The AGC Group provides diverse products and solutions as a leading architectural glass and automotive glass manufacturer.

Architectural Glass Business

The AGC Group’s architectural glass business supplies a wide range of products—such as float glass, fabricated glass, decorative glass and glass for photovoltaic devices—which are tailored to the needs of each region and client. The AGC Group is also committed to the development and sale of functional glass products that offer comfort and reduce environmental impact. For buildings, the AGC Group provides glass with solar control and heat insulation, and glass with anti-condensation and anti-reflective properties. The Group’s architectural glass business holds a world-leading market share.

Market share rankings for main products
(Based on fiscal 2016 estimates by AGC)

Float glass
Global No. 1

Automotive Glass Business

The AGC Group’s automotive glass business holds a world-leading market share in the sale of laminated glass and tempered glass. The Group makes use of its global marketing functions, production networks and cutting-edge technologies to pursue greater product safety, design, comfort and environmental performance. It has a wide variety of products, including UV cut glass, infrared ray cut glass, water repellent glass for doors and glass antennas.

Laminated Low-E (Low emissivity) double glazing glass
Outstanding safety and heat insulation performance

Lacobel™ painted glass for indoor applications
Excellent coloring properties and improved transparency

“ATTOCH™” Low-E glass for on-site retrofitting installation
Ideal for remodeling buildings and stores

“Clearsight™” anti-reflective glass
Minimizing light reflections on the glass surface

“Temperlite™” tempered automotive glass
Several times the strength of general-purpose flat glass

“Lamisafe™” laminated automotive glass
Designed with safety in mind, shatterproof even when broken

“UV Verre Premium™” series for automotive glass
A global first!

Architectural glass pursues superior design, improved comfort and reduced environmental impact
Automotive Glass Business

The AGC Group’s automotive glass business holds a world-leading market share in the sale of laminated glass and tempered glass. The Group makes use of its global marketing functions, production networks and cutting-edge technologies to pursue greater product safety, design, comfort and environmental performance. It has a wide variety of products, including UV cut glass, infrared ray cut glass, water repellent glass for doors and glass antennas.

*Temperlite™* tempered automotive glass  
Several times the strength of general-purpose flat glass

*Lamisafe™* laminated automotive glass  
Designed with safety in mind, shatterproof even when broken

*UV Verre Premium™* series for automotive glass  
A global first\(^1\) All-around 99% UV cut, providing safety and comfort in the vehicle

Light Control glass "WONDERLITE™"  
Contributing to improved in-car comfort and energy conservation

Glass for railroads:  
Outstanding weather resistance, sound insulation and heat insulation

Automotive glass that pursues superior safety, design sensibility, comfort and environmental performance.
Business Overview

Display Business

In its display business, the AGC Group holds a number-two global market share in glass substrates used for thin-film-transistor (TFT) liquid crystal displays (LCDs). The Group leverages its unique manufacturing methods and advanced production techniques to increase its global competitiveness, while focusing on developing glass products for next-generation display devices.

Market share rankings for main products
(Based on fiscal 2016 estimates by AGC)

Glass substrates for TFT-LCDs
Global No.2

Applied Glass Materials Business

The AGC Group is promoting the advantages of the Group’s “thin, light and strong” specialty glass in an effort to create new applications, while broadening the Group’s product lineup, which includes cover glass for smartphones and tablet devices, and glass substrates for photovoltaic devices and touch panels.

market share rankings for main products
(Based on fiscal 2016 estimates by AGC)

Glass substrates for TFT-LCDs
Global No.2

The AGC Group will continue to offer high value-added products and solutions that support the evolution of the electronics industry.

Glass substrates for touch panels
The world’s thinnest electronic device glass

* XCV™ glass for light guide plates
  Enabling liquid crystal displays to be made thinner

*Dragontrail™ Pro* specialty glass for chemical strengthening
  Cover glass for electronic devices

*Leoflex™* chemically strengthened specialty glass
  Used for various applications in architecture, solar cells and more

*TCO substrates for photovoltaic devices
Improving the power generating efficiency of thin film silicon photovoltaic devices

“Roiceram™-HS” high-purity SiC jigs
  Used for heat treatment and other semiconductor processes

Glass substrates for displays
Contribute to the continuous evolution of high definition imagery

Chemical mechanical polishing (CMP) slurry and polishing solutions
Enabling multi-layered components to be made extremely flat and even

Synthetic quartz glass
Ensuring high quality in semiconductor processing

Glass frit
Used for electrical insulation, airtight seals, and other applications in various industries
Electronic Materials Business

In its electronic materials business, the AGC Group contributes to the most advanced sectors of the electronics industry by applying the leading-edge technologies it has fostered in its glass, chemicals, and ceramics businesses, including material, processing, surface treatment and molding technologies. The business supplies a wide lineup of products, such as synthetic quartz glass—a product boasting a world-leading market share—as well as high-purity silicon carbide (SiC) jigs and other semiconductor manufacturing components, CMOS/CCD blue filters and other optical materials for smartphones and digital cameras, and glass frit and paste display materials for electrical insulation and sealing.

**Market share rankings for main products**
(Based on fiscal 2016 estimates by AGC)

**Quartz materials for stepper lenses**
Global No. 1

**CMOS/CCD blue filter**
Enabling image sensors to match the luminosity of the human eye

**Synthetic quartz glass**
Ensuring high quality in semiconductor processing

**Chemical mechanical polishing (CMP) slurry and polishing solutions**
Enabling multi-layered components to be made extremely flat and even

**Glass frit**
Used for electrical insulation, airtight seals, and other applications in various industries

**"Roiceram™-HS" high-purity SiC jigs**
Used for heat treatment and other semiconductor processes

**Glass substrates for displays**
Contribute to the continuous evolution of high definition imagery

**TCO substrates for photovoltaic devices**
Improving the power generating efficiency of thin film silicon photovoltaic devices

**"Leoflex™" chemically strengthened specialty glass**
Used for various applications in architecture, solar cells and more

**"Dragontrail™ Pro" specialty glass for chemical strengthening**
Cover glass for electronic devices

**"XCV™" glass for light guide plates**
Enabling liquid crystal displays to be made thinner

**Glass substrates for TFT-LCDs**
Key materials for displays

The AGC Group will continue to offer high value-added products and solutions that support the evolution of the electronics industry.
The AGC Group’s products and solutions help create an affluent, safe and secure society while promoting environmental conservation.

Chemicals Business

The AGC Group’s chemicals business originally began with the production of soda ash, the main raw material for producing glass.

The Group subsequently developed a wide variety of products through its own chemical chain, which enables full use of by-products generated through chemical reaction process. While working to keep its environmental impact to a minimum, the AGC Group supplies a broad lineup of products ranging from basic chemicals like caustic soda to highly functional chemicals such as Fluon® ETFE, which holds the number-one global market share for fluorinated resins.

**Market share rankings for main products**
(Based on fiscal 2016 estimates by AGC)

**Fluorinated resins (Fluon® ETFE)**
Global No.1

**The AGC Group’s Chemical Chain**

Chlor-alkali and urethanes

- Raw salt
- Potassium chloride
- Electrolysis
  - Chlorine
  - Sodium bicarbonate
  - Potassium carbonate
  - Hydrogen
- Caustic soda
- Caustic potash
- Hydrogen
- Methane
- Chlorine

Fluorochemicals and specialty chemicals

- Fluorine
- Hydrofluoric acid
- Chlorinated solvents
- Chloroform
- HCFC-22
- Tetrfluoroethylene
- Gas and solvents
- Fluorinated gas recovery and processing
- Fluorinated water & oil repellents
- Fluoropolymer
- Fluorinated solvents
- Fluorinated resins
- Fluorinated elastomers
- Fluoropolymer films
- Fluoropolymer ion-exchange membrane
- Fluoropolymer resin for coatings
- Fluoropolymer for coatings
- Life science

**Fluorochemicals**

- Fluoropolymer
- Flucon®
- Fluon® ETFE FILM
- Fluon®
- Fluorinated solvents
- AMOLEA™
- HFO-1234yf
- Fluorinated gas recovery and processing
- Fluorinated water & oil repellents
- Fluoropolymer
- Fluorinated solvents
- Fluorinated resins
- Fluorinated elastomers
- Fluoropolymer films
- Fluoropolymer ion-exchange membrane
- Fluoropolymer resin for coatings
- Fluoropolymer for coatings
- Life science

**Chemical Chain**

- Caustic soda
- Caustic potash
- Hydrogen
- Tetrfluoroethylene
- Fluorinated resins
- Fluorinated elastomers
- Fluorinated resins
- Fluorinated elastomers
- Fluorinated water & oil repellents
- Fluoropolymer
- Fluorinated solvents
- Fluorinated resins
- Fluorinated elastomers
- Fluoropolymer films
- Fluoropolymer ion-exchange membrane
- Fluoropolymer resin for coatings
- Fluoropolymer for coatings
- Life science

**Market share rankings for main products**
(Based on fiscal 2016 estimates by AGC)

**Fluorinated resins (Fluon® ETFE)**
Global No.1

**Chlor-alkali and urethanes**

- Methane
- Chlorine
- Sodium bicarbonate
- Potassium carbonate
- Hydrogen
- Caustic soda
- Caustic potash
- Hydrogen
- Methane
- Chlorine

**Fluorochemicals and specialty chemicals**

- Fluorine
- Hydrofluoric acid
- Chlorinated solvents
- Chloroform
- HCFC-22
- Tetrfluoroethylene
- Gas and solvents
- Fluorinated gas recovery and processing
- Fluorinated water & oil repellents
- Fluoropolymer
- Fluorinated solvents
- Fluorinated resins
- Fluorinated elastomers
- Fluoropolymer films
- Fluoropolymer ion-exchange membrane
- Fluoropolymer resin for coatings
- Fluoropolymer for coatings
- Life science

**Chemical Chain**

- Caustic soda
- Caustic potash
- Hydrogen
- Tetrfluoroethylene
- Fluorinated resins
- Fluorinated elastomers
- Fluorinated resins
- Fluorinated elastomers
- Fluorinated water & oil repellents
- Fluoropolymer
- Fluorinated solvents
- Fluorinated resins
- Fluorinated elastomers
- Fluoropolymer films
- Fluoropolymer ion-exchange membrane
- Fluoropolymer resin for coatings
- Fluoropolymer for coatings
- Life science

**Market share rankings for main products**
(Based on fiscal 2016 estimates by AGC)

**Fluorinated resins (Fluon® ETFE)**
Global No.1
The AGC Group’s Chemical Chain

Raw salt
Potassium chloride
Electrolysis
Chlorine
Chlor-alkali
Chlor-alkali and urethanes
Fluorochemicals and specialty chemicals

Polyurethanes
Life science
Fluorochemicals
Gases and solvents
Methane
Fluorite
Chlorinated solvents
Chloroform
HCFC-22
Tetrafluoroethylene
Liquid chlorine
Sodium hypochlorite
Vinyl chloride monomer
Epichlorohydrin
Propylene oxide (PO)
Propylene glycol (PG)
Vinyl chloride polymer
Polypropylene glycol (PPG)

Fluorinated gas recovery and processing
Fluorinated solvents
ASAHIKLIN™
AMOLEA™
HFO-1234yf
Fluorinated water & oil repellents
AsahiGuard™ E-SERIES
Fluoroelastomers
AFLAS™
Transparent amorphous fluoropolymer
CYTOP™
Fluoropolymer ion-exchange membrane
Flemion™
Fluoropolymer resin for coatings
LUMIFLON™
Fluorine containing pharmaceutical & agrochemical intermediates & active ingredients
Biopharmaceutical CDMO (Contract Development & Manufacturing Organization) Services

Business Overview
Chemicals Business

The AGC Group's chemicals business originally began with the production of soda ash, the main raw material for producing glass. The Group subsequently developed a wide variety of products through its own chemical chain, which enables full use of by-products generated through chemical reaction processes. While working to keep its environmental impact to a minimum, the AGC Group supplies a broad lineup of products ranging from basic chemicals like caustic soda to highly functional chemicals such as Fluon® ETFE, which holds the number-one global market share for fluorinated resins.

Fluorochemicals and specialty chemicals
In its fluorine and specialty chemicals business, the AGC Group’s fluorochemical products have gained a strong reputation for their outstanding heat resistance, chemical resistance and weather resistance. Led by Fluon® ETFE fluorinated resin—which holds top global market share—the business’ wide range of high-performance products are used in various industries. For example, its fluorinated resins and fluorinated elastomers are commonly applied in the automotive and aircraft industries, and its fluoropolymer films and fluoropolymer resins for coating are used in the building construction industry. Likewise, its multifunctional materials are used in electronic devices and displays. In addition, the AGC Group contributes to the life science industry by supplying services and products such as pharmaceutical and agrochemical intermediates and active ingredients.

Chlor-alkali and urethane
In its chlor-alkali and urethane business, the AGC Group supplies highly versatile basic chemical products—such as caustic soda and sodium bicarbonate—used in various industries. In addition, its urethane-related products are used as raw materials in thermal insulation, vehicle seats and other products that are vital for providing comfort in our everyday lives.

PREMINOL™ high purity and high molecular weight polypropylene glycol
Used widely as an adhesive and sealant

Sodium bicarbonate
Used widely, including medical applications such as dialysis fluid

“Fluon® ETFE FILM” Fluoropolymer film
Used for a wide range of applications due to its excellent transparency and weatherability

“HFO-1234yf” refrigerant for next-generation vehicle air-conditioners
Helping to reduce environmental load
Photo: HFO-1234yf manufacturing plant

“LUMIFLON™” highly weather-resistant fluoropolymer resin for coatings
Used for coating buildings and structures

“Tafluprost” pharmaceutical active ingredients
Used in medications for treating glaucoma
Note: A glaucoma and ocular hypertension therapeutic agent jointly developed with Santen Pharmaceutical Co., Ltd.

Fluon® ETFE FILM
used for the Allianz Arena, a soccer stadium in Germany
The AGC Group offers a variety of products and solutions that contribute to innovation in glass production processes and environmental conservation.

Ceramics Business

The AGC Group’s ceramics business has a long history, dating back to 1916, when it began producing refractory bricks for glass melting furnaces. The business is now operated by AGC Ceramics Co., Ltd. With its core businesses in glass engineering, environmental and energy-related domains, the company leverages its diverse lineup of refractory products and leading-edge engineering technologies.

In the glass engineering business, the company aims to help its customers improve energy efficiency and extend the service life of their glass furnaces, as well as ensure stable operations and lower lifecycle costs by supplying high-durability, high-performance fused cast bricks and related solutions.

In environmental and energy-related businesses, AGC Ceramics offers a wide range of ecological solutions, implementing castable refractories that make industrial furnaces more energy efficient and reduce environmental load. The company also focuses on developing ceramic materials that help reduce global environmental impact, such as high-temperature fine ceramic fans and sputtering targets for eco-friendly glass.
New Products

Products for New Markets
Combining diverse technologies, the AGC Group is creating products with even higher added value for new markets.

For Next-generation Communications Markets
Making all the glass around us into an information interface

infoverre™
Glass integrated digital signage

Transforming Glass into an Informational Device by Integrating Liquid Crystal Displays
Infoverre™ digital signage is a brand-new technology comprised of an LCD directly attached on building exterior or interior glass. The AGC Group has enabled non-reflective, clear images that seem to float in the air by applying integrated optical technologies cultivated through its chemicals business. A mount or monitor stand is not necessary, so the signage can be installed without using much space.

Attached to the windows of the Shin-Marunouchi Building in Tokyo, 55-inch infoverre™ LCDs show a range of advertisements. This product received a 2015 Digital Signage Award in the Technology category.

Glascene™
Transparent glass screen

Opening Up New Possibilities for Glass Signage by Enabling Image Projection Onto Transparent Glass
Manufactured using a unique process, Glascene™ is a glass screen that enables images to be projected onto it. This new type of screen retains its transparency when images are not projected. The images can be projected at sizes over 100 inches, from the front or rear of the screen—depending on the Glascene™ screen type.

Just ordinary glass when not in use.

Glascene™ displays beautiful images while retaining its transparency.

For Next-generation Mobility Markets
Making vehicle interiors more comfortable with user-friendly touch panels

Cover Glass for Console Panels

Realizing More Comfortable and Reliable Touch Panel Operation through Electronic Device Cover Glass Technology
In recent years, the automotive industry has been developing technologies that integrate the operation of various vehicle equipment, including stereos, navigation systems and air conditioners. Having outstanding strength, scratch resistant and anti-reflective properties, the AGC Group’s Dragontrail™ cover glass for electronic devices is now used for the console panels of vehicle equipment.