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# Progress

To meet the immense challenges of sustainable development, people must constantly rethink how they address the world's urgent environmental, social and economic issues.

By focusing on genuinely innovative, ambitious, disruptive research, Arkema helps us achieve a fresh balance by designing and developing safer, ever more efficient, eco-friendly products.



# Performance materials and sustainable development, the core of our R&D

R&D is pivotal to Arkema's future, setting the stage for disruptive research projects, developing a broad range of ultra-high-performance materials, contributing to the advancement of new energy sources, and emphasizing renewable raw materials when designing new processes and products.

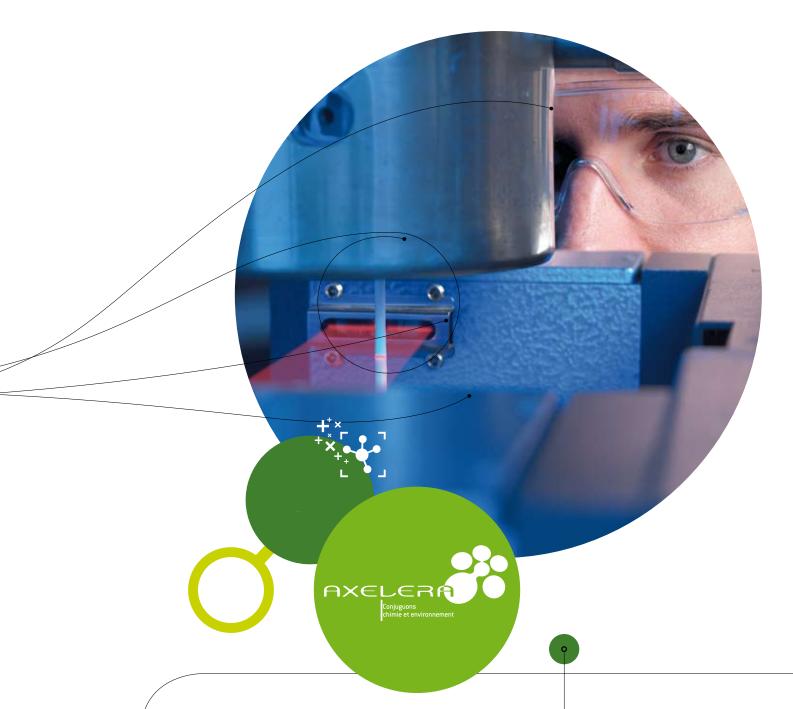
### An innovation-driven organization

Innovation in the chemical industry is driven not by applied research intended to advance existing operations on a day-to-day basis, but by medium and long-term projects, whose commercial applications may require several years' development. These efforts must be managed at corporate level, independent of each business unit's short-term financial constraints.

Arkema's R&D Department reports directly to the Chairman and CEO and commands a budget of over 2.5% of sales. The skills and expertise of our 1,200 researchers are deployed throughout six research centers in France, the United States and Japan. More than 10% of our R&D budget is directly earmarked for disruptive research projects that allow us to anticipate and plan for the future.

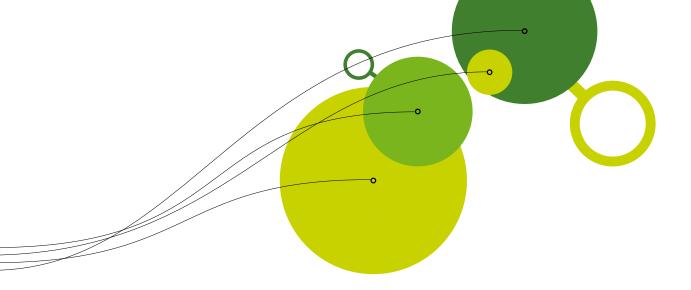
To give our innovation-focused R&D projects every chance of success, we have put together a unique, dedicated incubator organization with the human and technical resources needed to carry out such projects. Arkema's incubator interacts fully with the relevant business units, which take over projects once they reach maturity. The versatility of the incubator organization facilitates different types of projects, from developing new products and processes to acquiring startups and managing industrial and academic partnerships.





## Arkema, a key player in the Axelera competitiveness cluster in France

Three years after its creation, the Axelera chemical-environmental competitiveness cluster passed an evaluation by the French Ministry of Industry. In addition to initiating R&D programs and signing up some 150 regional members, from major corporations to small businesses and public research and educational institutions, Axelera has entered into four partnership agreements with other European clusters. Axelera's growth strategy is now focused on five areas: chemistry for societal issues, protection of natural areas, materials recyclability, green chemistry, and the factory of the future. Arkema's researchers are involved in many of the cluster's R&D programs, strengthening our innovation potential alongside a number of industrial operators and academics from the Rhône-Alpes region.



### R&D partnership with the Fondation Lyon 1 in France

Arkema stepped up its collaboration with the academic and scientific communities by participating in the creation of the first partnership foundation in France. Instigated by the Université Claude Bernard Lyon 1, the Fondation Lyon 1 heralds a fresh type of relationship between universities and companies. In keeping with our research and innovation policy, we offer the foundation financial support and, more importantly, technical and strategic expertise, boosting three-way collaboration among universities, the research community and industry.

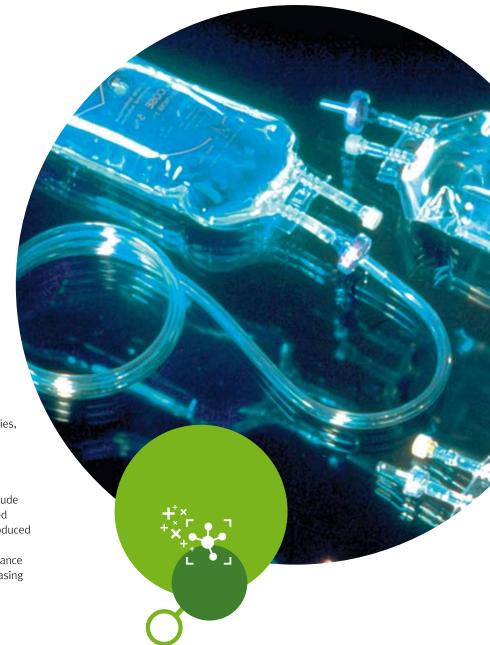
## Industrial and academic partnerships

R&D partnerships with other manufacturers and university research departments allow the partners to pool their skills and expertise. To be truly effective, R&D partnerships must be long-term. One such arrangement is the framework agreement signed in 2008 with the French National Center for Scientific Research (CNRS), which has led to the creation of full-fledged technology hubs that support ongoing exchanges and know-how transfers.

Arkema is the cornerstone industrial partner in a number of Europe-wide projects:

- The Genesis program, created to commercialize applications for nanostructured materials, brings major industrial groups, small businesses and several university laboratories together with Arkema, a leader in the field of nanostructured materials and Europe's only producer of functional copolymers with controlled architecture. This consortium designs potential market applications for nanostructured materials, including applications for automobiles, cables, and structural composites and technologies like energy, environmental, information and communications.
- Arkema and the Aquitaine Regional Council strengthened their partnership in 2008 by signing a memorandum of understanding to create a European technology innovation hub. CANOE (Consortium Aquitain d'Innovation Nanomatériaux et Électronique Organique) is dedicated to expanding the organic electronics and nanostructured materials sectors.
- Arkema, through our Carling research center (CRDE), is also collaborating with the *École Nationale Supérieure des Industries Chimiques de Nancy* (ENSIC) chemical engineering school and the Lorraine region as a partner in the region's process intensification expertise center.





# Creating a range of ultra-high-performance materials

Polymer materials from Arkema fall into three families, depending on their intrinsic properties:

- base polymers, such as PVC;
- performance polymers, like PMMA, conventional polyamides and functional polyolefins;
- and ultra-high-performance materials, which include polyamides with special properties, nanostructured materials, polyether ketone ketone, and rubber produced by supramolecular chemical processes.

We plan to expand our family of ultra-high-performance materials and have set an ambitious target of increasing their sales ten-fold over the next five years, to  $\leqslant$ 250 million annually.

## Arkema's contribution to sustainable development solutions

Through the many products we already market and our strong R&D emphasis on designing innovative materials and processes, we do our part to devise solutions that support sustainable development.

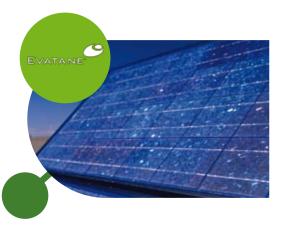
- We help to conserve fossil fuel resources by stepping up the use of plant-derived raw materials, especially to produce performance materials.
- We are contributing to the development of new energy sources, notably photovoltaic solar power, by developing materials that boost cell efficiency and longevity.
- We are developing the processes of the future, which are more energy-efficient, environmentally friendly and based on renewable raw materials.
- We offer solutions that meet the needs of both society and the environment, for example by fine-tuning and developing next-generation fluorocarbon gases with lower greenhouse effects.



# Photopoltaic solar energy for tomorrow's electricity

Solar radiation is a clean, renewable energy source. Longstanding industrial and domestic thermal applications include heating buildings and producing hot water. Harnessing solar energy using photopoltaic technology to convert sunlight to electricity is now a fast-growing application.

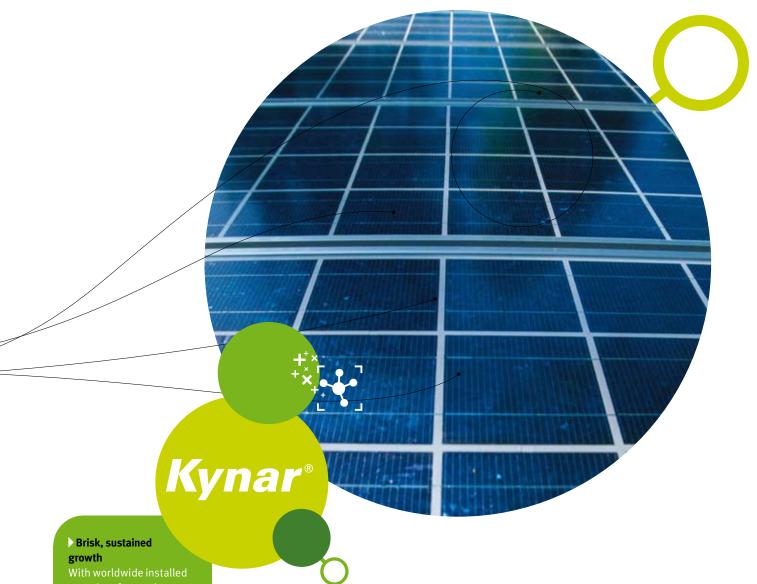
Our planet perpetually captures energy from the sun equivalent to about 10,000 times global consumption from all sources. There are no greenhouse gas emissions or longlived wastes associated with solar power, unlike conventional energy.



## Arkema's materials optimize solar cell efficiency

Used to make films for the back contacts of photovoltaic cells, Arkema's Kynar® PVDF combines several properties essential to cell longevity and efficiency. Easy to work with and resistant to temperature fluctuations and moisture, this stable white film also reflects light towards the cell's silicon.

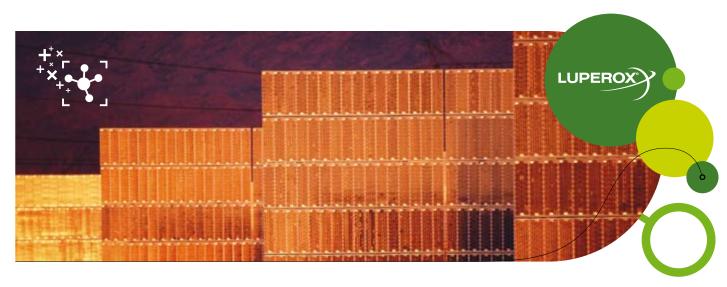
Ethylene vinyl acetate resins with high vinyl acetate content, Arkema's Evatane® technical polymers promote adhesion and effectively protect silicon and electrical circuits. Cross-linked with Luperox® organic peroxides, they are highly transparent and help to maintain photovoltaic cell performance over time.



With worldwide installed capacity of around 10,000 MW, photovoltaic solar energy currently accounts for less than 1% of global power production, but its generating capacity is growing at a rate of

## Ever more innovative materials for the photovoltaic cells of the future

Arkema is working to develop and refine innovative materials that will make photovoltaic cells more efficient by boosting their output and lowering their production costs. In coming years, the use of new polymers and nanostructured materials should raise the effective recovery rate of the captured solar energy from 15% to 40%.



# Ultra-high-performance materials

In addition to basic polymers like PVC, Arkema offers an extensive range of high-performance polymers, from PMMA to polyamides and functional polyolefins. Increasingly however, our expertise is growing in ultra-high-performance materials, which are paving the way for innovative applications across advanced technology sectors.



## Ultra-high-performance polymer materials

We are already active in the ultra-high-performance niche with internationally recognized brands like Kynar® fluoropolymers, Rilsan® polyamides and Pebax® thermoplastic elastomers. Through innovative R&D, we are also developing new polymers with outstanding properties. Currently in commercial use are innovative materials like transparent polyamides, high-temperature polyamides, fluoropolymers specifically designed for photovoltaic cells, and self-repairing rubber.



#### New bio-based performance polymers

The first thermoplastic elastomers derived directly from castoroil - the same renewable materialused to make Rilsan® polyamide 11 — Pebax® Rnew delivers the same superior properties as conventional petroleum-derived Pebax® products. Made entirely from renewable raw materials, Platamid® Rnew is used to manufacture thermoplastic hot-melt adhesives suitable for even the trickiest bonding applications.





# Polyether ketone ketone (PEKK) polymers, the newest in Arkema's range of ultra-high-performance polymers

To augment and enhance our existing range of high-performance materials, we acquired U.S.-based Oxford Performance Materials, Inc. (OPM), which markets Oxpekk® polyether ketone ketone polymers. These products have exceptional properties, including excellent high-temperature and chemical resistance, unmatched abrasion resistance and natural flame retardancy. They currently have applications in aerospace, long-term medical implants and downhole equipment for the oil and gas industry.

# Nanostrength® & Graphistrength®, two nanostructured materials with exceptional properties

Produced using proprietary technologies that can control their molecular structure and available dispersed in polymer matrices, Arkema's nanostructured materials, marketed under the Nanostrength® and Graphistrength® brands, offer exceptional improvements in mechanical strength and electrical and thermal conductivity.

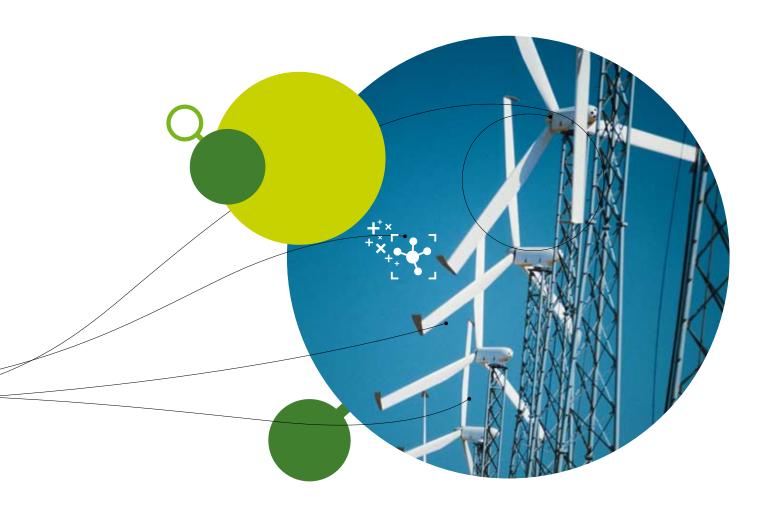


## Ultra-high-performance applications

Nanostrength® and Graphistrength® are designed for use in cutting-edge technologies that require performance levels superior to those of conventional materials. They are useful in a wide array of applications, including aerospace and aviation, sports, automobiles, electrical engineering, electronics, specialty adhesives and tires.

## Graphistrength® carbon nanotubes

The Graphistrength® line includes various grades of multiwall carbon nanotubes, produced at a pilot facility at our Lacq research center in southwestern France, and masterbatches formulated from multiwall carbon nanotubes dispersed in thermoplastic or thermoset polymers.





## Nanostrength® block copolymers

Made using proprietary Arkema technologies, Nanostrength® block copolymers are currently available in two families that differ in their chemical properties and the arrangement of their basic blocks. These nanostructured materials have a number of applications in thermosetting and thermoplastic polymers, composite materials and rubber. Regardless of the processing method used, they increase the impact strength of materials without adversely altering such basic properties as thermal behavior and transparency.

## Preventing potential risk in nanoparticle use

To counter the potential health risks involved in handling carbon nanotubes, Arkema follows the recommendations of the Haut Conseil de la Santé Publique, France's public health council, and emphasizes exposure prevention for our employees and user customers. Our voluntary, proactive approach involves three principles: promoting protection wherever safety concerns arise, acquiring the knowledge needed to characterize potential risks, and providing stakeholders with complete information.

# Innovation-driven processes

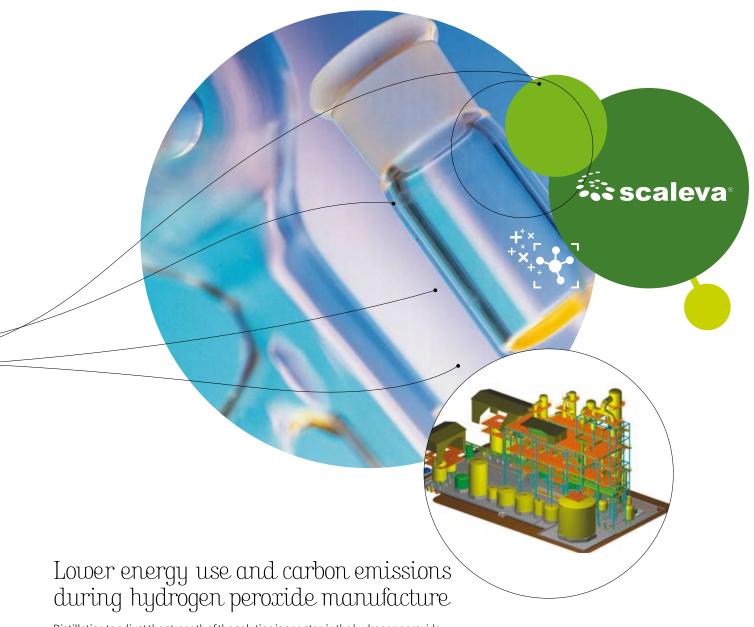
Continuous improvement, especially to enhance energy efficiency, further optimize safety, effectively meet environmental requirements and increase the use of renewable-sourced raw materials, is a core focus of Arkema's R&D, applied not only to production, but also to high-performance downstream applications.

## Environmentally friendly cleaning

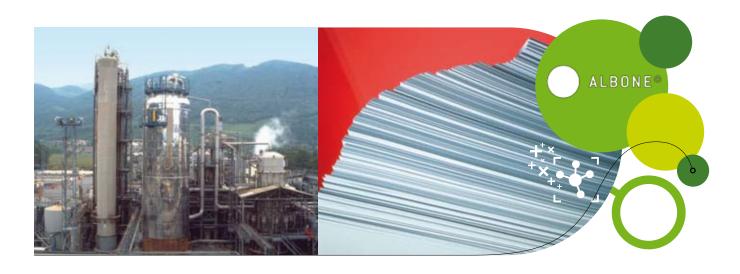
We have developed an innovative, environmentally friendly cleaner, trademarked Scaleva®, which ensures scrupulous hygiene in the food industry. The new product is a sustainable alternative to phosphoric acid, whose use generates significant phosphorus discharges that can damage the aquatic environment. Compatible with stainless steel, Scaleva® is a step change in the dairy, cheese, brewing and salt-preserving industries.

## Glycerol as an acrylic acid feedstock

Through basic R&D, we have identified an efficient catalyst that allows glycerol, a co-product of oilseed-derived biofuel manufacture, to substitute for some of the propylene required to produce acrolein and acrylic acid, both of which have industrial applications in pharmaceuticals, animal feed, and papermaking.

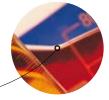


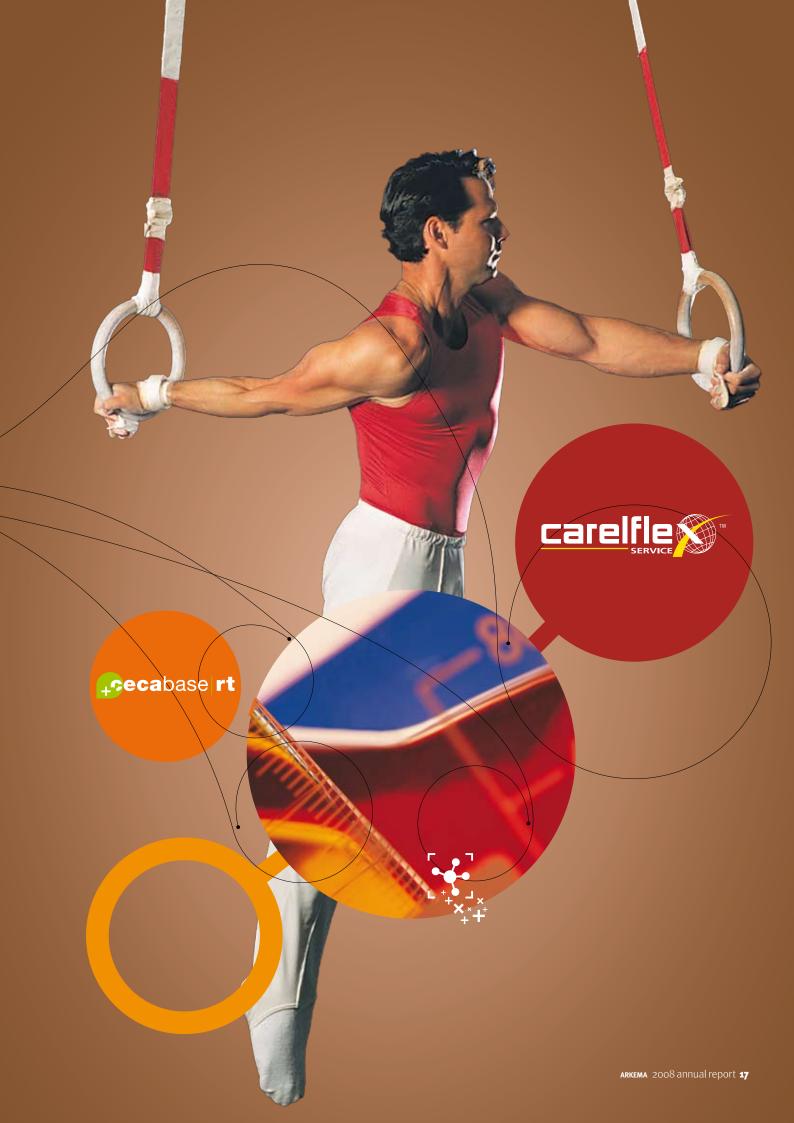
Distillation to adjust the strength of the solution is one step in the hydrogen peroxide manufacturing process. At the Jarrie production plant, the largest of the five operated by Arkema worldwide, an innovative technology enhances distillation efficiency through optimum use of steam. Compared to the conventional technology, it uses around 35% less energy and reduces carbon emissions by 70 kilograms for every metric ton of hydrogen peroxide produced, or more than 7,000 metric tons a year.



# Stability

In a global economy shaped by a host of complex interactions and experiencing changes of unprecedented scale, businesses must act swiftly to reinvent themselves and recalibrate their strategies. France's leading chemical producer and a world-class chemical company, we rely on our established manufacturing culture, international reach, top-tier positions in most of our business segments, and healthy balance sheet to ensure long-term stability.





# Interview with Thierry Le Hénaff

Thanks to a far-reaching transformation that has accelerated sharply since our IPO, we are well-equipped to deal with the deteriorating economic environment."

### How would you sum up 2008 in economic terms?

Arkema's annual results remained solid, despite a severe economic downturn in the fourth quarter. Thanks largely to internal improvements made by all our teams, our ability to weather rocky conditions resulted in an EBITDA margin very close to that of 2007.

In an environment of high raw materials and energy prices, demand held steady through the first nine months of the year. But the global economy experienced a sharp, sudden fourth-quarter downturn, prompting massive destocking by our customers.

We immediately focused on adjusting our production to match shrinking demand and on cash management and cash generation. This allowed us to maintain a decent financial position with modest debt of under €500 million, equal to our 2008 EBITDA. This is an undeniable asset these days.

#### How are you approaching 2009?

At this point, no one can say how deep or how long the current global economic crisis will be, but things are likely to remain quite tough in 2009. That means that our priorities will be maintaining a very healthy balance sheet and cutting costs.

We will stay vigilant about adapting to changes in demand while maintaining Arkema's strength, so that we're in solid shape when the crisis ends.

### How would you assess Arkema's performance in the three years since the IPO?

We have done everything we said we would do at the time of the IPO in May 2006, despite the relatively

unfavorable environment over the period. Although deteriorating economic conditions have cost us around €120 million in EBITDA, average annual EBITDA growth topped 12% over the last three years. We have also surpassed our objective for working capital, which now represents 18.7% of sales — better than the 20% originally targeted. In 2008, free cash flow was €68 million, with a net debt-to-equity of 25%.

We have also tightly focused our portfolio by divesting non-strategic product lines with sales of €400 million and making small, selective acquisitions that generated €200 million in sales.

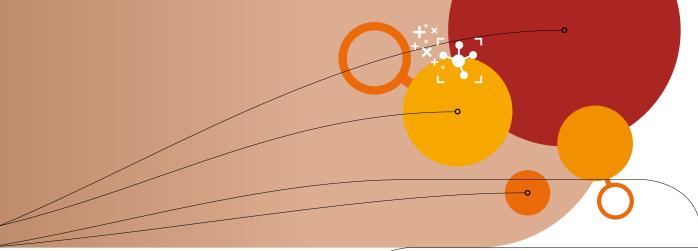
Over the last three years, thanks to the tireless efforts of all our employees, we have enhanced our competitiveness while implemented growth projects that will gradually produce benefits in the coming years.

Arkema has grown much stronger since the IPO, and we are well equipped to deal with the current crisis. The initial earnings gap with our peers has already been cut by more than half. Yes, we still have a lot of work to do in order to rank among the best in class, but I know we're on the right track.

#### What is Arkema's strategy?

Arkema's strategy is to balance cost improvements, growth in Asia, product innovation and a more tightly focused business portfolio. Although currently engrossed in dealing with today's economic environment, our employees are still pursuing efforts to totally transform the company and realize our long-term vision.

We are gradually moving our portfolio of businesses toward higher value-added products, significantly



improving our cost base and maintaining a healthy balance sheet with low debt.

As an industrial operator and chemical producer, we are mindful of our responsibilities to promote health, safety and environmental protection through thoroughgoing initiatives that reflect our beliefs. These include completing the tasks required for compliance with the European Union REACH regulation, further reducing our greenhouse gas emissions, reaching out to our stakeholders through our Common Ground® initiatives, and offering our customers sustainable development solutions.

### Is the economic crisis impacting your innovation strategy?

Slowing the pace of our new product and process rollout is absolutely out of the question. On the contrary, I firmly believe that innovation is an effective antidote to the crisis.

We directly allocate 10% of our R&D spending to long-term disruptive research projects, and we have created a unique "incubator" organization with the human and technical resources required to carry out such projects, under optimum conditions, right through to the commercial development stage.

Our long-term innovation goals center on two main areas: delivering the ultra-high-performance materials that our customers increasingly demand and developing a wide range of sustainable development solutions, especially in the new energies like photovoltaic solar power and next-generation refrigerant gases from plant-derived materials.





# What do you think the French chemical industry's priorities should be for joint action and coordination with the European Union chemical industry?

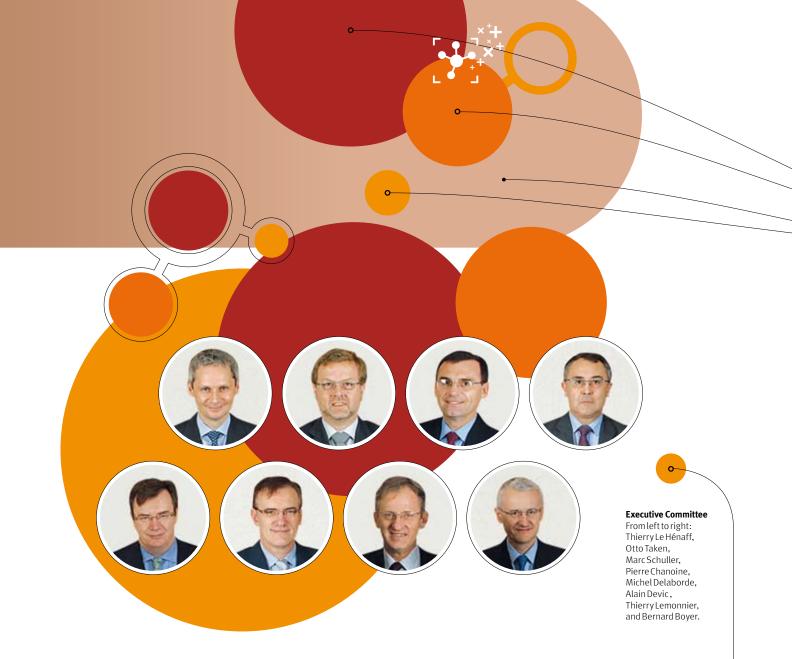
I had the honor of representing the French chemical industry as part of a European Commission High Level Group that spent the last 18 months identifying the basic building blocks for a modern, competitive, sustainable European Union chemical industry.

I am convinced that the French chemical industry can and should play an assertive role in EU joint action and coordination, even though it has fallen somewhat behind its Central European counterparts in the last ten years.

We have to accurately assess the stakes involved and support a powerful manufacturing and technological base in France. Of course, we must step up both process and new product research and innovation to keep pace with changes driven by sustainable development concerns. The research tax credit is a very effective mechanism for fostering innovation in France. Moreover, Arkema is closely involved in a number of French competitiveness clusters, including Axelera in the Lyon region and the nanostructured materials cluster in the Aquitaine region.

As the work of the Strategic Council for the French Chemical Industry (COSIC) highlighted so well, France's chemical industry absolutely must be able to purchase energy at competitive prices and have ongoing access to petrochemical feedstock and an efficient transportation infrastructure.

The E.U. chemical industry's framework for the next 20 years has been established. It is now up to us to hammer out a French equivalent as soon as possible. With its long tradition of chemistry expertise, as evidenced by its many Nobel prizewinners and topflight, prestigious schools and universities, France has a strong hand to play. As the country's leading chemical producer, with a solid commitment to innovation, Arkema has every intention of playing it fully.



#### The Executive Committee

Thierry Le Hénaff is Chairman of the Board of Directors and Chief Executive Officer of Arkema.

He chairs an Executive Committee whose other committee members are:

- the Executive Vice-Presidents of the three business segments of Arkema: Otto Takken (Vinyl Products), Marc Schuller (Industrial Chemicals) and Pierre Chanoine (Performance Products),
- the senior executives of the four corporate support functions:
  Executive Vice Presidents Michel Delaborde (Human Resources
  and Corporate Communications), Alain Devic (Industrial Operations)
  and Bernard Boyer (Strategy), and Chief Financial Officer Thierry Lemonnier.
  The Executive Committee is a decision-making organization that carries
  out strategic planning, tracks performance and examines important
  organizational issues and major projects.

The Executive Committee usually meets twice a month.

 $\label{thm:equiv} Each \, member \, is \, responsible \, for \, ensuring \, compliance \, with \, shared \, rules \, and \, principles \, in \, the \, operations \, he \, oversees.$ 

## 3 business segments, 13 business units

— Our three business segments market internationally recognized products and brands that give us global or European leadership in most of our businesses.



#### **Vinyl Products**

Vinyl Products, which generates a quarter of Arkema's sales, consists of four business units: Chlorine/Caustic Soda, PVC, Vinyl Compounds, and Pipes and Profiles (Alphacan). Its activities are integrated from brine electrolysis to PVC processing.

The markets for Vinyl Products are highly sensitive to business cycles. Moreover, Chlorochemicals labors under sector-specific upstream constraints including high energy costs and lackluster growth in the European market.

High ethylene prices, which peaked in the third quarter of 2008, and a fourth-quarter drop in PVC demand adversely affected the segment's results. The deterioration caused by the economic environment was partially offset by ongoing measures to reduce fixed costs and optimize variable costs. New restructuring plans were announced for the Saint-Auban and Jarrie facilities in France and for Alphacan and Resinoplast in the PVC downstream.

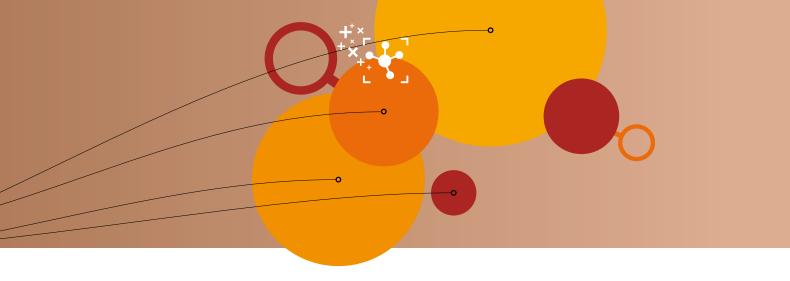
#### **Industrial Chemicals**

Arkema is a global leader in Industrial Chemicals, which accounts for nearly half of our sales and consists of six business units that produce intermediates: Acrylics, Specialty Acrylic Polymers (Coatex), PMMA and Methacrylics, Thiochemicals, Fluorochemicals and Hydrogen Peroxide.

We have production units in Europe and North America for major products like acrylic acid, specialty acrylic polymers, methyl methacrylate, PMMA, fluorochemicals, hydrogen peroxide and sulfur derivatives. We also have extensive operations in Asia, including local production facilities for fluorochemicals, hydrogen peroxide and PMMA.

We will continue to expand our global positions through new plants in Asia, targeted debottlenecking in Europe and North America, and joint ventures with our leading partners.

The segment's high quality portfolio delivered a significant increase in earnings, despite an





unfavorable economic environment and an automotive industry slowdown that strongly affected PMMA volumes in the fourth quarter. Expanded capacity in thiochemicals and fluorochemicals proved beneficial. The successful integration of Coatex helped reduce cyclical tendencies. All contributed to the entire segment's very robust performance in 2008.

**Performance Products** 

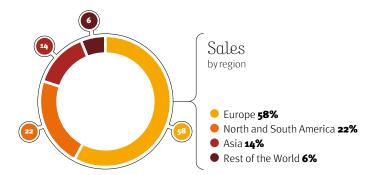
Performance Products' three business units — Technical Polymers, Specialty Chemicals (CECA) and Functional Additives — bring expertise and presence to their respective markets, allowing each to offer technical solutions tailored to specific customer requirements. This segment, which accounts for roughly one-third of Arkema's sales, holds world-class positions in several niche markets, especially polyamides, PVDF, molecular sieves, PVC process aids and organic peroxides.

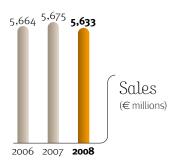
Offering a portfolio of internationally recognized brands, Performance Products provides high-performance, innovative solutions; develops new, high value-added products; and maintains quality customer relationships.

New applications, particularly in photovoltaic cells, and cost reductions offset the impact of the U.S. dollar/euro exchange rate and a collapse in overall market demand in the fourth quarter.

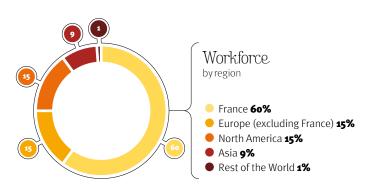


# 2008 key figures







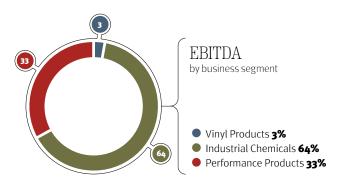


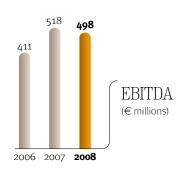
France's leading chemical producer, with global reach
• 80 production plants:
50 in Europe
20 in North America
and 10 in Asia
• 14,983 employees
• 6 R&D centers —
4 in France

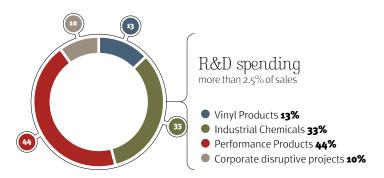
1 in the United States

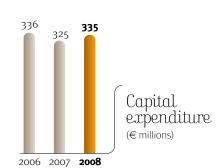
and 1 in Japan











# Preparing for the future through ongoing transformation

Despite the extremely challenging economic environment, Arkema's solid 2008 results confirm the soundness of our strategy, which was set at the time of our creation: improving competitiveness by reducing costs, putting the accent on product innovation geared toward ultra-high-performance materials and sustainable development, adjusting our portfolio of activities, and implementing selective growth projects, particularly in Asia.

## **Staying focused on improving competitiveness**

In 2007, we announced that we intended to reduce fixed costs by €500 million to improve EBITDA by €200 million by 2010, compared to 2005. In response to the severe deterioration in the economic environment in the fourth quarter of 2008, we immediately introduced special measures to adjust our production base to weaker demand and implemented a program to reduce costs by a further €50 million by 2010.

In just three years, we have already substantially narrowed the competitiveness gap with our main rivals, particularly through comprehensive restructuring everywhere we operate. We intend to repeat this course of action whenever necessary to maintain our competitive strength.

#### Putting the accent on product innovation

Since there is no reason why the economic crisis should stifle innovation, we continue to allocate a large percentage of our R&D budget to long-term, disruptive research. Over the next five years, we expect a growing portfolio of products developed through innovation will generate additional annual sales of around €∆oo million.

We have set sales targets of some €250 million from ultra-high-performance materials and almost €150 million from sustainable development solutions built on very high value-added product lines.

Materials for photovoltaic power generation, nextgeneration fluorocarbon gases for air conditioning, ultra-high-performance polyamides, petroleum additives and glass coatings are just a few of the recently created products that are already yielding benefits.

#### Adjusting our portfolio of activities

Although our 2009 priorities will shift to cash management and cash generation, we plan, over the intermediate term, to continually transform our portfolio through small and mid-sized acquisitions. Our focus will be to add higher value-added businesses that strengthen our top-tier positions while maintaining a healthy balance sheet.

At the time of the 2006 IPO, we announced that we would be divesting assets worth some €300 million to €400 million over a three-year period and were planning selective acquisitions totaling some €500 million to €800 million in terms of annual sales. These transactions would be designed to adjust our portfolio and make it more resistant to industry cycles.

Our primary divestments, such as Cerexagri and our urea formaldehyde resins business, involved operations far removed from our core businesses, while our acquisitions — of Coatex in the acrylics downstream, Odor-Tech in thiochemicals in the U.S. and Repsol's PMMA business — are fully aligned with our best product lines and create a number of synergies.

As of December 31, 2008, we had divested assets generating more than  $\in$ 400 million in sales, against roughly  $\in$ 230 million for the businesses acquired. Although our portfolio adjustments pared some  $\in$ 200 million from our sales figures, they had a positive full-year impact of  $\in$ 30 million on EBITDA.

#### Capitalizing on our best product lines

Since the IPO, we have completed or launched several selective growth projects involving our most efficient facilities in Europe and North America, in addition to expanding our presence in Asia. For instance, significant



capital expenditures have boosted the fluorochemicals business in the United States and the thiochemicals business in France.

We also plan to step up the pace of development in Asia by intensifying capital spending. Fluorocarbon gas and PVDF projects at the Changshu production hub in China have recently been approved. Our ultimate goal is for the region to account for 20% of our overall sales in 2012.

## A transformation strategy already bearing fruit

In our short, four-year history, we have remade ourselves into a much more robust company far better equipped to deal with economic ups and downs. Our reinvention has produced a very positive change in EBITDA margin, which increased from 6.2% in 2006 to 8.8% in 2008, enabling us to maintain a very healthy balance sheet.

A willingness to juggle both day-to-day operational management and longer-term projects is a core component of our strategy.



# Changshu, a competitive, growing production hub and our third-biggest site by 2011

Recent investments, particularly in Forane® 22, organic peroxides and polyamides, make our Changshu production hub near Shanghai an obvious springboard for further development in China. Changshu will soon be home to two new fluorochemical production units to boost Arkema's leadership in this niche. A unit to manufacture HFC-125 unit, an essential component in next-generation refrigerant blends, will be built in a joint venture with Japan's Daikin. It will be the leading refrigerant producer in the Asia-Pacific region. The second unit will manufacture Kynar® PVDF (polyvinylidene fluoride), a high-performance technical polymer.

# 2008 highlights

FEBRUARY 7, 2008 Arkema France's Human Resources and Accounting functions are restructured through the creation of two shared service centers (SSC).

The Human Resources SSC provides recruiting, relocation and training support to production sites, while the Accounting SSC handles payables, financial and management accounting.



FEBRUARY 29, 2008 Arkema finalizes the acquisition of Repsol YPF's PMMA business and bolsters its leadership position in the PMMA sheet market in Europe.

APRIL 30, 2008 Arkema's first worldwide employee share issue is a success.

Some 4,000 employees from 19 countries purchased a total of 618,462 shares, doubling employee ownership of Arkema S.A. to just over 2%.



**APRIL 9, 2008** Arkema restructures production of functional additives for PVC manufacturing. Manufacturing operations are transferred from the Axis site in Alabama to the Vlissingen plant in the Netherlands, concentrating the global production of Clearstrength® impact modifiers at a single European facility.

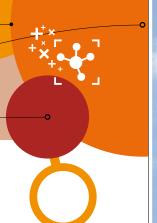


JUNE 4, 2008 Arkema's
nanostructured materials are at
the heart of the Genesis research
program, as the company and
16 other partners join forces to
develop a nanostructured materials
industry in six high-technology
European Union markets: automotive
components, energy storage, cables,
composites, conductive inks and the
environment.

JULY 9, 2008 Arkema launches an industrial production project in the European Union to produce low-GWP\* fluorinated gas for automotive air-conditioning. Looking ahead to stricter environmental standards, the plan involves investing in production of R1234yf, a fourth-generation substitute for HFC134a.

\*Global Warming Potential.





JULY 24, 2008 Arkema acquires American gas odorant specialist Odor-Tech.

With sales of nearly \$8 million in 2007, the business strengthens Arkema's position in the North American odorants market



SEPTEMBER 8, 2008 CECA obtains a Global Road Achievement Award from the International Road Federation for Cecabase® RT, its new additive for warm mix asphalts. This solution reduces carbon dioxide, carbon monoxide and nitrogen oxide emissions by 35% and dust emissions by 90% compared with conventional technologies.

**DECEMBER 10, 2008** Arkema acquires

U.S.-based GEO Specialty Chemicals' organic peroxide business. The company is building a solid organic peroxide manufacturing base in the United States to broaden its access to the North American market.

DECEMBER 2, 2008 Arkema completes pre-registration of all 430 substances covered by the E.U.'s REACH regulation.



OCTOBER 21, 2008 Arkema doubles production capacity at its Shanghai hydrogen peroxide plant to 80,000 metric tons per year. The capacity extension is successfully commissioned, strengthening Arkema's leadership in Asia.



NOVEMBER 26, 2008 Arkema further enhances the competitiveness of its Vinyl Products segment. The sharp deterioration in the economic environment of the segment's businesses necessitates changes that include shutting down aluminum chloride operations at the Jarrie plant and vinyl chloride/vinyl acetate copolymer production at the Saint-Auban facility, both in France, and reorganizing European PVC downstream operations at Alphacan and Resinoplast.

DECEMBER 12, 2008 Arkema and the Aquitaine Regional Council join CANOE (Consortium Aquitain d'Innovation Nanomatériaux et Électronique Organique), technology hub in southwestern France that will help accelerate the emergence of a fully integrated nanostructured materials sector in Europe, from raw materials through finished products.

## Solid results in 2008

9

In a tough economic environment marked by the collapse in demand in many markets in the fourth quarter 2008, Arkema resisted well, achieving an EBITDA margin close to that in 2007 at 9% and generating a positive net income of €100 million.

Key indicators		
(€ millions)	2007	2008
Sales	5,675	5,633
EBITDA	518	498
EBITDA margin	9.1%	8.8%
Recurring operating income	293	250
Net income - Group share	122	100
Capital employed	3,263	3,370
Net debt	459	495
Dividend per share	€0.75	€0.60

### An 8.8% EBITDA margin, close to that in 2007

In 2008, Arkema continued its transformation that began with its spin-off in 2006 by further reducing its break-even point and driving targeted growth in its high-value-added product lines. These internal measures enabled Arkema to better resist to the strong deterioration in the economic environment in the fourth quarter 2008.

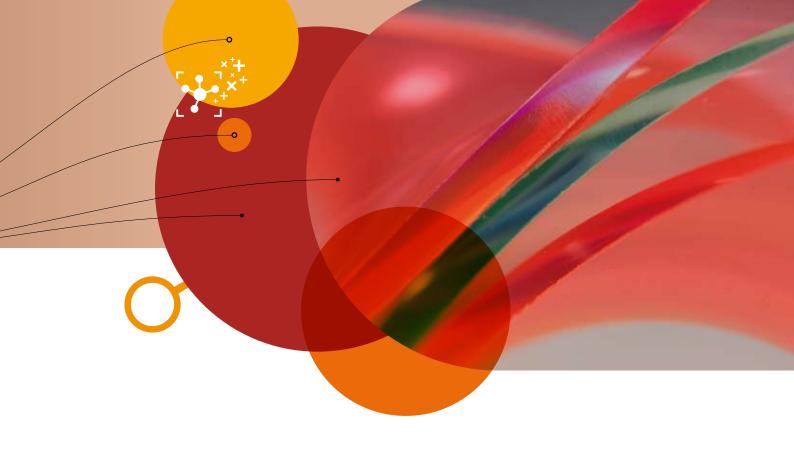
In 2008 sales totaled €5,633 million, versus €5,675 million in 2007. Excluding the translation effect mainly related to the weakness of the U.S. dollar compared to the euro in 2008 (-2.4%) and the limited effect of changes in the scope of business (-0.5%), sales were up 2.2%. The very significant increase in average selling prices across all the Group's businesses (+8.1%) offset the 5.9% decrease in volumes caused mainly by the sharp decline in demand in many market segments in the fourth quarter 2008, amplified by massive destocking by customers.

EBITDA amounted to €498 million in 2008, versus €518 million in 2007, in a very deteriorated economic environment. It includes €23 million negative inventory adjustments relating to the sharp decrease of some raw material costs at the very end of the year, and a negative €17 million relating to the translation effect on foreign exchange rates. An EBITDA gain of €111 million was achieved through productivity initiatives, very tight control of overheads, the launch of new products and the industrial growth developments in Fluorochemicals, Thiochemicals and Specialty Chemicals, which offset, to a great extent, the decline in demand, the strong increase in energy and raw material costs, and low acrylics unit margins.

EBITDA margin resisted well at 8.8% of sales, against 9.1% in 2007 and 7.3% in 2006.

Recurring operating income was €250 million in 2008, versus €293 million in 2007, and included €248 million in depreciation and amortization, up €23 million from 2007.

Net income — Group share stood at  $\in$ 100 million in 2008, versus  $\in$ 122 million in 2007. The annual general meeting on June 15, 2009 will be proposed to approve a dividend of  $\in$ 0.60 per share in respect of 2008, in line with the evolution of the results. This dividend will thus enable Arkema's shareholders to take part in the Group's transformation.



### Contrasted impact by segment of decline demand

Vinyl Products

(€ millions)	2007	2008
Sales	1,418	1,443
EBITDA	90	14
Recurring operating income	65	(25)

Vinyl Products' sales rose 1.8% to  $\leq$ 1,443 million. The increase in average selling prices and good demand for caustic soda compensated for the decrease in PVC volumes resulting from the deterioration, in the 4th quarter, in demand from the construction sector, amplified by massive de-stocking by customers.

EBITDA totaled €14 million. The very sharp and continuous rise in ethylene prices, which peaked in the 3rd quarter 2008, weighed heavily on the segment's results, as the rise in average selling price did not compensate for the very high raw material costs. In addition, the decrease in PVC volumes and selling price in the 4th quarter strongly affected the segment's results. Measures to reduce fixed costs and optimize variable costs were continued and partially compensated for the very negative impact of the economic environment.

#### Industrial Chemicals

(€ millions)	2007	2008
Sales	2,529	2,582
EBITDA	289	341
Recurring operating income	178	218

Industrial Chemicals' sales were up 2.1% to €2,582 million. The rise in average selling prices in all the segment's business units, together with the positive effect of a change in the scope of business due mainly to the acquisition of Coatex in October 2007, both offset the impact on volumes of the sharp decline in demand in some sectors such as automotive and the

negative impact of the U.S. dollar-euro exchange rate. EBITDA rose 18% to  $\mathop{\leqslant}_{341}$  million, despite bottom-of-cycle unit margins in acrylics and a slowdown in the automotive industry, which strongly affected PMMA volumes in the fourth quarter. This very strong improvement demonstrates the quality of the segment's business portfolio. Restructuring plans launched in the last three years, new product development projects and the successful integration of Coatex have contributed significantly to growth in EBITDA.

EBITDA margin improved sharply, standing at 13.2%, against 11.4% in 2007 and 10.7% in 2006.

#### Performance Products

(€ millions)	2007	2008
Sales	1,723	1,602
EBITDA	184	177
Recurring operating income	97	92

Performance Products' sales totaled €1,602 million, against €1,723 million in 2007. The decrease mainly resulted from the negative effect of changes in the scope of business following the divestment of the urea formaldehyde resin business in November 2007, the unfavorable U.S. dollar-euro exchange rate and the slowdown in demand, especially in U.S. construction, which weighed strongly on Functional Additives' volumes.

EBITDA amounted to €177 million, up 2.9%, excluding the effect of changes in the scope of business. The development of new applications such as PVDF in the solar photovoltaic market and molecular sieves, together with restructuring plans in Functional Additives and Polyamides, contributed to improve EBITDA despite a negative foreign currency effect and the collapse in demand in several market segments in the fourth quarter.

EBITDA margin increased to 11%, against 10.7% in 2007 and 8.7% in 2006.



construction of a plant to produce a new fluorocarbon gas, HFC-125, in partnership with Daikin in Changshu, China. The total capital expenditures of €335 million also includes finalization of the Chlorochemicals plan launched in 2005 and acquisitions of assets;

• a positive change in working capital, which stood at €56 million.

#### Cash generation: a top priority

Cash flow from operations and investments generated in 2008 amounted to -€11 million, against -€94 million in 2007. This includes a -€25 million net outflow from portfolio management finalized in 2008 and a -€54 million outflow from non-recurring pre-spin-off<sup>(1)</sup> items. After adjustment for both these items, free cash flow was positive and amounted to €68 million.

Since the fourth quarter 2008, the priority placed on cash generation has been reinforced with a very strict working capital and capital expenditures management. The net cash flow from operations and investments includes:

• capital expenditures in operating tangible and intangible assets of €301 million in 2008, lower than the €315 million initially targeted. These capital expenditures concerned in particular plant startups in 2008, including the doubling of the hydrogen peroxide production capacity at Shanghai, China, and the growth projects being implemented, such as

#### A very solid balance sheet

Thanks to continued tight management, working capital decreased to €1,055 million at December 31, 2008, bringing the working capital-to-sales ratio to 18.7%, against 19.3% in 2007, in line with the target of 18% in 2010.

Net debt stood at €495 million on December 31, 2008, against €459 million in 2007, giving a net-debt-to-EBITDA ratio of 1. The debt-to-equity ratio remained low at 25%. Arkema thus demonstrates its ability to maintain a high-quality, solid balance sheet despite deteriorating economic conditions. More generally, most of the group's financing is secured through a syndicated credit facility, for a maximum of €1.1 billion, which has been rolled over through March 31, 2013. At December 31, 2008, €410 million of this credit facility had been drawn down.

<sup>(1)</sup> Non-recurring pre-spin-off items include a number of special items treated as debt and therefore taken into account when calculating theoretical financial debt at the time of spin-off.

## Shareholder notebook



Since our May 2006 IPO, Arkema has been committed to providing individual and institutional shareholders with reliable information in a context of close contact and transparent dialogue. Included among the many opportunities to meet investors during 2008 were the second Annual Shareholders' Meeting, new Investor Days and the first full year of the Arkema Shareholders' Club.

### Highlight of the year, the Annual Shareholders' Meeting

Our second Annual Shareholders' Meeting was held on May 20, 2008 and attended by more than 700 shareholders. Chairman and CEO Thierry Le Hénaff reviewed our businesses, performance, transformation and outlook. Shareholders approved all the resolutions put forward by the Board of Directors at the Meeting.

**Outreach** 

In France, Arkema reaches out to individual shareholders by holding a number of information meetings outside Paris. In 2008, we met almost 1,500 people in Lyon, Marseille, Lille, Nantes and Bordeaux. For 2009, meetings are already planned for Lyon, Lille and Marseille. We also take part in the Actionaria investor fair every year, and in 2008 welcomed more than 1,000 visitors to our stand, where they tested their innovation and sustainable development knowledge through our interactive quizzes. In addition, Thierry Le Hénaff spoke at the CEO Forum.

Our Investor Days on September 22 and 23, 2008 attracted more than 40 financial analysts and institutional investors. All were brought up to date on the far-reaching changes taking place at Arkema and given a tour of the Coatex plant and R&D center in France.

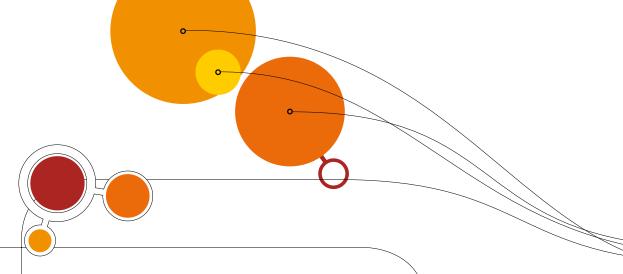
The event was followed by roadshows in Paris, London, Frankfurt and Geneva in Europe and in New York, Boston, Chicago and San Francisco in the United States. Thierry Le Hénaff, Chairman and CEO, Thierry Lemonnier, Chief Financial Officer, and Bernard Boyer, Executive Vice-President, Strategy, met with investors

during the roadshow tour. A similar roadshow was held when our annual results were released.

In addition, Arkema participated in various press conferences in Paris, Zurich, London and New York. Quarterly results were the subject of individual news releases, presentations and conference calls.

The materials related to these events are available at www.finance.arkema.com.





#### Fact sheet for the Arkema share

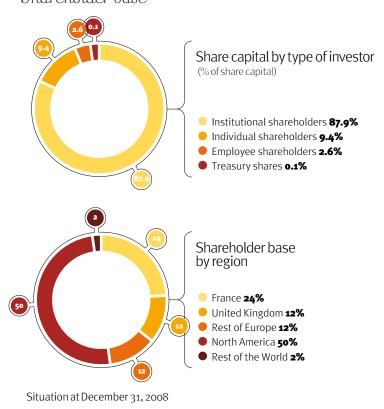
- IPO: May 18, 2006
- Market capitalization on Dec.31, 2008: €741 million
- Number of shares on Dec. 31, 2008: 60,454,973
- Parvalue:€10
- Free float: 100%
- Listed on: Euronext (Paris) stock exchange
- Indexes: SBF 120, CAC MID 100, DJ Euro STOXX Chemicals
- Sectorial classification: Sector: 1350, Chemicals Subsector: 1353, Commodity Chemicals
- ISIN code: FR0010313833
- Ticker symbol: AKE
- Bloomberg symbol: AKE FP
- Reuters symbol: AKE.PA
- Eligible for the Deferred Settlement Service (SRD) and French equity savings plans (PEA)
- Registrar: BNP Paribas Securities Services

GCT Emetteurs - Immeuble Tolbiac

75450 Paris Cedex 09, France

Toll-free number: 0 800 115 153 (France only) E-mail: arkema-actionnaires@bnpparibas.com

#### Shareholder base



#### **Communication resources**

Our shareholders have access to an Investor Relations section on our website, a 24/7 toll-free number in France and various publications. They can request the Registration Document, a share registration form, the Annual and Sustainable Development Report, the corporate brochure, the Shareholders' Club calendar and the Shareholder Newsletter at any time. We also keep our shareholders informed through the print media by publishing regular financial notices.



#### **Shareholders' Club**

Individual shareholders with at least five registered or 25 bearer shares can join the Arkema Shareholders' Club free of charge. Its main purpose is to familiarize investors with Arkema and help them to understand our organization and what we do, especially through site tours. The Club celebrated its first anniversary in November 2008. We met nearly a hundred shareholders at events held every other month, including conferences, site tours and first aid classes.

The following Club events are scheduled for the first half of 2009:

- February 5, 2009: Tour of the Fos-sur-Mer plant in southern France.
- $\bullet \, \mathsf{March} \, \mathsf{25}, \mathsf{2009} \colon \mathsf{First} \, \mathsf{aid} \, \mathsf{classes} \, (\mathsf{French} \, \mathsf{Red} \, \mathsf{Cross}).$
- June 23, 2009: Tour of the Lannemezan plant in southwestern France.



2009 calendar

MARCH 5, 2009 – Release of 2008 results

APRIL 27, 2009 – Shareholder information meeting in Lyon

May 13, 2009 – Release of first-quarter 2009 results

June 15, 2009 – Annual Shareholders' Meeting in Paris

June 18, 2009 – Shareholder information meeting in Lille

August 3, 2009 – Release of interim 2009 results

**November 10, 2009** – Release of third-quarter 2009 results

**November 20-21, 2009** – *Salon Actionaria* investor fair in Paris

**DATE TO BE CONFIRMED** – Shareholder information meeting in Marseille

#### Recognition

Our investor relations initiatives earned us first place in the CAC MID100 category for Best Individual Shareholder Relations at the *Fils d'Or* awards, held on October 14, 2008 and organized by *La Vie Financiè*re magazine, business daily *Les Echos* in partnership with Synerfil. The award recognizes the quality of shareholder relations at major French and euro-zone companies and is based on such criteria as responsiveness, reliability and user-friendliness.

Arkema was also a winner in Swiss daily *Agefi's* 2008 Corporate Governance Awards, taking second prize in the Investor Relations Quality and Transparency category. The award recognizes the breadth, quality and accessibility of our investor information and the responsiveness and availability of our management.

#### Contacts

Arkema

Investor Relations

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- Telephone: +33 (o)149 00 74 63
- Fax: +33 (0)149 00 50 24
- www.finance.arkema.com

#### Individual shareholders:

- E-mail: actionnaires-individuels@arkema.com
- 24/7 toll-free number:

**○ Toll-free number** 0 800 01 00 01 (France only)

24/7: real-time share price, financial calendar, news and financial information.

An individual shareholder advisor is available Monday to Friday, from 9:00 a.m. to 12:30 p.m. and 1:30 to 5:00 p.m.

#### Institutional shareholders:

• investor-relations@arkema.com

#### Share performance since IPO

#### Arkema share performance versus the SBF 120



IPO price: €27.50

Price on Dec. 31, 2008: €12.25

High: €50.88 Low: €10.93

Performance since IPO on May 18, 2006:

Arkema: down 55.45% at December 31, 2008

SBF120: down 35.28%

Average daily traded volume in 2008: €11 million

#### Share price (in euros) and change (%)

	2006*	2007	2008
Arkema			
High	41.45	50.88	45.75
Low	24.94	36.35	10.93
Most recent price (closing)	38.93	44.94	12.25
Annual change	+41.56%	+15.44%	-72.74%
SBF120			
Annual change	+13.32%	+0.34%	-43.08%

<sup>\*</sup>Since IPO on 18 May 2006.

#### A dividend of €0.60 per share

Arkema shareholders also stand to benefit from our improved results. Shareholders at the Annual Shareholder's Meeting on June 15, 2009 will be asked to approve a dividend of €0.60 per share for fiscal year 2008, to be paid on June 15, 2009, in line with changes in our results. We plan to continue paying a dividend, the amount dependent on Arkema's financial performance.

# Corporate governance

In a complex, uncertain economic environment, companies must pay increased attention to upholding principles of corporate governance, especially those relating to director independence, transparent information and respect for shareholders' rights. Around the world, the rules of governance involve three levels of oversight: shareholders, who at Annual Shareholders' Meetings empower a Board of Directors (or Supervisory Board), which in turn oversees senior executives involved in day-to-day management.

### Regulations that conform to AFEP/MEDEF recommendations

Since its creation, Arkema has introduced governance measures, including the Board of Directors' internal rules, that comply with the recommendations of French employers' association AFEP/MEDEF. On November 12, 2008, the Board of Directors voted to adopt the AFEP/MEDEF Code of Corporate Governance as a guideline, noting that the company had already implemented many of its principles, including evaluation of the Board of Directors, directors' independence and prohibiting employment contracts for corporate officers.

Arkema's organization comprises an eight-member Executive Committee responsible for executive management of the company, and a Board of Directors, established at the time of the 2006 IPO, that determines the company's strategic vision and ensures its implementation. In 2006, the Board of Directors voted to combine the roles of Chairman of the Board and Chief Executive Officer and appointed Thierry Le Hénaff to this dual role for the duration of his term as director. Given Arkema's organization into business segments and functional divisions, the Board's decision to combine these offices is proving effective for ensuring efficient coordination within the Group.

#### A majority of independent directors

The Board of Directors comprises eight directors (Thierry Le Hénaff, François Enaud, Bernard Kasriel, Laurent Mignon, Thierry Morin, Jean Pierre Seeuws, Tidjane Thiam and Philippe Vassor), six of whom are deemed independent under the criteria specified in the Board of Directors' bylaws, which comply with the AFEP/MEDEF recommendations. The Board of Directors determines who qualifies as an independent director, based on Appointments and Compensation Committee proposals. An independent director is one who, other than his position on the Board, has no

relationship whatsoever with the company, its group or its management.

Accordingly, the January 20, 2009 Board of Directors meeting ruled, based on a proposal from the Appointments and Compensation Committee, that François Enaud, Bernard Kasriel, Thierry Morin, Laurent Mignon, Tidjane Thiam and Philippe Vassor are independent directors.

The Board of Directors met five times in 2008. The average attendance was 87.5%.

#### **Board of Directors' committees**

The Board of Directors created two standing committees in 2006, the Audit and Accounts Committee and the Appointments and Compensation Committee.

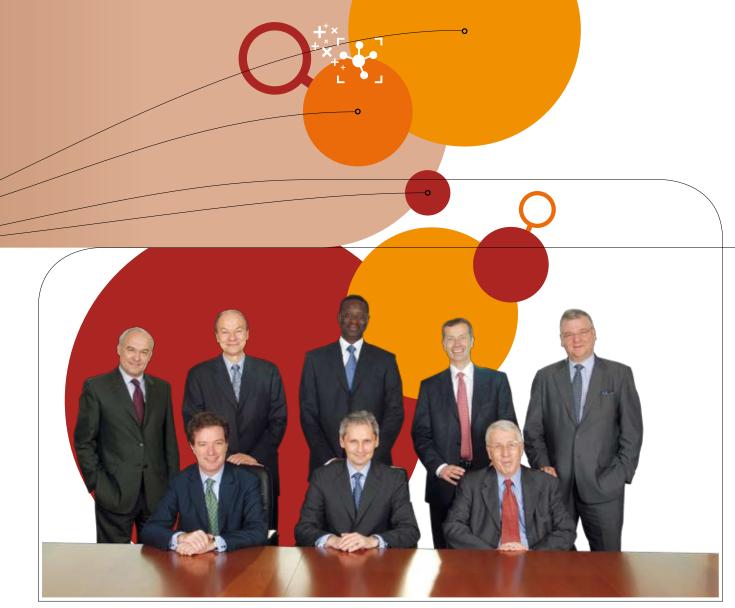
The Audit and Accounts Committee is comprised of Philippe Vassor (Chairman), Jean-Pierre Seeuws and Laurent Mignon, giving it two independent directors including the Chairman. Thierry Lemonnier, Arkema's Chief Financial Officer, is the Committee's secretary.

The Committee met five times in 2008 and reported on its work to the Board of Directors. The average attendance was 86.6%.

The Committee's work during the fiscal year focused primarily on examining the annual, interimand quarterly financial statements, ensuring effective internal control procedures, reviewing internal and external auditing programs and audit results, and monitoring developments in Arkema's main legal and arbitration proceedings.

The Appointments and Compensation Committee consists of Thierry Morin (Chairman), François Enaud and Bernard Kasriel, who are all independent directors. Michel Delaborde, Executive Vice-President, Human Resources and Corporate Communications, is the Committee's secretary.

This committee met three times in 2008 and reported on its work to the Board of Directors. Attendance was 100%.



The committee's work focused primarily on reviewing the compensation of company officers and Executive Committee members, examining the conditions governing a severance package for the Chairman and Chief Executive Officer if he were dismissed under the August 21, 2007 TEPA Act, setting up stock-option and performance-share plans, and reviewing plans for an employee-only share issue.

#### A Board of Directors with diversified, complementary experience

A joint study conducted in 2008 by InvestorSight and the Institut Français des Administrateurs (IFA) directors' association highlighted Arkema's governance best practices.

The study particularly stressed how effectively the Board of Directors operated and how well its members complemented one another. The Board's composition gave Arkema top-notch, diversified, complementary skills and experience, as per the corporate governance principles set forth by AFEP/MEDEF. Directors were selected with the assistance of an external consultant, and Thierry Le Hénaff had not met most of them prior to their first interview.

Special care is taken to forward information to members both in advance of and between Board meetings. Arkema considers the Annual Shareholders' Meeting less a legal requirement and more a prime opportunity to meet with shareholders and present results, the year's events and the work performed by the Board of Directors. To this end, all Committee chairmen reported on their committees' work at the 2008 meeting.

The Board of Directors has conducted self-assessments twice, in 2006 and 2007, using a questionnaire drawn up under the supervision of the Appointments and Compensation Committee. In 2008, an external consultant performed this evaluation. The evaluations provide guidance to the Board of Directors regarding any necessary changes in the way it operates.

#### **Board of Directors**

Left to right, front row: Messrs. Laurent Mignon, Thierry Le Hénaff, Jean-Pierre Seeuws; bach row: Messrs. Thierry Morin, Bernard Kasriel, Tidjane Thiam, François Enaud, Philippe Vassor.



# Interactions

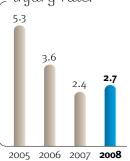
Sharing ideas and information, comparing viewpoints, and forging partnerships among stakeholders working toward shared goals are the core drivers of change in today's world.

Since progress is meaningless unless it benefits the greatest possible number, we strive to be open to civil society in all its diversity, to manage risk and environmental impact, to act as a responsible steward of our products, and to promote employee dialogue.

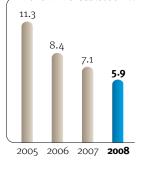


# Industrial safety

# Lost time injury rate:



Total recordable injury rate, with and without lost time:



#### Risk management expertise and a dedicated organization.

#### A shared safety culture under the *Safety in Action* banner

Approved and promoted by Arkema's Executive Committee, our safety management process is defined at the corporate level and disseminated globally.

The process involves the deployment of safety management systems, targeted consulting and support initiatives, scheduled control audits, and the involvement of employees at all reporting levels within all businesses.

This ongoing initiative, cascaded worldwide under the *Safety in Action* banner, involves three fundamental, interlocking parts:

- A technical component that deals with risk prevention at our facilities and during hazardous materials transportation. It involves incorporating hazard prevention and protection measures during process planning, installation design, equipment selection and manufacturing procedure definition.
- A component concerned with the quality of operations, including the deployment of management systems tailored to the specific needs of each plant and analysis support resources that are frequently up-

graded. Our safety management systems are regularly audited and certified by internal and external auditors, based on the International Safety Rating System (ISRS) and Arkema's own guidelines and recommendations.

• Ahuman resources, behavioral component targeting everyone at our production plants, Arkema and contractor employees alike, because improving industrial safety performance fosters a shared safety culture.

#### A real-world, global process

Arkema deploys the *Safety in Action* program worldwide to provide our plants with practical tools that can be used by everyone to improve both personal and collective behavior:

• "Highlights" are quarterly scheduled meetings that allow teams at every facility to discuss safety. Each meeting features a short video based on a safety-related situation submitted by a facility team. in each video, the members of the team whose scenario was selected have perform as actors. The screening of these videos provides opportunities to analyze common workplace practices and involve employees in improving safety habits and eliminating unsafe behaviors.

In 2008, "Highlights" topics included pedestrian safety at industrial sites in Hernani, Spain; carrying heavy loads in Honfleur, France; the importance of speaking up when instructions aren't understood at Bécancour in Canada; and the risks that can result from hurrying at Bernouville in France.

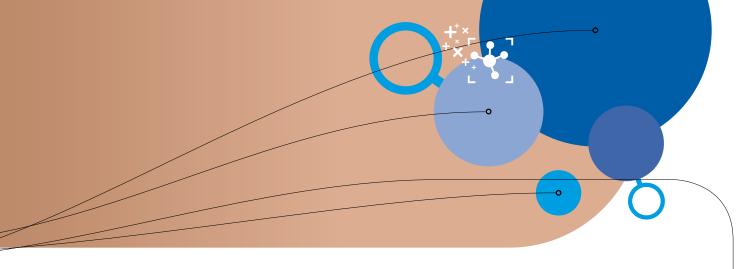
• All production facilities worldwide have an orientation procedure to inform visitors and carriers about Arkema's industrial safety standards and educate them about compliance with safety rules. We make sure they understand safety instructions by having them watch a video and pass a test about facility safety rules.

After improving more than 50% between 2005 and 2007, the lost time injury rate, encompassing both our own and contractor employees, inched up slightly in 2008, despite a further sharp decline in the total recordable injury rate. This gives us yet another



#### Technological risk prevention plans (PPRT)

Technological risk prevention plans manage land use around upper-tier Seveso industrial facilities. To help deploy PPRT effectively, Arkema's technical teams significantly expanded hazard studies at 19 sites required to introduce this type of plan. The team's work led to the creation of new methods of quantified risk analysis for managing plant operations.



reason to continue our safety initiatives and work harder toward becoming one of our industry's "best in class."

#### **Protecting employee health**

To safeguard employee health, Arkema has developed a tool to monitor individual exposure at workstations. Currently deployed at production facilities in France and the United States by occupational physicians together with HSE teams, the tool will be extended to other countries in mid-2009.

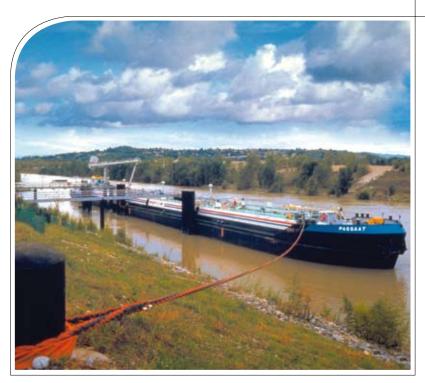
In September 2007, we rolled out our "No Drugs, No Alcohol" initiative to prevent substance abuse in the company. The initiative includes providing information to all employees, preparing specific prevention plans, and conducting regular assessments at all sites.

In the United States, Arkema Inc. conducts awareness campaigns to encourage wellness for all employees. The topics addressed are obesity, smoking, healthy eating habits and physical exercise.

We also strive to prevent stress, harassment and bullying at work and are working to quickly define measures applicable across Arkema. One particular focus is the introduction of a program to educate occupational physicians, human resources teams, management, and occupational health, safety and working conditions committees.

# The same concern for product transportation safety

Arkema has a team of safety experts dedicated to identifying and minimizing the hazards associated with product transportation. In many cases, we transport by barge, which offers many logistics advantages, excellent safety conditions and lower environmental impact. The same dedication has made Arkema one of the main partners of Modalohr, a trans-Alpine rail service. We account for over 10% of the goods carried by Modalohr.



In addition, suppliers are required to undergo audits based on the rating system specific to each mode of transport: the Safety Quality Assessment System (SQAS) for road transportation, the Chemicals Distribution Institute (CDI) system for maritime transportation and the European Barge Inspection System (EBIS) for inland waterway transportation.



#### Dedicated in-house risk analysis software

Analyzing workplace risk and providing information to the employees are essential steps in accident prevention. Arkema has developed a proprietary software application, Risk and Task Management (known by its French acronym MRT), tailored to the chemical industry's specific needs, that provides analyses and information beyond that required by regulations.

# Environmental stewardship

9

Reducing our environmental footprint, conserving energy and optimizing the use of natural resources.



# Reclamation of a former settling basin at the Carling site

A basin used for past operations at the site was completely reclaimed over a period of several years, allowing it to be backfilled and planted over. Some 70,000 metric tons of sludge and sediment were removed and treated using appropriate methods. At the same time, the Carling site continued to reduce emissions by upgrading its secondary treatment plant and incinerating volatile organic compounds.

## Preventing and managing environmental impact

Arkema's environmental processes are based on a corporate policy implemented at our industrial facilities and on the deployment of specific action plans.

With a continuous improvement process that exceeds the requirements of applicable regulations, Arkema has integrated environmental protection into our management system. Most of our plants have earned environmental certification, usually based on the ISO 14001 standard, chosen because it is an international benchmark. However, depending on the local situation, some sites have selected other standards, such as the Responsible Care® Management System (RCMS).

Each Arkema plant uses an exacting procedure to pinpoint its local impact on water, air, waste, noise, odors and soil, and to establish its priorities for action. Regular environmental analyses track our progress and set new improvement targets. Each facility thoroughly and systematically monitors its discharges, emissions and waste. All environmental data are collected, compiled at a corporate level and published each year in this report.

Minimizing the environmental impact of industrial operations also means optimizing the use of natural resources, especially water, energy and raw materials. Our plants only use what water is strictly necessary for their operations. Energy efficiency is a core operating principle at our facilities. New production units factor energy management into their choice of processes and equipment from the design stage onward.



#### **Ongoing emissions reduction**

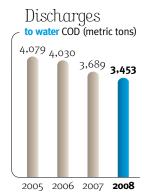
Concerned with maintaining water and air quality and mitigating climate change, Arkema pays special attention to three indicators: chemical oxygen demand (COD) in discharges to water, volatile organic compounds (VOC) and greenhouse gas emissions, mainly carbon dioxide (CO<sub>2</sub>) and hydrofluorocarbons (HFC).

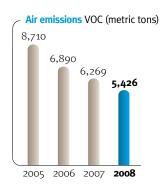
Prevention at the source, improved processes, optimized effluent treatment, operator and maintenance personnel training, and the installation of sophisticated continuous-analysis devices have helped reduce discharges to water and air emissions at all our industrial facilities.

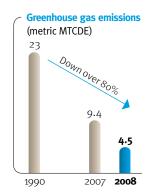
Saving energy is important to reducing greenhouse gas emissions. As a major energy consumer, Arkema strives to continuously improve the energy efficiency of our installations. The in-house Arkenergy initiative raises employee awareness of the need to reduce waste and to look for ways to conserve energy.

Arkema has been working to reduce greenhouse gas emissions at our combustion and production plants for many years. We have cut them by 80% since 1990, the baseline year for the Kyoto Protocol establishing improvement targets for industrialized nations.

In 2008, we commissioned an incineration unit for HFC 23, a byproduct of HCFC 22 production, at our Changshu, China plant. The incinerator's impact will be fully felt in 2009, at which time Arkema's greenhouse gas emissions will be just one-sixth of their 1990 levels.







# Generating less waste and using less steam at the Spinetta plant in Italy

Modifying the secondary wastewater treatment process at our organic peroxide plant in Spinetta reduced the solid waste from wastewater treatment by some 2,500 metric tons a year. At the same time, an overhaul of the steam distribution system saved over 10,000 metric tons of steam a year, the equivalent of 1,000 metric tons of oil.

# Product stewardship

# — Making sure our products are safe for human health and the environment at every stage in their life cycle.

#### Assessing risks across the product life cycle

Arkema takes care to market products that are safe, environmentally and health friendly, and useful to the community. Product stewardship means making sure that products do not jeopardize human health and safety or the environment at any stage of their life cycle, including development, production plant design, manufacturing, transportation, marketing, use and disposal. This proactive, voluntary policy requires the cooperation of all participants in the production chain, from raw material suppliers to carriers, retailers, sales and marketing professionals, and end-use customers.

Arkema's toxicologists and ecotoxicologists continuously broaden our knowledge of the properties of our chemicals. For years, they have been working with other professionals through the High Production Volume (HPV) programs of either the International Council of Chemical Associations (ICCA) or the U.S. Environmental Protection Agency (EPA). Implementation of the European Union REACH regulation will supplement and expand these programs.

#### REACH, an opportunity for improvement

Arkema sees REACH as another way of continuously improving what we know about our chemicals and their safe use, an opportunity to respond to the legitimate expectations of civil society concerning health and environmental protection, and a means of restoring the public's faith in the chemical industry. Through innovative R&D, we also plan to take advantage of the inevitable changes that REACH will bring to the chemical marketplace.

#### **REACH's challenges**

Formally adopted on December 18, 2006 by the European Union's Council of Environment Ministers, the REACH regulation became effective on June 1, 2007. REACH, which stands for Registration, Evaluation and Authorization of Chemicals, aims to upgrade public protection. Probably the most ambitious E.U. regulation adopted in the last

20 years, it replaced some 40 other regulations. REACH introduces sweeping changes in the way chemicals produced in or imported into the European Union are managed. It requires that we increase what we know about our products, analyzing their environmental and health risks, and take measures to manage any risk associated with their production and use.

#### **REACH procedures**

- A new procedure: Registration.
- A new risk management tool: The authorization process.
- The creation of the European Chemicals Agency (ECHA), based in Helsinki, Finland, responsible for REACH's technical and administrative processes. In the first 11 years after REACH takes effect, more than 30,000 substances, accounting for most of the volume produced and marketed in the E.U., will have to be registered with the ECHA.

## Arkema successfully completes step one, pre-registration

Arkema's employees rose to the challenge of preregistering our 430 substances with the ECHA by the December 1, 2008 deadline. Pre-registration is an essential step in the process instituted by the REACH regulation, because companies that pre-register every substance they make or import will be allowed to continue marketing them and be granted extensions to prepare registration dossiers, depending on the quantities involved.

#### The next steps

Of the 430 Arkema substances preregistered by December 1, 2008, 35 to 40 are hazardous substances expected to be subject to the authorization procedure. The business units affected are incorporating this requirement into their strategy and substitution programs are underway:

• 160 substances produced in annual quantities of 1,000 metric tons or more and those designated substances of very high concern (SVHCs) must be registered by end-November 2010.



## November 2010: the first registration deadline

The first registration dossiers, for substances produced in annual quantities of 1,000 metric tons or more and those designated SVHCs, must be submitted to the ECHA no later than November 30, 2010.

Registration dossiers contain a comprehensive description of the physicochemical, toxicological and ecotoxicological properties that make the substance inherently hazardous. A risk assessment based on analysis of potential human and environmental exposure to the substance throughout its life cycle, from production through end use, is also required for all applications.

Even though much of the data needed to register the substances — most of which have already been studied thoroughly — is available, preparing a dossier requires pulling it all together, which can lead to additional tests, in particular to enhance toxicological and ecotoxicological data and refine the risk assessment. To minimize animal testing and make compliance more affordable, REACH encourages the sharing of data. A lead registrant therefore prepares a single, joint registration dossier for each substance, with each manufacturer or importer involved submitting other information individually in a separate dossier. The pooling of data generally takes place in consortiums, usually emerging from industry associations and groups. Arkema is the lead registrant for around 50 dossiers.

The main findings of the registration dossier will ultimately be published in a Material Safety Data Sheet (MSDS), an invaluable resource for sharing information among various stakeholders in the supply chain. The MSDS ensures the correct use of the substance

and products made with it, in all markets and for all applications.

#### **Dedicated teams and resources**

To handle the projected workload increase, we expanded our staff of toxicologists and ecotoxicologists and created new positions to prepare registration dossiers. A team of experts manages the REACH regulation's implementation at the corporate level together with a network of correspondents who prepare specific sections of the dossiers in the business units, at production facilities and in subsidiaries.

REACH's overall compliance cost for Arkema will be about €60 million between 2007 and 2018.

# Arkema, a chemical producer interested in what the world around us thinks

By fostering mutual understanding and communication with all stakeholders, Arkema cultivates close local relationships that help us take into account legitimate social expectations, especially those of people living and working near our production facilities.

# Pursuing a program of continuous improvement

In 1990, responding to legitimate expectations concerning industry in general and chemical producers in particular, the global chemical industry committed to a continuous improvement process known as Responsible Care®.

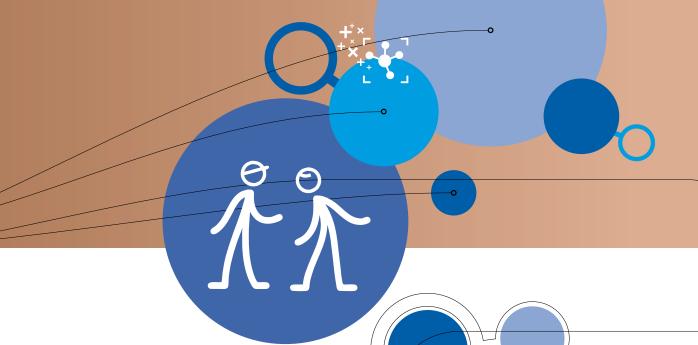
As a member of this global program since our creation, we have been careful to ensure that our operations create no unacceptable public health or environmental risks. To reaffirm our support, on November 17, 2006, Arkema Chairman and CEO Thierry Le Hénaff signed the Responsible Care® Global Charter of the International Council of Chemical Associations (ICC), which commits signatory companies to driving sustainable development by improving their safety, health and environmental performance and by fostering dialogue with all stakeholders.

#### **Emphasizing local outreach to cement trust**

Since the public has a strong tendency to notice the potential risks of chemical production more than the way our industry improves everyday life, Arkema created Common Ground®, an outreach initiative to build lasting, trust-based relationships with stakeholders. Each industrial facility defines and implements initiatives to regularly inform our community partners - public authorities, elected officials, people living and working near our plants, associations and the media — and take their concerns into account. Facilities provide frequent updates on operational changes and their socioeconomic repercussions, risks associated with their activities and preventive measures taken, regulations that apply to them and inspections conducted by authorities, improvement targets, and products and their applications.

The Common Ground® initiative stresses safety and health and environmental protection information, communication on what to do in the event of incidents





and accidents, and alert information procedures. This proactive approach is fully aligned with the real-time communications policy introduced in France in 2007 by the Risk and Industrial Pollution Analysis Office (BARPI), the French Union of Chemical Industries (UIC) and the French Oil and Chemical Industry Safety Group (GESIP). All Arkema sites in France adhere to this voluntary practice of notifying the media regarding all incidents — even minor ones — that occur at a Seveso-classified industrial facility.

## Surveying 2,000 people living near Arkema's industrial facilities in France

To gauge the Common Ground® initiative's impact as part of a continuous improvement process, Arkema partnered with pollster TNS Sofres in April 2008 to conduct a fourth survey regarding how our production facilities are perceived by the people who live and work near them.

The 2008 survey involved some 2,000 telephone interviews with people living near the Balan, Jarrie, Pierre-Bénite, Lacq-Mourenx, Lannemezan, Marseille and Serquigny industrial facilities. Its findings showed a more favorable climate overall compared to the prevailing situation in 2002 and 2005, especially an easing of concerns about industrial risk and chemicals. The safety of industrial sites now ranks seventh among the public's concerns, well below pollution, unemployment and waste management, which are the top three issues.

The survey revealed improved information and confidence levels of people living near our production sites. Respondents said they were better informed about the potential consequences of accidents and the precautions taken by Arkema to prevent them. They also were taking part in greater numbers during the sites' safety drills.

The survey confirms that Common Ground® is on the right track and that the credibility of our facilities has improved. At the same time, it highlights the















#### Seeing industry through the eyes of Chinese schoolchildren

In the fall of 2008, Arkema's Shanghai hydrogen peroxide plant took pupils from the nearby Cao Hang primary school and employees' children on a tour of its production units, laboratories and control room. The tour was followed by a drawing contest on the theme of "A factory seen through children's eyes." Of the 50 drawings submitted, 18 were selected for reproduction on the wall around the plant. The contest is an example of our international deployment of the Common Ground® initiative and its role in building solid relationships between the plant and its neighbors.



significant community impact of restructuring certain facilities and the strong public expectations regarding health and environmental protection. Given these concerns, the levels of satisfaction and general trust among those living and working near our facilities were stable overall for the period, after rising steadily over the last five years.

Arkema is taking what was learned via the survey to heart, and will pay particular attention to responding to these new concerns in coming years.

#### Committed to contributing to civic life

Arkema's first aid training partnership with the French Red Cross introduced in October 2005 came to a close in 2008. The initial target of the partnership was achieved. More than 5,000 people — almost half of them from outside Arkema — were trained at production sites operated by Arkema or our subsidiaries in France. Arkema and the French Red Cross are now working together to set up a new, civic-minded joint action plan that would be a natural fit with the Common Ground® agenda.

#### ARKEMA INVOLVED IN SOUTH LYON'S INTER-COMPANY COMMUTING

PLAN ▶ Arkema's four facilities south of Lyon — the Pierre-Bénite and Saint-Fons plants, the Rhône-Alpes Research Center and a shared services center — are taking concrete steps to implement the United Nations' Agenda 21 sustainable development action plan by drawing up an inter-company commuting plan for Chemical Valley's 6,000 employees, to reduce the environmental impact of commuting to work.

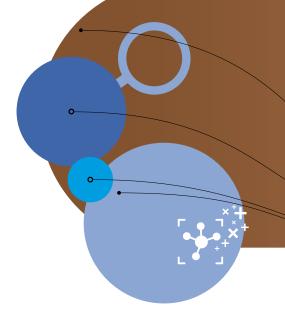
With Arkema's support and financial backing, the Fondation ENSIC, is now up and running. Created in September 2008 by chemical engineering school École Nationale Supérieure des Industries Chimiques de Nancy under the aegis of the Fondation de France, the new foundation aims to promote greater access to higher education by awarding scholarships to deserving students in financial need and fulfill the school's role as a vehicle for individual socioeconomic betterment. The first scholarships will be awarded for the 2009-2010 academic year.

## Helping communities deal with unusually severe natural disasters

In 2008, China and the United States experienced unprecedented natural disasters. In each case, the support and involvement of local Arkema teams enabled us to render assistance to our own employees and the local populace.

After the earthquake that rocked Sichuan province in May 2008, Arkema China made a donation to the Chinese Red Cross to assist the victims, with the help of all production plant employees.

In September 2008, Hurricane Ike swept across Texas, directly affecting Arkema's four facilities in the region. Despite major property damage, our sites escaped unscathed in terms of personal injury and environmental impact, thanks in part to the deployment of contingency plans prepared in the aftermath of Hurricane Rita in 2005. Arkema Inc. management and personnel organized to provide moral support and financial aid to those employees who were personally affected.



# Shaping employee dialogue to support Arkema's transformation

To support our growth and ease the impact of change, we structure a process to work with employee representatives toward solutions that accommodate the positions and interests of all stakeholders.

#### Modernizing employee dialogue

We maintain ongoing dialogue with employee representatives across our units. In July 2008, the European Works Council, established in 2007 to provide representation for Arkema's 11,000 employees in Europe, held its first plenary session.

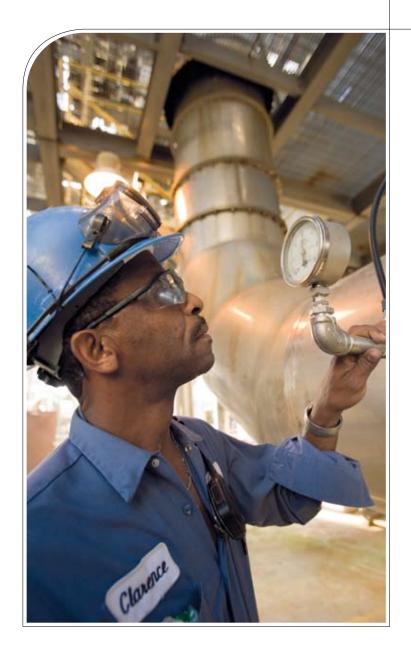
This new, pan-European body is an integral part of the process to modernize employee dialogue at Arkema, which ensures that employees have instructive explanations and all the information they need to understand our strategy and any changes in our environment.

In the People's Republic of China, the first Employee Representatives Congress (ERC) at Arkema China Investment, our biggest subsidiary in the country, was elected In December 2007. This organization enjoys input in many areas, from salary negotiations to safety and training, and is in addition to the labor unions already in place at our Chinese production plants.

#### A contract-based employee-relations policy

In 2008, Arkema France signed a number of company-wide agreements, covering wages, bonuses and incentives, the composition of Central Works Committee's, health-cost reimbursement, the hiring of employees with disabilities, and amendments to the framework agreement, which provides for early retirements resulting from various restructuring plans. We also signed agreements to assist workers affected by production change plans in Germany and Italy.

In the United States, unionized employees are covered by collective bargaining agreements negotiated with local and central labor unions. Usually valid for three years, the agreements cover wages, benefits and working conditions. In 2008, we renegotiated a collective bargaining agreement at the Bristol, Pennsylvania plant.





#### Hiring employees with disabilities

Following a 2007 audit by a consultant, Arkema France and labor organizations signed an initial corporate agreement on June 9, 2008 to encourage the hiring of employees with disabilities. The agreement covers all potential ways of promoting job access and retention and supporting the hiring, onboarding and career advancement of workers with disabilities and employees who become disabled at some point in their lives. The agreement also aims to encourage recruitment of the disabled by setting specific hiring targets. For example, Arkema France has pledged to recruit at least 35 disabled employees and host 40 disabled interns over a three-year period. This initiative involves recruitment officers directly, and requires adjustment of the onboarding process to accommodate individual needs.

The 2008 agreement will also enable us to strengthen our relationships with the sheltered employment sector by signing outsourcing contracts — worth at least 50% more than the average amount of outsourcing contracts signed from 2005 to 2007 — with sheltered workshops, programs for the disabled and disability-friendly employers.

In addition, to meet our targets and overcome the reluctance and bias that can undermine workplace acceptance of people with disabilities, the agreement calls for internal and external communication initiatives.

### Helping employees weather changes at Arkema

The various restructuring plans announced and implemented at Arkema provide many opportunities for discussion as part of procedures for informing and consulting employee representation organizations at the corporate and local level. We are especially attentive to the impact on employees of changes brought about by restructuring.

Several work change plans were presented in 2008, with Arkema suggesting solutions for all employees affected by job cuts.

Arkema France announced plans involving changes at the Saint-Menet facility in Marseille, restructuring of the Serquigny plant, the creation of two shared service centers for human resources and accounting in the Lyon region, restructuring of the Saint-Auban and Jarrie facilities, and reorganization of goods and services procurement.

The plans presented by Arkema subsidiary Alphacan, our Pipes and Profiles business unit, involved restructuring its Profiles production by closing down the Hasparren plant in France and the Miranda plant in Spain, and restructuring the Gaillac facility and Alphacan's La Celle-Saint-Cloud headquarters in France.

Plans announced in Italy called for boosting the competitiveness of the Rho plant, shutting down



announced.

Resilia site in Samarate.

#### Welfare and employee benefits

The Group's various units in France and abroad are responsible for ensuring that social security and employee benefit provisions are in keeping with their needs and local practice, within the constraints of agreed-upon annual budgets. Welfare schemes are in place in most countries to cover risks related to death and disability.

In certain countries with basic mandatory retirement plans that fail to guarantee sufficient income, Arkema units had set up defined-benefit pension plans. To limit their resultant financial obligations, these units have gradually closed such pensions to new hires and replaced them with defined-contribution plans. The phase-out took effect in the United Kingdom and Germany in 2002 and in the United States in 2007.

#### ARKEMAINC.

In the United States, Arkema Inc. has a proactive hiring, training and promotion policy covering employees with disabilities, intended to foster staff diversity in keeping with the principles of the company's **Equal Employment** Opportunities guidance.

#### Ark'Santé: standardized medical expense reimbursement

On January 1, 2009, following more than a year of negotiations, Arkema France introduced Ark'Santé, a standardized medical expense reimbursement plan, under a collective bargaining agreement signed by four trade unions. This supplementary health insurance plan aims to offer employees consistent, high-quality benefits at a competitive,

# Focusing on career management and skills optimization

9

Driving our transformation by continuously upgrading employee skills and motivation.



# Arkema France: a shared services center for human resources

The creation of a shared services center responsible for administrative management, payroll and human resources development has optimized employee management at Arkema France. The new organization is more efficient at managing recruitment, training and professional mobility.

#### Putting employees in charge of their careers

Giving employees the skills and resources they need to help drive technological, social and economic change at Arkema is a cornerstone of our human resources policy. Many skills development resources are in place, especially for defining career paths and plans and customized training programs to go with them. At Arkema, career management applies to all personnel categories.

For operations, administrative, technical and supervisory employees, a proactive policy of internal promotion and seamless career paths was formally adopted when we signed a job and skills planning framework agreement. The accord opens the door to new career opportunities through vertical mobility and transfers to different professional fields and facilities.

In 2008, we recruited almost 800 employees around the world, 25% of them women. Nearly 60% of these new hires took place outside France.

## Fair compensation for personal and corporate performance

Our human resources policy is based on the principles of diversity and equal opportunity in every host country. Compensation is the key to recognizing and rewarding each employee's contributions to our success. The goals are to compensate staff for personal and corporate performance in a fair, consistent way; foster a sense of accountability and involve all employees in achieving objectives; and stay competitive by considering various markets' requirements and managing costs.

To tie compensation more closely to personal performance, all management jobs have been classified using the Hay method. Based on the level of responsibility assigned to the job, executive compensation includes a variable portion that is pegged to personal performance and the individual's contribution to the overall



performance of a business unit, corporate department, country performance or the company overall.

# Giving employees a stake in Arkema's performance and growth

In addition to the profit-sharing system legally required in France, our French companies have introduced employee incentive plans to drive growth. Although each operating unit has its own system, they are all based on the same principle: a bonus pegged to financial performance and a performance improvement bonus tied to achieving targets specific to each facility.

The performance share and stock option plans deployed in 2006, 2007 and 2008 supplement our compensation package. In 2008, our performance share plans were open to almost 900 employees of all categories and professions, and some 100 people received stock options.

Arkema verifies the competitiveness of our overall compensation policy by comparing it regularly to the policies of similar companies.

#### **Encouraging employee share ownership**

Through a vigorous policy of encouraging employee share ownership, Arkema intends to periodically hold employee-only share issues that will give personnel a real stake in our growth. The purchase price for the 2008 issue was set at €30.42. The share issue was open to employees of Arkema S.A. and affiliated companies participating in the PEG-A employee savings plan that had secured local administrative authorizations. It was also open to retired employees of Arkema S.A. and its subsidiaries who had retained assets in the employee savings plan.

Nineteen countries participated in the share issue, with 4,000 employees purchasing a total of 618,462 shares, increasing employee ownership of Arkema S.A. from 1% to just over 2%.

Arkema France's incentive agreement, renegotiated for 2008, 2009 and 2010, is covered by a collective bargaining agreement signed on April 4, 2008 by four labor unions. Incentives for a given fiscal year may not exceed 5.4% of payroll expenses.

#### Relationships with educational institutions

Arkema cultivates close relationships with the top schools and educational institutions for all of our businesses. In France, for example, we sponsor the École Supérieure de Physique et Chimie Industrielle (ESPCI) and École Nationale Supérieure des Industries Chimiques de Nancy (ENSIC) industrial physics and chemical engineering schools. To optimize recruitment for our corporate functions, we also maintain close ties with business schools as the École Supérieure des Sciences Économiques et Commerciales (ESSEC) and the École Supérieure de Commerce de Paris-École Européenne des Affaires (ESCP-EAP).

Through the *Developing Engineer Program* in the United States, we host four to six engineering students each year from leading American universities, providing them with work placements at industrial facilities over a period of five years.

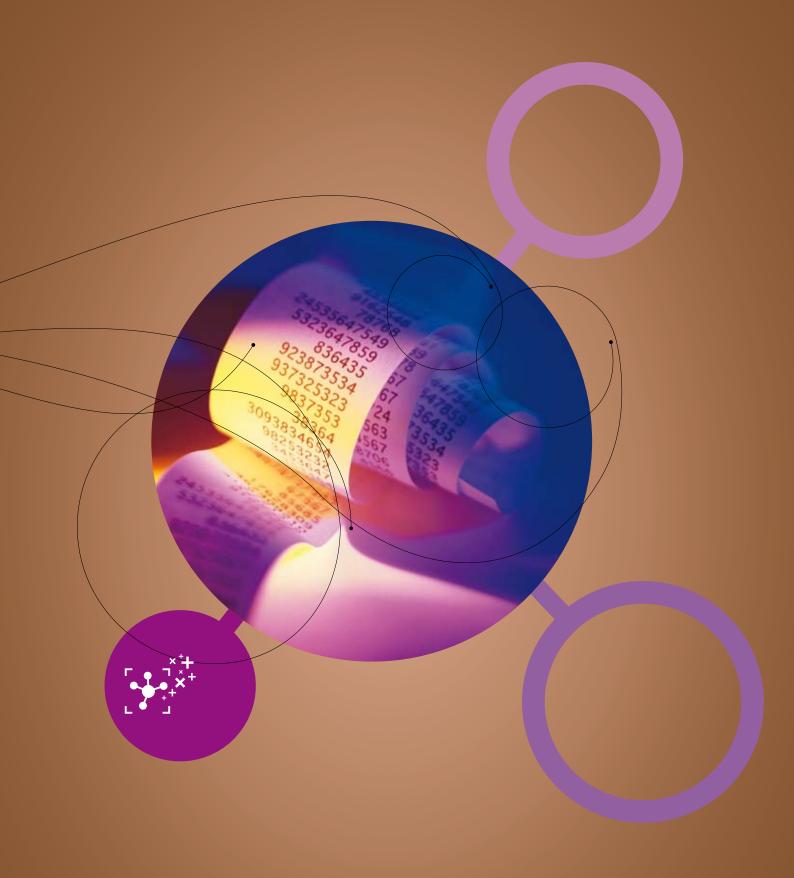
Arkema also offers many opportunities each year for internships, apprenticeships, post-graduate thesis work and co-op placements through the *Volontaire International en Entreprise* (VIE) program, providing us with a pool of excellent recruits.

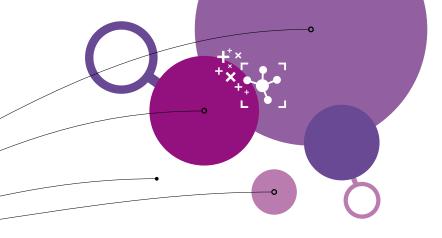
# Appendixes

Simplified financial statements
Environmental Reporting Methodology
Safety data Verification Statement
Environmental data Verification Statement
Environmental indicators



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# Simplified financial statements

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(0.1111)	December 31,2007	December 31,2008
(€ millions)	(audited)	(audited)
Assets		
ntangible assets, net	460	466
Property, plant and equipment, net	1,525	1,638
Equity affiliates: investments and loans	42	53
Other investments	24	22
Deferred income tax assets	18	25
Other non-current assets	127	137
Total non-current assets	2,196	2,341
Inventories	1,017	1,026
Accounts receivable	1,000	838
Other receivables and prepaid expenses	160	149
Income taxes recoverable	14	22
Other current assets	1	30
Cash and cash equivalents	58	67
Total assets of discontinued operations	<u> </u>	-
Total current assets	2,250	2,132
	4,446	4,473
<b>Liabilities and shareholders' equity</b> Share capital	<b>4,446</b> 605	<b>4,473</b> 605
<b>Liabilities and shareholders' equity</b> Share capital Paid-in surplus and retained earnings		
Liabilities and shareholders' equity Share capital Paid-in surplus and retained earnings Treasury shares	605	605
Liabilities and shareholders' equity Share capital Paid-in surplus and retained earnings Treasury shares Cumulative translation adjustment	605	605 1,476
Liabilities and shareholders' equity Share capital Paid-in surplus and retained earnings Treasury shares Cumulative translation adjustment Shareholders' equity - Group share	605 1,446	605 1,476 (1)
Liabilities and shareholders' equity Share capital Paid-in surplus and retained earnings Treasury shares Cumulative translation adjustment Shareholders' equity - Group share Minority interests	605 1,446 - (140)	605 1,476 (1) (84)
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity	605 1,446 - (140) <b>1,911</b>	605 1,476 (1) (84) <b>1,996</b>
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities	605 1,446 - (140) 1,911 21	605 1,476 (1) (84) 1,996
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities	605 1,446 - (140) 1,911 21 1,932	605 1,476 (1) (84) 1,996 22 2,018
Liabilities and shareholders' equity Share capital Paid-in surplus and retained earnings Treasury shares Cumulative translation adjustment Shareholders' equity - Group share Minority interests Total shareholders' equity Deferred income tax liabilities Provisions and other non-current liabilities Non-current debt	605 1,446 - (140) 1,911 21 1,932	605 1,476 (1) (84) 1,996 22 2,018
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities  Provisions and other non-current liabilities  Non-current debt  Total non-current liabilities	605 1,446 - (140) 1,911 21 1,932 54	605 1,476 (1) (84) 1,996 22 2,018 47
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities  Provisions and other non-current liabilities  Non-current debt  Total non-current liabilities  Accounts payable	605 1,446 - (140) 1,911 21 1,932 54 846 61	605 1,476 (1) (84) 1,996 22 2,018 47 835
Liabilities and shareholders' equity Share capital Paid-in surplus and retained earnings Treasury shares Cumulative translation adjustment Shareholders' equity - Group share Minority interests Total shareholders' equity Deferred income tax liabilities Provisions and other non-current liabilities Non-current debt Total non-current liabilities Accounts payable	605 1,446 - (140) 1,911 21 1,932 54 846 61	605 1,476 (1) (84) 1,996 22 2,018 47 835 69
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities  Provisions and other non-current liabilities  Non-current debt  Total non-current liabilities  Accounts payable  Other creditors and accrued liabilities  Income taxes payable	605 1,446 - (140) 1,911 21 1,932 54 846 61 961 786	605 1,476 (1) (84) 1,996 22 2,018 47 835 69
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities  Provisions and other non-current liabilities  Non-current debt  Total non-current liabilities  Accounts payable  Other creditors and accrued liabilities	605 1,446 - (140) 1,911 21 1,932 54 846 61 961 786	605 1,476 (1) (84) 1,996 22 2,018 47 835 69 951 690 259
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities  Provisions and other non-current liabilities  Non-current debt  Total non-current liabilities  Accounts payable  Other creditors and accrued liabilities  Income taxes payable  Other current liabilities	605 1,446 - (140) 1,911 21 1,932 54 846 61 961 786 290	605 1,476 (1) (84) 1,996 22 2,018 47 835 69 951 690 259
Liabilities and shareholders' equity  Share capital Paid-in surplus and retained earnings Treasury shares Cumulative translation adjustment Shareholders' equity - Group share Minority interests Total shareholders' equity Deferred income tax liabilities Provisions and other non-current liabilities Non-current debt Total non-current liabilities Accounts payable Other creditors and accrued liabilities Income taxes payable Other current liabilities Current debt Total liabilities	605 1,446 - (140) 1,911 21 1,932 54 846 61 961 786 290 15	605 1,476 (1) (84) 1,996 22 2,018 47 835 69 951 690 259 17 45
Liabilities and shareholders' equity  Share capital  Paid-in surplus and retained earnings  Treasury shares  Cumulative translation adjustment  Shareholders' equity - Group share  Minority interests  Total shareholders' equity  Deferred income tax liabilities  Provisions and other non-current liabilities  Non-current debt  Total non-current liabilities  Accounts payable  Other creditors and accrued liabilities  Income taxes payable  Other current liabilities  Current debt	605 1,446 - (140) 1,911 21 1,932 54 846 61 961 786 290 15	605 1,476 (1) (84) 1,996 22 2,018 47 835 69 951 690 259 17 45

#### Income statement

	December 31,2007	December 31,2008
(€ millions)	(audited)	(audited)
Sales	5,675	5,633
Operating expenses	(4,827)	(4,840)
Research and development expenses	(158)	(150)
Selling and administrative expenses	(397)	(393)
Recurring operating income	293	250
Other income and expenses	(72)	(53)
Operating income	221	197
Equity in income of affiliates	5	8
Net finance costs	(15)	(35)
Income taxes	(104)	(69)
Net income from continuing operations	107	101
Net income from discontinued operations	17	-
Net income	124	101
of which minority interests	2	1
Net income - Group share	122	100
Earnings per share (in euros)	2.02	1.65
Diluted earnings per share (in euros)	2.01	1.65
Depreciation and amortization	(225)	(248)
Recurring EBITDA	518	498
Adjusted net income	186	146
Adjusted earnings per share (in euros)	- 3.08	2.41
Diluted adjusted earnings per share (in euros)	3.06	2.41

#### Cash flow statement

	December 31,2007	December 31,2008
(€ millions)	(audited)	(audited)
Cash flow - operating activities		
Netincome	124	101
Depreciation, amortization and impairment of assets	246	268
Provisions, valuation allowances and deferred taxes	(2)	(56)
(Gains)/losses on sales of assets	(96)	(38)
Undistributed affiliate equity earnings	(5)	(8)
Change in working capital	47	56
Other changes	5	8
Cash flow from operating activities	319	331
Cash flow - investing activities		
Intangible assets and additions to property, plant and equipment	(325)	(335)
Change in fixed asset payables	9	5
Acquisitions of subsidiaries, net of cash acquired	(294)	(18)
Increase in long-term loans	(24)	(49)
Total expenditures	(634)	(397)
Proceeds from sale of intangible assets and property, plant and equipmen	t 88	40
Change in fixed asset receivables	-	(14)
Proceeds from sale of subsidiaries, net of cash sold	105	-
Proceeds from sale of other investments	1	2
Repayment of long-term loans	27	27
Total divestitures	221	55
Cash flow from investing activities	(413)	(342)
Cash flow - financing activities		
Issuance (repayment) of shares	5	17
Purchase of treasury shares	-	(25)
Dividends paid to parent company shareholders	-	(46)
Dividends paid to minority shareholders	-	-
Increase(decrease) in long-term debt	9	20
Increase(decrease) in short-term borrowings and bank overdrafts	(4)	22
Cash flow from financing activities	10	(12)
Net increase(decrease) in cash and cash equivalents	(84)	(23)
Effect of exchange rates and changes in scope	(29)	32
Cash and cash equivalents at beginning of period	171	58
Cash and cash equivalents of discontinued operations at end of period	-	-
Cash advance granted to discontinued operations	-	-
Cash and cash equivalents at end of period	58	67

# Environmental Reporting Methodology

The indicators published in this report track performance on the primary environmental issues raised by Arkema's operations. They are based on annual data, from January 1 to December 31, for the years 2006, 2007 and 2008.

#### **Scope**

The environmental data in this report concern all of the facilities operated worldwide by Arkema or one of its subsidiaries, regardless of the equity held in the facilities in question, to the extent that Arkema has the authority to implement its health, safety and environmental policies and guidelines.

To facilate like-for-like comparisons, current year data are presented based on the structure for each of the previous two years.

#### Methodology

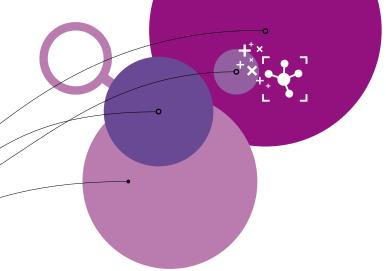
- To avoid duplication, only direct emissions from facilities or installations operated by Arkema are included.
- In order to gauge the true environmental impact of discharges to water, data refer to discharges from treatment facilities.
- Discharge to water flows are indicated as additional flows, since pre-existing pollutants in the water sampled are not included in facility discharge figures. This rule applies only for samples and discharges from the same environment.
- The diversity of analytical methods and regulations in force in various countries makes it difficult to consolidate global data for the discharge of organic matter into water. Of the two criteria commonly used to measure organic matter Total Organic Carbon (TOC) and Chemical Oxygen Demand (COD) this report uses COD. For plants that measure only TOC, a default COD/TOC ratio of three was applied. This coefficient was used in the European Commission's decision establishing the European Pollutant Emission Register (EPER) and in the December 24, 2002 French ministerial

order, as amended, concerning the annual pollutant emissions filing of environmentally-sensitive facilities subject to authorization.

- Global consolidation of air emissions data is also problematic in the case of non-methane volatile organic compounds (NM-VOC). The definition of what constitutes an NM-VOC varies by country, and especially between the United States and the European Union. This report uses the definition in the Council Directive of March 11, 1999.
- Waste incinerated using company facilities, whether on-site or off, is counted as onsite incineration. This applies even if the waste was physically moved from one Arkema facility to another for incineration.

#### **External Verification**

The application of reporting procedures to a selection of environmental indicators was verified by outside verifier Bureau Veritas Certification. Its verification statement is reprinted on page 60 of this report.



# Safety data Verification Statement

— Arkema has required *Bureau Veritas Certification France*, Independent Verification Body, to verify some of its safety data for 2008 fiscal year.

The purpose of this verification was to assess the reliability of the data processing.

This includes:

- LTIR: Lost Time Injury Rate (injury rate with stop of work including temporary employees, apprentices and trainees, subcontractors staff working within the Arkema facility or entity on regular basis or staff from companies involved in facility closure or a site building project or existing facility modernisation).
- TRIR: Total Recordable Injuries Rate (injury rate with or without stop of work stoppage including temporary employees, apprentices and trainees, subcontractors staff working within the Arkema facility or entity on regular basis or staff from companies involved in facility closure or a site building project or existing facility modernisation).

Bureau Veritas Certification declares that this statement, based on the results of its verification process, gives its own opinion. Bureau Veritas Certification commercial interests concern only this third party verification.

The verified data was prepared under the responsibility of the Quality Environment and Safety Division in accordance with the ARKEMA Corporate Directive "Safety reporting Reference D-HS o1/issue 2".

Bureau Veritas Certification has performed the following tasks in order to verify that the data is reliable and free from significant error.

#### **Head Office Audit:**

- Understanding of the scope concerned which is bounded to the sites operated by Arkema.
- Assessment of the Corporate Reporting Procedures based on relevant and reliable criterias.
- Validation that the data reported by the sites are correctly considered for the global consolidation by the Quality, Environment and Safety Division.

#### **Sampled sites Audit:**

- Verification that the Corporate Reporting rules and local rules are complied with.
- Interview of the staff involved in the process of collecting and handling data, until the final calculation of the occupational safety indicator for year 2008.
- Understanding and auditing of the organizational and technical specificities of the sampled sites related to the presence from subcontractors, to the presence from medical assistance, to local specificities.

Headquarter and 6 sites among the 112 industrial sites, research centers and other headoffices were verified. They represent 19.4% of injuries and 15.2% of working hours within the Group in 2008.

This work was performed between the 14th of January 2009 and the 20th of February 2009.

Sites audit verified the compliance to Group Reporting practices, from the injury declaration by the person injured to at worldwide level. The management of modifications was verified at the different levels.

Based on our verification protocole described as above:

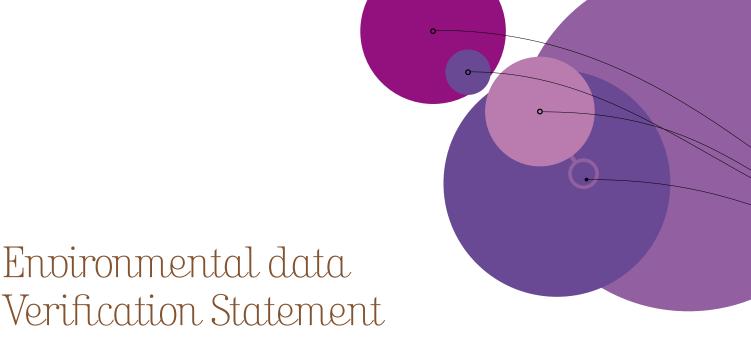
- Nothing indicates to *Bureau Veritas Certification* that the examined data for the calculation of both indicators LTIR and TRIR is inaccurate.
- It is *Bureau Veritas Certification's* opinion that Arkema has established appropriate systems for the collection, aggregation and analysis of data.

Data processing is based on the gathered data by the sites and verified for 2008. This concerns the occupational safety indicators with the following results:

LTIR: 2.7 TRIR: 5.9



Paris, the 24th February 2009 BUREAU VERITAS Certification France Bruno LABARRE Managing Director



Arkema asked *Bureau Veritas Certification France*, Independent Verification Body, to verify some of its environmental data for 2008 fiscal year.

This verification aimed to assess the reliability of this data.

The verification field covered:

- Chemical Oxygen Demand: COD
- Volatile Organic Compounds: VOC
- GreenHouse Gas (GHG): CO<sub>2</sub> (carbon dioxide), CH<sub>4</sub> (methane), HFC (Hydrofluorocarbons), PFC (Perfluorocarbons), N<sub>2</sub>O (Nitrous oxide) and SF<sub>6</sub> (Sulphur hexafluoride).

Bureau Veritas Certification declares that this statement, based on the results of its verification works, gives its own opinion. Bureau Veritas Certification commercial interests concern only this third part verification.

The verified data was prepared under the responsibility of the Quality Environment and Safety Division in accordance with the Arkema Corporate Directive "Environmental reporting-Reference D-Eo1 / issue 2".

We have performed following tasks in order to verify the data is reliable and free from significant error:

#### **Head Office Audit:**

• Understanding of the scope concerned which is bounded to the 119 sites operated by ARKEMA, excepted the 2 sites: Polivar and Le Havre, closed during year 2008. These 2 sites did not benefit from an annual verification system for environmental data. The contribution of those 2 sites compared to verified data is estimated by Arkema at less than 0.1% of COD, VOC and GHG emissions,

- Assessment of the Corporate Reporting Procedures based on relevance and reliability criterias.
- Validation that the data reported by the sites are correctly considered for the global consolidation by the Quality Environment and Safety Division.

#### **Sampled sites Audit:**

- Verification that the Corporate Reporting rules and local rules are respected,
- Interview of the staff involved in the process of collecting and handling data, until the final calculation of the environmental indicator for year 2008,
- Understanding and audit of the organizational and technical specificities of the sampled sites: arrangements used to monitor the 3 environmental indicators (process, treatment equipments for liquid releases (COD) and atmospheric releases (VOC and GHG)).

On site audits allowed us to verify in situ the equipments and the respect of the arrangements "declared". Those sites were sampled in France. Their contribution to the Arkema group global emissions taking into account data verified 2008, is listed below:

COD = 32.1%

VOC = 28.1%

GHG = 18.6%

The data of the other sites was verified in a centralized way.

Considering that the reporting reliability of the sites audited in 2006 and 2007 is maintained

in 2008, the contribution of the sites audited on those 3 years to the ARKEMA group global emissions, would be for year 2008:

COD = 73.7%

VOC = 80.9%

GHG = 88.8%

Based on our verification protocole described above:

- Nothing indicates us that examined indicators are inaccurate,
- It is our opinion that Arkema has established appropriate systems for the collection, aggregation and analysis of data.

Amounts verified for 2008: COD: 3,453 tons of O<sub>2</sub> VOC: 5,426 tons GHG: 4,505 kilotons equivalent CO<sub>2</sub>



Paris, the 24th February 2009 BUREAU VERITAS Certification France Bruno LABARRE Managing Director



# Environmental indicators

Emissions to air	2006	2007	2008
Volatile organic compounds - VOC (metric tons)	6,890	6,269	5,426
Total emissions of acidifying substances (metric tons SO <sub>2</sub> equivalent)	8,330	7,269	6,516
Greenhouse gases (metric TCDE)	9,580	9,392	4,505
• of which CO <sub>2</sub>	1,796	1,611	1,596
• of which HFC	7,729	7,726	2,850
Dust (metric tons)	474	513	600
CO (metric tons)	9,230	9,277	7,381
Energy consumption			
Total (TWh)	17.1	16.0	15.8
Water use			
Total (million cublic meters)	169.5	148.6	138.5
Discharges to water			
COD (metric tons of $O_2$ )	4,030	3,689	3,453
Suspended solids (metric tons)	6,675	6,127	6,189
Waste in metric tons/year			
Hazardous waste excluding recycled material	200,710	198,670	182,500
• of which landfilled offsite	9,479	8,419	6,700
Non-hazardous waste	91,686	84,281	89,100

This report was produced by the External Communications Department, the Investor Relations Department and the Safety, Environment and Quality Department, in cooperation with Arkema's facilities, business units and subsidiaries.

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 $The \, report \, can \, be \, downloaded \, in \, PDF \, format \, at \, www. arkema.com.$ 

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