INDUSTRIAL SPECIALTIES

Marc SCHULLER
Executive Vice-President
Industrial Specialties and Coating Solutions
INDUSTRIAL SPECIALTIES AT A GLANCE

2014 KEY FIGURES*

<table>
<thead>
<tr>
<th>IN €M</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>2,269</td>
</tr>
<tr>
<td>EBITDA</td>
<td>312</td>
</tr>
<tr>
<td>EBITDA margin</td>
<td>13.8%</td>
</tr>
<tr>
<td>EBIT</td>
<td>169</td>
</tr>
<tr>
<td>Capex</td>
<td>268</td>
</tr>
</tbody>
</table>

2014 SALES BY BUSINESS UNIT*

- Thiochemicals: 11%
- PMMA: 26%
- Fluorochemicals: 24%
- Hydrogen Peroxide: 31%

PMMA sales include Sunclear** for 8%

2014 SALES BY REGION*

- Europe: 42%
- North America: 35%
- Asia and RoW: 23%

KEY SUCCESS FACTORS

- Leading positions in four platforms
- Large integrated chemical lines
- Proprietary technologies and competitive production processes
- World-scale production sites
- Global footprint
- Recognized and well-established brands
- Strong partnerships / customer base

*Sales using new reporting
**Project subject to information / consultation of works councils in France announced in June 2015
LEADING POSITIONS IN FOUR MAIN PLATFORMS

<table>
<thead>
<tr>
<th>BU / platform</th>
<th>Main products</th>
<th>Main end-markets</th>
<th>Worldwide position</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THIOCHEMICALS</strong></td>
<td>Sulfur derivatives</td>
<td>Animal nutrition PETrochemicals</td>
<td>#1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>and refining</td>
<td></td>
</tr>
<tr>
<td><strong>FLUOROCHEMICALS</strong></td>
<td>Fluorogases</td>
<td>Air-conditioning and refrigeration</td>
<td>#3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fluoropolymers</td>
<td></td>
</tr>
<tr>
<td><strong>PMMA</strong></td>
<td>MMA</td>
<td>Automotive</td>
<td>#2</td>
</tr>
<tr>
<td></td>
<td>PMMA sheets and resins</td>
<td>Signs and displays</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electronics</td>
<td></td>
</tr>
<tr>
<td><strong>HYDROGEN PEROXIDE</strong></td>
<td>Hydrogen peroxide</td>
<td>Pulp and paper</td>
<td>#3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Detergence</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Electronics</td>
<td></td>
</tr>
</tbody>
</table>
INDUSTRIAL SPECIALTIES STRATEGY

**DIFFERENTIATED STRATEGY BY BU**

<table>
<thead>
<tr>
<th>Product Line</th>
<th>Growth</th>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIOCHEMICALS</td>
<td>GDP ++</td>
<td>Accelerate growth</td>
</tr>
<tr>
<td>FLUOROCHEMICALS</td>
<td>GDP</td>
<td>Restore competitiveness in a changing environment Next generation of gases</td>
</tr>
<tr>
<td>PMMA</td>
<td>GDP</td>
<td>Take advantage of growth in specialty applications</td>
</tr>
<tr>
<td>HYDROGEN PEROXIDE</td>
<td>GDP</td>
<td>Take advantage of growth in specialty applications</td>
</tr>
</tbody>
</table>

**STRATEGIC PILLARS**

- Technology leadership and manufacturing excellence in each platform
- Increase share of specialties
- Invest selectively to capture growth opportunities
- Secure long-term competitive access to strategic raw materials
OPERATIONAL EXCELLENCE TO ACHIEVE SUPERIOR PERFORMANCE

TECHNOLOGY LEADERSHIP

- Proprietary technologies in each platform with strong in-house expertise
- Continuous improvement of complex processes
  - ~50% of R&D allocated to process innovation
- Recent success:
  - Fluorogases manufacturing processes: HFC125 / HFO1234yf
  - Thiochemicals: state-of-the-art sulfur derivatives process for animal nutrition in Malaysia
- Proven ability to manage complex industrial projects

MANUFACTURING EXCELLENCE

- Take safety and reliability to a best in class level
- Reinforce competitiveness
  - Thiochemicals - Lacq, France
    - Lacq 2014 project:
      - Long-term competitive access to sulfur secured for next 30 years
      - Optimization of process and organization
  - Hydrogen Peroxide - Jarrie, France
    - Conversion of a mercury electrolysis to a membrane electrolysis
    - Ongoing reorganization of the site
- Shutdown of loss-making units
  - PMMA - Bernouville, France* (38 positions)
  - Fluorochemicals - Zaramillo, Spain (59 positions)
- Optimize energy efficiency and yields

High barriers to entry

Very competitive cost position

*Subject to the information - consultation process of works councils in France
ASSET FOOTPRINT WELL ESTABLISHED IN ASIA

THIOCHEMICALS
Kerteh (Malaysia)
+6 to 7% growth* per year driven by animal nutrition, refining and petrochemicals

FLUOROCHEMICALS
Changshu (China)
+3 to 4% growth* per year driven by regulation (HCFCs to HFCs)

PMMA
Jinhae (South Korea)
Growth driven by automotive

HYDROGEN PEROXIDE
Shanghai (China)
Growth driven by industrial applications (Chemical synthesis, bleaching, cleaning,...)

World-scale units supporting Group’s long-term growth

*Expected growth of the market
ACCELERATE DEVELOPMENT IN SPECIALTIES

THIOCHEMICALS
- Customized solutions (service + product)
- Paladin® for soil fumigation

FLUOROCHEMICALS
- Intermediates for agrochemicals
- Synthesis intermediates for pharmaceuticals
- Development in electronics

PMMA
- High heat PMMA for automotive parts
- New generation of glass for LED lighting

HYDROGEN PEROXIDE
- Food applications
- New energies
- Electronics

Strong pipeline of innovations at different stages of development
SECURE ACCESS TO STRATEGIC RAW MATERIALS

<table>
<thead>
<tr>
<th>BU</th>
<th>Key raw material</th>
<th>Location</th>
<th>Drivers</th>
</tr>
</thead>
<tbody>
<tr>
<td>THIOCHEMICALS</td>
<td>Sulfur (H2S)</td>
<td>Lacq, France</td>
<td>▶ H2S supply secured for next 30 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▶ Risk existing at the time of spin-off removed</td>
</tr>
<tr>
<td>FLUOROCHEMICALS</td>
<td>Fluorspar</td>
<td>Canada</td>
<td>▶ Acquisition of stake in a mine</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other project under review</td>
</tr>
<tr>
<td>HYDROGEN PEROXIDE</td>
<td>Hydrogen, Electricity</td>
<td>Jarrie, France</td>
<td>▶ Conversion of mercury electrolysis to membrane electrolysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▶ Risk existing at the time of spin-off removed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>▶ Secure long-term competitive access to electricity (Exeltium)</td>
</tr>
</tbody>
</table>
STRONG PARTNERSHIPS

THIOCHEMICALS
NOVUS

THIOCHEMICALS
CJ CHEILJEDANG

FLUOROCHEMICALS
DAIKIN

HYDROGEN PEROXIDE
HUAYI
WELL POSITIONED TO SUPPORT GROUP’S LONG-TERM AMBITION

Technology leadership  +  Innovation  +  Global footprint  +  Partnerships, customer intimacy

Industrial Specialties EBITDA margin potential
17 - 19%

Arkema’s long-term ambition
A STRONG LEADER BUILT OVER THE PAST 10 YEARS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Several issues</td>
<td>Business potential unlocked with EBITDA margin &gt; 20% in 2010-2012</td>
<td>Unexpected magnitude of adverse market conditions</td>
<td>Restore historical profitability and remain a strong global leader</td>
</tr>
<tr>
<td>▶ Lack of clear strategy</td>
<td>▶ Competitive asset base built in Asia</td>
<td>▶ Increasing competitive pressure from Chinese HFC producers</td>
<td></td>
</tr>
<tr>
<td>▶ Limited commitment to the future</td>
<td>▶ Market positions in North America and Europe strengthened</td>
<td>▶ Momentarily increased quotas in HCFC22</td>
<td></td>
</tr>
<tr>
<td>▶ But valuable strengths</td>
<td>▶ Transition to HFCs and blends successfully managed</td>
<td>▶ €100 m EBITDA lost between mid-2013 and mid-2014</td>
<td></td>
</tr>
</tbody>
</table>
ARKEMA’S FLUOROGASES AT A GLANCE

2014 SALES

- €7.5 bn
  2014 proforma
  Group sales*

- Fluorochemicals:
  €540 m sales
  ~7% of Group sales

#3 WORLDWIDE**

KEY SUCCESS FACTORS

- Integrated chain from gases to fluoropolymers
- Wide range of products
- Proprietary technologies
- Recognized brands (Forane®)
- Global footprint with world-scale units
- Strong R&D know-how (process, product)

GLOBAL PRESENCE

- Calvert City Production
- King of Prussia R&D
- Pierre-Bénite R&D + Production
- Changshu R&D + Production

*2014 proforma sales including Bostik and using new reporting
**IHS CEH Fluorocarbons 2014, production capacities in kt
A MARKET SPLIT BETWEEN EMISSIVE AND NON EMISSIVE APPLICATIONS

**NON EMISSIVE APPLICATIONS**
- GROWTH: +5 TO +6% PER YEAR
- Specialties
  - Agrochemicals, electronics,...
- Fluoropolymers
  - PTFE/PVDF/Others
    - Captive use in PVDF
    - Merchant sales

**EMISSIVE APPLICATIONS SUBJECT TO REGULATIONS**
- GROWTH: +2 TO 3% PER YEAR
- Source: IHS CEH Fluorocarbons 2014, Arkema internal estimates
- F22
- 142b
- 32
- 125
- Blends...
- Air-conditioning
  - Mobile / Stationary
  - Refrigeration
  - Foams
  - Aerosol propellant

Capture growth opportunities

Successfully manage transition of products

Source: IHS CEH Fluorocarbons 2014, Arkema internal estimates
A GLOBAL FRAMEWORK WITH DIFFERENT REGULATORY STAGES BY REGION

Montreal Protocol
- Ozone depleting substances
- Impact on HCFCs (142b, 22)

Kyoto Protocol
- Global warming potential substances
- Impact on HFCs (134a, 32, 125, 143a, HFC blends)

... LEADING TO PERMANENT TRANSITIONS TO NEW GENERATIONS OF PRODUCTS...

HCFC
Old Generation
- 22
- 142b
- ...

HFC
Current Generation
- 134a
- 125
- 32
- Blends
- ...

HFO
Next Generation
- 1234yf
- 1233zd
- ...

...WITH INCREASING COUNTRY-SPECIFIC HFC REGULATIONS (US, Canada, Japan, Europe, etc.)
A GLOBAL LONG-TERM TRANSITION AT A DIFFERENT PHASE IN EACH MAIN REGION....

- **Phase-down to be completed in 2020 through “cap and allocation”**
- **Phase-down completed**
- **Start-up of phase-out over next 25 to 30 years**

<table>
<thead>
<tr>
<th>Region</th>
<th>Key Points</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NORTH AMERICA</strong></td>
<td>~25% of global demand</td>
</tr>
<tr>
<td>HCFCs</td>
<td>Phase-down under review by authorities (SNAP)</td>
</tr>
<tr>
<td>HFCs</td>
<td>Favored by EPA regulation on CO₂ emissions</td>
</tr>
<tr>
<td><strong>EUROPE</strong></td>
<td>~10% of global demand</td>
</tr>
<tr>
<td></td>
<td>Phase-down starting with quotas (F-gas regulation from 1 January 2015)</td>
</tr>
<tr>
<td></td>
<td>Phase-out of HFC with GWP&gt;150 from 1 January 2017 in new vehicles (MAC directive)</td>
</tr>
<tr>
<td><strong>ASIA</strong></td>
<td>~45% of global demand</td>
</tr>
<tr>
<td></td>
<td>Significant growth to replace HCFCs</td>
</tr>
<tr>
<td></td>
<td>Country by country approach</td>
</tr>
</tbody>
</table>

**A COMPLEX WORLD OFFERING OPPORTUNITIES FOR TECHNOLOGY LEADERS**
IMPLYING DIFFERENT STRATEGIC PRIORITIES BY REGION

NORTH AMERICA
- Successfully manage the end of phase-out process of F22
- Get prepared for future regulatory changes

EUROPE
- Prepare for transition to next generation of products
- Address competitiveness issues
- Monitor regulatory changes
  - Accelerate development in specialties and fluoropolymers (High Performance Materials)
  - Reinforce upstream integration in fluorspar

ASIA
- Capture growth opportunities
OUR AMBITION FOR FLUOROGASES

COMMITTED TO REMAIN A STRONG AND PROFITABLE GLOBAL LEADER IN FLUOROGASES WITH A COMPREHENSIVE RANGE OF PRODUCTS

**Mid-term priority (3 to 4 years)**

- Restore profitability to historical levels
  + €100 m EBITDA through a combination of internal measures and better pricing environment

**Long-term priority**

- Be a leading and integrated player in the next generations of fluorogases
+€50 M EBITDA FROM INTERNAL MEASURES

DEVELOP UPSTREAM INTEGRATION IN FLUORSPAR

Price of Fluorspar FOB Durban

2005 actual

+120%

Positive progresses in the definition of the project

ADDRESS COMPETITIVENESS ISSUES IN EUROPE

- Shutdown of Zaramillo (Spain) effective 2Q’15: expected EBITDA gain of €6 m
- Other projects progressing (fixed and variable costs)

INCREASE MARKET SHARE OF SPECIALTIES AND FIRST DEVELOPMENTS IN HFOs

- Agrochemical intermediates
- Pharmaceutical synthesis intermediates
- Electronics
- HFO 1234yf
- Investment in progress in China

TARGET €50 M
3 MAIN DRIVERS

- F22 USA: new quotas implemented since 1 January 2015
- HFC Europe: F-gas regulation
  → quotas on HFC products implemented since 1 January 2015
- 134a USA: final resolution on antidumping rights rejected end of 2014
  Appeal made by Mexichem and DuPont

NEW

- HFC blends USA: filing of antidumping petition against imports from China

IMPACT

Net positive

Prices Volumes
DEVELOP NEXT GENERATION OF FLUOROGASES

HFO 1234yf for automotive air-conditioning

- HFO 1234yf defined as the new global standard by the automotive industry
- In Europe, mandatory use as from 1 January 2017 of products with GWP < 150 for every new car sold in Europe (MAC directive)
- In the US, 1234yf will support the EPA regulation to curb CO₂ emissions
- Statement of objection issued by the European Commission end 2014. Waiting for final decision
- Investment in progress in a new plant in China to produce 1234yf with start-up expected before end 2016

HFO 1233zd and HFO blends

- Foams and chillers (mid-term)
- Stationary air-conditioning (longer term)
WRAP UP

Integration

Innovation (Product + process)

Global footprint and regulations

+€100 m EBITDA versus 2014

Arkema’s long-term ambition
THIOCHEMICALS
## REINFORCING LEADING POSITION OVER THE PAST 10 YEARS

### 2005 – 2014

<table>
<thead>
<tr>
<th>Unrealized good potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶ Profitability not reflecting full potential</td>
</tr>
<tr>
<td>▶ Despite good positions in H₂S derivatives</td>
</tr>
</tbody>
</table>

### LEADING POSITION IN H₂S REINFORCED

- Successful ramp-up of Beaumont unit started in 2005
- Operations in Europe and North America streamlined
- Highly competitive production platform built in Asia
- Risk existing at the time of the spin-off on the H₂S supply at Lacq (France) removed end 2013
- Bolt-on M&A completed to further reinforce portfolio of businesses with €50 m net sales divested

*x5 EBITDA*

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**Accelerate growth**

- Beaumont (US)
- Kerteh (Malaysia)
ARKEMA’S THIOCHEMICALS AT A GLANCE

2014 SALES

€7.5 bn
2014 proforma Group sales*

2014 SALES BY REGION

32% 35%
Europe North America
33%
Asia and RoW

KEY SUCCESS FACTORS

- #1 worldwide in H₂S derivatives
  - Niche market: 0.8 mt
  - Main competitor: Chevron Phillips Chemicals
- Unique state-of-the-art technology developed over more than 30 years
- Only player with global footprint and competitive world-scale units in 3 main regions
- Differentiated offer with customized service (Carelflex®, gas odorizers)
- Long term partnerships with global industry leaders

GLOBAL PRESENCE

- Beaumont
- Houston
- Lacq
- Kerteh - New (1Q’15)

* 2014 proforma sales including Bostik and using new reporting
STRONG COMBINATION OF HIGH-GROWTH AND RESILIENT NICHES

Major growth drivers

- High growth in animal nutrition supported by increasing standards of living in emerging countries, notably Asia
- Critical solutions for key applications offering strong earnings resilience:
  - Petrochemicals: higher efficiency
  - Refining: regulatory drive
  - Gaz odorizers: safety
- Emergence of Asia as a key market with superior growth
- Increasing need for innovative solutions

Expected growth: 4 to 5% CAGR

Demand by main end-markets for H₂S derivatives

- Animal nutrition: precursor for methionine, ~25%
- Petrochemicals, refining: crackers: anticoking agent, refining: fuel desulfuring, ~20%
- Gas odorizers: gas leakage detection, ~15%
- Polymers: polymerization agent, ~30%
THIOCHEMICALS STRATEGY

ACCELERATE GROWTH

Successfully execute on the ramp-up of our new platform in Asia in line with our plans

Support the growing demand for sulfur derivatives

Expand our specialty product portfolio and sales through innovation and customized solutions

Further enhance technology leadership and permanently focus on operational excellence (commercial and manufacturing)
LEVERAGE OUR NEW ASIAN PLATFORM

Proven ability to manage complex projects

- Greenfield project
- In a new country for Arkema
- With a new partner
- On a new process
- Excellent quality of products beyond our expectations
  ➔ A major technical success

Now focused on the successful ramp-up

- Good market conditions supporting successful start
- Well-balanced platform
  - MeSH for CJ’s bio-methionine
  - DMDS for the Group’s traditional markets of petrochemicals and refining
- Full capacity after 3 years

Confident in the prospects for the platform

- Confirm potential of US$120 m sales (at full capacity)
- Further thoughts underway
INCREASING OUR VALUE PROPOSAL TO OUR CUSTOMERS

A comprehensive product offering for our customers
- With a global efficient technical support to best use our products
- 3 world-scale units in each region of the world

Offering customized services
- Developing customer intimacy
- Delivering high-quality services to inject our products
- Dedicated team of specialists in each region

Support our customers in their own product development
- Offering them innovative solutions to develop new applications
- Our technology leadership at their service

A strong partner for our customers
PERMANENT FOCUS ON TECHNOLOGY LEADERSHIP AND OPERATIONAL EXCELLENCE

**TECHNOLOGY LEADERSHIP**

- New processes
  - MeSH for bio-methionine in Malaysia
- New Thiochemicals products
- New applications
  - Paladin® for soil fumigation
- Proven ability to execute major investment projects (Kerteh, Lacq, Beaumont)

**OPERATIONAL EXCELLENCE**

- Manufacturing excellence
  - Energy efficiency and yield optimization
  - Streamlined organizations
  - Long term competitive access to H₂S (Lacq 2014, France)
- Commercial excellence
  - Differentiated offer with customized services
  - Take advantage of “Ambition” roll-out to improve satisfaction of customers and reinforce working capital management

50 years of expertise

#1 worldwide
WRAP UP

Technology leadership + Global footprint + Customer focus

Together with Fluorochemicals, the largest contributor to the long-term growth of the segment

Arkema’s long-term ambition
The information disclosed in this document may contain forward-looking statements with respect to the financial condition, results of operations, business and strategy of Arkema. Such statements are based on management’s current views and assumptions that could ultimately prove inaccurate and are subject to material risk factors such as among others, changes in raw material prices, currency fluctuations, implementation pace of cost-reduction projects and changes in general economic and business conditions. These risk factors are further developed in the reference document.

Arkema does not assume any liability to update such forward-looking statements whether as a result of any new information or any unexpected event or otherwise. Further information on factors which could affect Arkema’s financial results is provided in the documents filed with the French Autorité des marchés financiers.


The business segment information is presented in accordance with Arkema’s internal reporting system used by the management.

The definition of the main performance indicators used can be found in the reference document filed with the French Autorité des Marchés Financiers and available on www.finance.arkema.com