitations do not apply to the Chairman of an annual general meeting who is voting by virtue of all such proxies combined.

The limitations provided in the foregoing paragraphs have no impact on the calculation of the total number of voting rights, including double voting rights, which are attached to the Company's shares and which must be taken into account when applying the legal, regulatory or statutory provisions providing for specific obligations by reference to the number of voting rights existing in the Company or the number of shares having voting rights.

The limitations set forth above shall lapse, without any need for a new resolution by an extraordinary general meeting, whenever an individual or a legal entity, acting separately or in concert with one or more individuals or legal entities, should come to hold at least two thirds of the total number of shares in the Company following a public offering for all of the Company's shares. The Board of Directors then recognizes that the limitations have lapsed, and carries out the related formalities to amend the Articles of Association.

## 5

# 5.5.3 Appropriation of earnings (article 20 of the Articles of Association)

The following sums are allocated from the Company's profits for the year, less any retained losses, in the following order:

- at least 5% is allocated to the legal reserve fund; once the legal reserve fund amounts to one-tenth of the share capital, this allocation is no longer mandatory;
- any amounts that the shareholders have resolved to transfer to reserves, for which they will determine the allocation or use; and
- any amount that the annual general meeting shall decide to allocate to retained earnings.

Any remaining balance is paid out to the shareholders as dividends. The Board of Directors may pay interim dividends under the conditions provided for by the applicable laws and regulations.

The annual general meeting called to approve the accounts for the financial year may grant each shareholder the option to receive all or part of the dividends or interim dividends in cash or in shares.

The annual general meeting may, at any time, on the Board of Directors' recommendation, decide to distribute all or part of the amounts contained in the reserve fund accounts either in cash or in shares in the Company.

# 5.5.4 Rights and obligations attached to the shares (article 9 of the Articles of Association)

In addition to the right to vote, each share gives the holder the right of ownership of a portion of the Company's assets, profits and winding-up dividends (boni de liquidation), determined proportionately to the shareholding it represents.

Ownership of a share entails compliance with the Articles of Association of the Company and with all resolutions approved by the Company's shareholders at annual general meetings.

Any changes to the rights attached to the shares are subject to legal provisions.

# 5.5.5 Form and transfer of shares (article 7 of the Articles of Association)

Shares may be held in registered or bearer form as required by the shareholder, unless stipulated otherwise by legal or regulatory provisions. The shares are freely negotiable. They are registered in an account and may be transferred from one account to another, in accordance with applicable laws and regulations.

# 5.5.6 Identification of shareholders (article 8.1 of the Articles of Association)

The Company may at any time make use of all applicable laws and regulations to identify the holders of securities that confer immediate or future voting rights in its annual general meetings.

For the purposes of identifying the holders of shares in bearer form, the Company has the right, under the conditions provided for by the applicable laws and regulations, to request at any time, at its own expense, that the central depository in charge of its securities issue account provide, as the case may be, the name or company name, nationality, year of birth or of incorporation and the address of the holders of securities giving immediate or future access to voting rights at its annual general meetings as well as the number of securities held by each and any restrictions that may apply to such securities. If such information is not received

Extract from the Articles of Association

within the period of time stipulated by the applicable regulations or if the information provided by the custodian account-holder is incomplete or erroneous, the central depository may request that the President of the district court (*Président du tribunal de grande instance*) order such information to be provided under financial compulsion in a summary proceeding (*en référé*).

The information obtained by the Company cannot be transferred thereby, even at no charge, subject to the criminal sanctions provided for by article 226-13 of the French Criminal Code (Code pénal).

Under the conditions specified by the applicable laws and regulations (particularly those concerning time limits), the intermediary registered on behalf of holders of securities in registered form who are not domiciled on the French territory is required to disclose the identity of the holders of such securities and of the number of securities held by each, at the request of the Company or of its representative, which may be submitted at any time.

As long as the Company deems that certain holders of securities in bearer form or in registered form whose identity has been communicated to the Company hold such shares on behalf of third parties, it has the right to request such holders to disclose the identity of the owners of these securities and the number of securities held by each such owner under the conditions indicated above. When a person who has received a request

in accordance with the foregoing provision fails to provide the information thus requested within the time specified by laws and regulations, or has provided incomplete or erroneous information either with regard to his own role, the owners of the securities, or the number of securities held by each, the shares or securities giving immediate or future access to the share capital and for which that person was registered shall be disqualified for voting purposes at any annual general meeting that may be held until the date on which all such information is made accurate, and payment of the corresponding dividend shall be postponed until such date.

Moreover, in the event that a registered person should knowingly fail to comply with the above provisions, the court having jurisdiction in the territory of the Company's registered office may, at the request of the Company or of one or more shareholders holding at least 5% of the share capital, partially or completely disqualify the questionable shares from voting and potentially from receiving the dividend, for a total of no more than five years.

Furthermore, without prejudice to the disclosure requirements set forth in article 8.2 of the Articles of Association, the Company may ask any legal entity that holds shares in the Company for more than one-fortieth of the share capital or voting rights to disclose the identity of persons who directly or indirectly hold more than one-third of the share capital or of the voting rights which are liable to be exercised at general meetings of such legal entity.

## 5.5.7 Thresholds (article 8.2 of the Articles of Association)

In addition to the legal obligation to inform the Company of any shareholdings or voting rights that they may hold, any individual or legal entity acting alone or in concert that has come into possession, within the meaning of articles L. 233-9 and L. 233-10 of the French Commercial Code, either directly or indirectly, of a percentage of the share capital or voting rights equal to or greater than 1%, is required to inform the Company, by registered mail with return receipt, of the total number of shares, voting rights and rights giving future access to the Company's capital, as well as the voting rights attached thereto, whether they are held alone or in concert, directly or indirectly, within five stock market trading days starting on the date on which it crossed this threshold.

Above this 1% threshold and up to 30%, this disclosure requirement must be fulfilled under the conditions set forth above,

each time the shareholder crosses a multiple of 0.5% of the share capital or voting rights.

Failure to make the threshold disclosures as set forth in the first two paragraphs above shall result in those shares that should have been disclosed being disqualified for voting purposes at annual general meetings, if such failure is acknowledged and if so requested at a meeting by one or more shareholders together holding at least 3% of the Company's share capital or voting rights.

All shareholders, whether natural persons or legal entities, must also notify the Company in the manner and within the time limits indicated in the first two paragraphs above, whenever their direct, indirect or joint holdings fall below any of the thresholds mentioned in the said paragraphs.

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Annual general meeting



The different parts constituting the Annual Financial Report are identified in the content by the pictogram  ${\color{red} {\bf AFR}}$ 

# 6.1 SPECIAL REPORT OF THE STATUTORY AUDITORS ON RELATED-PARTY AGREEMENTS AND COMMITMENTS

#### KPMG Audit Département de KPMG S.A.

Tour EQHO 2, avenue Gambetta CS 60055 92066 Paris-La Défense Cedex

Statutory auditors Member of the "Compagnie régionale de Versailles"

#### **ERNST & YOUNG Audit**

1/2, place des Saisons 92400 Courbevoie – Paris-La Défense 1 S.A.S. à capital variable

Statutory auditors Member of the "Compagnie régionale de Versailles"

This is a free translation into English of a report issued in the French language and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

#### Arkema S.A.

Registered office: 420, rue d'Estienne d'Orves - 92700 Colombes

Share capital: €744,721,010

#### Special report by the statutory auditors on regulated agreements and commitments

Year ended 31 December 2015

To the shareholders

Ladies and Gentlemen,

In our capacity as statutory auditors of your Company, we hereby report on the regulated agreements and commitments advised to us.

Our role is to inform you, on the basis of the information provided to us, of the terms and conditions of those agreements and commitments that were notified to us or may have come to our attention during our assignment, without being required to comment as to whether these are beneficial or appropriate, or to ascertain whether any other agreements and commitments exist. It is your responsibility, in accordance with article R. 225-31 of the French Commercial Code (Code de commerce), to evaluate the benefits resulting from these agreements and commitments prior to their approval.

Furthermore, we are required, where applicable, to provide you with the information set out under article R. 225-31 of the French Commercial Code (Code de commerce) relating to the execution, in the year ended December 2015, of the agreements and commitments already approved by the annual general meeting.

We have performed the procedures that we considered necessary to comply with the professional guidance issued by the French national auditing body (Compagnie Nationale des Commissaires aux Comptes) relating to this assignment. These procedures consisted in verifying that the information provided to us is consistent with the documentation from which it has been extracted.

#### AGREEMENTS AND COMMITMENTS REQUIRING APPROVAL BY THE ANNUAL GENERAL MEETING

#### Agreements and commitments authorized in the year ended 31 December 2015

We inform you that we were not advised of any agreement or commitment authorized in the year ended 31 December 2015 requiring approval by the annual general meeting in accordance with article L. 225-38 of the French Commercial Code (Code de Commerce).

#### Agreements and commitments authorized since the year ended 31 December 2015

We were advised of the following commitment, authorized since the year ended 31 December 2015, that was subject to prior authorization by your Board of Directors meeting on 2 March 2016.

#### With Mr Thierry Le Hénaff, Chairman and Chief executive officer of your Company

Your board of Directors decided, during his meeting on 2 March 2016, to renew the commitment related to the indemnity granted to Thierry Le Henaff in the event of non-voluntary early termination of contract, providing his appointment as a Director of your Company is renewed by your general meeting on 7 June 2016. In accordance with article L. 225-42-1 paragraph 4 of the French Commercial Code, this commitment requires the approval of the general meeting on 7 June 2016.

In accordance with the AFEP-MEDEF Code, Thierry Le Hénaff would be entitled to compensation for loss of office only if he were forced to step down as a result of a change of control of the Company or a change of strategy decided by the Board of Directors, and in particular if he was asked to step down as Chairman and Chief Executive Officer during or at the end of his term as Director, except in the event of serious or gross misconduct.

The compensation for loss of office would not exceed twice his total annual gross fixed and variable compensation. The calculation base would correspond to the fixed annual compensation for the year in which he was forced to step down and the average of the last two years of variable compensation paid prior to his departure.

The amount of this compensation will be calculated on the basis of the fulfillment of the following five performance conditions:

- TRIR: the total recordable injury rate (TRIR) would have to have decreased by at least 5% per year (average compound rate) between 31 December 2010 and the date at which the performance condition was assessed. For this condition, the Board decided to change the reference year from 2005 to 2010, when the Group started implementing its global safety improvement program;
- Annual variable compensation: on average, the payment of the annual variable compensation, determined as the last three years of compensation preceding the termination date, shall be at least 50% of the maximum amount payable;
- Return on capital employed: the average of net operating income over capital employed ((recurring operating income actual income tax (1))/(capital employed provisions)) for the last three years prior to the termination date, would have to exceed the Group's cost of capital for the year ended preceding his re-election, which is 7% for 2015. Capital employed and provisions are those at year-end, and recurring operating income of companies acquired during the year would be included on a full year basis and that of divested companies would be excluded.
- Working capital (WC): the year-end WC over annual sales ratio would have to have decreased by at least 2.5% per year (average compound rate) between 31 December 2005 and the date at which the performance condition was assessed;
- Comparative EBITDA margin: this financial performance indicator will continue to be measured against that of competitors in the chemicals industry comparable to the Group Arkema. The growth in the Group's EBITDA margin shall be at least equal to the average growth in the EBITDA margin of the companies in the peer group between 31 December 2005 and the date at which the performance condition was assessed;

The value of the end-of-period index to be taken into account in the computation of the above criteria would be the average of the indices calculated at Group level over the three years for which financial statements have been published prior to the termination date.

- If the 5 criteria have been fulfilled, Mr Thierry Le Hénaff shall receive 100% of the maximum of the termination indemnity.
- If 4 out of 5 criteria have been fulfilled, Mr Thierry Le Hénaff shall receive 90% of the maximum of the termination indemnity.
- If 3 out of 5 criteria have been fulfilled, Mr Thierry Le Hénaff shall receive 70% of the maximum of the termination indemnity.
- If 2 out of 5 criteria have been fulfilled, Mr Thierry Le Hénaff shall receive 40% of the maximum of the termination indemnity.
- If fewer than 2 criteria have been fulfilled, Mr Thierry Le Hénaff shall receive no compensation.

In addition, to include the evolution of the supplementary pension scheme once renewed as a Director, and in accordance with the AFEP-MEDEF Code relative to cumulative indemnity for non-voluntary early termination and supplementary pension scheme, your Board of Directors decided to gradually reduce the indemnity payable beyond 60 years old:

- 18 months of total annual gross compensation (fixed and variable) beyond 60 years old; and
- 12 months of total annual gross compensation (fixed and variable) beyond 62 years old and 6 months.

No indemnity will be paid in the event of departure beyond 65 years old.

Your Board of Directors motivated this commitment as follows: this commitment allows Arkema to renew the appointment of his Chairman and Chief executive officer in serene conditions for the latter.

(1) On recurring income (in particular excluding impact of M&A, restructuring operations).

#### AGREEMENTS AND COMMITMENTS ALREADY APPROVED BY THE ANNUAL GENERAL MEETING

#### Agreements and commitments approved during prior years

#### Without effective implementation in the year ended 31 December 2015

In accordance with article R.225-30 of the French Commercial Code, we were advised of the continuation of the following agreements and commitments in the year ended 31 December 2015, already approved by the annual general meeting in prior years, which did not result in effective implementation in the year ended 31 December 2015.

#### With Mr Thierry Le Hénaff, Chairman and Chief executive officer of your Company

a) Indemnity for non-voluntary early termination

In the event of non-voluntary early termination of contract or termination linked to a change of control of the Company or a change of strategy decided by the Board of Directors, and except in the event of serious or gross misconduct, Thierry Le Hénaff shall benefit from a redundancy payment, the amount of which shall be calculated on the basis of the fulfilment of the performance conditions by the beneficiary, with regard to the Company's performance, and shall not exceed twice his total annual gross compensation for the year in question.

The performance conditions are based on five criteria: one criterion related to safety (total recordable injury rate), one external criterion (growth in EBITDA margin compared to that of a given reference panel of chemical industry groups), and three financial criteria (working capital, EBITDA margin, return on capital employed). The reference index applicable for the calculation of the five performance criteria shall be the index corresponding to the Arkema Group data at 31 December 2005, and the value of the index at year-end applicable for the calculation of all criteria shall be the index average calculated at Group level over the two accounting periods preceding the date of early termination.

The performance conditions related to the above-mentioned five quantitative criteria are set out in detail in our special report of 16 March 2012

This commitment is continuing until the appointment of Mr Thierry Le Hénaff as a Director is renewed by your general meeting on 7 June 2016. This commitment was already renewed by your Board of Directors on 2 March 2016 in the conditions detailed in this report.

#### b) Supplementary pension scheme

In addition to the general pension schemes operated for employees of the Group, Mr Thierry Le Hénaff benefits from a supplementary scheme, financed by the Company and offered to certain executives of the Group, provided that the beneficiary is in the employ of the Company when he comes to retire. Your Board of Directors meeting on 4 July 2006 approved the calculation of accumulated benefits vested by the Chairman and Chief Executive Officer in 2006 as part of this supplementary scheme, whereby the Company's pension liabilities relating to the Chairman and Chief Executive Officer correspond, at 31 December 2015, to an annual retirement pension equal to 28.3% of his current annual compensation.

Your Board of Directors decided, during his meeting on 2 March 2016, to end this supplementary pension scheme, provided Mr Thierry Le Hénaff is renewed as a Director by your general meeting on 7 June 2016.

#### Agreements and commitments authorized in the year ended 31 December 2015

We were advised of the implementation of the following agreements and commitments in the year ended 31 December 2015, already approved by your general meeting on 2 June 2015, following our special report on regulated agreements and commitments of 24 March 2015.

#### With Mr Laurent Mignon, Director within your Company and Chief Executive Officer of Natixis

Agreements signed in connection with the financing of the Bostik group acquisition:

To secure the bank financing for the acquisition of the Bostik group, out of concern for the strict conditions of confidentiality stipulated by the vendor, your Company, on 17 September 2014, entered into a bridge term loan facility loan and underwritting agreement with Natixis bank for maximum aggregate principal of €1.5 billion. Under the agreement, Natixis will act as Global coordinator, principal arranger, underwriter, bookrunner and agent. Your Company had the option of extending the one-year bridge loan by six months. The bridge term loan facility included a guarantee of the availability of funds which is usual for this type of financing.

At 31 December 2015, the bridge term loan facility had been repaid in full.

Both the bridge term loan facility loan and the underwritting agreement expired on 2 February 2015...

Paris-La Défense, 11 March 2016 The statutory auditors French original signed by

**KPMG Audit** Département de KPMG S.A. **ERNST & YOUNG Audit** 

Jacques-François Lethu Partner François Quédiniac Partner Denis Thibon Partner

# 6

# 6.2 PROPOSED AGENDA AND PROPOSED RESOLUTIONS SUBMITTED TO THE ANNUAL GENERAL MEETING

# 6.2.1 Proposed agenda for the annual general meeting of 7 June 2016

## RESOLUTIONS PROPOSED TO THE ORDINARY GENERAL MEETING

- Approval of the Company's financial statements for the year ended 31 December 2015.
- Approval of the consolidated financial statements for the year ended 31 December 2015.
- Allocation of profit for the year ended 31 December 2015 and distribution of dividends.
- Special report of the statutory auditors on related-party agreements and commitments referred to in articles
   L. 225-38 et seq. of the French Commercial Code (Code de commerce)
- Special report of the statutory auditors on related-party agreements and commitments referred to in article
   L. 225-42-1 of the French Commercial Code.
- Re-election of Thierry Le Hénaff as member of the Board of Directors.
- Advisory vote of the shareholders on the components of compensation of Thierry Le Hénaff.
- Authorization granted to the Board of Directors to carry out a share buyback program.

# RESOLUTIONS PROPOSED TO THE EXTRAORDINARY GENERAL MEETING

- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, with preferential subscription rights.
- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, by means of a public offering, without preferential subscription rights but with a binding priority period.

- Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, without preferential subscription rights, by means of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code (Code monétaire et financier).
- Authorization granted to the Board of Directors, in the event
  of the issue of shares and/or securities giving access to shares
  in the Company, without preferential subscription rights, to set
  the issue price in accordance with the terms set forth by the
  annual general meeting up to a maximum of 10% of the share
  capital over a 12-month period.
- Delegation of authority granted to the Board of Directors to issue shares in the Company as compensation for contributions in kind.
- Authorization granted to the Board of Directors to increase the number of shares to be issued with or without preferential subscription rights, in the event of a capital increase pursuant to the five foregoing resolutions.
- Overall limit on authorizations to increase the Company's share capital immediately and/or in the future.
- Delegation of authority granted to the Board of Directors to carry out share issues reserved for members of a company savings plan (*Plan d'Épargne d'Entreprise*), without preferential subscription rights.
- Authorization granted to the Board of Directors to award free shares in the Company.
- Authorization granted to the Board of Directors to award free shares in the Company to the Chairman and Chief Executive Officer.
- Amendment to the Articles of Association to enable the appointment of a director representing employees.
- Powers to carry out formalities.

# 6.2.2 Proposed resolutions submitted to the annual general meeting of 7 June 2016

## RESOLUTIONS PROPOSED TO THE ORDINARY GENERAL MEETING

#### First resolution

(Approval of the Company's financial statements for the year ended 31 December 2015)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting, and having considered the Company's financial statements for the year ended 31 December 2015, the Board of Directors' management report and the statutory auditors' reports, approves said financial statements as well as the transactions reflected in said financial statements and described in said reports.

In accordance with the provisions of article 223 *quater* of the French Tax Code (*Code général des impôts*), the ordinary general meeting formally notes that no expenses or charges referred to in article 39-4 of said Code were incurred during the past financial year.

#### Second resolution

(Approval of the consolidated financial statements for the year ended 31 December 2015)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting, and having considered the consolidated financial statements for the year ended 31 December 2015, the Board of Directors' Group management report and the statutory auditors' report on the consolidated financial statements, approves said financial statements as well as the transactions reflected in said financial statements and described in said reports.

#### Third resolution

(Allocation of profit for the year ended 31 December 2015 and distribution of dividends)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting having noted that the Company's financial statements for the financial year ended 31 December 2015 show a profit of 753,934,202.81 euros decides, as recommended by the Board of Directors, to allocate the profit for the financial year as follows:

Profit for the period	€753,934,202.81
Prior retained earnings	€44,448,134.86
Allocation to legal reserve	€2,012,511.42
Distributable profit	€796,369,826.25
Dividend distribution (1)	€141,496,991.90

(1) The total dividend distribution is calculated on the basis of the number of shares carrying dividend rights as of 1 January 2015 and existing on the date of the Board of Directors' meeting adopting the proposed resolution and therefore granting dividend rights. The total may vary if the number of shares carrying dividend rights changes up to the ex-dividend date depending, for example, on the number of treasury shares and as a result of the capital increase reserved for employees decided by the Board of Directors on 2 March 2016 up to a maximum of 1,200,000 shares.

Accordingly, the annual general meeting decides to pay a dividend of 141,496,991.90 euros with regard to the 74,472,101 shares carrying dividend rights on 1 January 2015 and existing on the date of the Board of Directors' meeting adopting the proposed resolutions, corresponding to a distribution of 1.90 euro per share, it being specified that full powers are granted to the Board of Directors to set the definitive total amount of the dividend, then the balance of distributable income and consequently the amount to be allocated to retained earnings.

The shares will be traded ex-dividend as of 9 June 2016 and the dividend for the 2015 financial year will be payable as of 13 June 2016.

The dividend is eligible for the 40% tax deduction available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

The dividend paid for the last three financial years was as follows:

Financial year	2013	2014	2015
Net dividend per share (in euros)	1.85 (2)	1.85 (2)	1.90 (2)

(2) Eligible in full for 40% tax deduction available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

#### Fourth resolution

(Agreements referred to in articles L. 225-38 et seq. of the French Commercial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting, and having considered the statutory auditors' special report provided for in article L. 225-40 of the French Commercial Code, approves said report and duly notes the agreements entered into and commitments made during prior financial years referred to in this report and that no agreement or new commitment was entered into during the year ended 31 December 2015.

#### Fifth resolution

(Agreements referred to in article L. 225-42-1 of the French Commercial Code)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting, and having considered the statutory auditors' special report, in accordance with the provisions of article L. 225-42-1 of the French Commercial Code duly notes and approves the agreement concluded with Thierry Le Hénaff and set out in said report, provided that he is reappointed as Chairman and Chief Executive Officer by the Board of Directors.

#### Sixth resolution

(Re-election of Thierry Le Hénaff as member of the Board of Directors)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting, and having considered the Board of Directors' report and noting that the term of office as director of Thierry Le Hénaff expires on the date of this meeting, decides to re-elect him for a term of four (4) years expiring at the close of the annual general meeting to be held in 2020 to approve the financial statements for the year ending 31 December 2019.

#### Seventh resolution

(Advisory vote of the shareholders on the components of compensation of Thierry Le Hénaff)

The annual general meeting, consulted in accordance with section 24.3 of the AFEP-MEDEF Code (the Company's reference code pursuant to article L. 225-37 of the French Commercial Code), and voting in accordance with the quorum and majority requirements for ordinary general meeting, after considering the Board of Directors' report, votes in favor of the components of compensation due or awarded to Thierry Le Hénaff, Chairman and Chief Executive Officer, for the year ended 31 December 2015, as set out in said report.

#### **Eighth resolution**

(Authorization granted to the Board of Directors to carry out a share buyback program for a period of 18 months)

The annual general meeting, voting in accordance with the quorum and majority requirements for ordinary general meeting, having considered the Board of Directors' report, authorizes the Board of Directors to purchase or arrange for the purchase of shares in the Company in accordance with articles L. 225-209 et seq. of the French Commercial Code, European Council regulation no. 2273/2003 dated 22 December 2003 and Title IV of Book II of the general regulation of the French financial markets authority (Autorité des marchés financiers – AMF). The number of shares that may be held by the Company under this authorization at any given date may not be greater than 10% of the share capital. The 10% limit applies to the number of the Company's shares, which may be adjusted to take into account transactions that affect the share capital occurring after the present annual general meeting under the following conditions:

- (i) the maximum purchase price is 95 euros per share.
  - However, the Board of Directors will be able to adjust the purchase price to account for the impact on the share price resulting from transactions such as a capitalization of share premiums, reserves or earnings giving rise either to an increase in the par value of the shares or the issuance and award of free shares, a stock split or reverse stock split, or any other transaction affecting shareholders' equity;
- (ii) the maximum amount that may be dedicated to this share buyback program will be 100 million euros;
- (iii) under no circumstances can the Company hold, directly or indirectly, more than 10% of its share capital as a result of the purchases made pursuant to this authorization;
- (iv) the shares redeemed and held by the Company shall have no voting or dividend rights;
- (v) such shares may be purchased or transferred at any time, except as from the date a takeover bid for the Company's shares is filed by a third-party and until the end of the offer period, under the conditions and within the limits, particularly as regards volume and price, permitted by law at the date of the transaction in question, by any and all means, including on the market or over the counter, by way of block trades or by way of warrants traded on a regulated or over-the-counter market, under the conditions permitted by the market authorities and at the times the Board of Directors or its delegated representative deem appropriate.

Proposed agenda and proposed resolutions submitted to the annual general meeting

The annual general meeting decides that these share purchases can be made for any purpose permitted by law either now or in the future, and notably for the following purposes:

- (i) implementing market practices allowed by the AMF such as (a) purchasing shares in the Company in order to hold them and subsequently tender them in exchange or as payment as part of any potential external growth transactions, it being specified that the shares acquired for this purpose may not exceed 5% of the Company's share capital at the time of the acquisition or (b) purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as (c) any market practice subsequently permitted by the AMF or by law;
- (ii) putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to securities giving immediate or future access by any means to shares in the Company, as well as carrying out any hedging transactions in respect of the Company's obligations regarding such securities, in accordance with the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;
- (iii) covering stock option plans granted to employees or executive directors of the Company or its Group;
- (iv) granting free shares in the Company to employees or executive directors of the Company or its Group, particularly under the conditions provided for in articles L. 225-197-1 et seq. of the French Commercial Code;
- (v) offering employees the opportunity to acquire shares, whether directly or via a company savings plan, under the terms provided for by law and notably articles L. 3332-1 et seq. of the French Labor Code; and
- (vi) canceling all or part of the purchased shares in order to reduce the Company's share capital.

The annual general meeting grants full powers to the Board of Directors, with the possibility to sub-delegate such powers under the conditions provided for by law, to ensure the implementation of this authorization, and in particular to set the terms and conditions thereof, carry out the share buyback program and notably place all stock market orders, enter into any agreements, prepare and amend any documents, in particular information documents, carry out all formalities, including assigning or reassigning the purchased shares to the various purposes pursued, make all declarations to the AMF and any other bodies and, in general, do whatever may be necessary.

The annual general meeting decides that this authorization is granted for a period of eighteen (18) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the annual general meeting of 2 June 2015 in its 10<sup>th</sup> resolution.

## RESOLUTIONS PROPOSED TO THE EXTRAORDINARY GENERAL MEETING

#### Ninth resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months, to issue shares in the Company and/ or securities giving immediate or future access to shares in the Company, with preferential subscription rights)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular articles L. 225-129-2, L. 225-132, and L. 228-91 et seq.:

- (i) authorizes the Board of Directors to carry out one or more capital increases via the issue, with preferential subscription rights, in France or other countries, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, in the proportion and at the times that it deems appropriate, including warrants, issued against payment or free of consideration, which can be subscribed either in cash or by offsetting receivables;
- (ii) decides that the maximum nominal amount of the increase in the Company's capital resulting immediately or in the future from all the issues made pursuant to this delegation is three hundred and seventy-two (372) million euros, which will be included in the overall limit provided for in the 15th resolution and which may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;
- (iii) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is seven hundred and fifty (750) million euros or the euro equivalent in a foreign currency or unit of account at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of any existing par value and (b) applies to all the debt securities that may be issued pursuant to the 9th to 14th resolutions submitted to this annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;
- (iv) decides that existing shareholders shall have, in proportion to their shareholding, preferential rights to subscribe for the shares and securities issued pursuant to this resolution and that the Board of Directors may grant shareholders a right to subscribe for additional shares or securities corresponding to their subscription rights and within the limit of their requests;

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- (v) decides that, if subscriptions made by shareholders in proportion to their shareholding and, where applicable, for additional shares or securities, have not covered the full number of shares or securities issued, the Board of Directors will be able to make use of all or certain of the possibilities provided for by article L. 225-134 of the French Commercial Code in the order it chooses;
- (vi) duly notes that this delegation automatically entails a waiver by the shareholders of their preferential right to subscribe for Company shares resulting from securities giving access to shares in the Company that could be issued pursuant to this delegation;
- (vii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the general shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;
- (viii) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to inter alia:
  - set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
  - carry out the planned issues and, where applicable, suspend them,
  - deduct the fees for admission to trading on a regulated market and the issue costs of the Company's shares from the share premium amount related to such transactions and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase, and
  - generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, the listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 15 May 2014 in its 14<sup>th</sup> resolution.

#### Tenth resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months, to issue shares in the Company and/ or securities giving immediate or future access to shares in the Company, by means of a public offering, without preferential subscription rights but with a five day priority period) The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular articles L. 225-129-2, L. 225-135, L. 225-136, and L. 228-91 et seq.:

- (i) authorizes the Board of Directors to carry out one or more capital increases via the issue, without preferential subscription rights, by means of a public offering in France or other countries, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, in the proportion and at the times that it deems appropriate, which can be subscribed either in cash or by offsetting receivables;
- (ii) decides to cancel the shareholders' preferential subscription rights to the shares or other securities to be issued pursuant to this resolution;
- (iii) decides that the shareholders will benefit, in accordance with the provisions of article L. 225-135 of the French Commercial Code and without giving rise to a negotiable right, from a priority period of five (5) days for subscription in proportion to their shareholding and for any additional subscriptions; any remaining unsubscribed securities may be the subject of a public placement in France or any other country, or on the international market;
- (iv) decides that the maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall limit provided for in the 15th resolution and that may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;
- (v) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is seven hundred and fifty (750) million euros or the euro equivalent in a foreign currency or unit of account at the date of the decision to carry out the issue. This amount (a) does not include any redemption premium(s) in excess of any existing par value and (b) will be included in the limit of seven hundred and fifty (750) million euros for the issue of debt securities pursuant to the 9th to 14th resolutions submitted to the present annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code;



(vi) decides that if the subscriptions, including where applicable those by shareholders, have not covered the full amount of the issue, the Board of Directors will be able to limit the amount of the transaction under the conditions provided for by article L. 225-134 of the French Commercial Code;

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- (vii) duly notes that this delegation automatically entails a waiver by the shareholders of their preferential right to subscribe for Company shares resulting from securities that could be issued pursuant to this delegation;
- (viii) decides that the issue price of shares or securities granting access to share capital issued pursuant to this resolution will be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less a discount of 5%) after correction, if any, of this amount to take into account the difference in the dividend entitlement date;
- (ix) decides that the Board of Directors may not use this delegation of authority without prior authorization from the general shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;
- (x) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to inter alia:
  - set the amount of the issues, the issue price, the nature and characteristics of the securities to be issued, as well as the other terms and conditions of the issue thereof,
  - carry out the planned issues and, where applicable, suspend them,
  - deduct the fees for admission to trading on a regulated market and the issue costs of the Company's shares from the share premium amount related to such transactions and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase, and
  - generally, enter into any agreement, in particular in order to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, the listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 15 May 2014 in its 15th resolution.

#### **Eleventh resolution**

(Delegation of authority granted to the Board of Directors for a period of 26 months, to increase the share capital through the issue of shares in the Company and/or securities giving immediate or future access to shares in the Company, without preferential subscription rights, by means of an offering referred to in article L. 411-2 II of the French Monetary and Financial

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular articles L. 225-129-2, L. 225-135, L. 225-136, and L. 228-91

- authorizes the Board of Directors to carry out one or more capital increases via the issue, without preferential subscription rights, in France or any other country, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, in the proportion and at the times that it deems appropriate, by means of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code, which may be subscribed either in cash or by offsetting due and payable receivables;
- (ii) decides that these issues may only be carried out to finance a recapitalization operation related to an external growth transaction, or to carry out a convertible bond issue;
- (iii) decides to cancel the shareholders' preferential subscription rights to the shares or other securities to be issued pursuant to this resolution;
- (iv) decides that the maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which is included in the overall limit provided for in the 15th resolution below and that may be increased, where applicable, by the additional nominal amount of the shares to be issued in order to preserve the rights of holders of securities and other rights granting access to shares in the Company, in accordance with the law and any applicable contractual provisions;
- (v) decides that the maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is seven hundred and fifty (750) million euros or the euro equivalent in a foreign currency or unit of account at the date of the issue. This amount (a) does not include any redemption premium(s) in excess of any existing par value and (b) will be included in the limit of seven hundred and fifty (750) million euros for the issue of debt securities pursuant to the 9th to 14th resolutions submitted to the present annual general meeting, but (c) is independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide

- to issue in accordance with article L. 228-40 of the French Commercial Code;
- (vi) decides that if the subscriptions, including where applicable those by shareholders, have not covered the full amount of the issue, the Board of Directors will be able to limit the amount of the transaction under the conditions provided for by article L. 225-134 of the French Commercial Code;
- (vii) duly notes that this delegation automatically entails a waiver by the shareholders of their preferential right to subscribe for Company shares resulting from securities giving access to shares in the Company that could be issued pursuant to this resolution;
- (viii) decides that the issue price of shares or securities granting access to share capital issued pursuant to this resolution will be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less a discount of 5%) after correction, if any, of this amount to take into account the difference in the dividend entitlement date;
- (ix) decides that the Board of Directors may not use this delegation of authority without prior authorization from the general shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;
- (x) grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to implement this delegation of authority and to inter alia:
  - decide on the capital increase, set the amount of the issues, the issue price, the nature and characteristics of the shares or other securities to be issued, as well as the other terms and conditions of the issue thereof,
  - carry out the planned issues and, where applicable, suspend them,
  - deduct the fees for admission to trading of the Company's shares on a regulated market and the costs of capital increases from the share premium amount related to such transactions and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each share issue, and
  - generally, enter into any agreement, in particular to successfully complete the planned issues, take all steps and carry out all appropriate formalities for the issue, the listing and financial servicing of the shares and securities issued pursuant to this delegation of authority as well as the exercise of the rights attached thereto.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of

twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 15~May 2014 in its  $16^{\text{th}}$  resolution.

#### Twelfth resolution

(Authorization granted to the Board of Directors for a period of 26 months, in the event of the issue of shares or securities giving access to shares in the Company, without preferential subscription rights, to set the issue price in accordance with the terms set forth by the annual general meeting up to a maximum of 10% of the share capital over a 12-month period)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting, and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with article L. 225-136 of the French Commercial Code:

- (i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, in the event of implementation of the 10<sup>th</sup> and 11<sup>th</sup> resolutions, to deviate from the terms for setting the issue price for ordinary shares outlined in the aforementioned resolutions and to set the price based on the following terms:
  - the issue price of shares or securities granting access to share capital to be issued under the aforementioned resolutions will, at the Board of Directors' discretion, be equal to: (i) the volume weighted average price on the Euronext Paris regulated market on the last trading day preceding the day the issue price was set, or (ii) the volume weighted average price on the Euronext Paris regulated market determined during the trading session when the issue price is set less, as the case may be, in either case a maximum discount of 5%,
  - the issue price of securities granting immediate or future access to the Company's share capital shall be set to ensure that the amount received immediately by the Company, increased where applicable by the amount that it is likely to receive at a later date for each share issued as a result of the securities issued, shall be at least equal to the amount mentioned above,
  - the maximum nominal amount of capital increases resulting from the implementation of this resolution is 10% of the share capital over a 12-month period, and is included in the limit provided for in the 10<sup>th</sup> or 11<sup>th</sup> resolutions as applicable and in the overall limit provided for in the 15<sup>th</sup> resolution hereafter; and
- (ii) decides that the Board of Directors may not use this delegation of authority without prior authorization from the general shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

This authorization is granted for a period of twenty-six (26) months from the date of this annual general meeting.

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#### Thirteenth resolution

(Delegation of authority granted to the Board of Directors to issue shares in the Company, within the limit of 10% of total share capital, as compensation for contributions in kind)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with the provisions of the French Commercial Code, and in particular article L. 225-147:

- (i) gives full powers to the Board of Directors to carry out one or more capital increases via the issue of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, as compensation for contributions in kind granted to the Company in the form of another company's shares or securities carrying rights to shares, when the provisions of article L. 225-148 do not apply;
- (ii) decides that the maximum nominal amount of the capital increase that may be carried out, immediately or in the future, pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall limit on the nominal amount provided for in the 11th resolution of this annual general meeting;
- (iii) duly notes that this delegation automatically entails a waiver by the shareholders of their preferential right to subscribe for Company shares resulting from securities giving access to shares in the Company that could be issued pursuant to this resolution;
- (iv) decides that the Board of Directors, or any person duly authorized to act on its behalf, will have full powers to implement this delegation of authority;
- (v) decides that the Board of Directors may not use this delegation of authority without prior authorization from the general shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

The annual general meeting decides that this delegation of authority is granted to the Board of Directors for a period of twenty-six (26) months from the date of this annual general meeting.

#### Fourteenth resolution

(Authorization granted to the Board of Directors to increase the number of shares to be issued in the event of excess demand)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general

meeting and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with article L. 225-135-1 of the French Commercial Code:

- (i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to decide, within the scope of the use of the delegations of authority granted by the 9th to 13th resolutions set out above and within thirty days of the close of the subscription period for the initial issue, to increase the number of shares to be issued, within the limit of 15% of the initial issue and at the same price as that applied for the initial issue and subject to compliance with the limit provided for in the resolution authorizing the issue;
- (ii) decides that the Board of Directors may not use this delegation of authority without prior authorization from this shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period;
- (iii) gives full powers to the Board of Directors to implement this authorization in accordance with the law and the regulations.

The annual general meeting decides that this authorization is granted for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior authorization granted for the same purpose and in particular that given by the annual general meeting of 15 May 2014 in its 17<sup>th</sup> resolution.

#### Fifteenth resolution

(Overall limit of authorizations to increase the Company's share capital immediately and/or in the future)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting and having considered the Board of Directors' report, decides to set:

- the maximum nominal amount of the immediate or future capital increases that may be carried out pursuant to the delegations of authority and authorizations granted by the 9<sup>th</sup> to 14<sup>th</sup> resolutions at three hundred and seventy-two (372) million euros, i.e., approximately 50% of the share capital on the date of this annual general meeting;
- the overall limit for issues without preferential subscription rights that may be carried out pursuant to the delegations of authority and authorizations granted by the 11<sup>th</sup> to 13<sup>th</sup> resolutions, at 10% of the share capital on the date of this annual general meeting;

on the understanding that, where applicable, the nominal amount of the shares to be issued pursuant to adjustments made to protect holders of rights attached to securities granting access to Company shares shall be added to these nominal amounts.

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#### Sixteenth resolution

(Delegation of authority granted to the Board of Directors to carry out share issues reserved for members of a company savings plan (Plan d'Épargne d'Entreprise), without preferential subscription rights)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with articles L. 225-129, L. 225-129-2, L. 225-129-6, L. 228-92, L. 225-138 I and II and L. 225-138-1 of the French Commercial Code and articles L. 3332-18 et seq. of the French Labor Code:

- (i) authorizes the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, to carry out on one or more capital increases via the issue, in the proportions and at the times it deems appropriate, of shares or securities giving access to existing shares or shares to be issued in the Company, reserved for employees and former employees of the Company and of any French or foreign related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, who are members of a company savings plan (hereinafter, the "Beneficiaries");
- (ii) decides to cancel the shareholders' preferential subscription rights to the shares or securities giving access to shares that will be issued pursuant to this delegation of authority and, where applicable, to the shares or other securities granted free of consideration pursuant to this delegation of authority;
- (iii) duly notes that this delegation automatically entails a waiver by the shareholders of their preferential right to subscribe for Company shares resulting from securities giving access to shares in the Company that could be issued pursuant to this delegation;
- (iv) decides that within the limit of the applicable legal and regulatory provisions, the Board of Directors may provide for the free grant of new or existing shares or of securities giving access to existing shares or shares to be issued in the Company, in order to provide the employer's additional contribution or, where applicable, the discount;
- (v) decides that the maximum nominal amount of the increase in the Company's capital resulting immediately or in the future from all the issues made pursuant to this delegation of authority is twelve (12) million euros. This limit does not include the nominal amount of any shares issued pursuant to the adjustment to protect the holders of rights attached to securities giving access to shares in the Company, in accordance with the law and any applicable contractual provisions;
- (vi) decides that the subscription price of the shares to be issued will be equal to the average of the Arkema share's Euronext Paris opening trading prices for the twenty trading days prior to the date of the decision setting the subscription period

- opening date, less the maximum discount provided for by law on the date of the Board of Directors' decision; the Board of Directors may however, if it considers it appropriate, reduce or eliminate the abovementioned discount, in order to take into account, in particular, local legal requirements applicable in the event of a share offering to members of a company savings plan on the international market or in a foreign country;
- (vii) decides that the Board of Directors will be able to grant free shares or securities giving access to shares in the Company to replace all or part of the discount mentioned above. The total benefit resulting from this grant may not exceed the limits provided for by the laws or regulations;
- (viii) decides that the Board of Directors will be able to provide for the free grant of existing shares or securities giving access to existing shares in the Company on condition that the total benefit resulting from this grant and, where applicable, the discount mentioned above does not exceed the limits provided for by law, and that, taking into account the equivalent monetary value of the free shares or of securities giving access to shares in the Company, assessed at the subscription price, the limits provided for by law are not exceeded.

The annual general meeting decides that the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf, will have full powers to implement this resolution and in particular to:

- decide on the characteristics, amount and terms and conditions of any issue or free grant of shares;
- determine that the subscriptions can be carried out directly by the Beneficiaries or via a mutual fund or any other collective undertaking authorized by the regulations;
- establish, under the conditions required by law, the list of companies or groups whose employees and former employees will be able to subscribe to the shares or securities issued and, where applicable, receive the shares or securities granted free of consideration;
- determine the nature and terms and conditions of capital increases, and the terms and conditions of the issue or the free grant;
- set the subscription price of the shares and the length of the subscription period;
- determine the length of service conditions that must be met by the Beneficiaries of new shares or securities resulting from the share capital increase(s) or of the shares awarded by each free grant and covered by this resolution;

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- determine the terms and conditions of the issues of shares or securities that will be made pursuant to this delegation of authority and, in particular, their dividend entitlement date and the terms and conditions for paying them up;
- determine the opening and closing dates of the subscription periods and receive subscriptions;
- record the completion of the share capital increase for the amount of the shares that will actually be subscribed;
- determine, where appropriate, the nature of the free shares, as well as the terms and conditions of the grant;
- determine, where appropriate, the amount of the sums to be capitalized within the limit set above, the shareholders' equity account(s) from which they will be deducted and the dividend entitlement date of the shares created;
- at its sole discretion and as it deems appropriate, charge the costs of capital increases against the share premium amounts relating thereto and withhold the necessary sums to bring the legal reserve up to one-tenth of the new share capital after each capital increase;
- take all necessary measures to complete the capital increases, carry out the related formalities, particularly those concerning the listing of the shares created, amend the Articles of Association accordingly, and generally do whatever may be necessary.

The annual general meeting decides that this authorization is granted for a period of twenty-six (26) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of  $15~\mathrm{May}~2014$  in its  $19^\mathrm{th}$  resolution.

#### Seventeenth resolution

(Authorization granted to the Board of Directors for a period of 38 months, to award free shares in the Company, subject to performance conditions, and up to the limit of 1,450,000 shares i.e., less than 2% of the share capital)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with articles L. 225-197-1 et seq. of the French Commercial Code:

- authorizes the Board of Directors to award existing shares or shares to be issued in the Company free of consideration, on one or more occasions, to grantees or categories of grantees determined by the Board of Directors among the employees and/or eligible executive directors (within the meaning of article L. 225-197-1.II of the French Commercial Code) of the Company or related companies or groups pursuant to article L. 225-197-2 of the French Commercial Code;
- 2. decides that the free shares granted to the aforementioned eligible executive directors of the Company and Executive Committee members shall be subject to at least two performance criteria (one internal criterion and one external criterion) decided by the Board of Directors, on the basis of which the number of vested shares shall be determined. These

- criteria shall be assessed over a minimum period of three financial years;
- 3. decides that, pursuant to this authorization, the total grant of the Company's existing shares or shares to be issued may not exceed 1,450,000 shares (i.e., less than 2% of the share capital at the date of this annual general meeting). This limit is fixed without taking into account the adjustments that may be made to preserve the rights of holders of securities giving access to shares in the Company, in accordance with the applicable legal and regulatory provisions or any contractual provisions;
- decides that the Board of Directors shall determine, under the conditions required by law, at the time of each grant:
  - (i) the vesting period of the granted shares, which shall last at least one year, and
  - (ii) the lock-up period for grantees following the vesting of the shares, which for all or some of the shares shall be a minimum of one year, with the exception of shares with a vesting period of at least two years, for which the lock-up period can be eliminated or shortened;
- 5. decides that the shares awarded to grantees will vest before the end of the aforementioned vesting period in the event of second or third category disability within the meaning of article L. 341-4 of the French Social Security Code (Code de la sécurité sociale), and that in the event of the grantee's death, his or her heirs may request the vesting of the shares within six months of the date of death; these shares will be freely transferable;
- 6. decides that the existing shares that can be granted pursuant to this resolution shall be acquired by the Company, either within the framework of article L. 225-208 of the French Commercial Code, or, if applicable, through the share buyback program authorized by the general shareholders meeting pursuant to article L. 225-209 of the French Commercial Code;
- 7. acknowledges that in the event of an issue of free shares, at the end of the vesting period this authorization shall entail a capital increase through incorporation of reserves, profits or premiums in favor of the grantees and a waiver by the shareholders of (i) their preferential subscription rights to the shares that will be issued in the course of the vesting of the shares, (ii) any right to the free shares granted on the basis of this delegation of authority, and (iii) any right to the amount of the reserves and premiums against which, if applicable, the issuance of the new shares shall be charged;
- 8. grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf within the abovementioned limits, to implement this authorization and in particular to:
  - determine whether the free shares being granted exist or must be issued,

- (ii) determine the identity of the grantees or the category or categories of grantees, the grant criteria, the number of shares granted to each of them, the terms and conditions for the share grant and, in particular, the vesting and lock-up periods,
   (iii) define the graft grantees with size in particular for the charge.
- (iii) define the performance criteria, in particular for the shares granted to eligible executive directors of the Company and Executive Committee members,
- (iv) for the free shares granted to eligible executive directors of the Company, decide either that they cannot be sold by the interested parties before they cease to hold office, or stipulate the quantity of free shares that they are required to hold in registered form until they cease to hold office,
- (v) determine, under the conditions defined by law and within legal limits, the dates on which the free shares shall be granted,
- (vi) decide on the newly issued shares' dividend entitlement date, even if retroactive,
- (vii) decide on the conditions under which the number of free shares granted shall be adjusted, and
- (viii) more generally, enter into agreements, draw up documents, record capital increases following the vesting of shares, make any necessary amendments to the Articles of Association, perform all formalities, make all required declarations and do whatever is otherwise necessary.

Each year, the Board of Directors shall inform the ordinary general meeting of each grant made pursuant to this resolution, in accordance with article L. 225-197-4 of the French Commercial Code.

The annual general meeting decides that this authorization is granted for a period of thirty-eight (38) months from the date of this annual general meeting. It renders ineffective the unused portion of any prior delegation of authority granted for the same purpose and in particular that given by the annual general meeting of 4 June 2013 in its 12th resolution.

# **Eighteenth resolution**

(Authorization granted to the Board of Directors to allocate 50,000 free shares, subject to a condition of presence, to the Chairman and Chief Executive Officer as compensation indemnity for a portion of the contingent rights acquired by the latter under the supplementary defined benefit pension scheme to which he was entitled and which the Board of Directors terminated)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting and having considered the Board of Directors' report and the statutory auditors' special report, in accordance with articles L. 225-197-1 et seq. of the French Commercial Code:

- authorizes the Board of Directors to award the Chairman and Chief Executive Officer 50,000 free existing shares in the Company as compensation indemnity and payment for a portion of the contingent rights acquired by the latter under the supplementary defined benefit pension scheme to which he was entitled and which the Board terminated;
- decides that these free shares awarded will be subject to the grantee's presence within the Group;
- decides that the vesting period of the granted shares shall last one year for 16,667 shares, two years for 16,667 shares and three years for the remaining 16,666 shares, on the understanding that the vested shares will be subject to a two-year lock-up period as of the date they were definitively allotted;
- decides that these shares will not be subject to performance criteria given the compensatory nature of this exceptional allotment;
- 5. decides that the shares awarded to the Chairman and Chief Executive Officer will vest before the end of the aforementioned vesting period in the event of second or third category disability within the meaning of article L. 341-4 of the French Social Security Code, and that in the event of the grantee's death, his or her heirs may request the vesting of the shares within six months of the date of death; these shares will be freely transferable;
- 6. decides that the existing shares granted pursuant to this resolution shall be acquired by the Company, either within the framework of article L. 225-208 of the French Commercial Code, or, if applicable, through the share buyback program authorized by the general shareholders meeting pursuant to article L. 225-209 of the French Commercial Code;
- 7. grants full powers to the Board of Directors, or any person duly authorized under the conditions set by law to act on its behalf within the abovementioned limits, to implement this authorization and in particular to enter into agreements, draw up documents, perform all formalities, make all required declarations and do whatever is otherwise necessary.

The annual general meeting decides that this authorization is granted until 31 December 2016.

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#### Nineteenth resolution

(Amendment to the Articles of Association to enable the appointment of a director representing employees)

The annual general meeting, voting in accordance with the quorum and majority requirements for extraordinary general meeting, and having considered the Board of Directors' report and the favorable opinion of the Group Works Council (French delegation), in accordance with the provisions of article L. 225-27-1 of the French Commercial Code, duly decides to amend article 10 of the Articles of Association as follows to establish the terms and conditions for appointing a director representing employees and to add the following paragraph:

# "Article 10. Composition of the Board of Directors

[.....]

#### 10.3. Director representing employees

In accordance with legislation, when the number of members of the Board of Directors appointed by the ordinary general meeting is less than or equal to twelve, a director representing employees is appointed by the Group Works Council in compliance with article L. 2331-1 of the French Labor Code (i.e., by the French delegation of the European Group Works Council in compliance with the agreement establishing Arkema's European Group Works Council dated 21 March 2007).

Candidates for the position of director representing employees are put forward by trade unions represented at Group Works Council level (or the French delegation within the European Group Works Council). All candidates must meet the legal and regulatory requirements for appointment, and must in particular be an employee of the Company or of one of its direct or indirect subsidiaries whose head office is established on French soil.

Following prior notification by the Chairman of the European Group Works Council of the intention to appoint a director representing employees, the trade unions referred to above must provide a list of candidates no later than fifteen days prior to drafting the agenda for the European Group Works Council meeting scheduled to appoint this director along with a document outlining the career history of each candidate.

A secret ballot is held to appoint a director representing employees on the basis of a simple majority. If there is a tie, a second round of voting takes place involving candidates that obtained the highest number of votes. If there is a second tie, a third round of voting will take place involving candidates that participated in the second round. If there is still a tie at the end of the third round, the candidate who has been employed by Arkema for the longest period of time will be appointed.

The duration of the term of office of the director representing employees is the period provided for in article 10.1.2 above. This term of office expires at the end of the European Group Works Council meeting held to decide whether to renew the term or appoint a new director during the year in which the term expires. This renewal or appointment of a new director takes place during the European Group Works Council's first ordinary meeting following the Company's annual general meeting. The term of office ends automatically and the director representing employees is assumed to have automatically resigned if he or she is no longer an employee of the Company or of one of its subsidiaries with its head office established on French soil.

If, for whatever reason, the position of director representing employees falls vacant, his replacement will take place in compliance with the terms and conditions set out above. He or she will carry out his or her duties for the remainder of the predecessor's term of office. Up to the replacement date, the Board of Directors may meet and legitimately deliberate.

The director representing employees is not taken into account when establishing the minimum and maximum number of directors provided for in article 10.1 above nor when applying the first paragraph of article L. 225-18-1 of the French Commercial Code.

The provisions of article 10.1.1 referring to the number of shares that must be held by a director do not apply to directors representing employees.

If at the end of the financial year, the provisions of article L. 225-27-1 of the French Commercial Code no longer apply to the Company, the director's term of office expires at the end of the Board of Directors' meeting acknowledging that this is the case."

### Twentieth resolution

(Powers to carry out formalities)

The annual general meeting grants full powers to the bearer of an original, a copy or an excerpt of the minutes of this annual general meeting for the purposes of performing all filing, publicity or other formalities that may be required.

# 6

# 6.3 BOARD OF DIRECTORS' REPORT ON THE RESOLUTIONS SUBMITTED TO THE ANNUAL GENERAL MEETING OF 7 JUNE 2016

The Board of Directors proposes to submit the resolutions described below to the vote of the shareholders at the annual general meeting of 7 June 2016.

# RESOLUTIONS PROPOSED TO THE ORDINARY GENERAL MEETING

# Approval of the annual financial statements, allocation of profit and dividend (1st, 2nd and 3rd resolutions)

The purpose of the 1st resolution is to approve the Company's financial statements for the year ended 31 December 2015 as presented in the Board of Directors' management report, as well as all the transactions reflected or described therein. You are asked to acknowledge that no expenses or charges referred to in article 39-4 of the French Tax Code were incurred during the past financial year.

In the 2<sup>nd</sup> resolution, in accordance with the provisions of article L. 225-100 of the French Commercial Code, we recommend that you approve the consolidated financial statements for the year ended 31 December 2015, as well as all the transactions reflected or described therein.

Taking account of the profit of 753,934,202.81 euros shown in the annual financial statements, the Board of Directors proposes, in the  $3^{rd}$  resolution, that the profit be allocated as follows:

Profit for the period	€753,934,202.81
Prior retained earnings	€44,448,134.86
Allocation to legal reserve	€2,012,511.42
Distributable profit	€796,369,826.25
Dividend distribution (1)	€141,496,991.90

<sup>(1)</sup> The total dividend distribution is calculated on the basis of the number of shares carrying dividend rights as of 1 January 2015 and existing on the date of the Board of Directors' meeting adopting the proposed resolution and therefore granting dividend rights. The total may vary if the number of shares carrying dividend rights changes up to the ex-dividend date depending, for example, on the number of treasury shares and as a result of the capital increase reserved for employees decided by the Board of Directors on 2 March 2016 up to a maximum of 1,200,000 shares.

The payment of the dividend of 141,496,991.90 euros with regard to the 74,472,101 shares carrying dividend rights on 1 January 2015 and existing on the date of the Board of Directors' meeting adopting the proposed resolutions, would correspond to a distribution of 1.90 euro per share. Should the number of shares carrying dividend rights change between the date of this report and the ex-dividend date as a result, for example, of the number of treasury shares and the capital increase reserved for employees decided today by the Board of Directors up to a maximum of 1,200,000 shares, the Board of Directors requests an authorization to set the definitive total amount of the dividend, then the balance of distributable income and consequently the amount to be allocated to retained earnings.

The shares will be traded ex-dividend as of 9 June 2016 and the dividend will be payable as of 13 June 2016.

The dividend is eligible for the 40% tax deduction available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

The dividend paid for the last three financial years was as follows:

Financial year	2013	2014	2015
Net dividend per share (in euros)	1.85 (2)	1.85 (2)	1.90 (2)

<sup>(2)</sup> Eligible in full for 40% tax deduction available to individual shareholders domiciled for tax purposes in France as provided for in article 158.3-2° of the French Tax Code.

# Approval of the agreements and commitments referred to in articles L. 225-38 *et seq.* of the French Commercial Code (4th resolution)

We recommend, in the 4th resolution, that you approve the related-party agreements and commitments entered into during the year ended 31 December 2015, as presented in the statutory auditors' special report (in section 6.1 of this reference document) which also mentions the agreements and commitments already approved by the general shareholders meeting and which remained in force during the financial year. No agreement or new commitment was agreed during this financial year.

Board of Directors' report on the resolutions submitted to the annual general meeting of 7 June 2016

The commitments already approved by the general shareholders meeting, which continued during the 2015 financial year are: (i) the commitment to provide a supplementary pension scheme for certain executives including the Chairman and Chief Executive Officer (commitment which the Board of Directors has decided to end as from the renewal of his term of office as a director at this annual general meeting); and (ii) the indemnity due to the Chairman and Chief Executive Officer in case of forced departure up to the date of this annual general meeting.

# Approval of the agreements and commitments referred to in articles L. 225-42-1 of the French Commercial Code (5th resolution)

We recommend, in the 5<sup>th</sup> resolution, that you approve the agreement entered into between the Company and Thierry Le Hénaff, as presented in the statutory auditors' special report, concerning the renewal of the termination indemnity due in the event of forced departure. This compensation with effect from the re-appointment of Thierry Le Hénaff as Chairman and Chief Executive Officer is subject to performance conditions linked to the performance of the Company as detailed in the statutory auditors' special report, in accordance with legal provisions. In compliance with the AFEP-MEDEF Code, this compensation will only be paid in the event of forced departure, regardless of the nature of the departure, i.e., early termination or non-renewal of the Chairman and Chief Executive Officer's term of office when it expires, linked to a change in control or strategy. It will not be due in the event of serious or gross misconduct.

# Re-election of Thierry Le Hénaff as member of the Board of Directors (6th resolution)

The Board of Directors proposes, in the 6<sup>th</sup> resolution, that you re-elect Thierry Le Hénaff as a director for a term of four years expiring at the close of the annual general meeting to be held in 2020 to approve the financial statements for the year ending 31 December 2019. Information concerning Thierry Le Hénaff is set out in sections 3.2.1.2 and 3.2.1.3 of this reference document.

# Advisory vote of the shareholders on the components of compensation due or awarded to each of the Company's executive directors for the year ended 31 December 2015 (7th resolution)

In accordance with the recommendations of section 24.3 of the AFEP-MEDEF Code (the Company's reference code pursuant to article L. 225-37 of the French Commercial Code), the components of compensation due or awarded to each of the Company's executive directors for the past financial year is submitted to an advisory vote of the shareholders.

Accordingly, we recommend, in the **7**<sup>th</sup> **resolution**, that you vote in favor of the following components of compensation due or awarded for the year ended 31 December 2015 to Thierry Le Hénaff, Chairman and Chief Executive Officer, and only executive director of the Company:

#### COMPONENTS OF COMPENSATION DUE OR AWARDED TO THIERRY LE HÉNAFF FOR 2015 SUBMITTED TO THE ADVISORY VOTE OF THE SHAPEHOLDEDS

VOIE OF THE SH	AKEHOLDEKS	
Components of compensation due or awarded for 2015	Amounts or accounting valuation submitted to vote	Description
Fixed compensation	€750,000	Thierry Le Hénaff's annual fixed compensation was adjusted on 23 May 2012 when he was re-appointed as Chairman and Chief Executive Officer to bring it closer to that of the chief executive officers of comparable industrial companies.  At its meeting on 4 March 2015, the Board of Directors decided to maintain Thierry Le Hénaff's fixed compensation for 2015 at 750,000 euros, which, taking into account the increase in the compensation of his peers since 2012, places Thierry Le Hénaff's annual fixed compensation 12% below the median of the panel.
Annual variable compensation	€1,125,000	Variable compensation due for 2015, which could, as in previous years, represent up to 150% of the annual fixed compensation, was set by the Board of Directors at its meeting of 2 March 2016, taking into account the quantitative and qualitative criteria approved by the Board in 2015 and the achievements noted as of 31 December 2015, as follows:  • concerning the three quantitative criteria, linked to the financial performance of the Group (EBITDA, recurring cash flow and margin on variable costs of new developments), the achievement rates were as follows in 2015:

- - 100% for the first criterion (level of EBITDA) taking into account the very good performance of the Group, with EBITDA up 35% compared to 2014 in a soft and volatile global economic environment. The Board also noted that, excluding the effect of changes in the scope of business, EBITDA was 13% higher than in 2014;
  - 100% for recurring cash flow. In 2015, recurring cash flow reached an excellent level at 478 million euros
    with a very high EBITDA to cash conversion ratio of over 40%. This very strong growth reflected good control over capital expenditure, with a lower ratio of capital expenditure to sales and over working capital supported by the positive effect of lower raw materials costs in 2015. In addition, the Board observed that, just eleven months after the Bostik acquisition, the Group's gearing ratio was back below 40%;
  - 100% for the contribution of new developments. The Board took into account, in particular, the very successful start-up of the Kerteh thiochemicals platform using an innovative technological process, the success of the technical polymers used in new sports applications, promising developments in the areas of consumer electronics and new energies, the discovery of new applications in oil additives, developments for Coatex and coating resins in several specialty segments, new low odor grades developed by Bostik, the growth in sales of hydrogen peroxide specialties and advances in 3D printing and thermoplastic compounds.

After applying the calculation formula defined by the Nominating, Compensation and Corporate Governance Committee, the variable compensation due in respect of quantitative criteria amounted to 110% of the annual fixed compensation; and

• concerning the qualitative criteria relating for the most part to the implementation of the Group's strategy and operating priorities, the performance was deemed excellent at the end of a particularly busy year, in light of the successful implementation of several projects of significant importance to the Group. In particular, the Board of Directors noted the completion or progress of several industrial projects that were complex, significant and fundamental in establishing the Group's long term positioning. They include the successful technical start-up and rapid ramp-up of the thiochemicals platform in Malaysia, the smooth integration of Bostik and the implementation of the first synergies between the two groups, renegotiation of the contractual conditions governing the Sunke acrylics joint venture set up with Jurong Chemical in China, in challenging market conditions for these products in Ásia, gradual deployment of the recovery plan for the fluorogases business, progress in implementing the divestment program with the divestment of Sunclear which represented annual sales of around 180 million euros, ongoing deployment of the SAP global management system for the Group's supply chain, the successful outcome of the Klesch arbitration, efficient management of fixed costs and working capital (with a pro forma ratio of working capital to sales of 14.6% in 2015 versus 16.1% in 2014), and lower capital intensity (with capital expenditure representing 5.6% of sales in 2015 compared to 7.9% in 2014). Lastly, improvements in the safety records exceeded the original targets to reach levels among the best in the industry (TRIR of 1.5 accidents per million hours worked in 2015 compared to 1.9 accidents in 2014).

Consequently, the variable compensation due in respect of qualitative criteria was set at 40% of the annual fixed compensation.

In total, his variable compensation for 2015 approved by the Board of Directors amounts to 1,125,000 euros, around 63% more than in 2014 when his variable compensation reflected the impact on Group performance of a generally difficult year. Such an increase reflects the very strong earnings growth and the successful implementation of a number of projects. It represents 150% of 2015 annual fixed compensation and an overall achievement rate of 100% (100% in respect of quantitative criteria and 100% in respect of qualitative criteria), after a very significant decline in variable compensation in 2013 and 2014.
Further details on the criteria may be found in section 3.4.3.2 of this reference document

Components of compensation due or awarded for 2015	Amounts or accounting valuation submitted to vote	Description
Deferred variable compensation	N/A	Thierry Le Hénaff receives no long-term variable compensation.
Exceptional compensation	N/A	Thierry Le Hénaff was not awarded any exceptional compensation.
Attendance fees	N/A	Thierry Le Hénaff receives no attendance fees from Arkema.
Stock options	N/A	The Board of Directors decided at the beginning of 2013 not to grant any further stock options.
Performance shares	€1,110,060	Making use of the authorization granted by the annual general meeting of 4 June 2013 (12th resolution), on the recommendation of the Nominating, Compensation and Corporate Governance Committee, at its meeting of 9 November 2015, the Board of Directors awarded 26,000 performance shares (representing 0.03% of share capital) to Thierry Le Hénaff (out of a total of 345,120 shares granted to around 1,100 grantees, representing 7.5% out of a maximum of 12%).  The shares will vest at the end of a four-year period if three performance targets are met (EBITDA growth, EBITDA to cash conversion rate (net cash flow/EBITDA) and comparative Total Shareholder Return – TSR) and subject to Thierry Le Hénaff still being with the Group at the end of this period. These three criteria apply to 35%, 30% and 35% of rights awarded, respectively.  Further details on the criteria may be found in section 3.5.1 of this reference document.
Benefits in kind	€6,720	Thierry Le Hénaff has a company car.

# COMPONENTS OF COMPENSATION DUE OR AWARDED FOR 2015 ALREADY SUBMITTED TO THE GENERAL SHAREHOLDERS MEETING FOR APPROVAL AS PART OF THE PROCEDURES FOR RELATED-PARTY AGREEMENTS AND COMMITMENTS

Termination benefit	No payment	Thierry Le Hénaff could be entitled to compensation for termination of office in an amount not exceeding two years' gross fixed and variable compensation, calculated based on the achievement of five quantitative targets set by the Board of Directors and approved by the general shareholders' meeting (total recordable injury rate (TRIR), comparative EBITDA margin, working capital, EBITDA margin, and return on capital employed). In accordance with the related-party agreements and commitments procedure, this commitment was authorized by the Board of Directors' meeting of 7 March 2012 and approved by the annual general meeting of 23 May 2012 (6th resolution).  Further detail on the conditions governing the award of this compensation may be found in section 3.4.3.4 of this reference document.
Non-compete compensation	N/A	Thierry Le Hénaff would not be entitled to any non-compete compensation.
Supplementary pension benefits	No payment	Thierry Le Hénaff benefits from a supplementary defined benefit pension scheme offered to certain executives of the Group whose annual compensation exceeds eight times the annual social security ceiling, provided that they complete their career in the Group. The future benefits from this supplementary pension scheme will be paid after deducting benefits received under the defined contribution scheme applicable to certain executives of the Group. As of 31 December 2015, the Company's pension commitments for the Chairman and Chief Executive Officer corresponded to an annual pension (calculated based primarily on the average compensation paid over the last three years) equal to 28.3% of his current annual compensation. In accordance with the related-party agreements and commitments procedure, this commitment was authorized by the Board of Directors' meeting of 4 July 2006, and approved by the annual general meeting of 5 June 2007 (4th resolution).  Further details on this pension commitment may be found in section 3.4.3.4 of this reference document.

## Share buyback (8th resolution)

As the authorization granted by the annual general meeting of 2 June 2015 to the Board of Directors to carry out a share buyback program is due to expire in the near future, we recommend, in the 8th resolution, that you renew the Board of Directors' authorization for a period of 18 months to purchase or arrange for the purchase of shares in the Company at any time, except from the date a takeover bid for the company's shares is filed by a third party and until the end of the offer period, at a maximum price of 95 euros per share.

This authorization would enable the Board of Directors to acquire a number of shares **up to a maximum of 10% of the Company's share capital**, in particular with a view to:

- (i) implementing market practices allowed by the AMF such as (a) purchasing shares in the Company in order to hold them and subsequently tender them in exchange or as payment as part of any potential external growth operations, it being specified that shares acquired for consideration of mergers, spin-offs or contributions may not exceed 5% of the share capital at the time of the acquisition, or (b) purchasing or selling shares within the scope of a liquidity agreement entered into with an investment services provider and compliant with the code of conduct approved by the AMF, as well as (c) any market practice subsequently permitted by the AMF or by law;
- (ii) putting in place and complying with obligations and in particular delivering shares upon the exercise of rights attached to securities giving immediate or future access by any means to shares in the Company, as well as carrying out any hedging transactions in respect of the Company's obligations (or of one of its subsidiaries) under such securities, in accordance with the conditions provided for by the market authorities and at the times the Board of Directors or its delegated representative deems appropriate;
- (iii) granting free shares in the Company to the employees or executive officers of the Company or its Group, particularly under the conditions provided for in articles L. 225-197-1 et seg. of the French Commercial Code;
- (iv) offering employees the opportunity to acquire shares, whether directly or *via* a company savings plan, under the terms provided for by law, and notably articles L. 3332-1 *et seq.* of the French Labor Code;
- (v) canceling all or part of the purchased shares in order to reduce the Company's share capital.

The maximum amount that may be dedicated to this share buyback program would be 100 million euros.

This new authorization would render ineffective, from the date of this annual general meeting, any unused portion of the authorization granted in the 10<sup>th</sup> resolution of the annual general meeting of 2 June 2015.

# RESOLUTIONS PROPOSED TO THE EXTRAORDINARY GENERAL MEETING

As the delegations of authority and authorizations granted to the Board of Directors by the annual general meeting on 15 May 2014 are due to expire on 14 July 2016, we propose that you renew them. If you vote in favor of the delegations of authority and authorizations that are submitted to you to replace the aforementioned delegations, they will render ineffective the delegations of authority previously granted for the same purpose, from the date of this annual general meeting.

The delegations of authority and authorizations submitted to you would make it possible to carry out, pursuant to a decision of the Board of Directors, the issue of shares and/or securities giving access to shares in the Company, with or without preferential subscription rights, in France, in another country and/or on the international markets, depending on the opportunities offered by the financial markets and in the interests of the Company and its shareholders. This would offer the Board of Directors the possibility to issue a convertible bond or finance recapitalization operations related to potential external growth transactions in the most appropriate manner.

The delegations granted in the 9th to 14th resolutions cannot be used by the Board of Directors without prior authorization from the general shareholders' meeting from the date a takeover bid for the Company's shares is filed by a third party until the end of the offer period.

Delegation of authority granted to the Board of Directors to issue shares in the Company and/or securities giving access to shares in the Company, with or without shareholders' preferential subscription rights (9th to 13th resolutions)

# Issues with preferential subscription rights (9th resolution)

The purpose of the 9th resolution is to grant the Board of Directors a delegation of authority to increase the Company's share capital in the proportion and at the times that it deems appropriate, through the issue, with preferential subscription rights, in France or any other country, of shares in the Company or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, such as convertible bonds, bonds with equity warrants attached or stock warrants issued on a standalone basis. Your approval would entail the waiver by the shareholders of their preferential subscription rights to the shares that may result from the securities issued pursuant to this resolution.

The maximum nominal amount of the capital increases that may be carried out pursuant to this delegation of authority would be three hundred and seventy-two (372) million euros, i.e., approximately 50% of the share capital on the date of this annual general meeting. This maximum nominal amount would be included in the overall limit of 372 million euros that is proposed in the 15th resolution, and which would include all the issues decided pursuant to the 9th to 14th resolutions that we describe below.

Board of Directors' report on the resolutions submitted to the annual general meeting of 7 June 2016

The maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this delegation of authority would be seven hundred and fifty (750) million euros or the euro equivalent in a foreign currency in the event of an issue in other currencies or units of account at the date of the issue. This amount would apply to all the debt securities that may be issued pursuant to the 9<sup>th</sup> to 14<sup>th</sup> resolutions submitted to your annual general meeting, and that we describe below, but would be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

This delegation of authority would be granted for a period of twenty-six (26) months from the date of this annual general meeting.

# Issues without preferential subscription rights $(10^{th} to 13^{th} resolutions)$

In order to be able to rapidly respond to any financial opportunity offered, particularly by the diversity of the financial markets in France and any other country, the Board of Directors may be required to carry out issues that may be placed with investors interested in certain types of financial products. This means that the Board of Directors will have to be able to carry out these issues without preferential subscription rights.

Pursuant to the terms of the 10th resolution, it is proposed that you grant the Board of Directors a delegation of authority to increase the Company's share capital in the proportion and at the times that it deems appropriate, through the issue, without preferential subscription rights, by means of a public offering in France or any other country, of shares in the Company or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company. Your approval would entail the waiver by the shareholders of their preferential subscription rights to the shares that may result from the securities issued pursuant to this resolution. However, the shareholders would benefit, in accordance with the provisions of article L. 225-135 of the French Commercial Code and without giving rise to a negotiable right, from a priority period of five (5) days for subscription in proportion to their shareholding and for any additional subscriptions.

The maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall limit of three hundred and seventy-two (372) million euros provided for in the 15th resolution.

The maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is seven hundred and fifty (750) million euros or the euro equivalent in a foreign currency in the event of an issue in other currencies or units of account at the date of the decision to carry out the issue. This amount would be included in the total limit of seven hundred and fifty (750) million euros for the issue of debt securities pursuant to the 9th to 14th resolutions submitted to the present annual general meeting, but would be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or

decide to issue in accordance with article L. 228-40 of the French Commercial Code

The issue price of shares or securities granting access to share capital issued pursuant to this resolution would be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less **a discount of 5%**) after correction, if any, of this amount to take into account the difference in the dividend entitlement date.

This delegation of authority would be granted for a period of twenty-six (26) months from the date of this annual general meeting.

Pursuant to the terms of the 11th resolution, it is proposed that you grant the Board of Directors a delegation of authority to increase the Company's share capital in the proportion and at the times that it deems appropriate, through the issue, without preferential subscription rights, in France or any other country, of shares in the Company or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, by means of an offering referred to in article L. 411-2 II of the French Monetary and Financial Code.

These issues may only be made to finance a recapitalization operation related to an external growth transaction, or to carry out a convertible bond issue.

The maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which will be included in the overall limit of three hundred and seventy-two (372) million euros provided for in the 15<sup>th</sup> resolution.

The maximum nominal amount of debt securities giving immediate or future access to shares in the Company that may be issued pursuant to this resolution is seven hundred and fifty (750) million euros or the euro equivalent in a foreign currency in the event of an issue in other currencies or unit of account at the date of the decision to carry out the issue. This amount would be included in the total limit of seven hundred and fifty (750) million euros for the issue of debt securities pursuant to the 9<sup>th</sup> to 14<sup>th</sup> resolutions submitted to this annual general meeting, but would be independent of, and separate from, the amount of the debt securities that the Board of Directors may authorize or decide to issue in accordance with article L. 228-40 of the French Commercial Code.

The issue price of shares or securities granting access to share capital issued pursuant to this resolution would be set on the basis of the conversion or exchange rate to ensure that the issue price of the shares that may be created by conversion, exchange or in any other manner, shall be at least equal to the minimum amount provided for by the laws and regulations in force at the time of use of this delegation of authority (at this date, the weighted average of the Arkema share price for the three trading days prior to the date of setting the issue price, less **a discount of 5%**) after correction, if any, of this amount to take into account the difference in the dividend entitlement date.

This delegation of authority would be granted for a period of twenty-six (26) months from the date of this annual general meeting.

Pursuant to the terms of the 12th resolution, it is proposed that, in the event of an issue of shares or securities granting immediate or future access to the Company's existing or future share capital under the aforementioned 10th and 11th resolutions, you authorize the Board of Directors to deviate from the terms for setting the issue price for shares provided for in the aforementioned resolutions and to set the price based on the following terms:

- the issue price of shares or securities granting access to share capital to be issued under the aforementioned resolutions would, at the Board of Directors' discretion, be equal to: (i) the volume weighted average price on the Euronext Paris regulated market on the last trading day preceding the day the issue price was set, or (ii) the volume weighted average price on the Euronext Paris regulated market determined during the trading session when the issue price is set less, in either case, a maximum discount of 5%;
- the issue price of securities granting immediate or future access to the Company's share capital should be set to ensure that the amount received immediately by the Company, increased where applicable by the amount that it is likely to receive at a later date for each share issued as a result of the securities issued, shall be at least equal to the amount mentioned above.

The maximum nominal amount of capital increases resulting from the implementation of this resolution is 10% of the share capital over a 12-month period, which would be included in the limit provided for in the  $10^{\text{th}}$  or  $11^{\text{th}}$  resolutions as applicable and in the overall limit provided for in the  $15^{\text{th}}$  resolution hereafter.

This authorization would be granted for a period of **twenty-six** (26) months from the date of this annual general meeting.

Finally, pursuant to the terms of the 13th resolution, it is proposed that you grant the Board of Directors a delegation of authority to increase the Company's share capital *via* the issue, on one or more occasions, of shares or securities giving immediate or future access by any means to existing shares or shares to be issued in the Company, as compensation for contributions in kind granted to the Company in the form of another company's shares or securities carrying rights to shares, when the provisions of article L. 225-148 do not apply.

This delegation of authority would automatically entail a waiver by the shareholders of their preferential right to subscribe for Company shares resulting from securities giving access to shares in the Company that could be issued pursuant to this resolution.

The maximum nominal amount of the capital increases that may be carried out, immediately or in the future, pursuant to this delegation of authority is 10% of the Company's share capital at the date of this annual general meeting, which would be included in the overall limit on the nominal amount provided for in the 11th resolution of this annual general meeting.

This delegation of authority would be granted for a period of twenty-six (26) months from the date of this annual general meeting.

Increase in the number of shares to be issued with or without preferential subscription rights in the event of a capital increase (Greenshoe option) (14<sup>th</sup> resolution)

It is proposed, in the  $14^{th}$  resolution, that you delegate to the Board of Directors the authority to decide, for each of the issues carried out pursuant to the  $9^{th}$  to  $13^{th}$  resolutions described above, to increase the number of shares, at the same price as that applied for the initial issue, within the limit of 15% of the initial issue and within thirty days of the close of the subscription period for the initial issue, subject to compliance with the limit provided for in the resolution authorizing the issue and the limits provided for in the  $15^{th}$  resolution.

This delegation of authority would be granted for a period of twenty-six (26) months from the date of this annual general meeting.

## Overall limit on authorization amounts (15th resolution)

The purpose of the 15<sup>th</sup> resolution is to set an **overall limit** on the nominal amount of the capital increases to be carried out with or without preferential subscription rights, immediately or in the future, which may be implemented by the Board of Directors pursuant to the 9<sup>th</sup> to 14<sup>th</sup> resolutions described above.

The maximum nominal amount of capital increases mentioned in the 9th to 14th resolutions would be capped at three hundred and seventy-two (372) million euros, approximately 50% of the Company's share capital at the date of this annual general meeting.

This may be increased by the additional nominal amount of shares to be issued to preserve the rights of holders of securities granting access to shares in the Company in accordance with the legal provisions.

The maximum nominal amount of capital increases mentioned in the 11<sup>th</sup> to 13<sup>th</sup> resolutions would be capped at **10% of the Company's share capital at the date of this annual general meeting.** 

# Delegation of authority to carry out share issues reserved for members of a company savings plan (16th resolution)

It is proposed, in the 16th resolution, that you delegate to the Board of Directors the authority to carry out issues without preferential subscription rights of shares and/or securities giving access to shares in the Company, reserved for employees and former employees of the Company and of any French or foreign related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, who are members of a company savings plan in place in the Company or Group.

The maximum nominal amount of the capital increase resulting immediately or in the future from all the issues made pursuant to this delegation of authority would be 12 million euros, i.e., 1.6% of the Company's share capital at the date of this annual general meeting.

The issue price would be equal to the average of the Arkema share's Euronext Paris opening trading prices for the twenty (20) trading days prior to the date of the decision setting the subscription period opening date, less the maximum discount provided for by law on the date of the Board of Directors' decision; the Board of Directors may however, if it considers appropriate,

Board of Directors' report on the resolutions submitted to the annual general meeting of 7 June 2016

reduce or eliminate the abovementioned discount, in order to take into account, in particular, the local legal requirements applicable in the event of a share offering to members of a company savings plan on the international market or in a foreign country.

This delegation of authority would be granted for a period of twenty-six (26) months from the date of this annual general meeting.

# Authorization granted to the Board of Directors to award free shares in the Company (17th resolution)

The Board of Directors proposes that you authorize it, in accordance with the provisions of articles L. 225-197-1 *et seq.* of the French Commercial Code, to grant existing shares or shares to be issued in the Company free of consideration, on one or more occasions. The grantees would be employees and eligible executive directors of the Company or related companies or groups within the meaning of article L. 225-197-2 of the French Commercial Code.

The Board of Directors proposes that you decide that:

- the free shares granted to the eligible executive directors of the Company and Executive Committee members would be subject to at least two performance criteria (one internal criterion and one external criterion) decided by the Board of Directors, on the basis of which the number of vested shares would be determined. These criteria would be assessed over a minimum period of three financial years;
- the total number of the Company's existing shares or shares to be issued granted free of consideration pursuant to this authorization may not exceed 1,450,000 shares (i.e., less than 2% of the share capital). This limit would be fixed without taking into account the adjustments that may be made to preserve the rights of holders of securities giving access to shares in the Company, in accordance with the applicable legal and regulatory provisions or any contractual provisions;
- that the Board of Directors would determine, under the conditions required by law, at the time of each grant: (i) the vesting period of the granted shares, which shall last at least one year and (ii) the lock-up period, which for all or some of the shares shall be a minimum of one year, with the exception of shares with a vesting period of at least two years, for which the lock-up period can be eliminated or shortened;
- the shares awarded to grantees would vest before the end of the aforementioned vesting period in the event of second or third category disability within the meaning of article L. 341-4 of the French Social Security Code, and in the event of the grantee's death, his or her heirs may request the vesting of the shares within six months of the date of death; these shares will be freely transferable;
- the existing shares that can be granted pursuant to this resolution would be acquired by the Company, either within the framework of article L. 225-208 of the French Commercial Code, or, if applicable, through the share buyback program authorized by the general shareholders' meeting pursuant to article L. 225-209 of the French Commercial Code.

The Board of Directors invites you to acknowledge that in the event of an issue of free shares at the end of the vesting period this authorization shall entail a capital increase through incorporation of reserves, profits or premiums in favor of the grantees and a waiver by the shareholders of (i) their preferential subscription rights to the shares that will be issued in the course of the vesting of the shares, (ii) any right to the free shares granted on the basis of this delegation of authority, and (iii) any right to the amount of the reserves and premiums against which, if applicable, the issuance of the new shares shall be charged.

The Board of Directors proposes that you grant it, or any person duly authorized under the conditions set by law to act on its behalf, full powers within the abovementioned limits, to implement this authorization and in particular to:

- determine whether the free shares being granted exist or must be issued;
- (ii) determine the identity of the grantees or the category or categories of grantees, the grant criteria, the number of shares granted to each of them, the terms and conditions for the share grant and, in particular, the vesting and lock-up periods;
- (iii) define the performance criteria, in particular for the shares granted to eligible executive directors of the Company and Executive Committee members;
- (iv) for the free shares granted to eligible executive directors of the Company, decide either that they cannot be sold by the interested parties before they cease to hold office, or stipulate the quantity of free shares that they are required to hold in registered form until they cease to hold office;
- (v) determine, under the conditions defined by law and within legal limits, the dates on which the free shares shall be granted;
- (vi) decide on the newly issued shares' dividend entitlement date, even if retroactive;
- (vii) decide on the conditions under which the number of free shares granted shall be adjusted; and
- (viii) more generally, enter into agreements, draw up documents, record capital increases following the vesting of shares, make any necessary amendments to the Articles of Association, perform all formalities, make all required declarations and do whatever is otherwise necessary.

Each year, the Board of Directors shall inform the ordinary general meeting of each grant made pursuant to this resolution, in accordance with article L. 225-197-4 of the French Commercial Code

This delegation of authority would be granted for a period of **thirty-eight (38) months** from the date of this annual general meeting.

Authorization granted to the Board of Directors to allocate 50,000 free shares, subject to a condition of presence, to the Chairman and Chief Executive Officer as compensation indemnity for a portion of the contingent rights acquired by the latter under the supplementary defined benefit pension scheme to which he was entitled and which the Board terminated (18th resolution)

Pursuant to the provisions of articles L. 225-197-1 et seq. of the French Commercial Code, the Board of Directors requests authorization to award the Chairman and Chief Executive Officer 50,000 free existing shares in the Company as compensation indemnity for a portion of the contingent rights acquired by the latter under the supplementary defined benefit pension scheme to which he was entitled and which the Board terminated.

The Board of Directors therefore proposes that you decide that:

- these free shares awarded will be subject to the grantee's presence within the Group;
- the vesting period for the granted shares shall last for one year for 16,667 shares, two years for 16,667 shares and three years for the remaining 16,666 shares, on the understanding that the vested shares will be subject to a two-year lock-up period as of the date they were definitively granted;
- these shares will not be subject to performance criteria given the compensatory nature of this grant;
- the shares awarded to the Chairman and Chief Executive
  Officer will vest before the end of the aforementioned vesting
  period in the event of second or third category disability within
  the meaning of article L. 341-4 of the French Social Security
  Code, and that in the event of the grantee's death, his or her
  heirs may request the vesting of the shares within six months of
  the date of death; these shares will be freely transferable; and
- the existing shares granted pursuant to this resolution shall be acquired by the Company, either within the framework of article L. 225-208 of the French Commercial Code, or, if applicable, through the share buyback program authorized by the general shareholders meeting pursuant to article L. 225-209 of the French Commercial Code.

The Board of Directors proposes that you grant it, or any person duly authorized under the conditions set by law to act on its behalf, full powers within the abovementioned limits, to implement this authorization and in particular to enter into agreements, draw up documents, perform all formalities, make all required declarations and do whatever is otherwise necessary.

This authorization would be granted until 31 December 2016.

# Amendment to the Articles of Association to enable the appointment of a director representing employees (19th resolution)

The Board of Directors, having considered the favorable opinion of the Group's Works Council (French delegation) and in accordance with the provisions of article L. 225-27-1 of the French Commercial Code, as amended by Act no. 2015-994 of 17 August 2015, proposes to amend article 10 of the Articles of Association as follows to establish the terms and conditions for appointing a director representing employees and to add the following paragraph:

# "Article 10. Composition of the Board of Directors

[.....]

# 10.3 Director representing employees

In accordance with legislation, when the number of members of the Board of Directors appointed by the ordinary general meeting is less than or equal to twelve, a director representing employees is appointed by the Group Works Council in compliance with article L. 2331-1 of the French Labor Code (i.e., by the French delegation of the European Group Works Council in compliance with the agreement establishing Arkema's European Group Works Council on 21 March 2007).

Candidates for the position of director representing employees are put forward by trade unions represented at Group Works Council level (or the French delegation within the European Group Works Council). All candidates must meet the legal and regulatory requirements for appointment, and must in particular be an employee of the Company or one of its direct or indirect subsidiaries whose head office is established on French soil.

Following prior notification by the Chairman of the European Group Works Council of the intention to appoint a director representing employees, the trade unions referred to above must provide him with a list of candidates no later than fifteen days prior to drafting the agenda for the European Group Works Council meeting scheduled to appoint this director along with a document outlining the career history of each candidate.

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A secret ballot is held to appoint a director representing employees on the basis of a simple majority. If there is a tie, a second round of voting takes place involving candidates that obtained the highest number of votes. If there is a second tie, a third round of voting will take place involving candidates that participated in the second round. If there is still a tie at the end of the third round, the candidate who has been employed by Arkema for the longest period of time will be appointed.

The duration of the term of office of the director representing employees is the period provided for in article 10.1.2 above. This term of office expires at the end of the European Group Works Council meeting held to decide whether to renew the term or appoint a new director during the year in which the term expires. This renewal or appointment of a new director takes place during the European Group Works Council's first ordinary meeting following the Company's annual general meeting. The term of office ends automatically and the director representing employees is assumed to have automatically resigned if he or she is no longer an employee of the Company or of one of its subsidiaries with its head office established on French soil.

If, for whatever reason, the position of director representing employees falls vacant, his replacement will take place in compliance with the terms and conditions set out above. He or she will carry out his or her duties for the remainder of the predecessor's term of office. Up to the replacement date, the Board of Directors may meet and legitimately deliberate.

The director representing employees is not taken into account when establishing the minimum and maximum number of directors provided for in article 10.1 above or when applying the first paragraph of article L. 225-18-1 of the French Commercial Code.

The provisions of article 10.1.1 referring to the number of shares that must be held by a director do not apply to directors representing employees.

If at the end of the financial year, the provisions of article L. 225-27-1 of the French Commercial Code no longer apply to the Company, the director's term of office expires at the end of the Board of Directors' meeting acknowledging that this is the case."

# Powers to carry out formalities

The Board of Directors recommends, in the **20**th **resolution**, that you grant full powers to the bearer of a copy or an excerpt of the minutes of this annual general meeting to carry out all necessary formalities

This report contains the main provisions of the text of the proposed resolutions. We ask you to vote in favor of these proposed resolutions.

The Board of Directors

# 6.4 STATUTORY AUDITORS' REPORT ON THE ISSUE OF SHARES AND/OR SECURITIES GIVING ACCESS TO THE COMPANY'S SHARE CAPITAL WITH OR WITHOUT PREFERENTIAL SUBSCRIPTION RIGHTS

#### KPMG Audit Département de KPMG S.A.

Tour EQHO 2, avenue Gambetta CS 60055 92066 Paris-La Défense Cedex

Statutory auditors Member of the "Compagnie régionale de Versailles"

# **ERNST & YOUNG Audit**

1/2, place des Saisons 92400 Courbevoie – Paris-La Défense 1 S.A.S. à capital variable

Statutory auditors Member of the "Compagnie régionale de Versailles"

## Arkema S.A.

Combined general meeting of June 7, 2016 Ninth to thirteenth resolutions

To the Shareholders,

In our capacity as statutory auditors of your company and in compliance with articles L. 228-92 and L. 225-135 et seq. of the French commercial code (Code de commerce), we hereby report on the proposals of delegation of authority to the board of directors to issue ordinary shares and/or other financial instruments giving access to capital of the company, operations upon which you are called to vote.

Your board of directors proposes, on the basis of its report:

- that you delegate to them, for a period of 26 months, the authority to decide in favor of the operations mentioned below and to definitely set the conditions of these issues and proposes to you, as need be, to cancel, where appropriate, your preferential subscription right:
  - issue, with maintaining shareholders' preferential rights (ninth resolution), of ordinary shares in the company or financial instruments giving access by any means, immediately or in the future, to existing shares in the company or shares to be issued in the company,
  - issue, with cancellation of the shareholders' preferential subscription right, by way of public offering (tenth resolution), of shares in the company or financial instruments giving access by any means, immediately or in the future, to existing shares in the company or shares to be issued in the company,
  - issue, with cancellation of the shareholders' preferential subscription right, by way of offering in compliance with article L. 411-2 II of the French financial and monetary code (Code monétaire et financier) and in the limit of 10% of the amount of the share capital of the company (eleventh resolution), of ordinary shares in the company or financial instruments giving access by any means, immediately or in the future, to existing shares in the company or shares to be issued in the company,
- that you authorize them, under the twelfth resolution and in the use of the delegation mentioned in the tenth and eleventh resolutions, to set the subscription price in the legal annual limit of 10% of the amount of the share capital of the company,

Statutory auditors' report on the issue of shares and/or securities giving access to the Company's share capital with or without preferential subscription rights

• that you delegate to them, for a period of 26 months, the authority to decide in favour of the issuance of ordinary shares in the company or financial instruments giving access to shares to be issued in the company, in order to remunerate contribution in kind granted to the company and constituted of shares in the company or financial instruments giving access to shares of the company (thirteenth resolution), in the limit of 10% of the amount of the share capital of the company.

The maximum nominal amount of the share capital increase of the company that may be executed, immediately or in the future, under the ninth to thirteenth resolutions, may not exceed  $\le 372,000,000$ , according to the fifteenth resolution. The maximum nominal amount of the debt securities that may be issued under the ninth to thirteenth resolutions may not exceed  $\le 750,000,000$ .

These ceilings take account of the additional number of securities to be issued under the execution of the delegations of authority covered under the ninth to thirteenth resolutions, in accordance with article L. 225-135-1 of the French commercial code (Code de commerce), if you adopt the fourteenth resolution.

It is the responsibility of your board of directors to prepare a report in accordance with articles R. 225 113 et seq. of the French commercial code (Code de commerce). It is our responsibility to express an opinion on whether the information issued from the financial statements is fairly stated, on the proposal to cancel the preferential subscription right, and on various other information dealing with the issuance, provided in this report.

We performed the procedures that we considered necessary to comply with the professional guidance issued by the French national auditing body (Compagnie nationale des commissaires aux comptes) for this type of engagement. These procedures consisted in verifying the information provided in the board of directors' report relating to these operations and the methods used for determining the subscription price of the shares to be issued.

Subject to our further examination of the conditions of issues that may be decided, we have no matters to report on the methods used for determining the subscription price of the securities to be issued given in the board of directors' report under the tenth to twelfth resolutions.

In addition, as this report does not detail the methods used for determining the subscription price of the securities to be issued under the ninth and thirteenth resolutions, we do not express any opinion on the elements of the subscription price calculation.

As the share issue price has not yet been determined, we do not express any opinion on the final conditions, and, accordingly, on the proposal to cancel the shareholders' preferential subscription right under the tenth to twelfth resolutions.

In accordance with article R. 225-116 of the French commercial code (Code de commerce), we will issue a supplementary report, if necessary, when your board of directors has exercised these authorizations in case of the issue of marketable securities that are equity securities giving access to other equity securities or giving entitlement to the allotment of debt securities, in case of the issue of marketable securities giving access to equity securities to be issued and in case of the issue of shares with cancellation of preferential subscription right.

Paris-La Défense, 11 March 2016 The statutory auditors French original signed by

**KPMG Audit** Département de KPMG S.A. **ERNST & YOUNG Audit** 

Jacques-François Lethu
Partner

François Quédiniac

Denis Thibon
Partner

# 6.5 STATUTORY AUDITORS' REPORT ON THE ISSUE OF SHARES AND/OR SECURITIES GIVING ACCESS TO THE COMPANY'S SHARE CAPITAL WITH OR WITHOUT PREFERENTIAL SUBSCRIPTION RIGHTS RESERVED FOR MEMBERS OF A COMPANY SAVINGS PLAN

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#### Arkema S.A.

Combined general meeting of June 7, 2016 Sixteenth resolution

# Statutory auditors' report on the increase in capital reserved for employees subscribing to a company savings plan

To the Shareholders,

In our capacity as statutory auditors of your company and in accordance with the terms of our engagement defined by article L. 225-135 et seq. of the French commercial code (Code de commerce), we hereby report on the proposal to authorize your board of directors to decide whether to proceed with a capital increase, in one or more occasions, by issuing shares with cancellation of preferential subscription rights, reserved for employees and former employees of your company and companies or French and foreign groups related within the meaning of the regulation, subscribing to a company savings plan, for a maximum nominal amount of € 12,000,000, an operation upon which you are called to vote.

This capital increase is submitted to your approval in accordance with articles L. 225-129-6 of the French commercial code (Code de commerce) and L. 3332-18 et seq. of the French labor code (Code du travail).

Your board of directors proposes, on the basis of its report, to delegate to them, for a period of twenty-six months, the authority to decide in favor of one or several capital increase operations and to cancel your preferential subscription rights to the shares to be issued. Where applicable, the board of directors shall definitely set the conditions of these issues.

It is the responsibility of your board of directors to prepare a report in accordance with articles R. 225 113 and R. 225-114 of the French commercial code (Code de commerce). It is our responsibility to express an opinion on whether the information issued from the financial statements is fairly stated, on the proposal to cancel the preferential subscription right, and on various others information dealing with the issuance, provided in this report.

We performed the procedures that we considered necessary to comply with the professional guidance issued by the French national auditing body (Compagnie nationale des commissaires aux comptes) for this type of engagement. These procedures consisted in verifying the information provided in the board of directors' report relating to this operation and the methods used for determining the subscription price of the shares to be issued.

Statutory auditors' report on the issue of shares and/or securities giving access to the Company's share capital with or without preferential subscription rights reserved for members of a company savings plan

Subject to our further examination of the conditions of the share capital increase that may be decided, we have no matters to report on the methods used for determining the subscription price of the shares to be issued provided in the board of directors' report.

As the final conditions of the proposed share capital increase have not yet been determined, we do not express any opinion on the final conditions and, accordingly, on the proposal to cancel the shareholders' preferential subscription right.

In accordance with article R. 225-116 of the French commercial code (Code de commerce), we will issue an additional report, if necessary, when your board of directors has exercised this authorization.

Paris-La Défense, 11 March 2016 The statutory auditors French original signed by

**KPMG Audit** Département de KPMG S.A. **ERNST & YOUNG Audit** 

Jacques-François Lethu Partner François Quédiniac
Partner

Denis Thibon Partner

# 6

# 6.6 STATUTORY AUDITORS' REPORT ON THE AUTHORIZATION TO GRANT PERFORMANCE SHARES

#### KPMG Audit Département de KPMG S.A.

Tour EQHO 2, avenue Gambetta CS 60055 92066 Paris-La Défense Cedex

Statutory auditors Member of the "Compagnie régionale de Versailles"

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Statutory auditors Member of the "Compagnie régionale de Versailles"

This is a free translation into English of a report issued in the French language and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

#### Arkema S.A.

Registered office: 420, rue d'Estienne d'Orves - 92700 Colombes

Share capital: €744,721,010

Combined general meeting of 7 June 2016,

Seventeenth resolution

# Statutory auditors' report on the authorization to allot free existing shares or shares to be issued

To the shareholders,

Ladies and Gentlemen,

In our capacity as statutory auditors of your Company and in accordance with the terms of our engagement defined by article L.225-197-1 of the French Commercial Code (Code de Commerce), we present below our report on the project of authorization to allot free existing shares or shares to be issued to eligible salaried employees and executive directors of your Company or companies or groupings related to it, upon which you are requested to vote.

Your Board of Directors therefore proposes, on the basis of its report that you delegate to the Board, for a period of 38 months, with effect from the date of this general meeting, the authority to allot free existing shares or shares to be issued.

It is the responsibility of your Board of Directors to prepare a report on this proposed operation. Our role is to report, where applicable, our observations on the information provided to you on the proposed operation.

We have performed those procedures that we considered necessary to comply with the professional guidance issued by the French national auditing body (Compagnie Nationale des Commissaires aux Comptes) relating to this assignment. These procedures have consisted mainly in verifying that the proposed methods set out in the report of the Board of Directors comply with the provisions of the law.

We have no matters to report on the information given in the report of the Board of Directors relating to the proposed to authorize the allotment of free shares.

Paris-La Défense, 11 March 2016

The statutory auditors French original signed by

**KPMG Audit** Département de KPMG S.A.

Jacques-François Lethu

Partner

François Quédiniac

**ERNST & YOUNG Audit** 

Denis Thibon Partner

# 6.7 STATUTORY AUDITORS' REPORT ON THE AUTHORIZATION TO GRANT FREE SHARES TO THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER

#### KPMG Audit Département de KPMG S.A.

Tour EQHO 2, avenue Gambetta CS 60055 92066 Paris-La Défense Cedex

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1/2, place des Saisons 92400 Courbevoie – Paris-La Défense 1 S.A.S. à capital variable

Statutory auditors Member of the "Compagnie régionale de Versailles"

This is a free translation into English of a report issued in the French language and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and is construed in accordance with, French law and professional auditing standards applicable in France.

#### Arkema S.A.

Registered office: 420, rue d'Estienne d'Orves - 92700 Colombes

Share capital: €744,721,010

Combined general meeting of 7 June 2016,

Eighteenth resolution

# Statutory auditors' report on the authorization to allot free existing shares

To the shareholders,

Ladies and Gentlemen,

In our capacity as statutory auditors of your Company and in accordance with the terms of our engagement defined by article L.225-197-1 of the French Commercial Code (Code de Commerce), we present below our report on the project of authorization to allot free existing shares to the Chairman and Chief Executive Officer, upon which you are requested to vote.

Your Board of Directors therefore proposes, on the basis of its report that you delegate to the Board, until 31 December 2016, the authority to allot free existing shares.

It is the responsibility of your Board of Directors to prepare a report on this proposed operation. Our role is to report, where applicable, our observations on the information provided to you on the proposed operation.

We have performed those procedures that we considered necessary to comply with the professional guidance issued by the French national auditing body (Compagnie Nationale des Commissaires aux Comptes) relating to this assignment. These procedures have consisted mainly in verifying that the proposed methods set out in the report of the Board of Directors comply with the provisions of the law.

We have no matters to report on the information given in the report of the Board of Directors relating to the proposed to authorize the allotment of free shares.

Paris-La Défense, 11 March 2016

The statutory auditors
French original signed by

**KPMG Audit** Département de KPMG S.A.

François Quédiniac

**ERNST & YOUNG Audit** 

Denis Thibon Partner

Jacques-François Lethu Partner

Reference document 2015 - ARKEMA

# 6.8 SUPPLEMENTARY REPORT BY THE BOARD OF DIRECTORS ON THE USE MADE OF THE DELEGATION OF AUTHORITY GRANTED PURSUANT TO THE 19<sup>TH</sup> RESOLUTION OF THE ANNUAL GENERAL MEETING OF 15 MAY 2014 (ARTICLE R. 225-116 OF THE FRENCH COMMERCIAL CODE)

The annual general meeting of 15 May 2014, in its 19th resolution, granted the Board of Directors the authority, in accordance with article L. 225-138-1 of the French Commercial Code, to carry out capital increases by issuing shares or securities giving access to shares in the Company, reserved for employees and former employees of the Company or related companies or groups within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, who are members of a company savings plan.

In accordance with the provisions of article R. 225-116 of the French Commercial Code, it is the Board of Directors' responsibility to prepare an additional report defining the final conditions of the transaction, the impact of the capital increase on a shareholder's situation and the theoretical impact on the current stock market value of the share.

1. Use by the Board of Directors of the delegation of authority granted by the annual general meeting of 15 May 2014 to carry out a capital increase reserved for employees who are members of a company savings plan

During its meeting of 9 November 2015, the Board of Directors used the aforementioned delegation of authority to approve in principle a capital increase reserved for employees as part of its objective to pursue a dynamic employee ownership policy.

During its meeting of 2 March 2016, the Board of Directors then:

- set the subscription price of the shares at 42.16 euros. This price corresponds to the average of the opening trading prices for the twenty trading days prior to 2 March 2016, i.e., 52.69 euros per share, reduced by a discount of 20% and rounded up to the nearest tenth of a euro;
- set the subscription period from 7 to 20 March 2016 inclusive;
- set the maximum amount of the capital increase at 12 million euros; and
- delegated to the Chairman and Chief Executive Officer the powers necessary to take all necessary measures to complete the capital
  increase, carry out the related formalities, particularly those concerning the listing of the shares created, amend the Articles of
  Association accordingly, and generally do whatever may be necessary.

### 2. Impact of the capital increase on a shareholder's situation

A shareholding of 1% of the Company's share capital prior to the present issue (744,721 shares at 10 euros par value) belonging to a person who did not subscribe to the issue, would change at the completion of the capital increase on 26 April 2016 as follows:

	shareholder as a % of share capital	Stake held by the shareholder as a % of share capital (diluted basis) (1)		Number of shares (diluted basis) (1)
Before the issue of the new shares resulting from the share capital increase	1%	0.98%	74,472,101	75,982,266
After the issue of the new shares resulting from the capital increase $\sp(2)$	0.98%	0.96%	75,672,101	77,182,266

<sup>(1)</sup> Calculations are based on all issued shares and securities granting access to share capital (stock options and free share awards).

# 3. Impact on the share of consolidated shareholders' equity and shareholders' equity of the Company for the holder of a share

A shareholding of 1% of the Company's share capital prior to the issue and with a share of consolidated shareholders' equity of 39,493,626.03 euros (undiluted basis), i.e., 53.03 euros per share, would change to 39,365,237.54 euros or 52.86 euros per share as a result of the impact of the capital increase on consolidated shareholders' equity (based on accounting data at 31 December 2015).

	shareholders' equity (in euros)	shareholders'	shareholders' equity (in euros)	at 31 December 2015
Before the issue of the new shares resulting from the share capital increase	53.03	37.44	52.30	37.02
After the issue of the new shares resulting from the capital increase $\sp(2)$	52.86	37.51	52.14	37.10

<sup>(1)</sup> Calculations are based on all issued shares and securities granting access to share capital (stock options and free share awards).

# 4. Theoretical impact of the capital increase on the stock market value of the share

The theoretical impact of the capital increase on the current stock market value of the share, resulting from the average of the opening trading prices for the twenty previous trading days and the subscription price, is as follows:

	Undiluted basis (in euros)	<b>Diluted basis</b> (1) (in euros)
After the issue of a maximum of 1,200,000 new shares	(0.17)	(0.16)

<sup>(1)</sup> Calculations are based on all issued shares and securities granting access to share capital (stock options and free share awards).

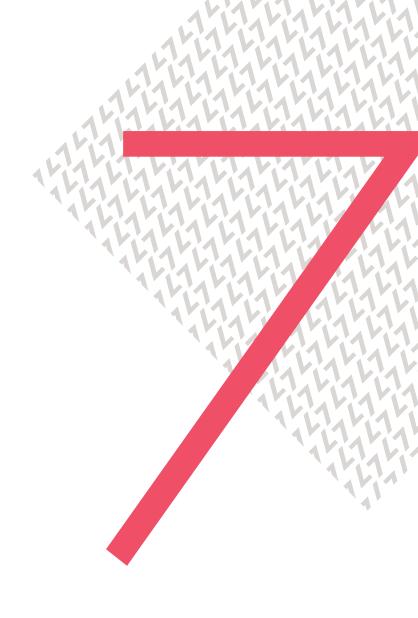
Colombes, 2 March 2016
The Board of Directors

<sup>(2)</sup> Calculations are based on the assumption that the maximum number of shares is issued, i.e., 1,200,000.

<sup>(2)</sup> Calculations are based on the assumption that the maximum number of shares is issued, i.e., 1,200,000.

7.1	PERSON RESPONSIBLE FOR THE REFERENCE DOCUMENT AND PERSONS RESPONSIBLE FOR AUDITING	CE
	THE FINANCIAL STATEMENTS	346
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# Information about the reference document



The different parts constituting the Annual Financial Report are identified in the content by the pictogram  ${\color{red} {\bf AFR}}$ 

Person responsible for the reference document and persons responsible for auditing the financial statements

# 7.1 PERSON RESPONSIBLE FOR THE REFERENCE DOCUMENT AND PERSONS RESPONSIBLE FOR AUDITING THE FINANCIAL STATEMENTS

# 7.1.1 Person responsible for the reference document

Thierry Le Hénaff, Chairman and Chief Executive Officer of Arkema.

# 7.1.2 Declaration by the person responsible for the reference document

"I hereby declare, having taken all reasonable care to ensure that such is the case, that the information in this reference document is, to the best of my knowledge, in accordance with the facts and contains no omission likely to affect its import.

I further declare that, to the best of my knowledge, (i) the financial statements have been prepared in accordance with the applicable accounting standards and give a true and fair view of the assets, liabilities, financial position and results of the Company and all of the companies included in the scope of consolidation, and (ii) the management report, consisting of the sections of this reference document listed in the cross-reference table on pages 352 and 353 of this reference document, includes a fair review of the development of the business, the results and the financial position of the Company and all of the companies included in the scope of consolidation as well as a description of the main risks and uncertainties to which they are exposed.

I have obtained a statement from the statutory auditors, KPMG Audit and Ernst & Young Audit, confirming that they have completed their work and verified information relating to the financial position and the financial statements contained in this reference document and that they have read the document in its entirety. Their statement does not contain any observations regarding this reference document.

The consolidated financial statements for the year ended 31 December 2015 and the statutory auditors' report are included in chapter 4 of this reference document. This report is presented on pages 197 and 198 of this reference document.

The historical financial information and the related statutory auditors' reports are incorporated by reference in this reference document."

Colombes, 4 April 2016
Thierry Le Hénaff
Chairman and Chief Executive Officer

#### Persons responsible for auditing the financial statements 7.1.3

#### Statutory auditors

# **KPMG** Audit

Department of KPMG S.A.

Represented by Jacques-François Lethu and François Quédiniac

Tour EQHO, 2, avenue Gambetta, CS 60055, 92066 Paris - La Défense Cedex – France

Appointed at the annual general meeting of 15 May 2014. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2019

#### Statutory auditors

## **Ernst & Young Audit**

Represented by Denis Thibon 1/2, place des Saisons,

92400 Courbevoie - Paris - La Défense 1 - France

Appointed at the annual general meeting of 23 May 2012. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2017

#### Substitute statutory auditors

#### **KPMG Audit IS**

2, rue Gambetta, 92400 Courbevoie - France

Appointed at the annual general meeting of 15 May 2014. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2019

### Substitute statutory auditors

### **AUDITEX**

1/2, place des Saisons, 92400 Courbevoie - Paris - La Défense 1 - France

Appointed at the annual general meeting of 23 May 2012. Current term expires following the annual general meeting to be held to approve the financial statements for the year ending 31 December 2017

# 7.2 PERSON RESPONSIBLE FOR THE INFORMATION

Questions concerning the Arkema Group and its activities should be addressed to:

Sophie Fouillat, Vice-President Investor Relations

Arkema

420, rue d'Estienne d'Orves

92700 Colombes (France)

Telephone: +33 (0)1 49 00 74 63

# 7.3 CONCORDANCE AND CROSS-REFERENCE TABLES

# 7.3.1 Concordance table

Informa	tion required under Annex I of EC regulation no. 809/2004 of 29 April 2004	Reference docu	ment
No.	Heading	Reference	Page(s)
1.	Persons responsible	Chapter 7	346
1.1.	Persons responsible for the information in the reference document	7.1.1	346
1.2.	Declaration by persons responsible for the reference document	7.1.2	346
2.	Statutory auditors		
2.1.	Names and addresses of the Company's statutory auditors	7.1.3	347
2.2.	Statutory auditors resigned, removed or not reappointed during the period covered by the reference document	None	
3.	Selected financial information	1.8	66
3.1.	Selected historical financial information	1.8	66
3.2.	Selected financial information for interim periods	None	
4.	Risk factors	1.7	47-65
5.	Information about the Company	5.1.1	290
5.1.	The Company's history and development	5.1.1	290
5.1.1.	The Company's legal and commercial name	5.1.1	290
5.1.2.	Place of registration and registration number	5.1.1	290
5.1.3.	Date of incorporation and length of life of the Company	5.1.1	290
5.1.4.	Registered office and legal form of the Company, legislation governing its activities, country of incorporation, address and telephone number	5.1.1	290
5.1.5.	Important events in the development of the Company's business	5.1.1	290
5.2.	Capital expenditure	1.3	32
5.2.1.	The Company's main capital expenditure projects for each financial year for the period covered by the historical financial information up to the date of the reference document	1.3.1	32
5.2.2.	Main capital expenditure projects in progress	1.3.2	33
5.2.3.	Information on the Company's main future capital expenditure projects to which its management bodies are already firmly committed	1.3.3	33
6.	Business overview	Chapter 1	14-31
6.1.	Principal activities	1.1 and 1.2	14, 20
6.1.1.	Nature of operations and principal activities	1.1 and 1.2	14, 20
6.1.2.	Significant new products or services introduced onto the market	1.2 and 1.4	20, 34
6.2.	Principal markets	1.1 and 1.2	14, 20
6.3.	Exceptional factors influencing principal activities and principal markets	None	
6.4.	Dependence on patents and licenses, industrial, commercial or financial contracts or new manufacturing processes	1.7.2.2, 1.7.2.3, and 1.7.2.4	55, 56 59
6.5.	Basis for any statements made by the Company regarding its competitive position	1.2	20

Informo	tion required under Annex I of EC regulation no. 809/2004 of 29 April 2004	Reference doc	ument
No.	Heading	Reference	Page(s
7.	Organizational structure	5.1.2	291
7.1.	Description of the Group and the Company's position within the Group	5.1.2	291
7.2.	List of the Company's significant subsidiaries	4.3.3 and 5.1.2	261, 291
8.	Property, plant and equipment		
8.1.	Existing or planned material property, plant and equipment	1.3.4	33
8.2.	Environmental issues that may affect the Company's use of property, plant and equipment	2.2	75
9.	Operating and financial review	4.1	184-194
9.1.	Financial position, changes in financial position and operating results during each financial year and interim period for which historical financial information is required	4.1	184
9.2.	Operating results	4.1.5	186
9.2.1.	Significant factors, including unusual or infrequent events or new developments, that materially affect the Company's operating income	4.1.1, 4.1.2, 4.1.3 and 4.1.4	184 185
9.2.2.	Reasons for material changes in net sales or revenue	4.1.4, 4.1.5, and 4.1.6	185, 186 188
9.2.3.	Governmental, political, economic, financial and monetary policies or factors that have materially affected, or could materially affect, directly or indirectly, the Company's operations	4.1.1, 4.1.2, and 4.1.3	184 185
10.	Capital resources	4.1.8	192-193
10.1.	Information on the Company's capital resources (short and long term)	4.1.8 and 4.1.9	192, 193
10.2.	Source, amounts and description of the Company's cash flows	4.1.9	193
10.3.	Information on the Company's borrowing terms and funding structure	4.1.8.1	192
10.4.	Information on any restrictions on the use of capital resources that have materially affected, or could materially affect, directly or indirectly, the Company's operations	4.1.8.2	193
10.5.	Information on anticipated sources of funds required to honor principal future investments and significant property, plant and equipment expenses	4.1.8.3	193
11.	Research and development, patents and licenses	1.4	34
12.	Trend information	4.2	195-196
12.1.	Principal trends in production, sales, inventory, costs and selling prices from the end of the last financial year up to the date of the reference document	4.2.1	195
12.2.	Known trends, uncertainties, demands, commitments or events that could materially affect the Company's outlook for at least the current financial year	4.2	195
13.	Profit forecasts or estimates	None	
14.	Administrative, management and supervisory bodies and executive management		
14.1.	Names, business addresses, functions and main activities outside the issuing company of (a) members of the administrative, management or supervisory bodies; (b) partners with unlimited liability, in the case of a limited partnership with a share capital (société en commandite par actions); (c) founders, if the company has been established for fewer than five years; and (d) any member of executive management who is relevant to establishing that the issuing company has the appropriate expertise and experience for the management of the issuer's business. The nature of any family ties between any of those persons. In the case of each member of the administrative, management or supervisory bodies and each person mentioned in points (b) and (d) of the first subparagraph, details of that person's relevant management expertise and experience and (a) the names of all companies and partnerships of which such person has been a member of the administrative, management or supervisory bodies or partner at any time in the previous five years; (b) any convictions for fraud for at least the previous five years; (c) details of any bankruptcies, receiverships or liquidations for at least the previous five years; (d) details of any offense or official public sanction of such person by statutory or regulatory authorities and whether such person has ever been prohibited by a court of law from serving as a member of the administrative, management or supervisory bodies of an issuer or from participating in the management or governance of any issuer's business for at least the previous five years.	3.2.1.2	139
14.2.	Conflicts of interest, commitments related to appointments, restrictions on the transfer of holdings in the Company's share capital	3.2.1.1 and 3.2.3	137, 148

Informa	tion required under Annex I of EC regulation no. 809/2004 of 29 April 2004	Reference doc	ument
No.	Heading	Reference	Page(s)
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15.1.	Compensation paid and benefits in kind granted by the Company and its subsidiaries	3.4	156
15.2.	Total amounts set aside or accrued by the Company or its subsidiaries to provide pension, retirement or similar benefits	3.4.1, 3.4.2, 3.4.3.4 and note 19 of the notes to the consolidated financial statements	157, 158, 164, 232
16.	Operating procedures of administrative and management bodies		
16.1.	Expiration date of the current term of office and the period during which the person has served	3.2.1.2	139
16.2.	Members of the administrative, management or supervisory bodies' service contracts with the Company or its subsidiaries, providing for benefits upon termination or an appropriate negative statement	3.2.3.4	148
16.3.	Information on the Company's Audit and Accounts Committee and Nominating, Compensation and Corporate Governance Committee	3.3.4.1 and 3.3.4.2	153 155
16.4.	Statement of compliance with the corporate governance regime in force in France	3.1	136
17.	Employees	2.5	104-122
17.1.	Number of employees at the end of each period covered by the historical financial information and breakdown of employees by main activity and location	2.5.1.1	105
17.2.	Shareholdings and stock options	2.5.1.3 and 5.2.6	112, 297
17.3.	Arrangements for involving employees in the capital of the Company	2.5.1.3 and 5.2.7	112, 298
18.	Major shareholders	5.3	298-302
18.1.	The name of any person other than a member of the administrative, management or supervisory bodies who, directly or indirectly, has an interest in the Company's capital or voting rights which is notifiable under the Company's national law, together with the amount of each such person's interest or, if there are no such persons, an appropriate negative statement	5.3.1	298
18.2.	Different voting rights or an appropriate negative statement	5.3.3	299
18.3.	Direct or indirect ownership or control over the Company	5.3.2	299
18.4.	Any agreement, known to the Company, the implementation of which would at a subsequent date result in a change in its control	5.3.2	299
19.	Related-party transactions	5.1.3	292
20.	Financial information concerning the Company's assets and liabilities, financial position and profits and losses	4.3 and 4.4	197, 265
20.1.	Historical financial information	4.3.2 and 4.4.2	199, 267
20.2.	Pro forma financial information	None	
20.3.	Financial statements	4.3.2 and 4.4.2	199, 267
20.4.	Auditing of historical annual financial information	4.3.1 and 4.5.1	197, 265
20.4.1.	Statement that the historical financial information has been audited	4.3.1 and 4.5.1	197, 265
20.4.2.	Other information in the reference document audited by the statutory auditors	None	
20.4.3.	Source of unaudited financial data in the reference document not extracted from the Company's audited financial statements	None	
20.5.	Date of the latest audited financial information	4.3.2 and 4.4.2	197, 265

Information required	under Anney	Lof EC regulation no	200/2004	of 20 April	200/

24.

25.

Documents on display

Information on investments

Information required under Annex I of EC regulation no. 809/2004 of 29 April 2004		Reference document	
No.	Heading	Reference	Page(s)
20.6.	Interim and other financial information	None	
20.6.1.	Quarterly or half yearly financial information published since the last financial statements and, where appropriate, the audit or review report	None	
20.6.2.	Interim audited or unaudited financial information, covering at least the first six months of the financial year if the reference document is dated more than nine months after the last audited financial year	None	
20.7.	Dividend policy	5.4.6	306
20.7.1.	Dividend per share	5.4.6	306
20.8.	Legal and arbitration proceedings	1.7.2.4 and note 21.2 of the notes to the consolidated financial statements	59, 240
20.9.	Significant change in the financial or trading position	None	
21.	Additional information	Chapter 5	289-310
21.1.	Share capital	5.2.1	292
21.1.1.	The amount of issued capital, the number of shares authorized, the number of shares issued and fully paid, the number of shares issued but not fully paid, the par value per share and a reconciliation of the number of outstanding shares at the beginning and end of the year	5.2.1	292
21.1.2.	Shares not representing capital	None	
21.1.3.	The number, book value and par value of shares held by the Company, on its behalf or by subsidiaries	5.2.4	294
21.1.4.	Convertible securities, exchangeable securities or securities with warrants	5.2.6	297
21.1.5.	Information about and terms of any acquisition rights and/or obligations over capital issued but not paid-up or an undertaking to increase the capital	None	
21.1.6.	Information about the capital of any member of the Group which is under option or agreed conditionally or unconditionally to be put under option	None	
21.1.7.	History of share capital for the period covered by the historical financial information	5.2.2	293
21.2.	Memorandum and Articles of Association	5.1.1 and 5.5	290, 307
21.2.1.	Company purpose	5.1.1	290
21.2.2.	Provisions of the Company's Memorandum, Articles of Association, charter or bylaws concerning the members of administrative, management and supervisory bodies	3.2 and 3.3	137, 149
21.2.3.	Rights, preferential rights and restrictions attaching to each class of existing shares	5.5.4	309
21.2.4.	Action necessary to change shareholder rights	5.5.2	308
21.2.5.	Conditions, including conditions of admission, governing the manner in which annual general meetings and extraordinary general meetings are called	5.5.1	307
21.2.6.	Provisions of the Company's Memorandum, Articles of Association, charter or bylaws that would have an effect of delaying, deferring or preventing a change in control	5.5.2	308
21.2.7.	Provisions of the Company's Memorandum, Articles of Association, charter or bylaws governing the ownership threshold above which shareholdings must be disclosed	5.5.6 and 5.5.7	309, 310
21.2.8.	Conditions imposed by the Company's Memorandum, Articles of Association, charter or bylaws governing changes in the capital, where such conditions are stricter than is required by law	None	
22.	Material contracts	1.5	42
23.	Third party information, statements by experts and declarations of interest	None	

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199, 267 291

5.1.1

4.3.2, 4.4.2, and 5.1.2

# 7.3.2 Cross-reference table

This reference document includes all the items of the Company and Group management report as required by articles L. 225-100 et seq., L. 232-1 II, L. 233-16, L. 233-26 and R. 225-102 of the French Commercial Code (I). It also contains all the information in the annual financial report referred to in articles L. 451-1-2 of the French Monetary and Financial Code and 222-3 of the AMF general regulation (II).

In order to facilitate the reading of the management report and the annual financial report mentioned above, the following cross-reference table has been prepared to identify the sections constituting these reports. Additionally, in accordance with AMF recommendation no. 2010-13, the cross-reference table helps to identify corporate social and environmental responsibility data required pursuant to articles R. 225-105 and R. 225-105-1 of the French Commercial Code (III). The cross-reference table also helps to identify the required information in the Chairman of the Board of Directors' report pursuant to article L. 225-37 of the French Commercial Code as approved by the Board of Directors on 2 March 2016 (IV).

Finally, the cross-reference table also lists other reports prepared by the Board of Directors or the statutory auditors (V).

No.	Information	Reference	
I	MANAGEMENT REPORT		
1	Position and activity of the Company and, where applicable, its subsidiaries and companies under its control, over the past financial year	1.2 and 1.3	
2	Results of operations of the Company, its subsidiaries and companies under its control	4.1.5	
3	Key financial performance indicators	1.8	
4	Review of the business, results of operations and financial position	4.1 and 4.2	
5	Progress achieved or difficulties encountered	4.2.1	
6	Description of main risks and uncertainties (including the Company's exposure to financial risks)	1.7.2	
7	Notes on the use of financial instruments and the Company's financial risk management policies and objectives	1.7.2.5	
8	Significant events that have occurred since the end of the reporting period	Note 32 of the notes to the consolidated financial statements	
9	Planned development and outlook of the Company	4.2	
10	Research and development activities	1.4	
11	List of positions held and duties performed by each executive director in all companies during the reporting period	3.2.1.2	
12	Total compensation and benefits in kind paid to each executive director during the reporting period $^{\left( 1\right) }$	3.4.1, 3.4.3, and 3.4.4	
13	Commitments of any kind entered into by the Company in favor of its executive directors, corresponding to items of compensation, indemnities or benefits due or expected to be due as a result of the commencement, termination or change of duties or due post-termination in particular pension commitments and other lifetime advantages	3.4.1, 3.4.3 and 3.4.4	
14	Transactions by executives on the Company's securities	3.4.5	
15	Corporate social and environmental responsibility, and commitments in favor of sustainable development, the circular economy, combating discrimination and promoting diversity	See III of cross-reference table	
16	Shareholdings in companies with registered offices in France and representing over 1/20, 1/10, 1/5, 1/3, 1/2 or 2/3 of these companies' capital or voting rights	5.1.2 Note D to the consolidated financial statements	
17	Transfer or disposal of shares undertaken to regularize cross shareholdings	Not applicable	
18	Individual persons or corporate bodies holding directly or indirectly over 1/20, 1/10, 3/20, 1/5, 1/4, 1/3, 1/2, 2/3, 18/20 or 19/20 of the Company's share capital or voting rights at general shareholders meetings	5.3.1, 5.3.2, 5.3.5, 5.3.6, and 5.3.7	

No.	Information	Reference
19	Injunctions or fines for antitrust practices	1.7.2.4 and note 21.2.2 of the notes to the consolidated financial statements
20	Factors likely to have an impact in the event of a public offering	
	Structure of the Company's capital	5.2.1 and 5.3.1
	Restrictions under the Articles of Association on the exercise of voting rights and share transfers, clauses of agreements brought to the Company's attention, pursuant to article L. 233-11 of the French Commercial Code	5.5.2
	Direct or indirect shareholdings in the Company's share capital, of which it is aware under articles L. 233-7 and L. 233-12 of the French Commercial Code	5.3.1, 5.3.2, and 5.3.4
	List and description of bearers of securities with special controlling rights	Not applicable
	Control mechanisms in place for an employee shareholding scheme where controlling rights are not exercised by the employees	Not applicable
	Agreements between shareholders of which the Company is aware and which can entail restrictions on the exercise of voting rights and share transfers	Not applicable
	Rules applicable to the appointment and replacement of members of the Board of Directors, and to amendments to the Company's Articles of Association	3.2.1.1, 3.2.3 and 3.3.2.2
	Powers of the Board of Directors, in particular regarding share issuance and buyback	3.3.1, 3.3.2.1, 5.2.4 and 5.2.5
	Company agreements which are amended or lapse in the event of a change of control (2)	1.5.4 and note 30.2 of the notes to the consolidated financial statements <sup>(3)</sup>
	Compensation agreements for members of the Board of Directors or employees who resign or are made redundant without any real or serious reason or as a result of a public offering	3.4.3.4
21	Company's management structure (only in the event of amendments)	Not applicable
22	Calculation and results of adjustment of conversion bases or of exercising of securities giving access to capital and stock subscription and purchase options	3.5.2 and 5.2.6
23	Information on share buyback programs	5.2.4
24	Summary table showing the authorizations to increase the share capital currently in force	5.2.5
25	Five-year financial summary	4.4.4
26	Dividends paid during the last three financial years and dividends eligible for the 40% tax rebate	5.4.6
27	Information on non-tax-deductible sumptuary expenses (article 223 quater of the French General Tax Code)	None (see 6.2.2)
28	Details of trade payables (article D. 441-4 of the French Commercial Code)	Note D8 to the annual financial statements
<u>II</u>	ANNUAL FINANCIAL REPORT	
1	Company financial statements	4.4.2 and 4.4.3
2	Consolidated financial statements	4.3.2 and 4.3.3
3	Statutory auditors' report on the Company financial statements	4.4.1
4	Statutory auditors' report on the consolidated financial statements	4.3.1
5	Management report including, at minimum, the information mentioned in articles L. 225-100, L. 225-100-2, L. 225-100-3 and L. 225-211 paragraph 2 of the French Commercial Code	See I of this cross-reference table, and in particular headings 4, 5, 7, 8, 15, 17, 20 and 21
6	Statement of persons responsible for the annual financial report	7.1.2
7	Statutory auditors' fees	Note 31 of the notes to the consolidated financial statements
8	Report by the Chairman of the Board of Directors on the conditions of preparation and organization of the work performed by the Board, and on the internal control procedures implemented by the Company	See IV of this cross-reference table
9	Statutory auditors' report prepared in accordance with article L. 225-235 of the French Commercial Code	3.6

	Information	Reference
	CONCORDANCE TABLE FOR SOCIAL AND ENVIRONMENTAL INFORMATION	
	Key environmental and social indicators	2.2, 2.5, 2.6 and 2.7
	Social information	
	Employment	
	Total headcount and breakdown by gender, age and region	2.5.1.1
	New hires and departures	2.5.1.2
	Compensation and changes in compensation	2.5.1.3
	Work organization (I)	
	Organization of working time	2.5.3.1
	Employee relations	
	<ul> <li>Organization of social dialogue, particularly employee information, consultation procedures and negotiation procedures</li> </ul>	2.5.4.1
	Collective bargaining agreements	2.5.4.3 and 2.5.5.1
	Health and safety (I)	
	Occupational health and safety	2.5.5.1
	<ul> <li>Bargaining agreements signed with trade unions and employee representatives concerning occupational health and safety</li> </ul>	2.5.5.1
	Training	
	Training policies	2.5.2.1
	Total number of training hours	2.5.2.1
	Equal treatment	
	<ul> <li>Measures to promote the employment and integration of people with disabilities</li> </ul>	2.5.6.2
	Measures to promote gender equality	2.5.6.1
	Anti-discrimination policy	2.5.6.3
	Work organization (II)	
	• Absenteeism	2.5.3.2
	Health and safety (II)	
	<ul> <li>Occupational injuries, particularly frequency and severity, and occupational illness</li> </ul>	2.1.2 and 2.5.5.3
	Promotion and compliance with the provisions of the core conventions of the International Labour Organization regarding	
	<ul> <li>Freedom of association and the right to collective bargaining</li> </ul>	2.5.7.1
	• Elimination of employment and occupation discrimination	2.5.7.2
	Elimination of forced or compulsory labor	2.5.7.3
	Abolition of child labor	2.5.7.3

Reference

'		Rotoronco
	Environmental information	
	Overall environmental policy (I)	
	<ul> <li>Organization of the Company to address environmental concerns, and, where applicable, environmental assessment or certification procedures</li> </ul>	2.1.1 and 2.2.1.1
	Initiatives taken to train and raise awareness among employees on environmental protection	2.1.1.2 and 2.5.2.1
	Resources used to prevent environmental risks and pollution	2.1.1.2 and 2.2.1
	Pollution and waste management	
	<ul> <li>Measures to prevent, reduce or rectify emissions into air, water and soil that have a serious impact on the environment</li> </ul>	2.2.1.2
	Measures to prevent, recycle and dispose of waste	2.2.1.2
	<ul> <li>Addressing noise pollution and any other form of pollution specific to an activity</li> <li>Climate change</li> </ul>	2.2.1.2
	Greenhouse gas emissions	2.2.1.4
	Sustainable use of resources (I)	
	Water consumption and water supply in accordance with local regulations	2.2.1.3
	Raw materials consumption and measures to promote more efficient use	2.2.1.3
	Energy consumption and measures to improve energy efficiency and use of renewable energy	2.2.1.3
	Protection of biodiversity	
	Measures to protect or develop biodiversity	2.2.1.5
	Overall environmental policy (II)	2.2.1.0
	Amount of provisions and guarantees for environmental risks	2.2.1.6 and note 20.3 of the notes to the consolidated financial statements
	Sustainable use of resources (II)	sidiemenis
	• Land use	2.2.1.3
	Climate change (II)	
	Adapting to the consequences of climate change	2.2.1.4
	<ul> <li>Information on technological accident risk prevention policy, the Company's ability to cover its civil liability in terms of property and people due to classified facilities, and resources provided to oversee the processing of victim compensation in the event of a technological accident for which the Company bears responsibility</li> </ul>	1.7.2.3 and 2.1
	Societal information promoting sustainable development	
	Regional, economic and social impact of the Company's activities	
	On employment and regional development	2.4.1
	On local communities	2.4.1
	Relations with the people and organizations interested in the Company's activities, in particular job placement organizations, educational establishments, environmental associations, consumer associations and local communities	
	Dialogue with stakeholders	2.4.2.1
	Partnerships and sponsorship initiatives	2.4.2.2
	Subcontracting and suppliers (I)	
	Consideration of social and environmental issues in the procurement policy	2.4.5
	Subcontracting and suppliers (II)	
	Scale of subcontracting and consideration of social and environmental responsibilities of suppliers and subcontractors	2.4.5
	Fair practices	
	Steps taken to prevent corruption	2.4.4
	Steps taken to promote consumer health and safety	2.2.2.2
		2.5.7

Information

No.

No.	Information	Reference
IV	REPORT BY THE CHAIRMAN ON THE BOARD OF DIRECTORS' WORK AND INTERNAL CONTROL PROC	EDURES
1	Composition of the Board of Directors and gender balance	3.2.1.1 and 3.2.1.2
2	Conditions for the preparation and organization of the work of the Board of Directors	3.3.2, 3.3.3, and 3.3.4
3	Internal control and risk management procedures put in place by the Company, in particular those relating to the preparation and treatment of accounting and financial information for the Company financial statements and, where applicable, the consolidated financial statements	1.7.1
4	Potential limitations imposed by the Board on the powers of the CEO	3.3.1
5	Where a Company voluntarily refers to a corporate governance code drawn up by business organizations: provisions that were disregarded and the reasons, as well as how the code may be consulted	3.1
6	Where applicable, the reasons for the Company disregarding all the provisions of a corporate governance code and rules respected in addition to the legal requirements	Not applicable
7	Specific conditions for shareholder participation in general shareholders meetings or referral to the provisions of the Articles of Association that provide for these conditions	5.5.1 and 5.5.2
8	Principles and rules laid down by the Board of Directors to determine the compensation and benefits in kind awarded to executive directors	3.4
9	Mention of the publication of information required under article L. 225-100-3 of the French Commercial Code	See 1.20 of this cross-reference table
٧	OTHER DOCUMENTS	
1	Statutory auditors' report prepared in accordance with article L. 225-235 of the French Commercial Code	3.6
2	Special report of the statutory auditors on related-party agreements and commitments	6.1
3	Proposed agenda for the annual general meeting of 7 June 2016	6.2.1
4	Proposed resolutions submitted to the annual general meeting of 7 June 2016	6.2.2
5	Board of Directors' report to the annual general meeting of 7 June 2016	6.3
6	Statutory auditors' report on the issue of shares and/or securities giving access to the Company's share capital with or without preferential subscription rights	6.4
7	Statutory auditors' report on the issue of shares and/or securities giving access to the Company's share capital without preferential subscription rights reserved for members of a Group Savings Plan	6.5
8	Statutory auditors' report on the authorization to grant performance shares	6.6
9	Statutory auditors' report on the authorization to grant free shares to the Chairman and Chief Executive Officer	6.7
10	Supplementary report by the Board of Directors on the use made of the delegation of authority granted pursuant to the 19 <sup>th</sup> resolution of the annual general meeting of 15 May 2014 (article R. 225-116 of the French Commercial Code)	6.8
11	Declaration that the social and environmental information required in the management report in respect of legal and regulatory commitments has been properly disclosed	2.8

<sup>(1)</sup> This includes compensation and employee benefits granted by the Company and its subsidiaries, including in the form of allocation of share capital, debt securities, or securities giving access to the Company's share capital. A distinction should be made between the fixed, variable and exceptional components making up these compensations and employee benefits, as well as the criteria used to calculate them or the circumstances in which they have been established.

<sup>(2)</sup> Except if this disclosure, other than where required by law, would have a significant negative impact on the Company's interests.

<sup>(3)</sup> The material contracts will need to be reviewed to establish whether or not they include clauses on change of control.

# Glossary

Term	Definition
Acrylic acid	An acid derived from propylene and mainly used as an intermediate in the preparation of superabsorbents and derivatives used in the manufacture of paints, inks and adhesives.
Acrylic esters	Acrylic acid esters.
Activated carbon	Processed charcoal used for its properties as an adsorption agent (i.e. the retention of molecules of a gas or a substance in solution or suspension on the surface of a solid).
Adsorption	The retention of molecules of a gas or a substance in solution or suspension on the surface of a solid.
Amines	A compound obtained by substituting monovalent hydrocarbon radicals for one of the hydrogen atoms of ammonia.
Carbon nanotubes	Cylindrical structure consisting of coils of one to tens of graphite planes, with a diameter ranging from 10 to 100 nanometers, and a few microns in length.
Chloromethane	A molecule obtained by substituting one atom of chlorine for one of the hydrogen atoms of methane.
CO <sub>2</sub>	Carbon dioxide.
COD	Chemical oxygen demand. A parameter for measuring water pollution by organic compounds, whose decomposition consumes oxygen.
Copolyamide	A polyamide obtained from two or more types of monomer.
Debottlenecking	A modification made to an industrial installation in order to increase production capacity.
Diatomites	Unicellular micro-organisms used in their fossil state (diatomites) by the chemical industry for their properties as filter aid.
Dioctylphthalate or DOP	An ester made from phthalic anhydride and mainly used as a plasticiser.
DMAEA	Abbreviation for dimethylaminoethyl acrylate.
DMDS	Abbreviation for dimethyldisulfide.
EC regulation 1107/2009	Refers to regulation (EC) n° 1107/2009 of the European Parliament and the Council of 21 October 2009, concerning the authorisation, commercialisation, use and control of phytopharmaceutical products within the European Community.
EDA	Refers to copolymers and terpolymers made from ethylene and acrylic esters.
<b>EFPI</b> (Environmental Footprint Performance Indicator)	Refers to the intensive indicator used by Arkema to offset the impact of changes in the production scope or volume and to monitor changes in its environmental performance compared to its 2020 objectives.
Elastic Bonding	Refers to elastomeric adhesive technology used in hardwood flooring, transport, assembly and flexible packaging applications.
Emulsions	Binders for paints, adhesives and varnishes produced by polymerisation of monomers (acrylic, vinyl and others) and forming a stable dispersion in water of polymer particles which, coated and dried, form a continuous film.
Extensive indicator	Indicator expressed in absolute value (in tonnes of emissions, in Mm3 or TWh of consumptions).
Functional polyolefins	Ethylene-derived polymers used as binding agents in multilayer food packaging and other industrial applications.
GHGs	Greenhouse gases.

Term	Definition
<b>GWP</b> (Global Warming Potential)	Index measuring the impact of a given mass of gas estimated to contribute to global warming, expressed in relation to carbon dioxide.
H <sub>2</sub> S	Hydrogen sulfide.
HCFCs	Hydrochlorofluorocarbons.
Heat stabilizers	Additives used to improve a polymer's resistance to heat.
HF	Hydrofluoric acid.
HFCs	Hydrofluorocarbons. Hydrofluorocarbons. Hydrogen-, carbon- and fluorine-based products that are mainly used in refrigeration as substitutes to CFCs (chlorofluorocarbons), following the introduction of the Montreal Protocol.
Hotmelts	Thermoplastic adhesives.
Hotmelts PSA (Pressure Sensitive Adhesives)	Refers to pressure sensitive Hotmelts.
Hydrazine hydrate	A nitrogen-, hydrogen- and water-based product used as an intermediate in agrochemicals, pharmaceuticals, chemical synthesis, water treatment and blowing agents for plastics and elastomers.
ICCA	International Council of Chemical Associations.
Impact modifiers	Additives introduced into certain products, in particular PVC, to make them more impact-resistant.
Initiators	Products used to initiate chemical reactions.
Intensive indicator	Intensity indicator relative to production volumes.
Interface agents	Products used in the formulation of additives.
IRT	Instituts de Recherche Technologique.
ISO 14001	An international standard that defines the criteria for introducing an environmental management system in companies.
Kyoto Protocol	Refers to an international agreement, entered into by 84 countries on 11 December 1997 in Kyoto (Japan), which was intended to supplement the May 1992 United Nations Framework Convention on Climate Change (UNFCCC). The Kyoto Protocol entered into effect on 16 February 2005.
Latex	Binders for paints, adhesives and varnishes produced by polymerisation of monomers (acrylic, vinyl and others) and forming a stable dispersion in water of polymer particles which, coated and dried, form a continuous film.
Mercaptans	Thio-alcohols and phenols.
Methyl methacrylate (MMA)	An essential raw material in the manufacture of polymethyl methacrylate (PMMA) for the automotive, construction and equipment industries. Methyl methacrylate is used not only in the manufacture of PMMA, but also in the fields of acrylic emulsions and plastic additives.
Molecular sieves	Synthesised mineral products used to purify liquids and gases by the selective adsorption of molecules.
Non-woven	Refers to textiles whose fibres are aligned in a random fashion.
NOx	Nitrogen oxides.
<b>ODP</b> (Ozone Depletion Potential)	Index measuring the impact of a given mass of gas estimated to contribute to the depletion of the ozone layer, expressed in relation to the impact of a chlorofluorocarbon.
Organic peroxides	Oxidising organic products used as initiators for polymerisation and as crosslinking agents.
Oxo-alcohols	Alcohols derived from propylene and used as synthesis intermediates.
Oxygenated solvents	Substances such as alcohols, ketones and ethers that contain oxygen atoms and have the ability to dissolve other substances without modifying them chemically.
Perlite	A natural silicate of volcanic origin used in industry for its properties as a filter aid.
Photocure resins	Synthetic resins that harden under the effect of ultraviolet light.
Phthalic anhydride	An orthoxylene derivative mainly used in the manufacture of plasticisers and as a synthesis intermediate.
PMMA	The ISO code for polymethyl methacrylate.
Polyamide	A polymer obtained by the reaction of a di-acid on a di-amine, or from the polymerisation of a monomer having both an acid and an amine function.
Polyamide 10 (PA10), Polyamide 11 (PA11), and Polyamide 12 (PA12)	Thermoplastic polyamides, whose monomers have 10, 11 and 12 carbon atoms, respectively.

Term	Definition
Polyethylene	A plastic obtained by the polymerisation of ethylene.
Polymer Modified Binders	Refers to adhesives based on hydraulic binders.
Polymerisation	The union of several molecules of one or more compounds (monomers) to form a large molecule.
Polymers	Products made by polymerisation.
Polyphthalamide (PPA)	A thermoplastic material from the polyamide family, obtained by polymerisation of aromatic diacides and aliphatic diamines, and characterised by high melting point and high mechanical rigidity.
Polystyrene	A plastic obtained by the polymerisation of styrene, an aromatic compound.
Processing agents	Products that facilitate the conversion of polymers by molding or extrusion.
Product life cycle	Refers to the various processing stages of a material, from raw material extraction through to management of end-of-life.
PTFE	The ISO code for polytetrafluoroethylene.
PVC	The ISO code for vinyl polychloride or polyvinyl chloride.
PVDF	The ISO code for polyvinylidene fluoride.
RCMS	The Responsible Care® Management System.
<b>REACH</b> (Registration, Evaluation and Authorisation of Chemicals)	The European regulation n° 1907/2006 of the Parliament and the Council dated 18 December 2006, concerning the registration, evaluation and authorisation of chemical substances, that came into force on 1 June 2007.
Refers to organic materials in suspension.	These are solid particles present in water that can be retained by physical or mechanical means (filtration and sedimentation).
Responsible Care®	A voluntary initiative by the world chemical industry to achieve continuous progress in safety, health and environment, managed in France by the UIC under the name of Engagement de progrès® ("Commitment to Progress").
Sebacic acid	Diacid derived from castor oil, used as an intermediate in the manufacture of bio-sourced polymers, plastics, lubricants, and anti-corrosion agents.
SO <sub>2</sub>	Sulfur dioxide.
Sodium chlorate	Sodium salt used in the treatment of paper pulp, as a herbicide, or as a synthesis intermediate.
Sodium perchlorate	Sodium salt used as a synthesis intermediate.
SOx	Sulfur dioxide.
SPOM	Refers to Suspended Particulate Organic Matter present in water that can be recovered by physical or mechanical means (filtration, sedimentation).
Stabilizers	Additives used to preserve a given composition of a product.
Surfactants	Refers to a compound that increases the spreading and wetting properties of a liquid by lowering its surface tension.
The Spin-Off of Arkema's businesses	Refers to the transaction, the subject of the prospectus that received the Autorité des marchés financiers visa n° 06-106 dated 5 April 2006.
UIC	Union des industries chimiques (Union of Chemical Industries). The professional body of the chemical industry in France.
Ultrafiltration	Refers to a system of filtration on the scale of one hundredth of a micron.
Unsaturated polyesters	Esters with high molecular weights produced by the linking of numerous ester molecules that have double bonds between carbon atoms.
VF2	The PVDF monomer.
Vinyl acetate	An ester derived from methanol and mainly used as raw material for EVAs (functional polyolefins).
VOC	Volatile Organic Compounds.





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