

Plastics Profile

Styron Plastics is a business division with a broad plastics portfolio including polystyrene, co-polymers (ABS, SAN), polycarbonate, and compounds & blends, as well as automotive plastics.

Styron Plastics is anchored by a premier polystyrene franchise, one of today's global marketplace leaders in polystyrene production.

Styron Plastics offers innovative and sustainable solutions to customers in industries such as home appliances, automotive, building & construction, commercial transportation, consumer electronics/information technology equipment (ITE), consumer goods, electrical & lighting, medical and packaging.

	Styrenics	Engineered Thermoplastics
Key Products	<ul style="list-style-type: none"> • General Purpose Polystyrene • High Impact Polystyrene • Acrylonitrile-Butadiene-Styrene (ABS) • Styrene-Acrylonitrile (SAN) • Feedstocks 	<ul style="list-style-type: none"> • Polycarbonate • Compounds & Blends • Automotive Plastics
Top Brands	<ul style="list-style-type: none"> • STYRON[™] Polystyrene Resins • STYRON A-TECH[™] Polystyrene Resins • MAGNUM[™] ABS Resins • TYRIL[™] SAN Resins 	<ul style="list-style-type: none"> • CALIBRE[™] Polycarbonate Resins • CELEX[™] Polycarbonate Resins • INSPIRE[™] Polypropylene Solutions • EMERGE[™] Advanced Resins • PULSE[™] PC/ABS Engineering Resins • VELVEX[™] Reinforced Elastomers
End Uses	<ul style="list-style-type: none"> • Automotive • Building & Construction • Commercial Transportation • Consumer Electronics/ITE • Consumer Goods • Electrical & Lighting • Home Appliances • Packaging 	<ul style="list-style-type: none"> • Automotive • Building & Construction • Commercial Transportation • Consumer Electronics/ITE • Consumer Goods • Electrical & Lighting • Home Appliances • Medical

Global Leader in Plastics

- Styron is one of the largest producers of polystyrene globally in terms of volume.
- Global polycarbonate and compounds & blend positions with blue-chip customers
- Differentiated ABS technology

Revenue: Plastics Business Group

2012 revenue for Styron Plastics: approximately \$ 3.2 billion (USD)

Major Plants and Locations

Manufacturing plants	Styrene based (PS, ABS & SAN)	Polycarbonate	Compounds & Blends	Styrene Monomer
Midland, Michigan, U.S.	√			
Tsing Yi, Hong Kong, China	√			
Zhangjiagang, China	√			
Merak, Indonesia	√			
Hsinchu, Taiwan			√	
Tessengerlo, Belgium	√			
Boehlen, Germany				√
Schkopau, Germany	√			
Stade, Germany		√		
Terneuzen, Netherlands	√		√	

Technology

Styron was founded on a unique combination of strong capabilities, including technology leadership, world-class production assets and a global team of technical experts. Building on more than seven decades of manufacturing, commercial and technological expertise, we are passionately focused on delivering high-performance products and innovative thinking to our customers.

Our Research & Development and Marketing people work closely together with our customers to ensure that research and innovation are driven by what is needed in the marketplace. Our technical experts are highly experienced in their fields, and in our customers' industries and applications, many of them with over 20 years of expertise. Styron's extensive Research and Development facilities span across Europe, North America, Latin America and Asia-Pacific.

For the Plastics division, Styron has six Research & Development and testing laboratories, two color laboratories and three pilot polymerization facilities. Key locations for R&D include Terneuzen, Netherlands; Stade, Germany; Hsinchu, Taiwan; and Midland, Michigan, U.S.

Styron has highly efficient manufacturing sites with a proven record of operating excellence. Our manufacturing assets boast a 99% asset mechanical reliability, 5% above the industry average. Styron people are strongly committed to safety and environmental performance, and are proud to have an industry-leading safety record.

Joint Ventures

Sumika Styron Polycarbonate is 50:50 joint venture owned equally by Sumitomo Chemical and Styron. The JV serves Asia-Pacific customers and markets polycarbonate products under the trademarks CALIBRE™ polycarbonate resins and SD POLYCA™ resins.

Americas Styrenics is a joint venture equally owned by Styron LLC and Chevron Phillips Chemical Company LP Americas. It is a leading integrated producer of polystyrene and styrene monomer, offering solutions and services to customers in a variety of markets throughout the Americas.

Products & Applications

Automotive

Styron Automotive is one of the leading suppliers of plastic material solutions for interior and exterior automotive applications. The company develops industry-leading products and systems to address a wide range of critical industry needs such as energy efficiency, improved safety and enhanced vehicle quality and appeal. The technology-based solutions by Styron Automotive thus meet customer demands for vehicles that are safer, stronger, quieter, lighter, cleaner, more comfortable and more modern.

Applications

- Interior automotive applications, e.g. instrument panels, mid consoles, door modules, door pockets, pillars, overhead consoles, trunk and interior trim as well as our patented blow-molded seatback technology
- Exterior automotive applications, e.g. spoilers, tail gates, bumper fascia, front end carriers and plating applications

Products

- PULSE™ PC/ABS Engineering Resins
- PULSE™ GX50 Engineering Resins
- MAGNUM™ ABS Resins
- VELVEX™ Reinforced Elastomers
- INSPIRE™ Polypropylene Solutions

Building & Construction

Architects, engineers and building owners are always looking for ways to increase the safety, strength and sustainability of their structures and signs, without detracting from the style. Styron offers a variety of plastic resins that can offer the clarity of glass, the strength of steel and the light weight of aluminum, as well as providing additional insulation and UV-resistant properties.

Applications

- (Transparent) roofing and glazing
- Industrial signage and road marking
- Hurricane panels
- Insulation
- Sanitary (bathtub liners and shower trays)

Products

- CALIBRE™ Polycarbonate Resins
- MAGNUM™ ABS Resins

- STYRON™ Polystyrene Resins
- TYRIL™ SAN Resins

Consumer Electronics

Styron collaborates with OEMs on a wide range of consumer electronics applications to develop resins with well balanced key performance attributes that give customers optimal design freedom. Thanks to Styron's speedy, tailor-made grade developments and well known defect standard grades, the company has become a widely recognized partner to the consumer electronics industry.

Applications

- Home entertainment
- Information technology equipment
- Optical media

Products

- STYRON™ Polystyrene Resins
- EMERGE™ Advanced Resins
- CALIBRE™ Polycarbonate Resins

Consumer Goods

When it comes to consumer goods, durability and style are key. From housewares and bathroom fittings to outdoor products and recreation equipment, consumers want products that look good and can handle rough play, extreme weather and heavy use. Styron has solutions that meet these needs, as well as many other special requirements.

Applications

- Wide range of consumer goods, from protective sunglasses over helmet visors to transparent furniture

Products

- CALIBRE™ Polycarbonate Resins
- EMERGE™ Advanced Resins
- TYRIL™ SAN Resins
- STYRON™ Polystyrene Resins
- STYRON A-TECH™ Polystyrene Resins
- MAGNUM™ ABS Resins

Electrical & Lighting

LED lighting, solar electricity generation, smart meters – the electrical and lighting industries are in the midst of a rapid evolution. Styron provides plastics that stand up to rough use over the product's lifetime and maximize durability.

Applications

- Consumer electronics, e.g. power adapters
- Electrical applications, e.g. switches, plugs and meters
- Lighting such as compact fluorescent lights (CFLs) and LED (solid-state) lighting
- Smart meters

Products

- CALIBRE™ Polycarbonate Resins
- EMERGE™ Advanced Resins
- TYRIL™ SAN Resins

Home Appliances

As emerging markets around the world continue to expand and develop, demand for home appliances is growing rapidly. But consumers are also concerned about style, energy efficiency, durability and costs. With 70 years of experience supplying the home appliance industry, Styron is a reliable resin supplier of proven grades tailored for the different applications of the industry. Styron's resins contribute to high-performance end products with consistent product property balance and high gloss aesthetics.

Applications

- Cold appliances (refrigerators and freezers)
- Air-conditioning
- Wet appliances (washers, dryers and dishwashers)
- Small and other appliances

Products

- STYRON™ Polystyrene Resins
- STYRON A-TECH™ Polystyrene Resins
- MAGNUM™ ABS Resins
- TYRIL™ SAN Resins
- CALIBRE™ Polycarbonate Resins

Medical

An increase in minimally invasive, more sterile surgeries and a shift to more home healthcare monitoring have increased the need for light, yet durable, medical devices. CALIBRE™ Medical Grade Polycarbonate Resins, CALIBRE™ MEGARAD™ Polycarbonate Resins, EMERGE™ Advanced Resins, and MAGNUM™ ABS Resins from Styron offer medical device manufacturers additional options to meet stringent requirements while ensuring patient safety and keeping costs low.

Applications

- Surgical devices
- Disposables
- Enclosures

Products

- CALIBRE™ Polycarbonate Resins
- CALIBRE™ MEGARAD Polycarbonate Resins
- EMERGE™ Advanced Resins
- MAGNUM™ ABS Resins

Packaging

Protection, convenience and ensuring product quality are just some of the vital properties needed to help the consumer trust the packaged final product. Styron offers the packaging industry performance products with enhanced properties and broadened processing windows for changing packaging needs. In order to maximize the value of its applications, Styron recently introduced a new fabrication high density technology solution (CO₂RE) for density reduction.

Applications

- Paperboard packaging
- Polystyrene bottles
- Protective foamed packaging
- Rigid opaque packaging
- Thin-wall containers for semi-liquid foods

Products

- STYRON™ Polystyrene Resins
- STYRON A-TECH™ Polystyrene Resins
- CALIBRE™ Polycarbonate Resins
- TYRIL™ SAN Resins

Sheet & Profile Extrusion

Good processability, high consistency, thermal stability – all are important to the sheet and extrusion profile applications. Styron addresses all these concerns with a broad range of ABS and polycarbonate resins that work for a variety of application needs.

Applications

- Opaque sheet
- Clear sheet
- Floor mats
- Edgebands and profiles
- Performance films

Products

- MAGNUM™ ABS Resins
- CALIBRE™ Polycarbonate Resins

For more information about Styron Plastics, visit www.styron.com.