

## ■ Market segment dynamics

Simultaneously a science and an industry, the chemistry sector occupies center stage in the French business landscape. The second leading industrial sector after the automotive industry, with 231 400 direct jobs, the chemical industry (including pharmaceuticals) generated worldwide sales of 95.7 billion euros in 2005, a result which ranks France second in Europe and fifth worldwide.

Very competitive at the international level, the chemical industry is the leading exporting industry in France (with 61% of sales generated through exports), and France is the third largest exporter of chemical and pharmaceutical products worldwide.

Unlike fine chemistry and specialty chemistry, base chemistry produces very high volumes in large-capacity facilities, using significant amounts of capital. Basic chemistry products come from mineral chemistry (chlorine, sodium, nitrogenous fertilizers, industrial gases) or organic chemistry (ethylene, propylene, polyethylene, polypropylene, etc.).

The chemical industry is highly concentrated and organized around thirty large companies with over 500 employees, either French (Air Liquide, Total Petrochemicals, Arkema), European (Shell Chemicals, Ineos, Nova Innovene, Solvay, Basell) or American companies (ExxonMobil Chemical, Dow Chemical).

In this sector as well as in others, France has been able to attract many foreign investors: non-French companies account for approximately 40% of chemical production of the country.

Taking into account only companies with more than 250 employees, half of total operations are handled in France by companies with foreign capital, such as Basell, BASF, Bayer, Degussa, ExxonMobil Chemicals, Ineos, Millennium Chemicals, Rohm & Haas, Shell, Solvay, Toyo Ink, etc.

## ■ France's attractiveness

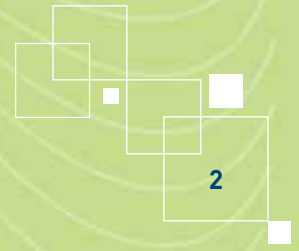
The commercial and structural advantages:

- Several production platforms specifically dedicated to chemical activities, classified Seveso II, have surfaces available.
- A very dense network of subcontractors and specialized service companies, mostly located in proximity to the chemical platforms.
- Stability of the electric power grid, which is indispensable for sites that are very sensitive to electric loads.
- High availability of industrial gases and other utilities, which are indispensable for the chemical production process.

Public and private support, recent measures:

The creation of "clusters" dedicated to the chemical industry makes it possible to pool and optimize company efforts in terms of export, R&D, or training.

These clusters have reinforced the already sustained public action: a number of training schools at all levels, including the prestigious Ecole Supérieure de Chimie (Higher School of Chemistry),



acknowledgement by the government of the fact that the chemical sector is an industrial priority for France, programs financed by the Agence pour l'Innovation Industrielle (Agency for Industrial Innovation), etc.

Finally, the profession is also very well structured, in particular around the Union des Industries Chimiques (Chemical Industries Union), which makes it possible, for example, to engage in a joint action to define the implementation of the new European 'Reach' procedures.

### ■ International players in France

- Established in 1902, Air Liquide is an international company of French origin that specializes in industrial and medical liquids and associated services. Its presence worldwide (130 subsidiaries in more than 70 countries, 36,000 employees throughout the world, including 11,000 in France) allows it to combine the resources and expertise of an international group with a strong local presence on the basis of autonomous and very client-oriented teams.

Air Liquide turnover reached a total of 10.4 billion euros in 2005, an increase of +11%.

- Exxon established its refining and petrochemical facilities in Port-Jérôme at the end of the Second World War. On January 18, 2005, Esso inaugurated at Port-Jérôme a grass roots unit intended for the production of desulfurized motor-fuels. With an investment of 250 million euros, this new unit, called the AEPJ 21Ø, allows the Norman refinery of the American giant oil company's subsidiary to produce fuels meeting Auto-oil 2 European specifications enforced on January 1, 2005, and to enhance the refinery conversion.

This investment directly related to Environment Protection is one of the most important of this type ever achieved in France.

Thanks to the PJ 21 project, The Port Jérôme refinery is now able to produce low sulphur motor-fuels and is ahead of the European law's requirements for gasoline.