

COMPAGNIE PLASTIC OMNIUM

CORPORATE PROFILE

Plastic Omnium is a manufacturing and services company with leadership positions in its three core businesses:

■ **AUTOMOTIVE, with Plastic Omnium Auto Exterior and Inergy Automotive Systems.**

As tier-one automotive equipment manufacturers, Plastic Omnium Auto Exterior and Inergy Automotive Systems offer integrated, multi-material solutions to optimize exterior components, body modules and fuel systems.

Plastic Omnium Auto Exterior is a global leader in body modules.

Inergy Automotive Systems is the world leader in fuel systems.

■ **ENVIRONMENT, with Plastic Omnium Environment.**

As a partner to municipalities and companies, Plastic Omnium Environment is active in three core businesses:

- Management and onsite handling of waste.
- Playground installations.
- Recycling.

Plastic Omnium Environment is the world leader in contract services to local communities and onsite waste handling.

■ **HIGH-TECH, with Performance Plastics Products - 3P and Plastic Omnium Medical.**

Performance Plastics Products - 3P is a world leader in the processing of fluoropolymers and other high-performance resins.

Plastic Omnium Medical is a European leader in plastic parts and systems for the health care industries.

Since its founding in 1947, Plastic Omnium has enjoyed steady growth while serving the needs of its customers, employees and shareholders, thanks to a strategic commitment to profitability, independence, innovation and corporate citizenship.

2002 Facts and Figures

Plastic Omnium operates in 25 countries on four continents with 66 plants and 14 research and development centers.

- 1.6 billion in 2002 sales
- 67% of sales outside France
- 9,200 employees
- 5.2% of sales allocated to R&D

PLASTIC OMNIUM AUTO EXTERIOR

A WORLD LEADER IN BODY MODULES

As a tier-one automotive equipment manufacturer, Plastic Omnium Auto Exterior designs and delivers integrated, multi-material auto body components and modules.

In 2002, the Division's 4,800 employees generated sales of 701 million, of which 68% from outside France.

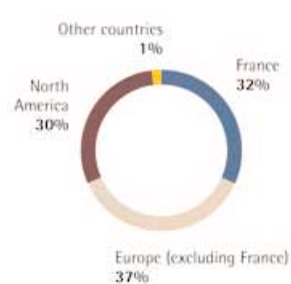
■ AN EXTENSIVE GLOBAL PRODUCTION NETWORK

Plastic Omnium Auto Exterior operates an extensive global production network that includes 22 manufacturing sites and 20 forward supplier facilities in Belgium, Brazil, France, Germany, Mexico, Poland, Slovakia, Spain, Turkey, the United Kingdom and the United States.

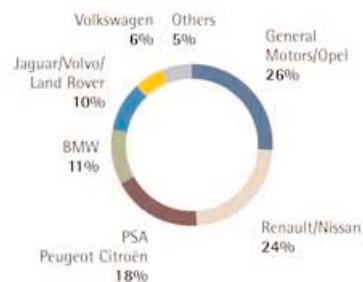
The Division's newest plant is in Bratislava, Slovakia in the heart of Central Europe. Operational since April 2002, the plant is located near Volkswagen's production facility. Capital spending programs at the Bratislava site have given it exceptional injection, paint, assembly and sequential delivery capacity.

■ A BALANCED PORTFOLIO OF WORLD-CLASS CUSTOMERS

With its balanced portfolio of world-class customers, Plastic Omnium Auto Exterior supports global carmakers as they expand their manufacturing and sales resources in Europe and North and South America, providing customized solutions that also meet the specific needs of local markets.



Sales by country



Sales by carmaker

■ AN ALLIANCE STRATEGY

Plastic Omnium Auto Exterior deploys expert skills in five product lines:

- Bumpers.
- Fenders.
- Front-end modules.
- Rear-end modules.
- Impact absorption systems.

To support its multi-product, multi-technology vision, Plastic Omnium Auto Exterior also forges strategic alliances with other tier-one suppliers, either in one-time partnerships or long-term commitments.

For example, an alliance was created with Valeo to fill a special order from Renault. The partners' joint venture, Valeo Plastic Omnium, produces the front-end module for the Mégane II in its plants in Douai, France and Palencia, Spain.

Plastic Omnium also holds a 34% stake in Inoplast, with whom it created Inoplastic Omnium, an equally owned joint venture. Inoplastic Omnium is a leading designer and manufacturer of parts and modules made of fiberglass-reinforced thermosetting materials, such as sheet molding compound. The company has facilities in Mexico and Spain.

■ POWERFUL GROWTH DRIVERS

2002 saw 20 production start-ups for new vehicles, including the rear hatch protective cladding, trunk floor and front-end module for the Renault Mégane II, bumpers and fenders for the Peugeot 307 SW, front and rear bumpers for the Jaguar S-Type, bumpers and front-end module for the Volkswagen Touareg, bumpers and fenders for the Volkswagen New Beetle Cabriolet and bumpers and structural front-end system for the Porsche Cayenne.

In 2003, growth will be led by a comparable number of production start-ups, notably for Renault, BMW, General Motors, Opel, Peugeot and Citroën.

■ INNOVATION AND CREATIVITY

Plastic Omnium Auto Exterior is pursuing an assertive strategy of innovation, with the goal of providing carmakers with new concepts and new solutions.

In 2002, 6% of Division sales were earmarked for research and development. During the year, Plastic Omnium Auto Exterior opened its new international research and development center near Lyon. The facility houses important data processing and simulation tools, a pilot production line and a test laboratory.

With its dedicated technological approach and entirely revamped project organization, S - Sigmatech is one of the industry's most advanced R&D facilities. It has already logged more than 550,000 man-hours on projects for 17 customers.

Research focuses on:

- Front and rear-end modules.
- Eco-design and product recyclability.
- Impact absorption.
- Pedestrian safety.
- Personalized bodywork, through film overmolding, back decoration, new materials and surface finishes.
- Water-soluble paints.
- Noise pollution.

Plastic Omnium has decided to enhance its strategy of developing modular solutions by adding a special Front-end Module Department, with a dedicated team assigned to develop vehicle front-ends and optimize them in terms of cost, weight, size and assembly time.

■ PLASTIC OMNIUM AUTO EXTERIOR: CURRENT OUTPUT

- Bumpers: 35,000/day
- Thermoplastic fenders: 10,000/day
- Rear hatches: 2,500/day
- Front-end modules: 3,300/day

Σ - SIGMATECH, AN INNOVATIVE RESEARCH AND DEVELOPMENT CENTER FOR THE VEHICLES OF TOMORROW

2002 was shaped by the opening of S - Sigmatech, Plastic Omnium Auto Exterior's 20-million international research and development center.

Operational since July 2002, the facility has consolidated the Division's French R&D teams formerly based in Oyonnax, Langres and Levallois.

Located 30 kilometers from Lyon, in the Plaine de l'Ain Industrial Park in Sainte-Julie, S - Sigmatech is ideally positioned in the heart of Europe, with access to highly developed air, rail and highway networks. This represents a major selling point for global carmakers.

The 15,000-square-meter, state-of-the-art facility houses engineering and design offices, an integrated laboratory and a unique pilot production line that allows for full-scale simulation and validation of injection, painting and assembly processes.

Designed in compliance with ISO 14001 environmental standards, the center brings together 400 employees, of whom 60% are engineers and technicians. Their mission is to work alongside carmaker teams to develop and validate new products, materials and processes.

These resources give Plastic Omnium Auto Exterior competitive strengths to enhance its industry-leading expertise in system and body module architecture.

■ DEVELOPMENT AND COLLABORATIVE WORK

Organized by project or project phase rather than by department, Σ - Sigmatech's engineers and technicians work in an extended enterprise environment.

Computer-assisted collaborative work based on networks and round-the-clock outsourcing optimizes project design, simulation and development by enabling real-time data flows between Σ - Sigmatech, the engineering centers and the plants.

A Keops project management system linked to Product Data Management tools allows the 500 engineers and technicians in the different sites to share information in real time and leverage experience from around the world, with 100,000 documents added to the database each year.

■ UNIQUE VALIDATION RESOURCES

A - A pilot line unrivaled among equipment manufacturers

Shortening and securing development cycles

The Σ - Sigmatech center enables researchers to accurately forecast manufacturing quality performance and effectively manage product and process engineering.

The lines' modular configuration allows for full-scale analysis and validation, using test protocols tailored to the configuration of each Division plant.

Unequaled by other OEMs, the pilot line reduces process-sequencing times and development costs and shortens validation loops in a wide range of processes, including molding, painting, assembly and functional validations.

- **Injection presses**

- A 3,150-ton injection/compression press with three injection ends (polyolefins, engineered alloys and fiberglass-reinforced alloys) and a seven-axis unloading robot.
- A 750-ton multi-process press (bi-material, gas co-injection, injection/compression, modular test molds).

Plastic Omnium Auto Exterior has developed the world's only technology for the 3D simulation of the injection process, which makes it easier to manage problems related to sizing and surface finish.

- **Automated paint lines** simulate different production site configurations compatible with water-borne and solvent-borne processes.

- **A flexible assembly line** simulates plant flow options (workstation to workstation, parallel or continuous) and validates clipping, screwing, gluing, welding and other assembly techniques.

B - Laboratory

Validating and correlating data with tests

Impact absorption

Plastic Omnium has developed unique expertise in low and moderate-speed impact absorption thanks to its in-depth understanding of materials, processes and architecture. Comparing computer simulations with laboratory crash tests enables researchers to optimize solutions.

In particular, research is focusing on pedestrian impact, with the goal of providing responses to the European Union directive that will take effect in 2005 and become stricter in 2010. Plastic Omnium also has facilities for reproducing impacts involving bumpers, fenders or the entire vehicle at speeds of up to 30 km/h.

Analytical laboratory

Σ- Sigmatech houses a laboratory for analyzing materials and studying the mechanical, chemical and flow properties of parts and materials, as well as their colorimetry and surface finish.

The laboratory also has equipment for assessing product durability, such as test benches for measuring resistance to sunlight or vibration.

Σ - Sigmatech Facts and Figures

- 400 employees, with an average age of 35, working in R&D, purchasing, project management, production and support functions.
- A 15,000-square-meter facility built on a 10-hectare site.
- 20 new patents filed every year.
- More than 550,000 man-hours logged on projects for 17 customers.
- ISO/TS 16 949 certification.