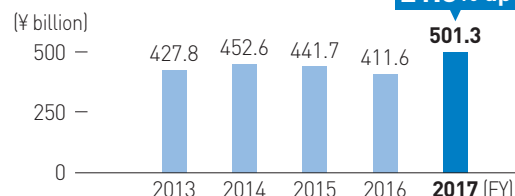


Business at a Glance

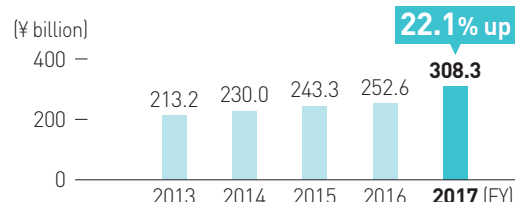
Net Sales

PVC/Chlor-Alkali Business



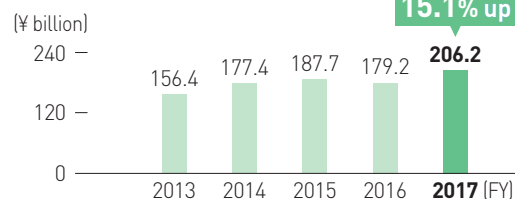
In the U.S. Shintech continued at full operation, while at the same time, in addition to PVC, the supply and demand relationship with respect to caustic soda improved, resulting in significant growth. Bases in Japan and Europe also achieved favorable business results. Thorough sales efforts resulted in increased sales, both in the regions surrounding our production bases and globally, contributing to growth in profit.

Semiconductor Silicon Business



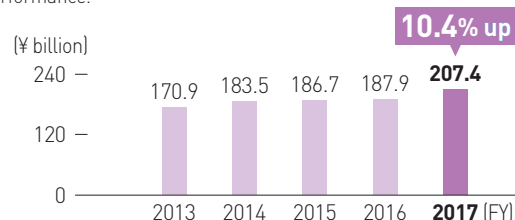
Driven by robust demand for semiconductor devices, 300mm and other diameter silicon wafers experienced strong demand, while the implementation of product price adjustments substantially enhanced segment performance.

Silicones Business



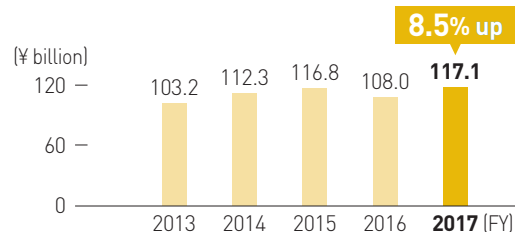
Demand increased for all product lines and applications, and in addition to functional products, sales of general-purpose products also expanded worldwide, which increased segment performance.

Electronics and Functional Materials Business



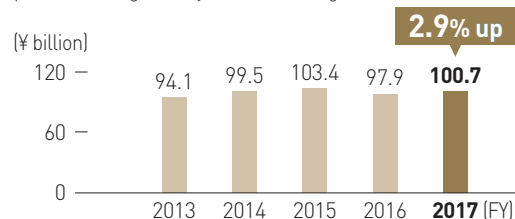
With regard to rare earth magnets, shipments of products for automotive applications, including hybrid cars and industrial equipment, remained strong as sales expanded. With regard to photoresist products, KrF resists, ArF resists and trilayer materials all performed favorably as photomask blanks also expanded. Optical fiber preform sales were increased by taking advantage of a rise in global demand as well as by contributions from the production at our new joint-venture company in China starting in the second half of FY 2018. Shipments of materials for LED packaging were also firm.

Specialty Chemicals Business



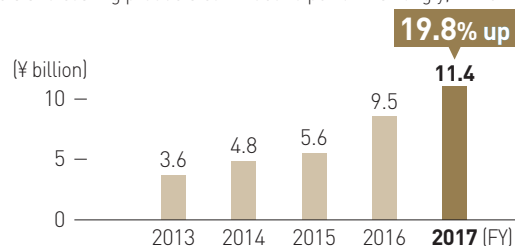
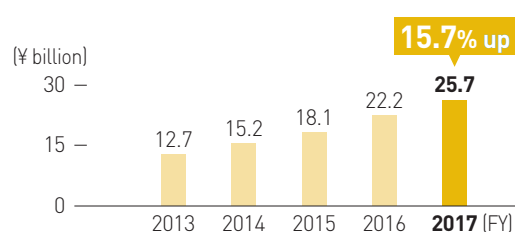
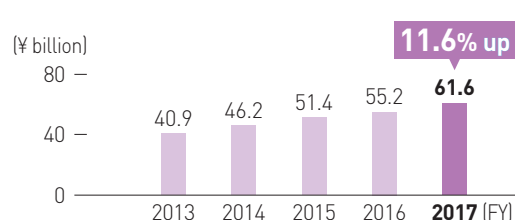
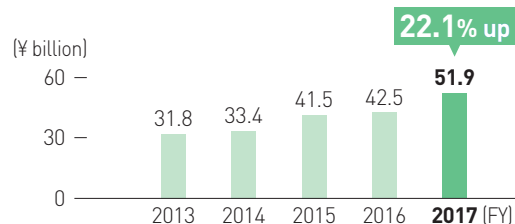
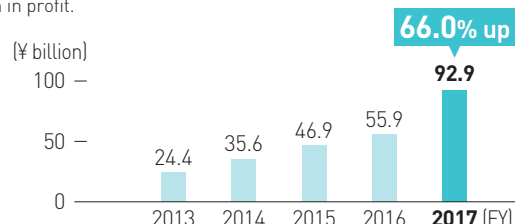
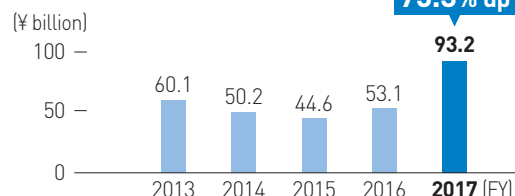
With regard to cellulose derivatives, pharmaceutical-use products, construction material products and coating products continued to perform strongly, while pheromone, POVAL and other products also generally achieved strong results.

Processing, Trading & Specialized Services Business



Shin-Etsu Polymer Co., Ltd., input devices for automobiles and semiconductor wafer-related cases continued to perform well.

Operating Income



PVC/Chlor-Alkali Business

Business Overview

Polyvinyl chloride resins (PVC) are general-purpose resins used in a wide range of applications, from everyday products to all kinds of industrial materials. This is one of the Group's core businesses. The Group became one of the first Japanese chemical manufacturers to establish a polyvinyl chloride manufacturing base overseas. Shintech in the U.S. from the time it began operations in 1974 with yearly production of 100,000 tons of PVC has carried out numerous expansions, and today it has expanded its annual PVC production capacity to 2.95 million tons. The Shin-Etsu Group, the world's largest maker of PVC, has PVC manufacturing plants in the U.S., Europe and Japan with annual production of 4.15 million tons, and is reliably supplying this superior material throughout the world.



Contributing to the Achievement of Sustainable Development Goals (SDGs) Through Product Supply

Approximately 60% of the raw materials used in PVC are salts that are practically inexhaustible resource. Compared to other general-purpose resins, the merits of PVC include a low dependence on petroleum resources, placing a relatively small burden on the environment. The process of manufacturing PVC from raw materials uses only 60% of the energy required to make other general-purpose resins. Highly durable and easy to recycle, PVC is used for a wide range of social infrastructure materials, including vinyl windows, water and sewerage pipes, construction and civil engineering.

PVC



Sodium hypochlorite



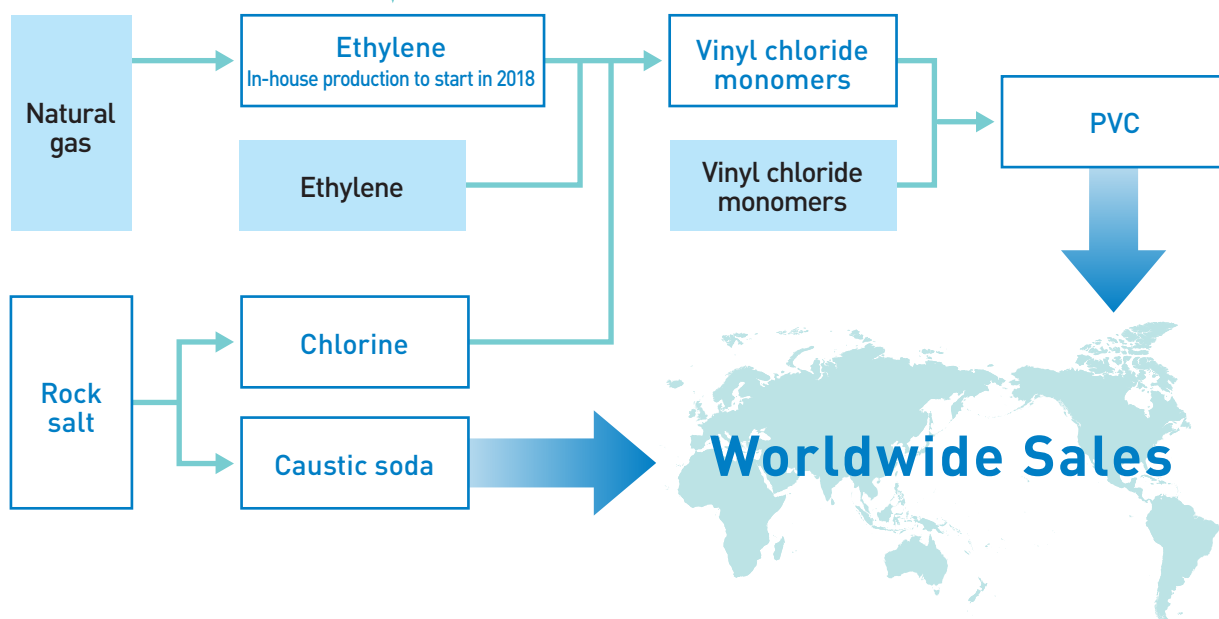
PVC/Chlor-Alkali Business

Shintech's Integrated Production Facilities

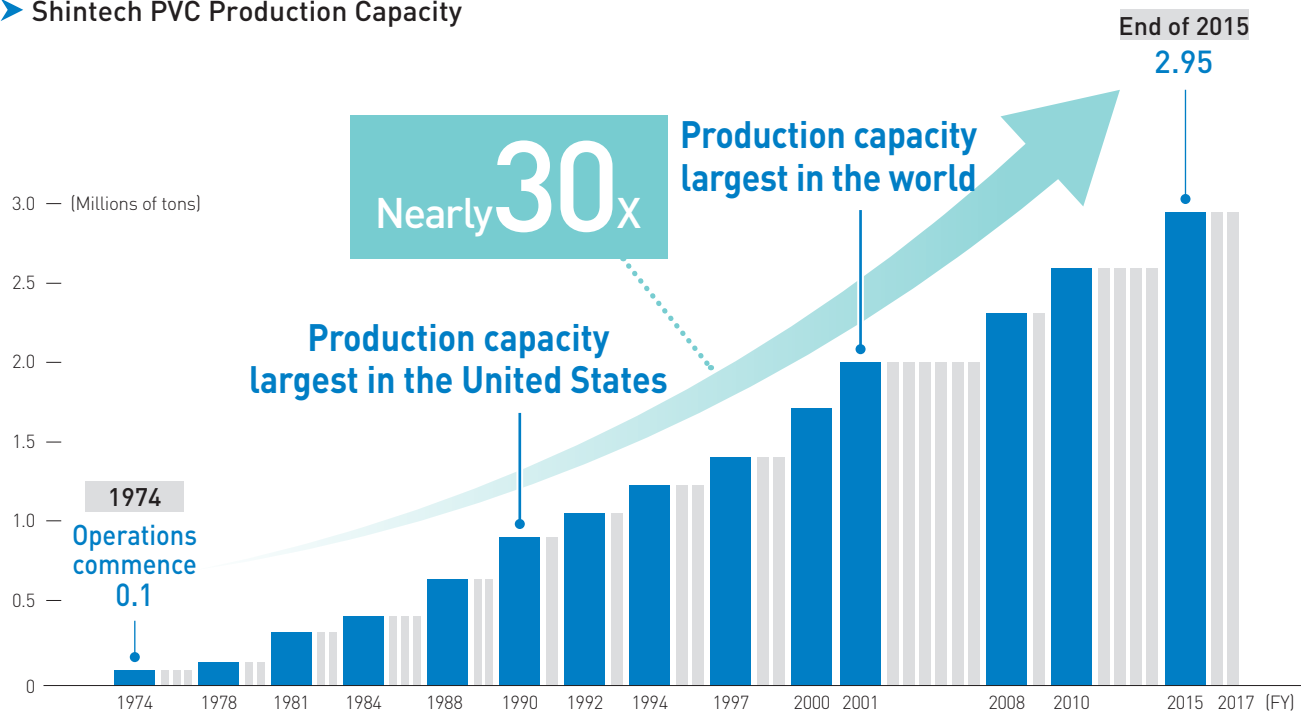
Integrated Production to Begin with Raw Materials

In-House Production
 External Procurement

Focus As with vinyl chloride monomers, an in-house production system will be established for ethylene.



Shintech PVC Production Capacity



Application

PVC

PVC pipes

PVC water and sewerage pipes can be used for more than 50 years without requiring replacement, contributing to a long working life for this infrastructure.



Plastic greenhouses for agriculture

PVC is easy to recycle and thus helps save resources. In Japan, more than 50% of the plastic used for agricultural greenhouses is recycled.



Electric wire coating material

PVC, which is superior in insulation properties, durability and pliability, and is difficult to damage, is used as a sheathing material for electric wires.



Vinyl windows

This material is an excellent insulator that can reduce the amount of heat lost through windows by 71%, contributing to reductions in energy consumption as well.

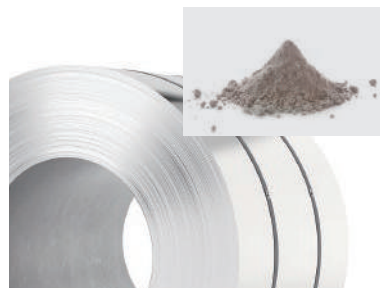


Siding materials

These decorative materials made from PVC are lightweight and easy to use for construction. They also provide excellent resistance to weather, shocks, rust and deterioration.



Caustic Soda



Alumina

Aluminum hydroxide, made by dissolving bauxite with caustic soda, is a raw material for alumina (aluminum oxide).



Paper and pulp

Caustic soda is used for digesting and bleaching wood chips in the dissolved pulp manufacturing process.



Soaps and detergents

Caustic soda reacts with fats and oils to become a raw material for soap or a raw material for synthetic detergents.



Super-absorbent polymers

These absorption agents are an essential element of paper diapers. Caustic soda is one of the raw materials used to manufacture these polymers.

Sodium Hypochlorite



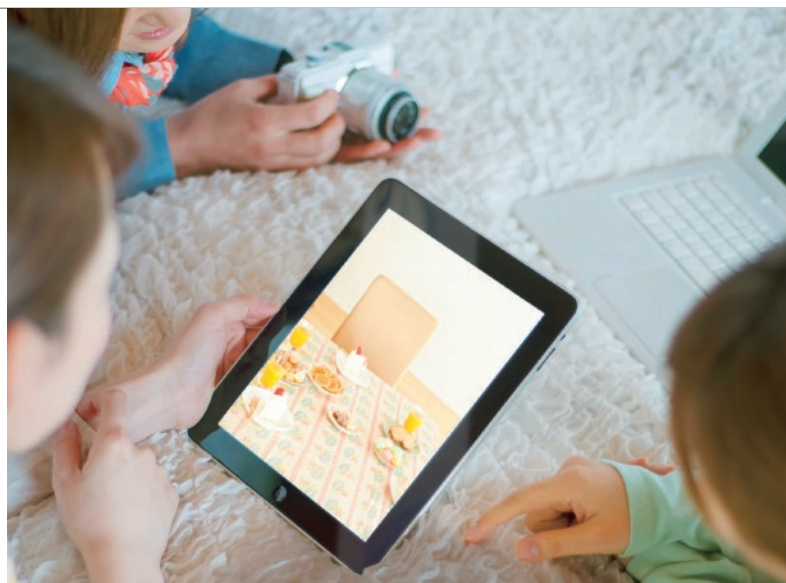
Sodium hypochlorite

As a chemical for protecting the safety of foodstuffs and tap water, this substance contributes to a safe and comfortable lifestyle.

Semiconductor Silicon Business

Business Overview

As the world's leading company providing silicon wafers for integrated circuits, the Shin-Etsu Group continues to be in the technological forefront with regard to cutting-edge large-diameter and super-flat wafers. We have succeeded ahead of others in the mass production of 300mm wafers and silicon-on-insulator (SOI) wafers that realize high speed and low power consumption, and we are stably supplying these superior products. In addition to our company's high-precision single-crystal technology and high-level processing technology, our high-quality epitaxial growth technology for cutting-edge image sensor devices and our systems for product quality control and evaluation analysis are highly valued by our customers around the world. By further developing our world's No.1 technology, we will continue to provide a stable supply of the silicon wafers that support the development and manufacture of semiconductor devices.



Contributing to the Achievement of Sustainable Development Goals (SDGs) Through Product Supply

As a basic material supporting our modern high-speed information society, silicon wafers contribute to society by reducing the size and weight of electronic equipment, reducing power consumption, improving automobile fuel efficiency, driving support systems and other safety controls and contributing to advancements in medical equipment. Furthermore, they are useful for the stable supply of electric power mainly to electronic equipment, as power semiconductors can minimize power consumption and accommodate

high voltage and high currents. Group products are also used to accurately regulate motor drive controls from high to low speeds and as power-saving transistors enabling the efficient transfer of power from generators to transmission lines.



Application



Various types of silicon wafers

Electrical components for digital equipment and automotive parts

Used as a substrate material for semiconductor devices in electronic devices such as personal computers, smartphones and televisions, as well as automobiles.

Compound semiconductor products

LED components

Used in a wide range of applications including outdoor displays, traffic lights, in-vehicle stop lamps and sensor light sources.



Application

Communication/Computers



Smartphones



Tablet-type devices



Personal computers



Data center

Automobile



Hybrid cars



Electric vehicles



Car navigation systems



Electronic toll collection system

Consumer



Televisions



Game devices



Smart watches



Digital cameras



Drum-type washing machines



Energy-saving air conditioners



Rice cookers



Microwave ovens

Industry



Industry robots

Other



Bullet trains



Bank ATM



Vending machines

Silicones Business

Business Overview

Since becoming the first Company to commercialize silicones in Japan in 1953, the Group has captured more than a 50% share in Japan through strong technological capabilities and detailed support for market needs. Silicone is a highly functional material that has both organic and inorganic characteristics and has many superior distinguishing features. The Shin-Etsu Group currently provides more than 5,000 silicone products to a wide range of industries from electronics and electric to automobiles, construction, cosmetics, chemicals, health care and food.



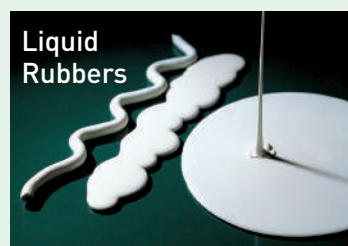
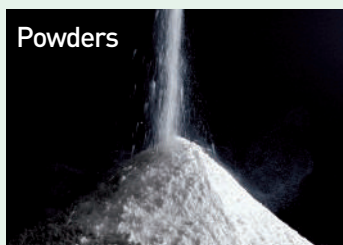
Contributing to the Achievement of Sustainable Development Goals (SDGs) Through Product Supply

Using silicones has the effect of reducing greenhouse gas emissions. It is estimated that the effect is nine times as large as the emission volume of silicone production and waste disposal, according to a study commissioned by the Global Silicones Council in 2012. Among these, the use of silicones for automobile, construction and solar cell applications account for a large proportion of greenhouse gas emission reductions from the silicone product cycle.

This constitutes a substantial contribution toward the realization of an environmentally friendly and sustainable society.



► Silicone Representative Configurations



► Numerous Characteristics of Silicone

- Heat resistance
- Cold resistance
- Electrical insulation properties
- Release properties
- Adhesion properties
- Defoaming properties
- Water repellency
- Weather resistance

Application

Cosmetics

Improving the usability and functionality of various cosmetics to meet the diverse needs of the marketplace.



Solar cells

Used as modifying agents for the resins in the encapsulating material for solar cells, thus helping to improve their functionality.



Bullet trains

Used as an insulating oil material for the transformers of bullet trains and contribute to the safe operation of these trains.



Electronic devices

Thermal interface materials for electronic devices widely used in such areas as electronic product.



Contact lenses

Essential as a material for contact lenses because of its oxygen permeability characteristics.



Herbarium

Silicone oil is clear, colorless and unaffected by temperature changes. For this reason, it improves the quality of herbarium specimens.



Nursery items

Durable and safe with no rubber-specific odor. Used in various products for babies such as the nipples of baby bottles and pacifiers.



Textile treatments

Add various advantageous properties such as softening, water repellency, etc.



Tires

Silicone-enhanced tires can lower rolling resistance and help improve fuel efficiency.



Ship-bottom paints

Contributes to the environmental conservation of the seas and the improvement of fuel efficiency by preventing marine organism adhesion.



Electronics and Functional Materials Business

Business Overview

The Shin-Etsu Group's rare earth magnets are used in a wide range of applications including automobile motors, industrial robots, home appliances and hard disk drives. We also develop and provide photoresists, photomask blanks, encapsulation materials and pellicles that are used in the semiconductor manufacturing process. We have also successfully launched the world's first mass production of synthetic quartz products, used as a substrate for photomasks. Furthermore, we successfully developed liquid fluoroelastomers.*

* Employs silicone addition reaction technology and hardens into a flexible solid synthetic rubber upon heating. Offers outstanding functionality and processability, and far more resistance to cold, oil, solvents and chemicals than conventional products. This material is expected to be applied in a wide range of fields, from automobiles and aircraft to electronic equipment and optical applications.



At the "24 Hours of Le Mans" traditional automotive race held in 2018, two Toyota hybrid cars achieved a dazzling 1st and 2nd place finish. Our rare earth magnets were used in the drive motors installed at both the front and rear of both of these cars.

Contributing to the Achievement of Sustainable Development Goals (SDGs) Through Product Supply



Various types of rare earth magnets in shapes such as squares, rings and cylinders

Rare earth magnets have about 10 times the magnetic force of conventional ferrite magnets. Even small rare earth magnets generate a powerful magnetic field. They are used in hybrid and electric cars to realize smaller size and weight as well as increased power regeneration. Rare earth magnets are also used in compressors for energy-saving air conditioners. They raise electric power efficiency in a variety of products and contribute to the reduction of greenhouse gas emissions.

Rare earth magnets



LED, semiconductor device encapsulation materials



Photoresists, Photomask blanks



Synthetic quartz



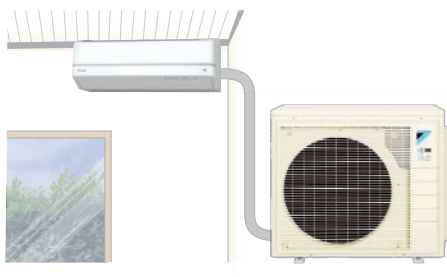
Oxide single crystal



Anode materials of lithium-ion batteries



Major Products and Application



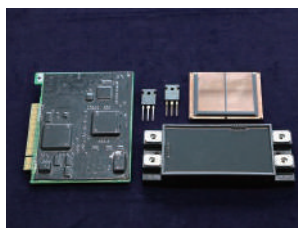
Rare Earth Magnets

Rare earth magnets are used in such products as automobile motors, compressor motors for air conditioners, industry robots and motors for the hard disk drives of digital home appliances, thus helping to contribute to saving energy. Shin-Etsu Chemical is engaged in the manufacture of these magnets from separation and refinement to processing of the rare earth raw materials. Furthermore, Shin-Etsu is reliably supplying high-quality rare earth magnets with highly advanced features by means of the development of its own grain boundary diffusion method, which reduces the amount of heavy rare earth used, while keeping the high performance level of the magnets.



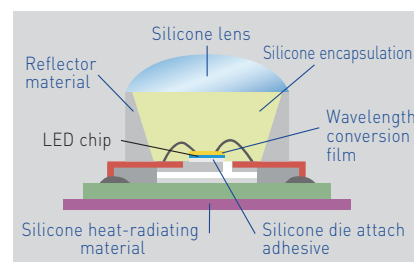
Epoxy Molding Compounds

Based on its high technologies that were cultivated through the development of various kinds of silicones, Shin-Etsu has developed encapsulating materials for applications in semiconductor devices. In recent years, epoxy molding compounds are being usefully applied not only in general-use semiconductors but also as a highly reliable encapsulating material in power modules for automobiles and various sensors.



Coating Resin and Die Attach Adhesive for LEDs

Shin-Etsu's various silicone encapsulation materials for LED lights feature such superior characteristics as being heat-resistant, high transparency and preventing a decline in brightness for a long period of time.



LED Structure (Blue characters are products provided by Shin-Etsu)



Reflector for LEDs

Shin-Etsu's reflector material for LEDs greatly improves brightness, and such reflectors are superior in heat resistance and weatherability, thus contributing to the long operating life of LED lighting. With Shin-Etsu's high-level processing technologies, our reflector material for LEDs makes it possible to freely design packaging shapes.



Wavelength Conversion Film

Wavelength conversion films are adhesive film materials that mix silicones with a fluorescent substance. By attaching it to the LED chip surface, the blue color light that LEDs emit can easily change to various colored lights, including white light, and can make a uniform color. In addition, the films are superior in heat-resistant and light-stability properties and it is possible to use them for long-term usage applications.



Optical Fiber Coatings

Extremely fine optical fibers have a cross-sectional diameter of only 125 microns. Optical fiber coatings provide a protective coating for these fine optical fibers to protect the surface while providing greater strength.

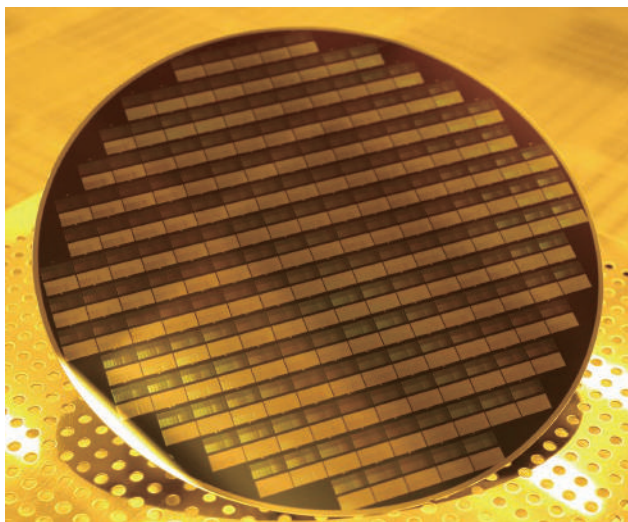


High-Purity Silane for Semiconductors

We provide high-purity silane that is used in such products as insulating film for semiconductors and epitaxial wafers. We meet the various needs of our global customers by providing a stable supply and a high level of product purity, which are supported by strict product quality and container control in addition to our own high-level refining technology.

Electronics and Functional Materials Business

Main Products and Applications



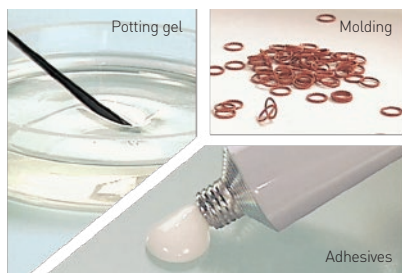
Photoresists

Shin-Etsu Chemical, by utilizing its strengths as a materials maker, carries out integrated manufacturing from raw materials' polymer synthesis to compounding. We make photoresists (KrF, ArF) for excimer lasers that are used as photosensitive material for etching on semiconductor circuits, and our thick film I-Line photoresists are used widely for thin-film magnetic heads and MEMS applications. Furthermore, for cutting-edge miniaturization processes we have lineups of multilayer material products. These are used as essential key materials in lithography processes for semiconductor manufacturing, and they help to enable the high integration, high speed and high functions of semiconductors. To steadily capture the growth of the photoresist market, construction of a new plant is under way in Taiwan, one of the main areas of demand. In combination with our existing Naoetsu Plant, we will have two production bases. As a result, we will be able to disperse business risk and strengthen our business foundation.



Photomask Blanks

Photomask blanks are the base material of photomasks that are used as the patterning templates when etching circuits on silicon wafers during the semiconductor lithography process. The light-shielding layer is formed on the surface of photomask blanks for which the substrate is synthetic quartz. Instead of the chromium (Cr) used for the conventional light-shielding layer of photomask blanks, Shin-Etsu has developed new manufacturing processes that use cutting-edge molybdenum-silicon binary (OMOG: Opaque MoSi on Glass) for the light-shielding layer. Shin-Etsu has established the mass-production technology of these advanced photomask blanks with its superior etching characteristics. Shin-Etsu's photomask blanks are highly evaluated by device makers as an essential material for cutting-edge semiconductor manufacturing processes. In addition, Shin-Etsu supplies attenuated phase-shift photomask blanks for ArF and KrF, which respond to customers' needs.



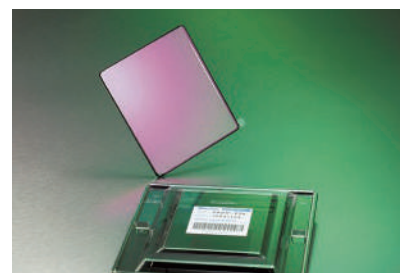
Liquid Fluoroelastomers SHIN-ETSU SIFEL®

Shin-Etsu Chemical was the first company in the world to succeed in developing the liquid fluoroelastomers SHIN-ETSU SIFEL®, which by using silicone addition-reaction technology can be made into a form that hardens into a flexible, solid synthetic rubber upon heating. SHIN-ETSU SIFEL® possesses excellent process ability and such superior properties as resistance to oils, solvents and chemicals together with good durability against heat and stability at cold temperatures. SHIN-ETSU SIFEL® contributes to the improvement of products in a wide range of fields, including the automotive, aircraft, electronics, office equipment and petrochemical industries.



Fluorinated Anti-Smudge Coating

Shin-Etsu's fluorinated anti-smudge coating is applied to the surface of eyeglasses and cover glasses/protective films for smartphones. A nano-scale fluorinated thin layer formed on the surface repels water and oil, and stains such as fingerprints can be wiped off easily. Due to its low dynamic friction, fluorinated coating contributes to improving the operability of smartphones. In addition, Shin-Etsu supplies a fluorinated anti-smudge additive that can obtain excellent surface properties by adding to hard coatings.



Pellicles

Shin-Etsu Chemical supplies high-quality pellicles for ArF and KrF excimer laser lithography. Shin-Etsu pellicles support customers' semiconductor device production with their excellent performance, such as high light resistance, good transmission uniformity and low outgassing. In addition, Shin-Etsu has succeeded in the development of super-large-size pellicles for the production of liquid crystal display (LCD) panels.



Preform for optical fiber



Optical fiber made of preform



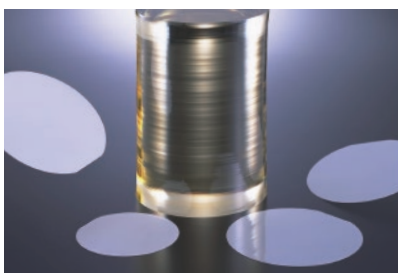
Synthetic quartz photomask substrates for LSI and FPD lithography



Large photomask substrate for FPD

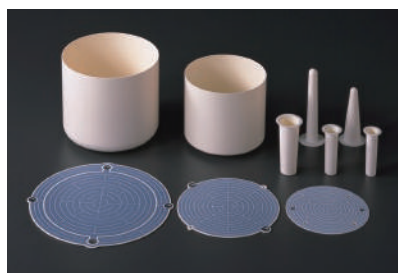
Synthetic Quartz

Synthetic quartz, the key raw material of optical fiber, has the characteristic of superior light transmission. In an ordinary glass sheet, light attenuates in about 2 meters. However, in the case of synthetic quartz, light can reach a distance of about 100 km. The Shin-Etsu Group was the first company in the world to mass-produce synthetic quartz that is higher in purity than natural quartz. So it is used as a preform for optical fiber, a photomask substrate for semiconductor lithography and a stepper lens for semiconductor lithography. In addition, it is used as a large-scale photomask substrate for flat-panel display (FPD) lithography. It is supporting the development of the advanced information society.



Oxide Single Crystals (Lithium Tantalite: LT)

Lithium tantalite (LT) is used in mobile communication devices as SAW devices that screen electromagnetic waves and pick up only specific frequencies. Oxide single crystals are currently contributing to the popularization of mobile phones and smartphones and serve an important role in the modern information society.



Pyrolytic Boron Nitride (PBN)

PBN is a high-purity ceramic with excellent chemical resistance and strength at high temperatures. Shin-Etsu Chemical was the first company to successfully produce PBN domestically. In addition to making use of PBN's excellent characteristics in crucibles for compound semiconductors and molecular-beam epitaxy, PBN's application fields are expanding to such areas as MOCVD systems and organic EL systems.



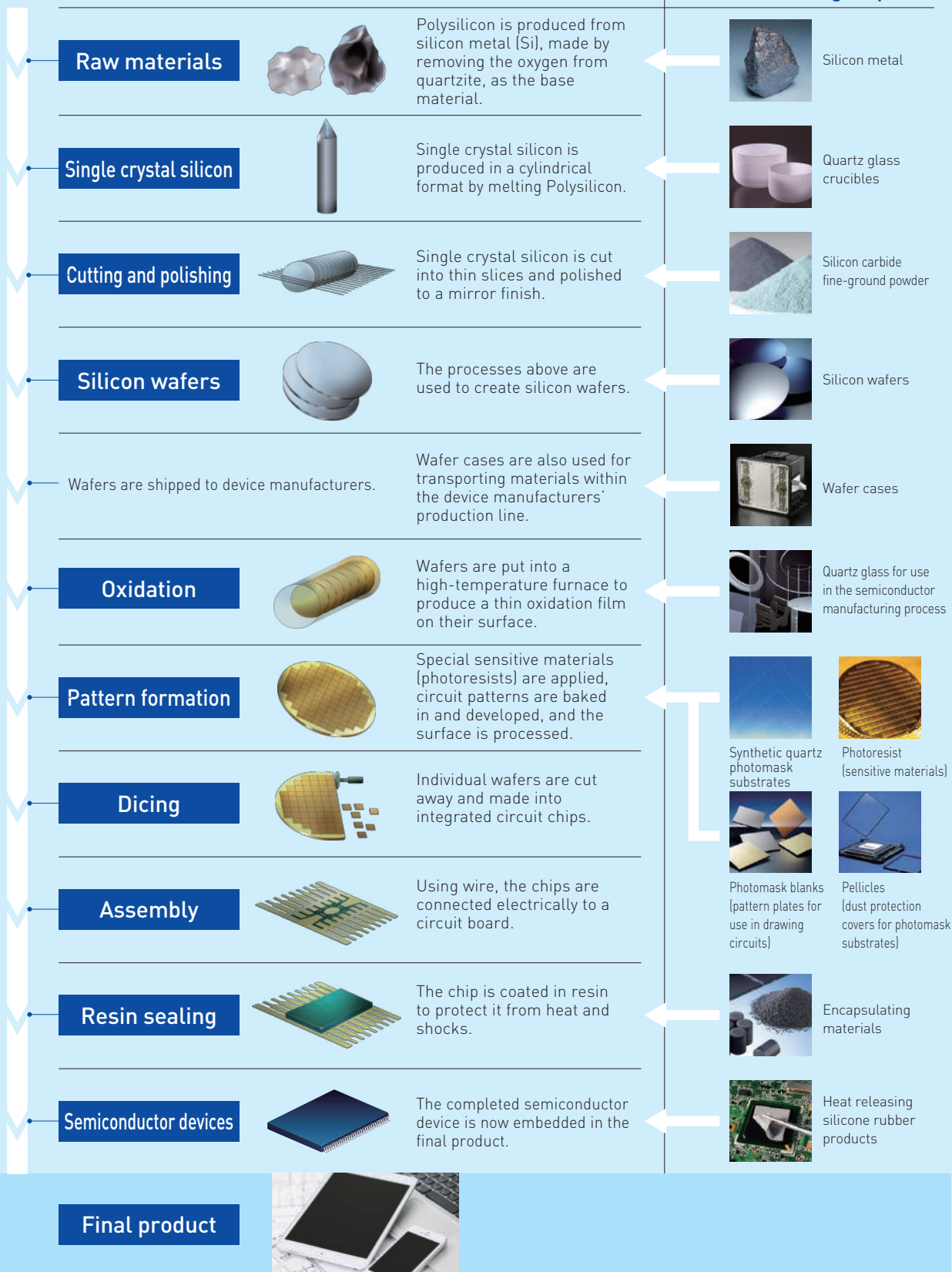
Anode Material of Lithium Ion Batteries

SiO is a greatly promising material as an anode material of next-generation lithium-ion batteries that have high capacity and excellent power properties. Shin-Etsu has succeeded in putting electrical conductivity on SiO particles via our own proprietary method. Shin-Etsu's anode material is highly evaluated by our customers.

Semiconductor Manufacturing Process and Products of the Shin-Etsu Group

From raw materials to completed semiconductor devices

Products supplied by Shin-Etsu group



Specialty Chemicals Business

Business Overview

Our main specialty chemical products are cellulose derivatives, environmentally friendly materials made from natural polymer cellulose. Cellulose derivatives have several versatile applications in a variety of fields, ranging from pharmaceuticals and foods to construction materials, engineering projects, coatings, ceramics, paper processing, cosmetics and toiletries. The Shin-Etsu Group began manufacturing



cellulose derivatives in 1962. Currently, we have the largest share in Japan and meet global needs as the world's foremost manufacturer with bases in Japan, Europe and the United States. In addition, we provide synthetic pheromones used for agricultural pest control and functional resin POVAL. We also provide a variety of other products, including silicon metal, a main ingredient in silicones and synthetic quartz.

Contributing to the Achievement of SDGs Through Product Supply



Cellulose derivatives



Artificial pheromones



Industrial cellulose derivatives reduce the separation of concrete in water, enabling concrete to be poured without polluting water. This contributes to environmental preservation by preventing water pollution. Synthetic pheromones are very safe, environmentally friendly and eliminate agricultural pests. They are useful for making food safer through the reduction of insecticides and agricultural chemicals sprayed in fields.

Major Products and Application



Cellulose derivatives

Provide a variety of functions such as controlling the location in the body where drugs dissolve and slowing the rate at which they dissolve.



Used as a binding agent for the molding process to manufacture exhaust gas purifiers for automobiles, technology that contributes to the prevention of global warming.



Synthetic pheromones

Synthetic pheromones disturb the communication of male and female insects and thus obstruct their mating process.



Aroma chemical

We manufacture leaf alcohol by breaking down natural fragrance compounds. These fragrances are used in a wide variety of products such as aroma products, cosmetics and foodstuffs.



Silicon metal

Silicon metal is a key raw material of silicone, semiconductor silicon, synthetic quartz and solar cells. Simcoa Operations, our group company, manufactures silicon metal in Australia.



Polyvinyl alcohol (POVAL)

JAPAN VAM & POVAL CO., LTD., manufactures and sells this material. Due to its properties as a water-soluble synthetic resin, it is used in a wide range of applications such as adhesives, various types of films, fiber treatment agents, paper processing agents, and additives for cosmetics and pharmaceuticals.



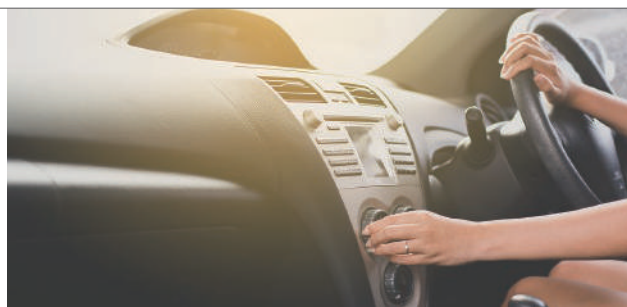
SOLBIN

This is a denatured resin supplied by Nissin Chemical Industry Co., Ltd., with excellent adhesion and solubility. Used in products such as paints, inks and adhesives.

Processing, Trading & Specialized Services Business

Business Overview

Shin-Etsu Polymer Co., Ltd., develops and supplies highly operable and functional products making use of materials processing technologies. Shin-Etsu Engineering Co., Ltd., which is involved in the design and construction of the Group's product manufacturing plants, has a strong reputation for engineering with customers outside the Group.



Contributing to the Achievement of Sustainable Development Goals (SDGs) Through Product Supply

The construction material (corrugated rigid polycarbonate sheets) manufactured by Shin-Etsu Polymer Co., Ltd. is used as an exterior roofing material. Using more than 50% reclaimed raw materials, this product contributes to recycling.



Major Products and Application

Input devices

Providing input devices such as automobile dashboard audio and air conditioners.



Shupua

Glasses made of silicone rubber.



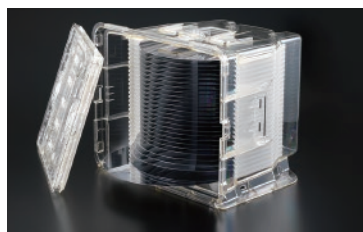
Engineering

The engineering business of Shin-Etsu Engineering Co., Ltd., is involved in the design, construction and maintenance of various Shin-Etsu Group product manufacturing plants.



Silicone catheters

Making use of the silicone processing technology we have developed, we provide catheters that offer important advances in their application.



Wafer cases

Providing containers used for transportation from silicon wafer makers to device makers and silicon wafer transport containers within the device manufacturing process.



Various rollers for OA equipment

Providing semi-conductive developing rollers and fuser rollers making use of proprietary processing technologies including conductivity, foaming and compositing using silicone rubber.



Vacuum superposition equipment

Shin-Etsu Engineering Co., Ltd., carries out the design and manufacturing of the alignment machines for LED panels that support large-scale liquid crystal panel production.

R&D and Quality Control

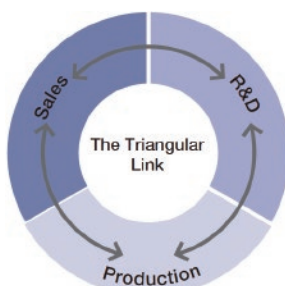
Research and Development

Without new challenges, a company cannot grow. Shin-Etsu Chemical values the power of R&D as an important asset, carving a path into the future. Then, based on questions such as “What do our customers need now?” and “What is the market looking for?” we tackle research and development to fulfill the demands of the times and actively undertake further research to raise the quality and production efficiency of our previously developed products.

The Triangular Link: Sales, R&D and Production

Shin-Etsu Chemical’s R&D is managed in a way that closely suits our customers’ needs. What makes this possible is Shin-Etsu’s R&D system, which integrates Sales, R&D and Production.

Market demands generated by our business activities are relayed to our development divisions to establish research themes. The development divisions follow these themes as they progress with development, while at the same time on the basis of close ties with the manufacturing divisions, they conduct practical R&D aimed at utilizing our plants and facilities for mass production. To do this efficiently, Shin-Etsu Chemical has established R&D centers at each plant.



Materials Development with Originality, Creating New Value

In conducting R&D, we focus on themes aimed at the creation of new products with originality. These themes attempt, first, to meet the next generation of needs and, second, to show originality in doing something that no one else has attempted. Some of these carefully selected themes have led to the invention of new materials that we produced for the first time in the world, solving problems in various industrial fields by providing materials with distinct properties and excellent functionality, and leading to epoch-making breakthroughs. Wherever there are needs, we will continue taking on the challenge of developing new materials.

Quality Control

At Shin-Etsu Chemical, as a materials manufacturer, we consider the stable supply of high-quality products to be the most important factor in our quality control framework. We supply a large number of items used for applications such as raw materials for industrial products and materials targeted to use in the latest cutting-edge products. In recent years, we are getting an increasing number of requests from our customers for ultra-high purity materials and strict cleanliness requirements. To meet all of our customers’ needs for each of our products, Shin-Etsu Chemical has introduced the latest state-of-the-art analysis and evaluation equipment, and we are developing proprietary quality control technology in-house. At the same time, we are reviewing our manufacturing processes and making efforts to minimize variation within the steps involved in each of our products.

We are creating a management system for the simultaneous and effective management of both production and product quality, and are continually working to ensure we can always provide a stable supply of high-quality products to our customers as the ultimate business partner.

The Deming Prize is Just One Example of Shin-Etsu Chemical’s Commitment to Quality Control.

Shin-Etsu Chemical has actively carried out quality control (QC) since 1950, a relatively early start in comparison with its peers, working to establish proprietary methods for ensuring consistent quality. Just three years later in 1953, the company was awarded the Deming Prize. The statistical quality control achieved at this time was praised by Dr. Deming himself, who called it “the highest level in the world.” Since then, Shin-Etsu Chemical has been working to develop technology and systems for maintaining and improving product quality. The ISO 9000 series of international standards for quality management systems was established by the International Standards Organization (ISO) in 1987, and the Shin-Etsu Chemical Group has achieved these certifications at the majority of its production facilities. In addition, we are focused not only on discharge prevention (avoiding the shipment of defective products) but also occurrence prevention (avoiding the manufacturing of defective products), and carry out regular quality surveillance from both of these perspectives at all of our factories. Through our continuing efforts to maximize and control quality, we will continue to meet the needs of the modern era.

Fulfilling the High-Level Requirements of Our Customers with the Shin-Etsu Six Sigma Method.

Based on statistical methods, “Six Sigma*” is a quality control system that uses data analysis to determine defect rates in our products and has been the focus of attention as part of our management methods. At Shin-Etsu Chemical, the Six Sigma concept has been used in combination with our experience in business thus far to create a proprietary composite method for quality control called “Shin-Etsu Six Sigma,” which was introduced in 2000 and has steadily improved our results ever since. We will continue to strive for further improvement in quality control by approaching problems from a variety of perspectives, fulfilling the high-level requirements of our customers while simultaneously improving awareness of quality among each and every one of our employees as part of our personnel development efforts.

*Six Sigma: The “sigma” in the name Six Sigma is statistical terminology for standard deviation, an expression of variability. Six Sigma is an extremely rigorous quality control system that accepts no more than three or four defects in 1 million products.