



AGC Inc.

IR Day 2024 <Day 2>

June 4, 2024

Event Summary

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	Tatsuo Momii	Senior Executive Officer, President of Chemicals Company
	Nobuyuki Suzuki	Senior Executive Officer, President of Electronics Company
	Tadashi Murano	Senior Executive Officer, President of Life Science Company
	Chikako Ogawa	General Manager of Corporate Communications & Investor Relations Division

Presentation

Ogawa: Mr. Momii, President of the Chemicals Company, will explain the business strategy of the chemicals business. Mr. Momii, please go ahead.

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Momii: My name is Momii of the Chemicals Company. Thank you for your participation today.

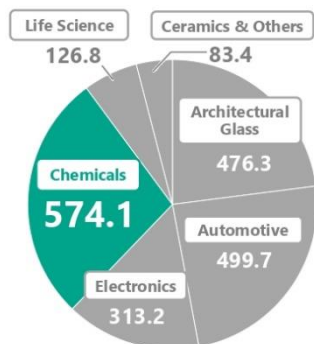
Today, I would like to explain the overview of our chemicals business and our business strategy as shown in the table of contents.

Business Scale of the Chemicals Business

- Composed of two sub-segments: Essential Chemicals and Performance Chemicals

2023 Net sales (Billion yen)

AGC Group 2,019.3 billion yen



Sub-segments and main business

Essential Chemicals (402.8 billion yen)

Business category	Major products	Main areas of demand
Chlor-alkali	Caustic soda, vinyl chloride resin etc.	<ul style="list-style-type: none"> Chemical fibers Paper/pulp Water pipes Electric wire Architecture etc.
Urethane	Polyols, polyurethane sealant materials etc.	<ul style="list-style-type: none"> Architecture Automotive Electronic equipment etc.

Performance Chemicals (166.9 billion yen)

Business category	Major products	Main areas of demand
Fluorochemicals*	Fluoropolymers, fluoropolymer films, fluorinated elastomers, fluoropolymer resin for coatings fluorinated gases and solvents, etc.	<ul style="list-style-type: none"> Transportation equipment Electronics Architecture Energy Aerospace Textiles/Paper Agriculture etc.
Specialty	Iodine and iodine-related products	<ul style="list-style-type: none"> Medical/Pharmaceutical Precision / Electrical equipment etc.

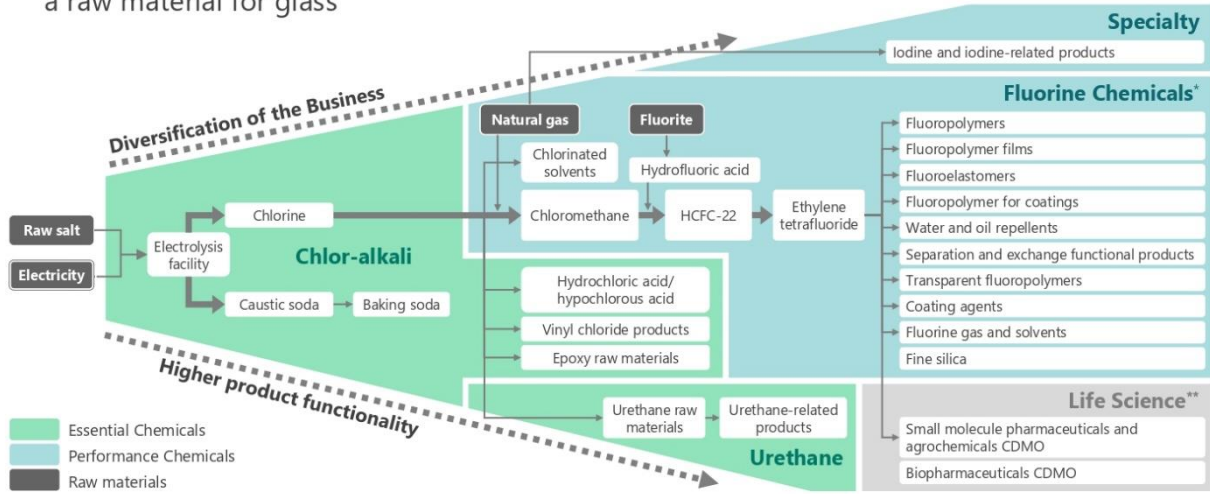
* Includes some products not made from fluorine

This is the business scale of the chemicals business.

In FY2023, sales amounted to JPY574.1 billion, or just under 30% of the AGC Group's total sales. Essential chemicals was JPY402.8 billion. Performance chemicals was JPY166.9 billion.

Product Flow in the Chemicals Business

- Unique chemical chain formed over the past 100 years, starting from production of soda ash, a raw material for glass



* Includes some products not made from fluorine ** Became a stand-alone segment after 2022

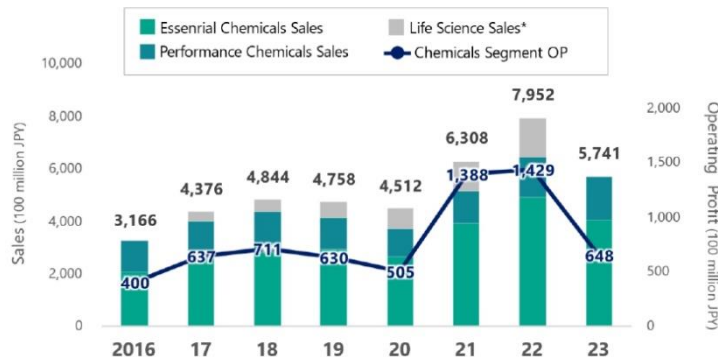
This is the product flow of the chemicals business.

Starting from the self-sufficiency of soda ash, which is a raw material of glass, this chemical chain has been formed over the subsequent approximately 100 years. With the electrolysis of salt water as the source of our business, we have developed our own chemical chain while diversifying our business and enhancing the functionality of our products.

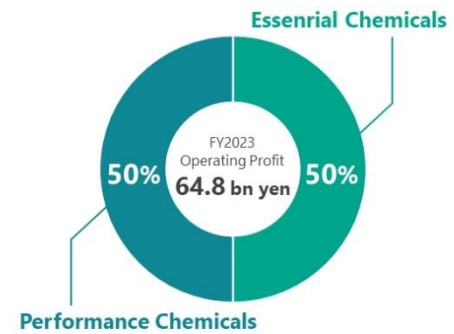
Chemicals Business Performance

- Although profits temporarily declined in FY2023 due to the slumping chlor-alkali market in Southeast Asia, both sub-segments steadily expanded their business scale through intensive investment.

Net sales and operating profit



FY2023 Breakdown of operating profit by sub-segment**



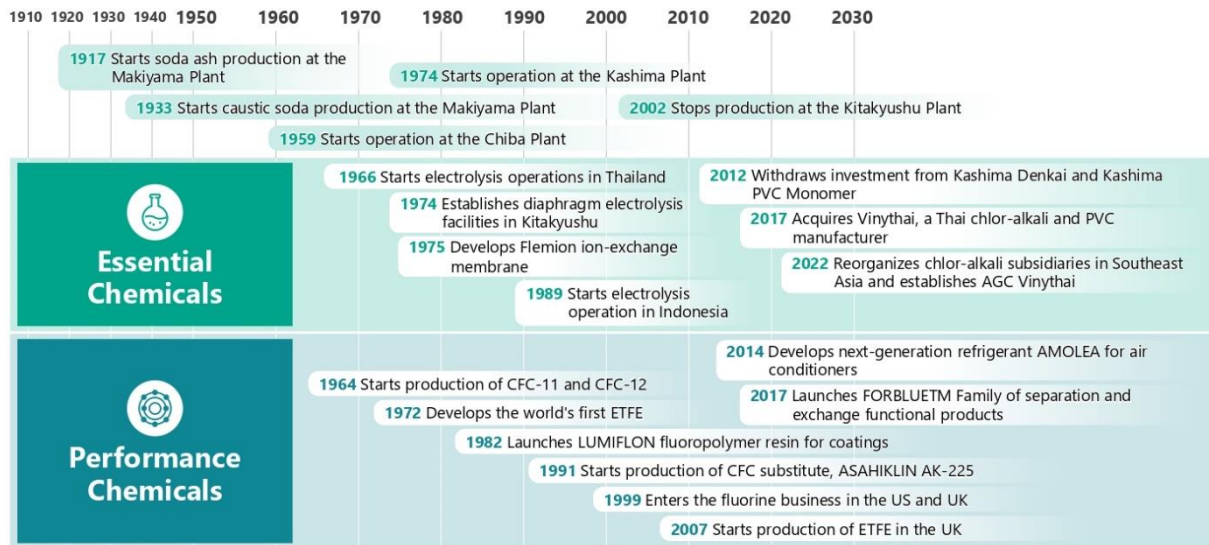
* Life Science is disclosed as a separate segment from 2023 ** Before common expense allocation

This is the performance trend of the chemicals business.

Last year, 2023, ended with a decrease in profits after the boom in the chlor-alkali market that continued in 2021 and 2022. However, both the essential chemicals and performance chemicals segments have steadily expanded their business scale over the past decade.

The ratio of operating income between essential chemicals and performance chemicals was almost 50-50 last year.

History of the Chemicals Business




This is the history of the chemicals business.

Our chemicals business began in 1917 when we started production of soda ash, a raw material for glass, at our Kitakyushu Makiyama Plant.

Since then, essential chemicals has expanded its business axis in Southeast Asia, while performance chemicals has expanded its business by creating high-functional products one after another.

- Chlor-alkali products such as caustic soda, PVC, and epichlorohydrin hold the top shares in the growing Southeast Asia market
- Also expanding urethane-related products, such as polyols and modified silicone

<p>Caustic soda</p> <p>No. 1* in Southeast Asia</p> <p>Main applications: Chemical textiles, paper/pulp</p>  <p>Mountain of salt used as raw material</p>	<p>PVC</p> <p>No. 1* in Southeast Asia</p> <p>Main applications: Water pipes, electrical wires</p> 	<p>Epichlorohydrin</p> <p>No. 1* in Southeast Asia</p> <p>Main applications: Adhesives, coatings, electronic materials</p> 
<p>Sodium bicarbonate</p> <p>Main applications: Pharmaceuticals, bath salts, baking powder</p> 	<p>Polyols</p> <p>Main applications: Urethane foam, elastomers, adhesives</p> 	<p>Modified silicone</p> <p>Main applications: Sealants, adhesives</p> 

* AGC estimate as of January 2024 (based on production capacity)

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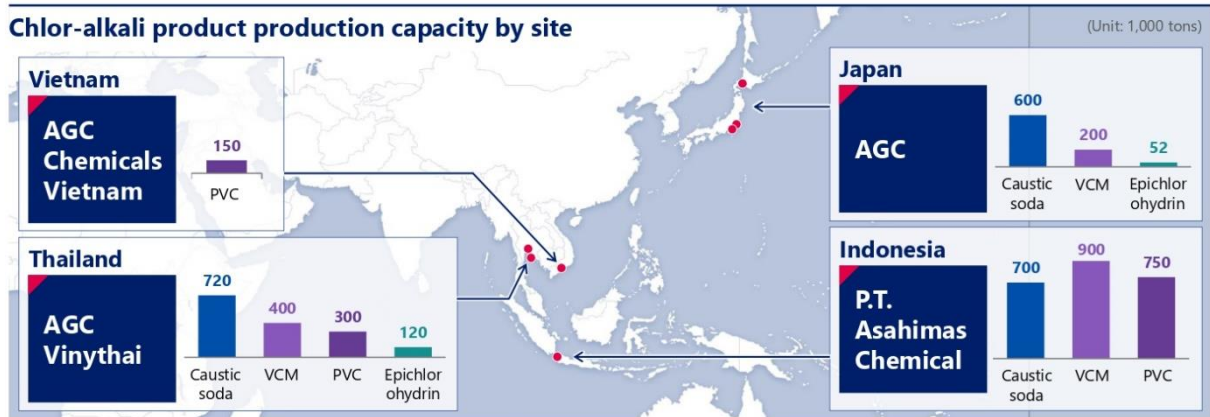
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Now I will explain our business strategies for each sub-segment, essential chemicals and performance chemicals.

These are the main products of essential chemicals.

Chlor-alkali products, baking soda, and urethane-related products are the main products. In particular, we have the number one production capacity in Southeast Asia for caustic soda, PVC, and epichlorohydrin.

- Expanding business in Southeast Asia and Japan
- Expanding chlor-alkali business in the growing Southeast Asian market



Moving on to our regional development.

Essential chemicals operates in Japan and Asia. In particular, we are expanding our business by adopting a strategy of concentrating on the high-growth markets of Southeast Asia.

- Demand for caustic soda and PVC in Southeast Asia is growing at an average of about 4% a year
- Southeast Asia is projected to continue importing chlor-alkali products
- Large-scale projects for alumina, nickel, etc. are expected to boost demand for caustic soda
- Demand for PVC is expected to grow in tandem with GDP owing to infrastructure investment, etc.



* Source: S&P Global Market Intelligence

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This is the outlook for the supply/demand balance for major products in Southeast Asia.

Demand for caustic soda and for PVC in Southeast Asia is growing at an average annual rate of approximately 4% and is expected to continue to exceed the production capacity in the region, giving the region a so-called excess of imports. We expect this situation to continue for some time to come.

Therefore, in the essential chemicals business, we plan to grow the business by concentrating resources in Southeast Asia.



Vision

Contribute to the growth and development of the region by providing a stable supply of products to the growing Southeast Asian market

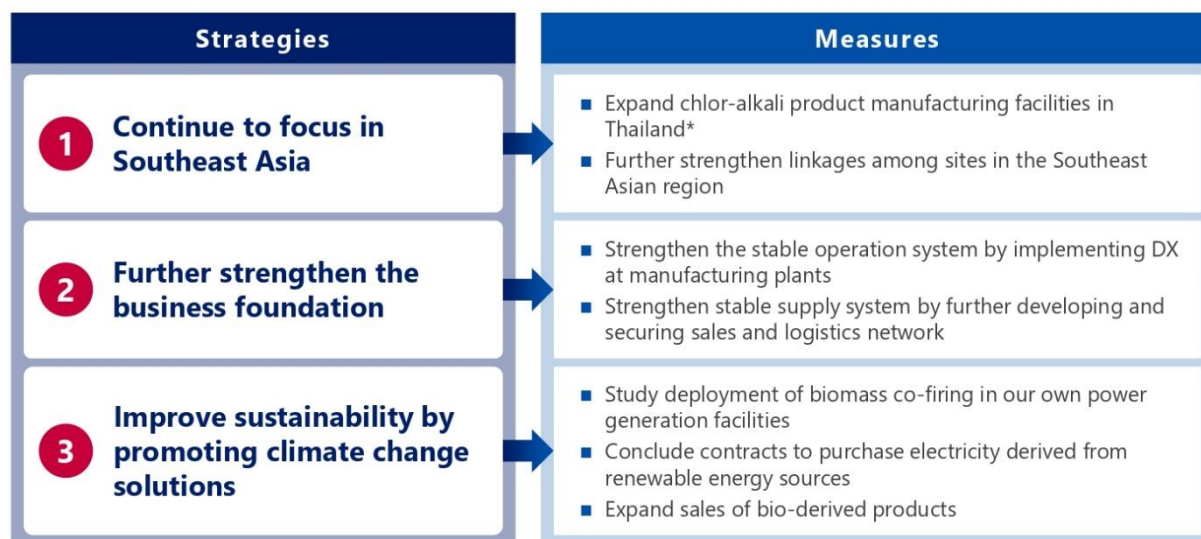


Strengths

- 1. High market share thanks to the largest production capacity in Southeast Asia**
- 2. Stable sales and supply capabilities through a solid sales and logistics network built over many years**
- 3. Stable production through advanced operational technology**

This slide shows our vision for the essential chemicals business and its strengths.

With the largest production capacity in Southeast Asia, a strong sales and distribution network backed by a long history, and stable production technology, we will continue to contribute to the region's growth and development via the growing Southeast Asian market. That is our aim.



* Related news release

These are the strategies and measures we will take.

As part of our strategy to concentrate on Southeast Asia, we will complete the expansion of our chlor-alkali products manufacturing facilities in Thailand in 2025, next year. Based on the results, we will further strengthen cooperation among our three Southeast Asian bases.

In addition, we will further strengthen our business base via digital transformation of our manufacturing plants and by further developing and securing our supply chain.

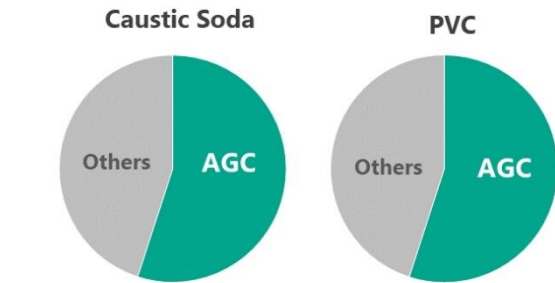
In terms of contributing to a sustainable society, we would like to take measures such as introducing biomass co-firing to our in-house power generation facilities in Indonesia and expanding sales of bio-based products.

- The undergoing expansion of our plant in Thailand will further enhance AGC's position in Southeast Asia.

Chlor-alkali production capacity in Southeast Asia (Unit: 10,000 tons)



Market share based on production capacity in Southeast Asia* (after expansion)



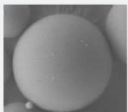


* Market share based on production capacity; Caustic soda does not include Australia/NZ in the region, PVC includes Australia/NZ in the region

This is the production capacity and market share of the essential chemicals business in Southeast Asia.

After the expansion of the chlor-alkali product manufacturing facilities in Thailand, the production capacity of each of caustic soda, vinyl chloride monomer, and vinyl chloride resin will all exceed 1.6 million tons. After the expansion, the share of caustic soda and vinyl chloride resin in terms of production capacity is expected to exceed 50%.

- Almost all the sales comes from Fluorinated products, many of which have top global market shares.
- Indispensable materials to realize a decarbonized and digital society

<p>ETFE resin (Fluorinated resin)</p> <p>No. 1 Globally*</p> <p>Main applications: Electric wires, tubes, lining and coating materials</p> 	<p>ETFE film</p> <p>Main applications: Releasing films for membrane structures and electronics</p> 	<p>Fluorinated electrolyte polymer for fuel cells</p> <p>No. 1 Globally*</p> <p>Main applications: Releasing films for membrane structures and electronics</p> 
<p>Ion-exchange membrane for chlor-alkali electrolysis</p> <p>No. 1 Globally*</p> 	<p>Fluoropolymers for on-site coating</p> <p>No. 1 Globally*</p> 	<p>Fine silica</p> <p>Main applications: Cosmetics, analytical equipment, electronic materials, coatings</p> 

* AGC estimates as of January 2024 (based on sales)

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From here, we move on to performance chemicals.

These are the main products of performance chemicals.

Performance chemicals consists mostly of fluorinated products, although some fine silica products are also included. Performance chemicals has many products that have the world's number one share in niche fields, such as fluorinated resin ETFE and fluorinated electrolyte polymer for fuel cells.

- About 60% of the demand is in the sectors of transportation equipment and architecture; where the products are mainly applied in electronics, automobiles, aircraft, etc.
- The remainder consists of diverse and specialized sectors



This shows our major demand sectors.

Performance chemicals' fluorinated products are in demand in diverse fields due to the unique characteristics of fluorine. The three fields of electronics, including semiconductors, transportation equipment, such as automobiles and aircraft, and construction account for approximately 60% of the total demand.



Vision

Contribute to the realization of a sustainable society and grow by further deepening and developing the technologies AGC has cultivated through addressing environmental and other social issues



Strengths

- 1. Global niche strategy aiming for No. 1 in specific markets with high profitability**
- 2. Global network of manufacturing, sales, and product development functions**
- 3. Ability to develop new products and technologies to meet the needs of cutting-edge fields**

This shows our vision for and the strengths of performance chemicals.

With our manufacturing, sales, and development functions operating on a global scale, we have the ability to quickly capture the most advanced needs of our customers. Our global-niche strategy of aiming for number one in specific markets is our strength, and we will grow our business while contributing to a sustainable society. Our goal is to realize this vision.

- As semiconductors become highly functional, the materials' specifications become more sophisticated. Growing demand for fluorinated products with special properties
- Developing new products and technologies to support even higher speed and capacity in telecommunications

Strategies	Measures																		
<p>Stably supply existing products to the semiconductor market, which is expected to expand, and enhance presence through the introduction of new products</p> <div style="text-align: center;"> <p>Semiconductor market scale*</p> <table border="1"> <caption>Semiconductor market scale (Billion USD)</caption> <thead> <tr> <th>Year</th> <th>Scale (Billion USD)</th> </tr> </thead> <tbody> <tr><td>'21</td><td>~550</td></tr> <tr><td>'22</td><td>~580</td></tr> <tr><td>'23e</td><td>~550</td></tr> <tr><td>'24e</td><td>~600</td></tr> <tr><td>'25e</td><td>~650</td></tr> <tr><td>'26e</td><td>~700</td></tr> </tbody> </table> </div>	Year	Scale (Billion USD)	'21	~550	'22	~580	'23e	~550	'24e	~600	'25e	~650	'26e	~700	<p>Increase manufacturing capacity for high-performance resin products in Japan**</p> <p>Increase manufacturing capacity of fluorinated products at the Chiba Plant to address robust demand, especially for semiconductor-related applications</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Investment</td> <td>Approx. 35 billion yen</td> </tr> <tr> <td>Scheduled to start operation</td> <td>2Q 2025</td> </tr> </table> <p>Launch products that meet market demand</p> <p>Fluon+™ EA-2000 as a PCB material, silica products as inorganic fillers, etc.</p>	Investment	Approx. 35 billion yen	Scheduled to start operation	2Q 2025
Year	Scale (Billion USD)																		
'21	~550																		
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* Graph created by AGC based on Gartner data. Gartner®, Semiconductors and Electronics Forecast Database, Worldwide, 3Q23 Update, Rajeev Rajput et al., 4 October 2023, Semiconductor Revenue by Electronic Equipment basis. GARTNER is a registered trademark and service mark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved.

** Related news release

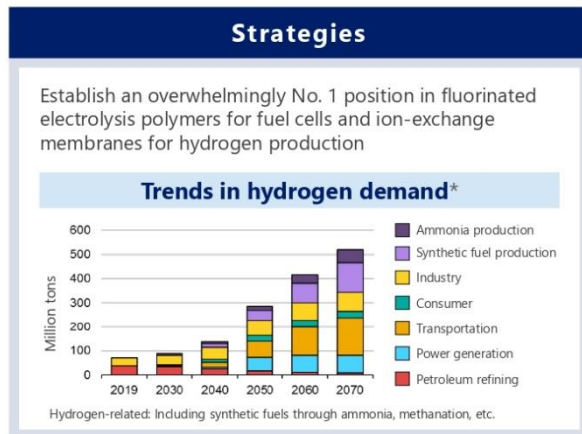
These are the strategies and measures we will take.

There are two areas that performance chemicals will focus on going forward. The first is the semiconductor field.

As semiconductors become more sophisticated, the specifications required for materials, such as heat resistance, chemical resistance, and electrical characteristics, are also becoming more sophisticated. Under such circumstances, the demand for fluorinated products with unique physical properties is expanding year by year.

In addition to expanding existing products, such as fluorinated resins and fluorinated rubbers used for semiconductor manufacturing equipment components, we plan to introduce new products with excellent electrical properties such as Fluon+, EA-2000, and fine silica for the upcoming high-speed, large-capacity communications.

- In anticipation of the coming hydrogen society, we will supply materials that demonstrate superior performance in the production of hydrogen producing water electrolysis devices and fuel cells that use hydrogen.



Measures

Building a new production facility to manufacture fluorinated ion-exchange membranes suitable for producing green hydrogen**

- Establish a new manufacturing facility at Kitakyushu site as the third domestic chemical site
- Investment of approx. 15 billion yen
- Scheduled to be operational in 2Q 2026

* Source: IEA Energy Technologies Perspectives 2020 ** Related news release

The other field of focus is the hydrogen-related market.

The decision was made earlier this year to construct a new fluorinated ion-exchange membrane manufacturing facility at the Kitakyushu site. AGC plans to provide materials for the coming hydrogen-based society based on two pillars: ion-exchange membranes for water electrolysis devices for producing hydrogen, which is unique to AGC and that no other company can imitate, and electrolyte polymers for fuel cells that use hydrogen.

Performance Chemicals | Conceptual Image of Medium- to Long-term Earnings

- In addition to existing applications, we aim to capture cutting-edge needs and achieve sales of 300 billion yen or more by 2030

Performance Chemicals: Sales image

[Unit: 100 Million yen]

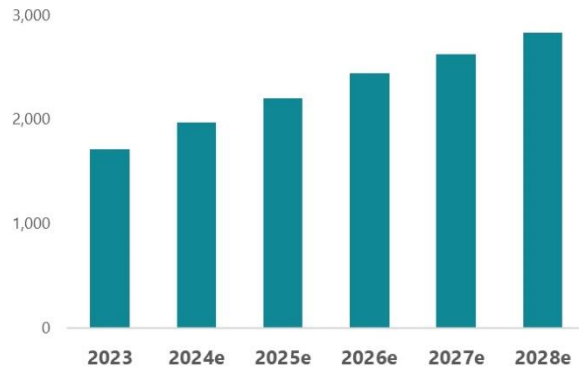
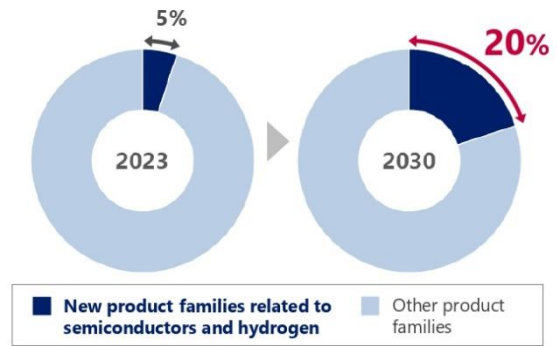


Image of sales ratio of new product families related to semiconductor and hydrogen



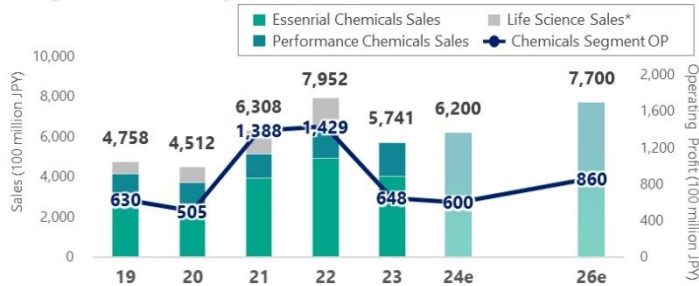
This is our image of the medium- to long-term performance of performance chemicals.

Currently, our focus field of semiconductors and hydrogen-related products account for about 5% of our sales, but we aim to increase this to 20% by 2030, with the goal of achieving sales on the scale of JPY300 billion by 2030.

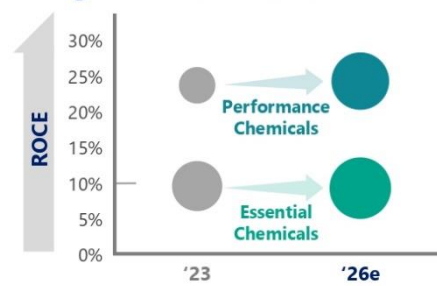
Chemicals Segment Performance Targets

- Essential Chemicals will maintain its strategy to put focus in the growing market of Southeast Asia.
- Performance Chemicals will provide high-performance materials for electronics, including semiconductors, and environmental and energy fields. We will capture demand in global niche markets through the provision of further added value and business domain expansion.
- By 2026, realize operating income of 86 billion yen and maintain ROCE of about 10% in Essential Chemicals and more than 20% in Performance Chemicals

Image of business performance



Change in ROCE and EBITDA**



* Life Science is disclosed as a separate segment from 2023 **Diameter of each circle : the size of EBITDA

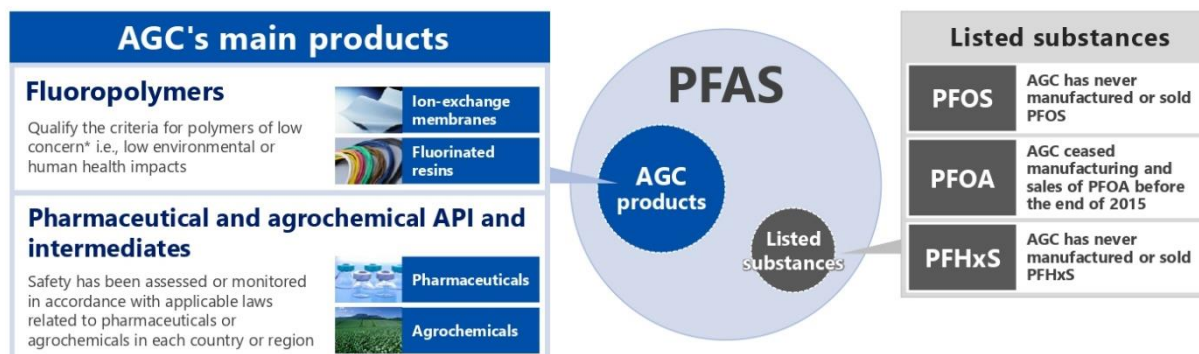
Next are the performance targets for Chemicals segment.

Essential chemicals will focus on Southeast Asia, while performance chemicals will find growth in the electronics, environment, and energy fields.

We expect operating income to be around JPY86 billion in 2026, while maintaining ROCE of around 10% for essential chemicals and more than 20% for performance chemicals.

PFAS and Regulations

- Of the PFAS (umbrella term for approximately 12,000 types of fluorine compounds), three substances are listed as Persistent Organic Pollutants under the Stockholm Convention, and AGC does not currently handle any of these listed substances.
- To fulfill its corporate social responsibility, AGC Group is working to minimize environmental impacts resulting from our business activities and contribute to resolving global environmental issues through our products, based on scientific evidence.



* B J Henry 2018 A Critical Review of the Application of Polymer of Low Concern and Regulatory Criteria to Fluoropolymers

Finally, I would like to briefly explain the current status of PFAS regulations, as they could be a very significant risk for the performance chemicals business.

First of all, draft PFAS regulations were released last February as a proposal for the European REACH regulation, but discussions are still ongoing, and the details of the regulations are not yet clear.

What AGC, which handles fluorinated products as its business, can say at this point is that almost all of our Performance Chemicals products are included in PFAS, which is a generic term for fluorine compounds, but that AGC has already completely eliminated or has no record of manufacturing and selling PFOS, PFOA, and PFHxS, which have already been designated as controlled substances under the law.

In order to fulfill its social responsibility, the AGC Group is committed to minimizing the environmental impact of its business activities and resolving environmental burdens.

Regulatory trends in Europe

- The expert committees of the European Chemicals Agency (ECHA) is currently reviewing the proposal of the universal PFAS restriction.
- The ECHA's review process is taking time due to the significant number of public comments received, and the timing of the second public consultation and the time frame for the subsequent regulatory process is currently unclear.
- AGC Group has submitted our public comments for the 1st public consultation.

Review process of the proposal of the universal PFAS regulation in Europe

- (1) After two rounds of public consultation by ECHA, the expert committee submits their final opinion
- (2) The European Commission prepares a draft regulation referring the final opinion submitted, and the REACH Committee, consisting of member states, deliberates on and adopts the draft.
- (3) The adopted legislation enters into force after being scrutinized by the European Parliament and Council



As for the latest development of the proposed PFAS regulations, ECHA has received more public comments than expected on the draft regulations, and it has taken some time to consider the proposed regulatory amendments. At this point, there is no clear timeline as to when we will move to the next step, which is the discussion phase at the European Commission.

This concludes my explanation.

Ogawa: Thank you very much, Mr. Momii.

Presentation

Ogawa: The time has arrived and Mr. Suzuki, President of Electronics Company, will give a presentation on the business strategy of the electronics business. Mr. Suzuki, please go ahead.

Contents

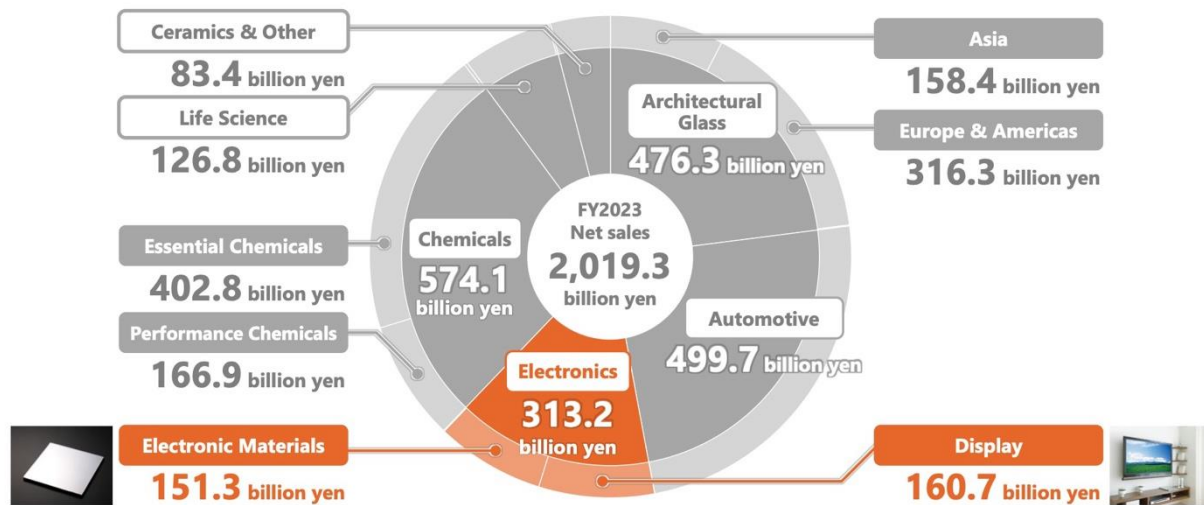


1. Electronics Business Overview	—————	P.3
2. Display: Issues and Strategies	—————	P.8
3. Electronic Materials: Business Strategy	—————	P.11
4. Target	—————	P.20

Suzuki: Hello, everyone. I would like to explain our electronics business.

Here is today's content. I will explain accordingly.

Position in the AGC Group



* As net sales by business are figures before eliminations of intersegment sales, the sum of net sales by business does not equal Companywide net sales. Sub-segment sales figures are based on sales to external customers.

First, an overview of the electronics business.

Last year, the electronics business had sales of JPY313.2 billion. It accounts for 16% of the AGC group's total sales. The electronics business includes the display and electronic materials segments, and last year sales were slightly higher in the display segment.

Electronics Company Earnings

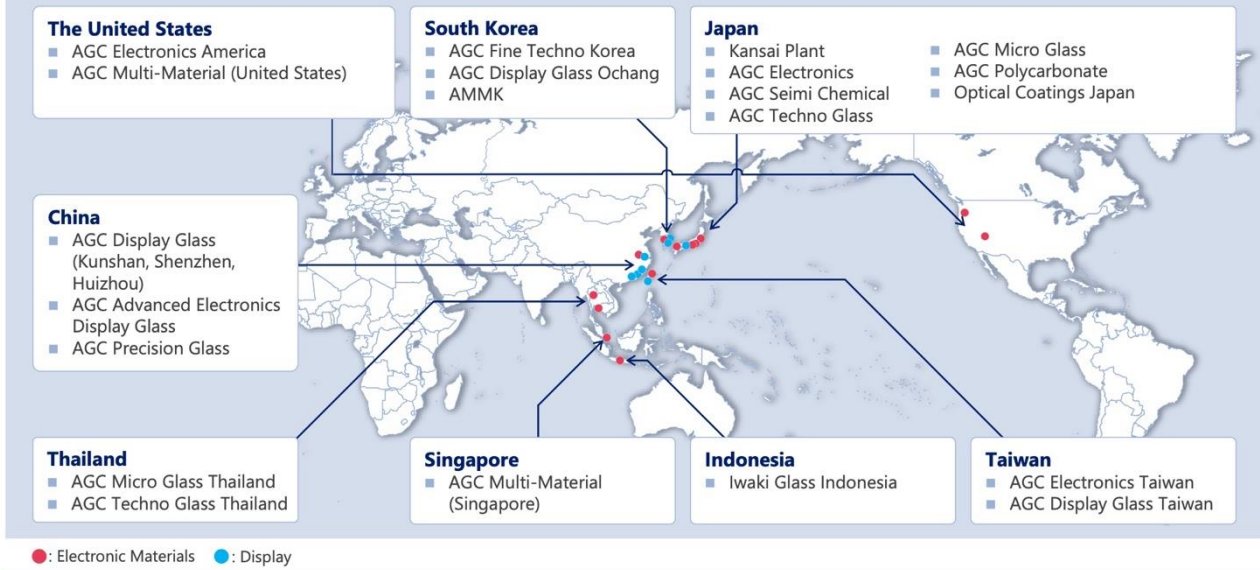
- Electronic Materials are expanding steadily
- Display is struggling due to the reversion of stay-at-home demand seen during the pandemic



The graph shows the performance of the electronics company. Historical sales are shown by segment. The line graph shows operating profit.

In the past few years, we have been steadily expanding our business in the electronic materials, this dark orange area. Display, on the other hand, continued to struggle in the last two years due to the reversion of stay-at-home demand seen during the pandemic. The display business incurred a loss, resulting in a large drop in profit in 2022, but last year, we saw a slight improvement.

Geographical Coverage



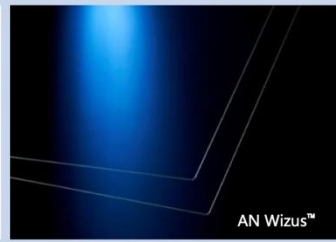
This is the electronics company's main manufacturing sites.

Our sites for TFT display glass are located in China, Taiwan, Korea, and Japan. In addition, we have many sites for electronic materials in the US, Thailand, and Japan, and we are expanding globally.

As for the main products of electronic materials, optoelectronics products are mainly manufactured in Thailand and Japan. In addition, the blanks are manufactured in Japan. CMP slurry is also expanding its business to the US and other countries, although it is mainly manufactured in Japan.

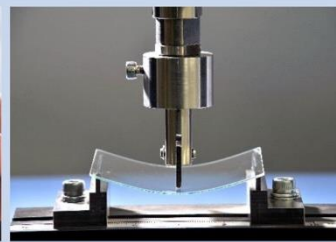
Main Products: Display

**Glass substrates for
TFT liquid crystal /
organic EL Display**



AN100, AN
Wizus™, AN
Rezosta™

**Specialty glass for
chemical
strengthening**



Dragontrail™
series, AS2

We will now move on to a description of the issues and strategies for the display.

The display segment includes glass substrates for TFT and organic EL display and specialty glass for chemical strengthening used in smartphone cover glass.

- Sales are sluggish due to the reversion of stay-at-home demand seen during the pandemic. In addition, higher raw materials and fuel prices and the yen's depreciation have worsened profitability, resulting in an impairment loss of more than 70 billion yen in FY2022.
- We aim to achieve 10% ROCE by steadily implementing measures to improve profitability during the current medium-term management plan period, thereby generating stable cash flow.



These are the issues and strategies of the display business.

The challenge is clear: improve profitability and asset utilization efficiency. From 2022 to 2023, earnings deteriorated due to lower sales as a result of the reversion of stay-at-home demand seen during the pandemic, higher prices for raw materials and other items, and the depreciation of the yen.

We are working on three earnings improvement measures, which are listed here: revise pricing policy, strengthen competitiveness through technological innovation, and structural reforms to focus on large-sized display panel glass substrates. We will explain in detail on the next page and beyond.

Revise pricing policy

- Significant increases in production costs have continued over the long term due to high raw materials and fuel prices and the appreciation of Asian currencies

Implemented price revision last year
Continue to request customers to review prices

Strengthen competitiveness through technological innovation

- Mass production of the competitive new product AN Rezosta™ and deployment of equipment with high combustion efficiency
- Technology development has already been completed and is being progressively rolled out since the beginning of the year
- Expected to contribute to earnings in stages starting in 2024



First, let's talk about price and technological innovation.

Prices were raised last year in response to a sharp rise in raw material and fuel costs and a significant increase in production costs due to the exchange rate. We continue to request our customers to review prices in this fiscal year.

Meanwhile, with regard to technological innovation, we aim to strengthen our competitiveness by launching competitive new products and deploying equipment with higher combustion efficiency than ever before.

Promote structural reforms to focus on large-sized display panel glass substrates



* Compared to 2022

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With respect to business structure reforms to focus on large-sized panel substrates, we have been implementing profit improvement measures for some time, and as announced in February of this year, we have launched a project headed by the CFO to accelerate business structure reforms in the display business.

We have already decided to reduce our production capacity by 20% from the 2022 level by the end of this year, including the partial withdrawal from small- and medium-sized, low-profit sizes and the suspension of operations of the LCD display glass substrate production line at Takasago plant.

We will continue to closely monitor the business environment and implement structural reforms with a sense of speed, aiming to achieve a 10% ROCE in the display business during the current medium-term management plan period.

Strengths of the Electronic Materials business

Three technologies developed based on “organic materials + inorganic materials” of glass, chemicals, and ceramics



Contribute to the development of the semiconductor and optoelectronics industries

Next, I will explain our business strategy for electronic materials.

The strength of AGC's electronic materials is that we have organic and inorganic materials, material and fabrication technologies, and superior design/evaluation/analysis technologies, which can be combined to provide unique and original solutions.

For example, we were able to commercialize blanks by having synthetic quartz as a material, then precision coating process, membrane design capability, and superior analysis. We also manufacture slurries for semiconductors from materials, and we believe we maintain our superiority by having both organic and inorganic materials.

We also believe that glass core substrates for semiconductor packaging, which are expected to grow in the future, are another product where these strengths can be utilized.

Semiconductor-related Materials

EUV mask blanks

High-quality photomask blanks for cutting-edge lithography

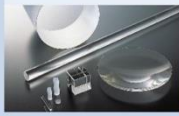


CMP slurry

One of the top manufacturers in the ceria slurry market



Synthetic quartz lens materials



Copper clad laminates



SiC thermal treatment jigs



Optoelectronic Materials

IR-cut filter

Industry leader in high-performance IR absorbing glass filters



DOE (diffractive optical element) Diffusers



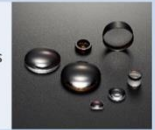
Glass ceramic substrates



High refractive glass



Aspherical glass mold lenses



Here is the description of main products.

In semiconductor-related materials, we handle EUV mask blanks, CMP slurry, synthetic quartz, which has a large share of the market for semiconductor lithography equipment, and copper-clad laminates used for circuit boards.

In the field of optoelectronic materials, in addition to IR-cut filter used for color correction, our mainstay products, we also handle DOEs and diffusers used in sensors, etc., high refractive glass expected to be used in AR and VR, and aspheric lenses used in cameras.

Semiconductor-related Materials: EUV Mask Blanks

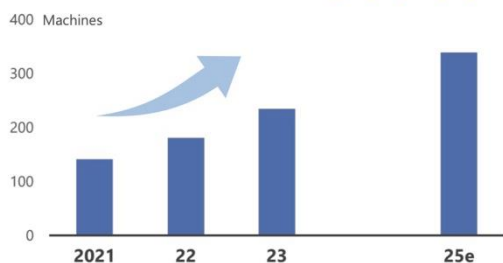
Strengths

- The sole blanks manufacturer in the world that covers the whole production process from glass materials to polishing and deposition
- Strengths include flexibility to customer requests, technical proposals and support to customers

Strategy

- Continue to invest intensively in line with market growth
- Securing competitive advantage in the next generation area with AGC's high technological capabilities

Cumulative number of EUV lithography equipment*



Net sales of EUV mask blanks of AGC



Source: The number of EUV exposure equipment is based on material published by ASML.

In terms of individual products, I will first explain the situation regarding EUV mask blanks.

We are the world's only manufacturer for EUV mask blanks that covers the whole production process from materials. For all processes, our strength lies in our ability to respond to customer requests and make proposals. We will continue to invest aggressively to respond to demand and ensure our superiority by leveraging our advanced technologies in the next generation area too.

The market for EUV mask blanks is correlated with the number of lithography equipment, and we expect the market to grow in the future because shipments of lithography equipment are strong now and the number of EUV lithography layers will increase as the level of semiconductor integration increases. As for sales, we originally expected to sell more than JPY40 billion in 2025, but we now see the possibility of achieving this goal one year ahead of schedule.

Semiconductor-related Materials: CMP Slurry

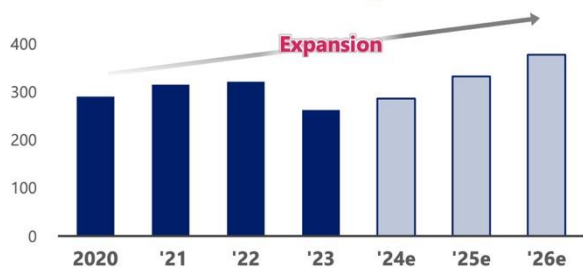
Strengths

- Technological development capabilities that enable integrated production from raw material abrasive powder to slurry
- Providing high-quality slurry and solutions to meet customers' design rules and processes

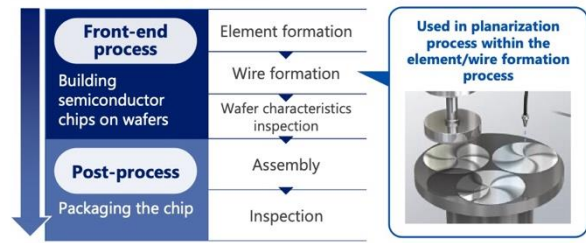
Strategy

- Maintains leading position in ceria slurry
- Expanding sales to new applications (3D mounting, etc.)

Business environment: Ceria slurry market Million USD



Use case of CMP slurry in semiconductor manufacturing process



Next, I will explain the CMP slurry.

In the area of CMP slurry, our ability to provide solutions in partnership with our customers is highly regarded for our entire production capability from raw material abrasive powder to slurry, as well as for our high quality.

Since slurries are used in semiconductor process, they are affected by semiconductor utilization rates and the market. However, since our products are widely used in next-generation semiconductors, we aim to grow faster than the growth of the overall CMP slurry market.

Strengths

- Realize spectral characteristics that are challenging to achieve by combining glass, disposition and optical design technologies, contributing to a better image quality for cameras

Strategy

- Build strong partnerships with influential customers by leveraging our advanced technological capabilities
- Aiming for even higher added value as mobile camera units become more advanced

Glass filter to match image sensor sensitivity to human visual sensitivity



Product use cases



Cameras for smartphones



SLR cameras



In-vehicle cameras

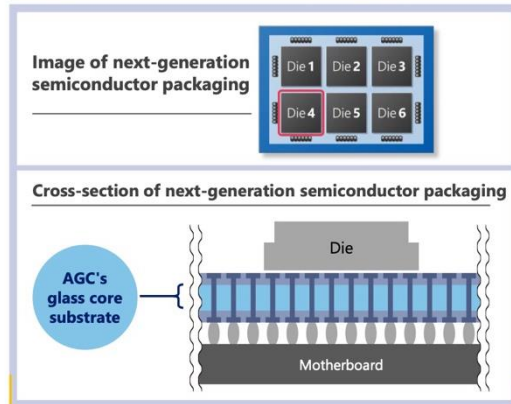
We will continue with the IR-cut filter.

The typical example of our optoelectronic materials is the IR-cut filter. I will explain its strategy. As explained below, the image received by the image sensor used in a camera has different tints from those visible to the human eye. The role of the IR-cut filters is to compensate for this as the human eye sees it. They are used in various types of cameras, including smartphones and digital cameras.

Our strategy is to build partnerships with our highly demanding customers by leveraging our technological capabilities to obtain information about new products. In addition, the camera unit is now increasingly used for moving images, etc., and its high functionality, including moving image performance, is advancing. By proposing technology that matches these needs, we are able to achieve even higher added value, which is helping to increase sales.

Semiconductor-related materials

Full-scale development of glass core substrates for next-generation semiconductor packaging



Optoelectronic materials

Provision of AR/MR glass and other high-performance, high-value-added products



Providing optoelectronic materials necessary for the spread of ADAS and automated driving



Next, here is an example of new business initiatives.

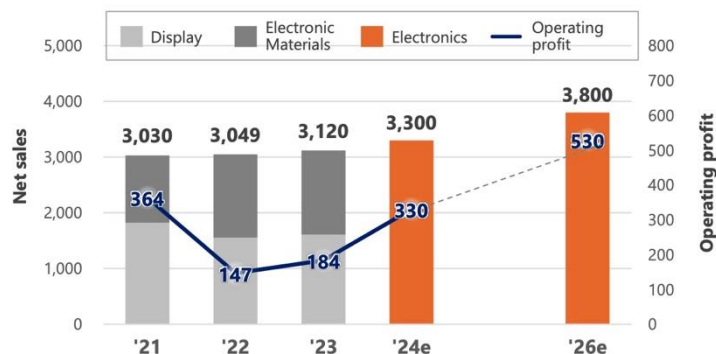
First, the semiconductor-related materials on the left. In this area, we are focusing on exploring business in the packaging field, which will become even more important in the future. Introduced here are glass core substrates that are expected to be widely used for future chiplet substrates. Currently, resin is used, but it is said that this will be replaced by glass in future next-generation products.

In the optoelectronic products on the right, we are focusing on the search for optoelectronic materials required in the new fields of AR/MR, etc., as well as the spread of automated driving and higher performance of automobiles.

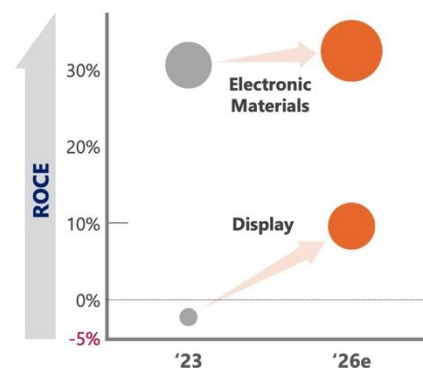
Medium- to Long-Term Performance Image

- In Display, we aim to achieve a 10% ROCE toward 2026 by improving profitability through the three pillar measures while reducing operating assets
- In Electronic Materials, we aim to maintain the 2023 ROCE level by expanding the business centered on semiconductor-related products

Net sales, Operating profit (100 million yen)



ROCE (Diameter of each circle : the size of EBITDA)



Next, I will explain our targets.

Last year, sales were JPY312 billion, and operating profit was JPY18.4 billion. This year, we expect sales of JPY330 billion and operating profit of JPY33 billion, an increase in both sales and profit compared to last year. We plan to increase this to JPY380 billion in sales and JPY53 billion in operating profit by 2026.

Regarding ROCE, we are targeting a 10% ROCE by 2026, as display will be improved through the implementation of the measures I just explained, while operating assets will be reduced.

In electronic materials, the business already has a high ROCE, but we have set a target to expand the business during this medium-term management plan period while maintaining ROCE, especially in semiconductor-related products.

This concludes the description of the electronics business. Thank you for your attention.

Ogawa: Thank you very much, Mr. Suzuki.

Presentation

Ogawa: The time has arrived, and Mr. Murano, President of Life Science Company, will give a presentation on the business strategy of the life science business. Mr. Murano, please go ahead.

Contents



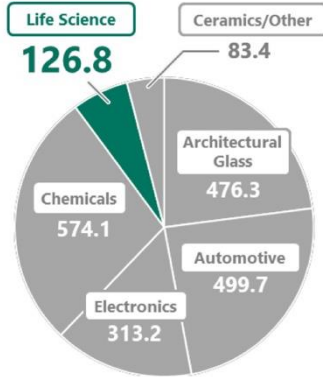
1. Overview of Life Science Business	—————	P.3
2. Current Situation and Future Outlook	—————	P.7
3. Business Strategy and Performance Targets	———	P.9
4. Appendix	—————	P.16

Murano: I am Murano of the life science company. Thank you.

I will now give a brief overview of our life science business.

FY2023 Sales (Billion Yen)

AGC Group 2019.3 billion yen



Main Life Science businesses

Business domain		Service overview
Small molecule pharmaceuticals and agrochemicals CDMO	Small molecule pharmaceuticals CDMO	<ul style="list-style-type: none"> Contract development and manufacturing of small molecule pharmaceuticals
	Agrochemicals CDMO	<ul style="list-style-type: none"> Contract development and manufacturing of agrochemicals
Biopharmaceuticals CDMO		<ul style="list-style-type: none"> Contract development and manufacturing of biopharmaceuticals (microbial, mammalian cell culture, gene and cell therapy, pDNA, mRNA, exosomes)

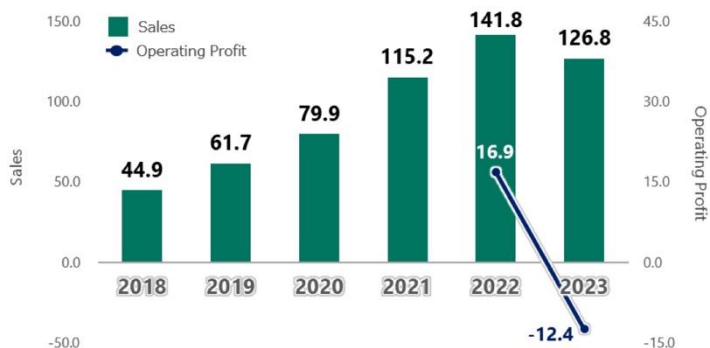
The AGC group's life science business is as you can see here.

Sales are on the left. To the right are the two main businesses of the life science business. One is the small molecule pharmaceuticals and agrochemicals CDMO, and the other is biopharmaceuticals CDMO. The details of the service are as described here.

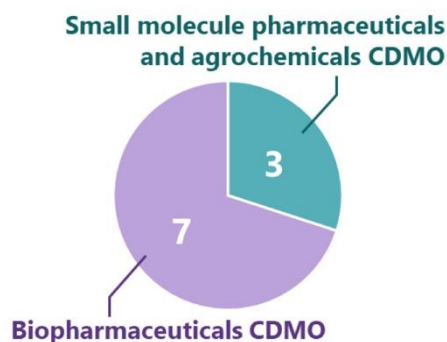
Financial Performance

- In 2023, sales and profits declined due to the delay in the launch of new US lines and the deterioration in the market environment, but the scale of the business increased steadily thanks to intensive investment.

Sales and Operating Profit (Billion Yen)



FY2023 Sales Breakdown



*Sub-segment information within the Chemicals segment is disclosed before 2021 (sales only), and on a stand-alone segment basis after 2022 (2022 figures are for reference only).

Next page, please. This is the performance trend of the life science company segment.

The graph from 2018 shows that we have achieved a growth rate of over 30% per year until 2022. However, if you look at 2023, the reality is that the brakes have been applied.

The contents are described here. Both sales and performance have temporarily deteriorated in 2023. The main reasons for this are the deterioration of the biopharmaceuticals CDMO market environment, the delay in the launch of a new line of biopharmaceuticals CDMO in the US, and the cost of large, aggressive investments that we had already prepared for.

As for the sales breakdown of the life science company, as shown in the graph on the right, 70% are biopharmaceuticals CDMO and 30% are small molecule pharmaceuticals and agrochemicals CDMO.

History of Life Science Business

- In 1973, the Life Science Team was launched as a research unit, and commercial operations began in the 80s.

1973 Launched The Life Science Team to investigate the applicability of AGC's fluorination technology to pharmaceutical & agrochemical production

Small molecule pharmaceuticals/agrochemicals	Biopharmaceuticals
1985 Started contract manufacture/supply of fluorinated intermediates for use in antibiotics	1984 Formed the Biochemical Group focused on biopharmaceutical development
1997 Established AGC Wakasa Fine Chemicals (currently AGC Wakasa Chemicals)	2000 Formally launched the protein contract manufacturing business
2003 Established a GMP-compliant manufacturing facility for clinical stage drug substances & intermediates at Chiba Plant	2008 Established a new facility at Chiba Plant with 10-fold higher capacity
2008 Obtained marketing approval for tafuprost, an anti-glaucoma drug substance	2016 Acquired biopharmaceuticals CDMO in German (currently Heidelberg site)
2013 Established a new plant, Kaminaka Plant, in the Wakasa Techno-Valley (AGC Wakasa Chemicals)	2017 Acquired biopharmaceuticals CDMO with sites in Europe and US (currently Seattle & Copenhagen sites)
2019 Acquired drug substance manufacturing plant in Spain (currently AGC Pharma Chemicals Europe)	2020 Established new mammalian cell culture facility at Chiba Plant
2019 Increased GMP compliant production capacity 10-fold at Chiba Plant	2020 Acquired biopharmaceutical drug substance manufacturing plant in US (currently Boulder site)
2020 Decided to expand facilities at AGC Pharma Chemicals Europe	2020 Acquired gene/cell therapy CDMO in Italia (currently Milan site)
2021 Decided to expand facilities at Kaminaka Plant of AGC Wakasa Chemicals	2021 Acquired U.S. gene therapy manufacturing plant (currently Longmont site)
2022 Decided to expand facilities at AGC Pharma Chemicals Europe	2023 Started mRNA CDMO service (Heidelberg site)

Next page, please. Here is the history of the AGC group's life science business.

As you can see in the various details, in 1973, the life science team was launched, and commercial operations began in the '80s. In particular, with regard to biopharmaceuticals, our history is that in 2000, we formally launched the protein contract manufacturing business at our Chiba Plant, and since 2016, we have been expanding our biopharmaceuticals CDMO business, mainly through M&A.

Current Situation and Outlook of Biopharmaceuticals CDMO

- The impact of the reduced capital inflows into biotech ventures continues. Although the business environment is recovering, **its recovery pace requires close monitoring. The situation going forward will be assessed and necessary measures will be taken.**
- New lines in the U.S. has **resumed commercial operations and is expected to contribute to improvement in earnings from 2024.**

	Business environment	Launch of new lines in the U.S.
Issues	Temporary leveling off due to repercussions of Covid-related special demand and reduced capital inflows into biotech ventures	Delay in launching new lines at Boulder site in the U.S.
Current Situation*	Continue to be affected by reduced capital inflows into biotech ventures, but recovery signs are seen. Implemented a rationalization to improve business performance	Drastic measures implemented and resumed commercial operations in end of 2023
Outlook	Business environment is recovering, but the recovery pace will be closely monitored to consider and take additional measures according to market situation	Slowly contributes to improvement in earnings from 2024

* As of June 4, 2024

Let me explain the current situation on page eight. I touched on this a little earlier, but I would like to explain the status of biopharmaceuticals CDMO in particular.

The impact of the decrease in capital inflows with respect to the main customers of the AGC group biopharmaceuticals CDMO, which is called biotech ventures, had started in 2023, and we now see that it is still continuing to some extent. The business environment itself is recovering on the actual front, but we are not very optimistic about the pace of recovery.

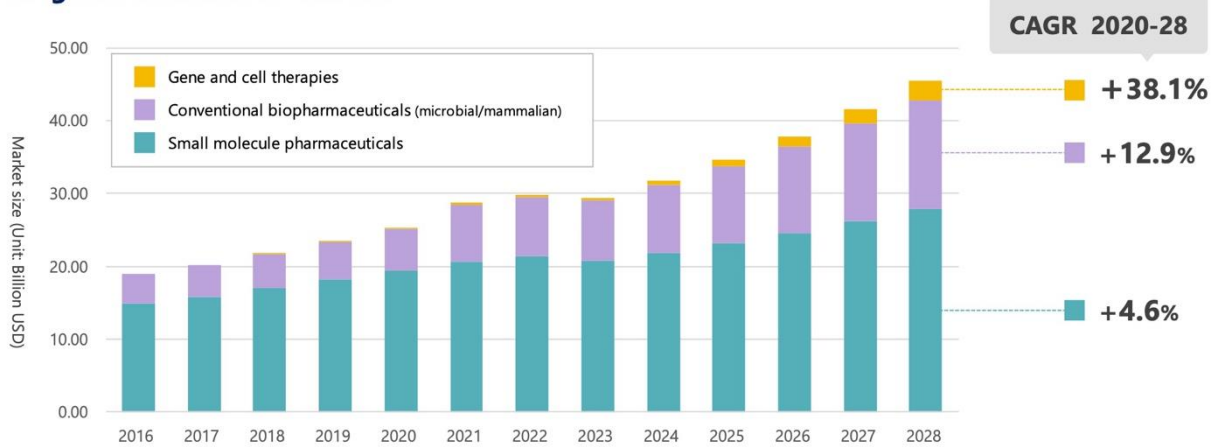
We believe that in the medium to long term, there will be a definite recovery, including the supply-demand balance, but we think that we need to be more cautious about the pace of recovery this year. We will take various measures according to the situation.

The new biopharmaceuticals CDMO line in the US, which had a large impact on our business performance last year, is located at our plant in Colorado, and last year, it was barely in operation, which had a considerable impact on our business performance. This line has resumed commercial operation this year, and we expect it to contribute to improved business performance this year and next.

Those things are written here, and as I have just told you about the launch of the new line, we expect it to make a significant contribution to our business performance from now on into next year.

- With the trend towards increased outsourcing, the CDMO market is expanding steadily.

Drug Substance CDMO Market



Source: Estimated by AGC based on EvaluatePharma®

©AGC Inc. 10

I will now explain our business performance and business strategy starting from the next page.

First, the business environment. Page 10 is the market for drug substance CDMO, which is our industry. This is the assumption of the market size.

Although there was a temporary problem with the capital inflows from biotech ventures, etc. in 2023, we are almost certain that the CDMO business will grow in the mid- to long-term as the pharmaceutical industry moves to outsource production to CDMO companies like AGC.

The CAGR is shown on the right side of the chart and looking at the investment by CDMO companies and the expansion of supply capacity, we expect that the demand-supply balance will remain quite strong at least until 2030. In particular, the small molecule pharmaceuticals at the bottom are expected to show stable growth, while the purple and orange biopharmaceuticals products above are expected to grow significantly.



Vision

To contribute to bettering the world, by providing high-quality life-science related services & products, that require high-level expertise & competence



Strengths

- 1. Providing a high standard of services integrated from 10 sites in three regions of Japan, the US, and Europe**
- 2. Flexible production system providing services from early-stage development to commercial phase**
- 3. Extensive Manufacturing and Inspection Track Record**

The next page shows AGC's strengths.

Our strengths include the ability to provide a high standard of CDMO services at 10 sites in three regions, Japan, the US, and Europe, and to handle everything from early-stage development to commercial phase. We believe that each of our global sites has strengths as a trusted CDMO because of their extensive manufacturing experience and track record of inspections called FDA and EMA.

The AGC group is a materials manufacturer, and in the mid- to long-term, we believe that we can differentiate ourselves from our competitors by applying technologies that are unique to the AGC group, such as digital or materials informatics.

Strengths | Flexible to production needs from early-stage development to commercial scale

- Addresses a wide range of production scale needs that vary in accordance with the progress of the development phase of the drug product

Small molecule pharmaceuticals	We have both pilot facilities suitable for small-volume production in the early stages of development and large reactors for commercial phase.
Biopharmaceuticals	AGC is a pioneer in the introduction of SUBs , which enable flexible production of small- to medium-scale production, and has the industry's top-class production capacity*. Large-scale SUS was introduced in 2020 to accommodate large-scale commercial production.
<p>Bioreactors used for biopharmaceutical production</p> <p>The main bioreactors used for biopharmaceutical production are "SUB" and "Large-scale SUS."</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid #008080; padding: 5px; width: 45%;"> <p style="text-align: center;">SUB (Single-use bag)</p> <p>A bioreactor that uses single-use bags, which are disposable containers. Since no washing of the bioreactor is required, it is highly efficient and suitable for small- to medium-scale multi-product production.</p> </div> <div style="border: 1px solid #008080; padding: 5px; width: 45%;"> <p style="text-align: center;">Large-scale SUS</p> <p>Large stainless steel bioreactors Suitable for large scale commercial production</p> </div> </div> <p>Scale of production</p> <p style="text-align: center;">2,000L 12,000L 20,000L</p>	
<p>Scope of AGC's services in the biopharmaceutical CDMO business</p> <p>Combination of SUB and large SUS to meet a wide range of production scale and development phase.</p>	

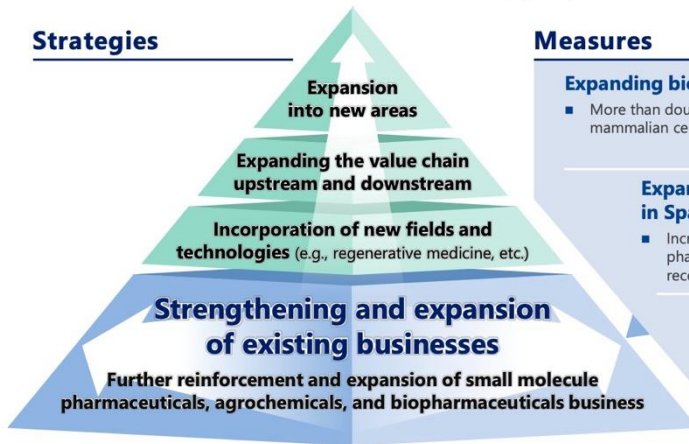
* AGC estimates

The page 12 shows what I have just discussed.

One of our characteristics is that we are engaged in both small molecule pharmaceuticals and biopharmaceuticals, and we have a flexible production system from early-stage development to commercial scale.

- **Further strengthen and expand the core CDMO business for small molecule pharmaceuticals, agrochemicals, and biopharmaceuticals** and consider expansion of services and business areas at an appropriate timing

Strategies



Measures

Expanding biopharmaceuticals CDMO capabilities in Denmark

- More than doubling the manufacturing capacity of the site with the addition of SUB mammalian cell culture bioreactors* Targeted to start operation in 2024.

Expanding small molecule pharmaceuticals CDMO capabilities in Spain

- Increasing manufacturing capacity by 30%. Facilities for highly potent active pharmaceutical ingredients (HPAPI), for which demand has been increasing in recent years, will also be added. Targeted to start operation in 2025.

Expanding biopharmaceuticals CDMO capabilities in Japan

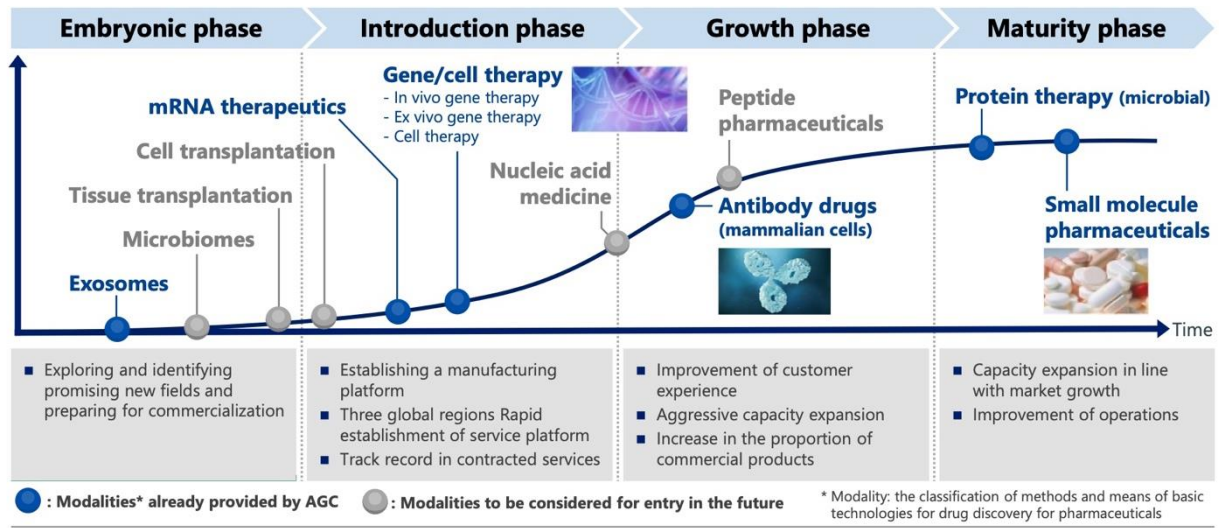
- In addition to mammalian cell culture bioreactors which have one of the largest capacity as a CDMO in Japan, the expansion will also include facilities for leading-edge field of mRNA pharmaceuticals and gene and cell therapies. Services are targeted to start gradually in 2025.

*Bioreactors using disposable containers called single-use bags

Next page, please. This is a short- and medium-term strategy.

Basically, we are planning to further expand small molecule pharmaceuticals, agrochemicals, and biopharmaceuticals business, as well as to expand our modality in terms of technology.

Business strategy based on the market maturity of each modality



Reference: Arthur D Little, December 23, 2020, Pharmaceutical Development Council document, "Survey on Issues and Initiatives Necessary to Resolve Issues Toward the Industrialization of Pharmaceutical-Related Industries."

The next page is specifically for modalities.

We are aggressively investing in our mature small molecule pharmaceuticals and proteins, as well as in growing antibody drugs, future gene/cell therapy, and mRNA, and we intend to adopt business strategies accordingly.

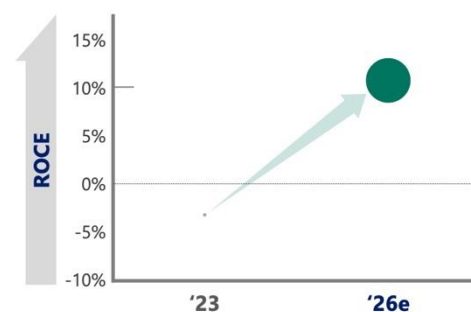
Life Science Segment Performance Targets

- We aim to achieve operating profit of over 30 billion yen and ROCE of over 10% by 2026.
- Continue to consider and take measures to improve business performance based on the current extremely severe business environment.

Image of business performance (Billion Yen)



Change in ROCE and EBITDA**



* Sub-segment information within the Chemicals segment is disclosed before 2021 (sales only), and on a stand-alone segment basis after 2022 (2022 figures are for reference only).

**Diameter of each circle : the size of EBITDA

Finally, our medium- to long-term performance targets.

As I mentioned earlier, in 2023, sales were temporarily affected by the market environment and capital investment was made here, resulting in a one-time drop in operating profit, but we believe that the market will recover in the mid- to long term and we will grow in this manner.

By 2026, we intend to achieve performance targets on the scale described here. That is all the explanation from me.

Ogawa: Thank you very much, Mr. Murano.

[END]