

# AGC Sustainability Data Book 2024

For the Year Ended December 31, 2023



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### **Editorial Policy**

Sustainability Data Book 2024 contains non-financial aspects (sustainability reporting) and complements the AGC Integrated Report 2024, in which the AGC Group publishes its broad range of business strategies and business activities. The information herein refers the Global Reporting Initiative Universal Standards (GRI 1: Foundation 2021.)

In 2019, the report's title changed from CSR Activity Report (Detailed) to Sustainability Data Book. In addition to non-financial data, individual policies, promotional structures, and business activity achievements are reported in regard to the Group's Corporate Social Responsibility (CSR) activities. Initiatives in the countries and regions in which the AGC Group operates are introduced on the AGC Group's sustainability website. The Sustainability Data Book should be viewed alongside the sustainability website to foster a deeper understanding of the social responsibility activities implemented by the AGC Group.

#### Scope of This Report

#### **Reporting Period**

2023 (Jan.-Dec. 2023) Some information includes content from 2022 and/or 2024.

### **Organizations Covered in the Report**

AGC and its 194 consolidated subsidiaries (Group companies worldwide)

Primary Notation and Report Subjects Used in the Report

- The AGC Group .....Same as "Organizations Covered in the Report" mentioned above
- The AGC Group (Japan) ······Group companies in Japan, including AGC
- AGC / the Company · · · · · · · · AGC Inc. (on a non-consolidated basis)
- Group companies in Asia .....Group companies in Asia, excluding the AGC Group (Japan)

## Main Communication Tools of the AGC Group

#### Dates of Publication

Japanese version: August 2024 (Previous date of publication: August 2023) English version: September 2024 (Previous date of publication: September 2023)

#### Future Assumptions, Forecasts, and Plans

Sustainability Data Book 2024 is based on the latest information available to the AGC Group at the time of editing this report. Nevertheless, please note that information regarding future forecasts may vary with fluctuations in the business environment that lead to unexpected results and/or phenomena.



# Message from the CEO



AGC was founded 117 years ago, in 1907. The founding spirit established at that time, deeply rooted in a profound sense of social mission, continues to be an integral part of the AGC Group's corporate culture, passed down through generations.

Never take the easy way out, but confront difficulties. Trust is the best way to inspire people. Strive to develop technologies that will change the world. A sense of mission leads us to advance.

# To contribute to the realization of a sustainable society, we aim for the growth of both people and business, to become an excellent company that grows and evolves continuously.

# Representative Director, President & CEO Yoshinori Hirai

The opening line, "Never take the easy way out, but confront difficulties," epitomizes our spirit of embracing challenges and resolute determination. Following this, we emphasize the foundational elements that support our challenges: "trust," "people," and "technology." Furthermore, at the core of our business is a profound sense of social mission. This sense arises from having a long-term perspective, understanding what the world will need in the future, and considering how scientific advancements will unfold to determine necessary actions. In our material development and research, which take a long time, establishing and maintaining trust with internal and external stakeholders is absolutely essential for successfully navigating long-term challenges. Moreover, unwavering dedication to technology is key to transforming new ideas into reality. This founding spirit is firmly embedded in our DNA and the AGC's Group Vision, "Look Bevond."

Our long-term management strategy Vision 2030, which we established in 2021, also incorporates this founding spirit. Our sense of mission is incorporated in the statement "By providing differentiated materials and solutions, AGC strives to help realize a sustainable society and become an excellent company that grows and evolves continuously" as part of Vision 2030. Today, the world is changing rapidly, and sustainability has become a major issue. Therefore, Vision 2030 embodies our sense of mission, to contribute to the realization of a sustainable society, and further expresses our aspiration to be an excellent company that perpetually grows and evolves. This reflects our belief that for the AGC Group to contribute to the realization of a sustainable society as a materials manufacturer, the AGC Group itself must also be sustainable.

To promote sustainability management, we are actively pursuing environmental initiatives, such as setting a 2030 milestone to reach Net Zero Carbon by 2050. Another pillar of sustainability management is human capital. The power of an organization is the collective strength of its people. By leveraging diverse talents, fostering individual growth, and enhancing engagement, we strive to realize sustainable management. We will carefully nurture our human resources so that each and every one of our employees can independently demonstrate their abilities, collectively supporting the company. At the same time, we will continue to select and concentrate on businesses, while allowing new businesses to successively emerge and develop. Only through the growth of both people and business will make us become an "excellent company that grows and evolves continuously" as set forth in our Vision 2030. I believe that creating mechanisms to generate new businesses and developing human resources are crucial roles that I must fulfill as the CFO

By upholding these principles and evolving with the times, the AGC Group will continue to strive to be an excellent company, continuously growing and advancing, and offering diverse value to society, customers, partners, employees, investors, and future generations. I would like to ask for your continued understanding and support of the AGC Group.

# Message from the GM of Sustainability Division

# Deeply incorporating sustainability perspectives into business activities.

Since its founding, the AGC Group has continuously provided products that contribute to society as demanded at the time. The economic value generated has been used as a source of growth, reinvesting in research and development, facilities, and human capital, thereby perpetuating a virtuous cycle of value creation and growth. Our sustainability management aims to contribute to the sustainability of society and increase our corporate value.

Based on the trends of long-term social issues, the AGC Group identifies opportunities and risks that are important for achieving both contribution to the realization of a sustainable society and the sustainable growth of the AGC Group. Our medium-term management plan **AGC plus-2026**, which began in 2024, focuses on "major opportunities" and defines three types of social value that the AGC Group wants to create with its products and technologies: "Blue planet" (realization of a sustainable global environment), "Innovation" (creation of an innovative future society), and "Well-being" (contribution to safe and secure living).

In addition to setting new sustainability KPIs to monitor the expansion in these three types, we have also established additional KPIs for GHG emission reduction targets, which aiming to contribute to the realization of a sustainable global environment, and employee engagement scores that are linked to organizational strength, as critical elements for achieving our long-term management plan Vision 2030.

# Steady Initiatives Addressing Environmental and Human Resource Challenges

We have established a milestone target for 2030 to reduce GHG emissions, addressing a key environmental issue, with the ultimate goal of achieving net zero carbon emissions (Scope 1 and 2) by 2050. For glass melting furnaces, which are major sources of emissions, we have developed a reduction roadmap and have begun implementing it. For example, we have entered into an agreement with Saint-Gobain to jointly develop technologies aimed at significantly reducing  $CO_2$ emissions in glass manufacturing and plan to commence demonstration tests in the second half of 2024. We are also advancing our examination of transitioning to clean fuels and technologies for carbon dioxide capture and utilization (CCU), a technology to utilize recovered  $CO_2$ . Thanks to progress in GHG emission reduction measures and business portfolio transformation, we have also made progress in reducing GHG emissions intensity per unit of sales.

With regard to the environment in addition to reducing GHG emissions, we will carry through in our work toward the realization of a circular economy, not only as a risk response, but also as a business opportunity.

We are also promoting "AGC People," our human capital management to achieve continuous corporate growth. We have established a "Diversity Council," such as "Top Communication," where top management and employees engage in direct dialogue, and improved the environment in which a diverse workforce, including various careers, experiences, and work styles, can maximize their abilities, respecting not only the active participation of women but also people with diverse values.

Furthermore, in 2023, we identified salient human rights issues in the AGC Group and established a new AGC Group Human Rights Policy. Going forward, we will deepen our efforts to address human rights issues.

# Robust Governance System for Sustainability Management

Important sustainability-related issues are deliberated by the Sustainability Committee, chaired by the CEO. The Sustainability Committee meets four times a year, attended by the CEO, CFO, CTO, Audit & Supervisory Board members, and all heads of In-house company/ SBU and corporate division The committee's deliberations are reported to the Board of Directors twice a year.

At the 2023 Sustainability Committee meeting, the agenda included a review of the implementation of the internal carbon pricing system, GHG emission reduction initiatives, including Scope 3 reduction strategies, the



GM of Sustainability Div., Corporate Planning General Div. Kazumi Tamaki

formulation of a human rights policy, and issues concerning worker safety. Since 2024, the Environmental Response Meeting, which has been reorganized under the Sustainability Committee, is promoting cross-divisional activities covering a wide range of environmental issues, including climate change.

In addition, we have established a mechanism to further enhance the performance of the sustainability KPIs outlined in the **AGC plus-2026** medium-term management plan. This includes incorporating GHG emissions intensity per unit of sales and employee engagement scores into our executive compensation system as non-financial indicators, with the aim of reducing GHG emissions and fostering company growth through the development and empowerment of each employee

The AGC Group will continue to work together as one to implement various measures to deepen sustainability management.

To that end, we kindly request your ongoing understanding and support for the AGC Group.

# **Group Vision**

# "Look Beyond"

**"Look Beyond"** is the AGC Group's corporate philosophy on which all the activities of the Group are founded.

# [Our Mission]

"Our Mission" expresses the value that the Group should offer to the world, and represents the reason why the AGC Group exists.

# [Our Shared Values]

"Our Shared Values" expresses the key ideas that all AGC Group members must share as the basis for every action we take.

# (Our Spirit)

This founding spirit is precisely 'the AGC spirit' that has been handed down from generation to generation and shared by all Group members.

# Structure and elements of *"Look Beyond"*

# [Our Mission]

AGC, an Everyday Essential Part of Our World

-AGC's unique materials and solutions make people's lives better around the world every day-

We, the AGC Group, aim to continue being the "first choice" solution provider for our customers by building long-term trusted relationships with them through unique materials and solutions developed using our wide-ranging material and production technologies. We will continue offering products and solutions that customers and society need, thereby making people's lives better around the world every day.

# [Our Shared Values]

# **Innovation & Operational Excellence**

- We will seek innovations in technology, products, and services beyond conventional concepts and frameworks.
- We will create value directed at our current and potential customer needs, accounting for changes in the business environment and social and market evolution.
- We will continuously improve all aspects of our operations, striving to achieve benchmark performance.

# Diversity

- We will respect individual diversity of varied capabilities and personalities.
- We will respect cultural diversity of race, ethnicity, religion, language, and nationality.
- We will respect different perspectives and opinions at all times.

# Environment

- We will contribute to creation of a sustainable society in harmony with nature as a successful and responsible global citizen.
- We will strive to ensure and further improve occupational health and safety in our working environment.

# Integrity

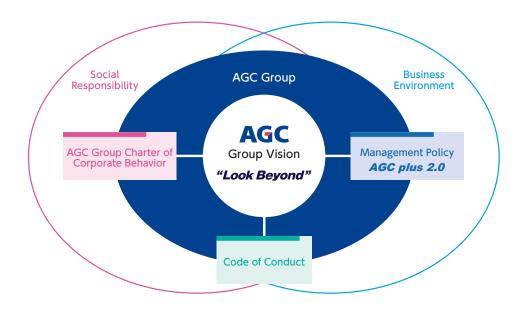
- We will build open and fair relationships with all of our stakeholders based on the highest ethical standards.
- We will comply with all applicable laws and regulations.
- We will fulfill our contractual and legal responsibilities to achieve customer satisfaction and trust.

# [Our Spirit]

## "Never take the easy way out, but confront difficulties"

The founding spirit of Toshiya Iwasaki, who established Asahi Glass Company in 1907.

# **Approach to Sustainability**



Based on our **AGC plus 2.0** Management Policy, the AGC Group aims to earn the trust and meet the expectations of society in accordance with our Mission, Shared Values, and Spirit set forth in the AGC's Group Vision **"Look Beyond,"** with the intention of balancing the AGC Group's sustained growth with contributions for the realization of a sustainable society. In addition, we fulfill our social responsibilities and have created the AGC Group Charter of Corporate Behavior and the AGC Group Code of Conduct.

# Management Policy **AGC plus 2.0**

The Management Policy sets the course of action for all the Group's business activities providing social and business aspirations, guidelines, and directives.

It is revised as necessary to reflect changes in the business environment and circumstances of the Group. Based on our **AGC plus 2.0** Management Policy, the AGC Group will realize sustainable growth by providing additional value to all stakeholders.

- Providing safety, security, and comfort to society,
- Creating new value and functions for customers and business partners and building trust with them,
- Enhancing job satisfaction among employees,
- Increasing the Group's corporate value for investors, and
- Building a better future for the coming generations.

# ► Code of Conduct

# ► AGC Group Charter of Corporate Behavior

The Group Charter sets forth and declares the perspectives that form the basis of our behavior to ensure that the AGC Group will remain a good corporate citizen

AGC Group Charter of Corporate Behavior (Established on June 1, 2007 and revised on March 9, 2016) Under the tenet of "Our Mission" in the Group vision, **"Look Beyond"** the AGC Group strives to be a company trusted by all of its stakeholders, a company that meets the expectations of the world business community to grow and develop responsibly and a company that significantly contributes to a healthier global society. To this end, the Group has established the AGC Group Charter of Corporate Behavior and acts in line with the following principles.

#### [Integrity: Sincere Behavior]

- 1. The AGC Group will develop and provide useful goods and services of superior quality, giving due consideration to safety and the environment, and will strive for customer satisfaction and loyalty.
- 2. The AGC Group will understand and comply with applicable laws and regulations of the countries and regions in which it does business and will respect international norms of behavior.
- The AGC Group will promote fair trade and conduct its operations in accordance with the principle of fair competition and all applicable laws and regulations.
- 4. The AGC Group will maintain sound relationships with government agencies and other responsible organizations. The Group will not support any person or group that threatens the order and security of society.
- The AGC Group will properly manage and safeguard its own proprietary information, intellectual property, and other assets and will respect the property rights and interests of others including customers and business partners.

#### [Environment and Safety: With Due Consideration]

- 6. The AGC Group regards environmental conservation as an essential responsibility of global citizens and will proactively contribute to the development of a sustainable society.
- The AGC Group will pursue technological innovations and new product developments that reflect due consideration for the environment and will participate in activities to preserve the environment and safety and security at work.
- 8. The AGC Group will maintain its workplaces with a proper regard to occupational health and safety for the people related to its business activities.

## [Diversity: Respect for People]

- 9. The AGC Group will respect human rights and will operate its business with due regard for the cultures and customs of each country and region in the world.
- The AGC Group will respect people's diverse capabilities and personal dignity and will create fair and open environments at its workplaces without discrimination based on race, ethnicity, religion, nationality, gender, disability, or any other legally protected group.
- 11. The AGC Group will not engage in forced labor or child labor and will not tolerate infringements of human rights.

# [Harmony with Society: From "Responsibility" to "Reliability"]

- 12. The AGC Group will strive to be a trusted corporate citizen, fulfilling its responsibilities to the communities in which it does business.
- 13. The AGC Group will build productive and proper relationships with business partners and encourage them to adhere to business principles consistent with its own.
- 14. The AGC Group will communicate responsibly with customers, local citizens, shareholders, employees, and other members of society by gathering their opinions and disclosing information in a fair and appropriate manner.

The management of all AGC Group companies, recognizing that it is their responsibility to realize the spirit of this Charter, will take the initiative to achieve an understanding of the Charter within all Group companies, and at the same time, will seek its business partners' cooperation.

The management will also promote the development and implementation of systems that the principles stipulated in this Charter can be duly incorporated into the Group's decision making and implementation.

In the case of any behavior contrary to the principles of this Charter, we will work to identify the cause and prevent a recurrence, making it clear to those inside and outside Group companies that the situation is being addressed diligently. We will take appropriate corrective and disciplinary actions when necessary.

# **Recognition of Long-term Social Issues (Material Issues) and the AGC Group Business Activities**

## Process for Identifying Long-Term Social Issues (Material Issues)

Following the process below, the AGC Group identifies long-term social issues as major opportunities and major risks that might have an impact on the long-term direction of business and corporate value.

# **SDGs** mapping

To enable analysis of our long-term social issues, we reconfirmed our current progress toward the realization of sustainability by using the 169 targets of the SDGs as the basis for an analysis of the types of social issues addressed by our existing products.

Focused on existing mainstay products in each business field

Calculated the "business impact score" for each product based on its sales and growth potential



Linked each product to the SDG targets to which it can contribute



Described the type of social value that the AGC Group is creating in relation to each SDG by taking into account the contributions of all products linked to a given target

Added up the total business impact score of all products linked to each type of social value

Corrected the business impact score for each type of social value based on the degree of contribution to addressing social issues

Set the corrected results as the social impact score and identified the top 15 types of notable social value

# The above procedure identified fields where existing products can help address current social issues.





In light of its current contributions to the resolution of social issues, important opportunities and risks for the Group going forward were identified through analysis of future trends in social issues. (The analysis results were also used as basic information in preparing Vision 2030.)



# Compiled a list of social issues

• 169 targets of the SDGs

stakeholders

Social issues with opportunities

Sustainability megatrends (circular economy, etc.)

Assessed material issues for

• Based on the Global Risks Report (World Economic Forum), compiled a list of items representing opportunities and risks for the AGC Group (79 items in total)



Assessed material issues for the AGC Group

With respect to the list of social issues, assessed material

issues based on relevance to current Core and Strategic

With respect to the list of social issues, assessed material

Maior Risks

Creating socially and environmentally conscious supply

Ensuring fair and equal employment and workplace safety

· Considering relationships with local communities and

issues based on overviews of the Group's value chains,

Businesses and the potential fields for the latter

#### Social issues with opportunities

With respect to the list of social issues,

- Identified social issues addressed by customers and competitor
- Assessed material issues based on sustainability and megatrends

#### Social issues with risks

With respect to the list of social issues, assessed material issues based on the assessment indicators of major ESG rating organizations

**Identifying major** 03 opportunities and maior risks

Based on the results of analyzing trends in social issues and in light of expert opinions, we identified major opportunities and major risks associated with simultaneously achieving sustainable development of the planet society, and sustainable growth as a corporate group. These opportunities and risks are discussed and determined by the Sustainability Committee and the Board of Directors and were then used as the foundation for setting sustainability targets.

including upstream and downstream

Social issues with risks

# **Major Opportunities**

#### Addressing climate change Using resources effectively

chains

the environment

- Developing social infrastructure
- Achieving safe, comfortable mobility
- Addressing food crises
- · Building an info-oriented, IoT-society
- Facilitating better health and longevity

# Governance

# The AGC Group's Recognition of Long-Term Social Issues (Material Issues )

In light of long-term trends in social issues, the AGC Group has identified major opportunities and risks associated with simultaneously moving toward a sustainable society and the sustainable growth of the Group. Based on these major opportunities and risks, the AGC Group has established long-term strategies, strategies for each of its businesses, and sustainability (non-financial) targets while engaging in business activities with the aim of creating social and economic value.

Major Risks	Solve Social Issues through Healthy Corporate Activities	
Major Opportunities	Solve Social Issues through Products and Technologies	

# Recognition of Long-Term Social Issues (Material Issues) and Their Relevance to Business Activities

The AGC Group's Recog	gnition of Long-term Social Issues (Mater	ial Issues)	Example	es of the AGC Group's initiative	s Governance / Environmenta	/ Social
Addressing climate	Since the Paris Agreement was reached in 2015, a shift toward decarbonization has been gathering momentum. Stricter energy-related	Major Risks	Reduction of Scope 1, 2, and <u>3 emissions</u> AGC Group metrics and targets This Issue P.33	Initiatives to reduce Scope 1 and 2 emissions Innovations in glass-melting process This Issue P.33 Reducing the environmental impact of the Chemicals Business This Issue P.36	Initiatives to reduce Scope 3 emissions This issue P.36	Addressing physical risks due to climate change This Issue P.32
change	policies and statutory regulations are expected. Also, socially calls are growing for companies to achieve net-zero greenhouse gas emissions.	Major Opportunities	• Expansion of hydrogen market Fluorine-based electrolyte polymers Integrated Report P.35, P.50-51 This Issue P.32	• Expansion of next-generation coolants and solvents markets Contribution to GHG emission reduction through low-GWP chemical products (ntegrated Report) P.32、P.67	Expansion of the building and renovation market, greening buildings Eco-glass, Thermodine™ low carbon glass Integrated Report P.67 This Issue P.32、P.38	Accelerated introduction of solar power generation facilities Refractories for melting furnaces for cover glass production, fluoropolymer resin films (This Issue) P.32
	There are concerns that stricter regulations on the use of depletable resources, such as rare earths, and higher demand for water	Major Risks	Initiatives to reduce resource input Recycling of plastic resources, utilization of glass cullet, fluorine products This Issue P.35、 P.42-44	Setting and managing targets for effective use of resources Reduction of landfill disposal rate, etc. (This Issue) P.42、 P.47	Appropriate disposal of waste Ensuring proper handling, proper management of PCBs This Issue P.45	●Effective use of water resources This Issue P.50
Effective use of resources	resources accompanying further urbanization could seriously impact the production activities of companies. In addition, as the recycling-based economy accelerates, society increasingly expects companies to reduce waste and promote recycling.	Major Opportunities	Retrofit double-glazed window products ATTOCH™ / MadoMado This Issue P.45	Products made from non-fossil raw materials / Bio-based epichlorohydrin (ECH) EPINITY <sup>®</sup> This Issue P.45	• Products utilizing waste materials DA CAPO: A cosmetics series that utilizes recycled crab shells from Hokkaido, Uniporous: A biological filtration material that utilizes sea urchin shells This Issue P.46	Double glazing facilitating easy separation during demolition and disposal Thermocline™ (This Issue) P.38
Developing social infrastructure	While the economic growth of emerging countries necessitates the development of such social infrastructure as housing, roads, railroads, and public services, developed countries must deal with the aging of their social infrastructure. Moreover, there is a growing need to develop resilient infrastructure that can withstand the intensified disasters being caused by climate change.	Major Opportunities	<ul> <li>Implementation of water purification project in India This Issue P.50</li> </ul>	Products contributing to effective use of water This Issue P.50	• Fluororesin for coatings with high weather resistance and corrosion protection, eliminating the need for repainting for decades This Issue P.46	<ul> <li>Photovoltaic glass unlocking new possibilities for architecture This Issue P.38</li> </ul>

Achieving safe, comfortable mobility	The spread of automobiles in emerging countries is causing concern over rising traffic accident deaths. Meanwhile, addressing the mobility needs of the elderly, those living in less-populated areas, and other vulnerable groups in society is becoming increasingly important. Further, as autonomous driving becomes more widespread, expectations are increasing with respect to the establishment of safety technologies, such as sensors and cameras, and the enhancement of in-car entertainment.	Major Opportunities	• Low-E glass products with h heat shielding and insulation properties for automotive applications This Issue P.38	n efficienc		• Solutions for nex mobility Antenna function, se display function (AGC Website)	-	Automotive glass that supports autonomous driving systems AGC Website
Addressing food crises	The problems of hunger and malnutrition in the world's poorest regions have yet to be resolved, and there are concerns that the situation will worsen due to disasters and droughts caused by the climate change in recent years. Also, to cope with a growing world population, food productivity must improve.	Major Opportunities			AGC Website pro		• Feed ad protection (AGC Websit	
Building an info-oriented, internet of things (IoT) society	With the spread of information and communication technologies in emerging countries, reliable, inexpensive access to information needs to be provided. In developed countries, the early dissemination of next-generation high-speed communication technologies, such as 5G, promises to improve the quality of remote medical care and information transmission.	Major Opportunities	Photomask blanks for EUV lithography (Integrated Report P.35     P.35     Provide a substrates for next- semiconductor pack (Integrated Report P.47		es for next-generation luctor packages	neration window into a base station		Glass for various applications in digital equipment AGC Website Glass for LCD TVs Dragon trail <sup>™</sup> NF glass filter
Facilitating better health and longevity	Given that the number of young people losing their lives due to non-communicable diseases remains high worldwide, there is a need to reduce such deaths by providing stable supplies of pharmaceuticals for prevention and treatment. In addition, a trend toward increased division and specialization in the pharmaceutical industry, which is aimed at improving the productivity of the industry as a whole and diversifying its risks, is becoming more pronounced.	Major Opportunities	• Expansion of biopharmaceutical CDMO development and manufacturing capacity (Integrated Report) P.54			• For medical use, s products for COVI This Issue P.54		Tissue culture products for regenerative medicine (AGC Website)
Creating socially and environmentally conscious supply chains	As supply chains become more globalized and complex, the risk of issues arising in relation to illegal employment, such as forced labor and child labor, at suppliers and subcontractors is increasing. Further, tighter environmental regulations are leading to concern over potential regulatory violations at operating bases.	Major Risks	in procurement activities business partners		or green procurement sk minerals	Training sessions partners This Issue P.89	with business	• Product safety initiatives This Issue P.97
Ensuring fair and equal employment and workplace safety	There is a growing need for compliance in employment and respect for workers' rights as well as for safety measures at manufacturing sites due to the increasing number of unskilled and elderly workers.	Major Risks	<ul> <li>Establishment of a global compliance system</li> <li>Establishment of a hotline, compliance training, compliance surveys</li> <li>This Issue P.17-19</li> <li>Respecting humaning rights</li> <li>Self-inspection of human rights educated and harassment previous measures</li> <li>This Issue P.60-61</li> </ul>		employees to management positions, labor practices, hts education, ment prevention This Issue P.68-69			Ith • Creating a comfortable workplace This Issue P.81-83
Considering relationships with local communities and the environment	Due to population growth and urbanization in various parts of the world, interest in expanding living areas and maintaining biodiversity in surrounding areas is growing. Also, in emerging countries there is an increasing focus on improving the quality of life as living standards improve. Efforts to build good relationships with local residents and governments in the vicinity of operating bases are also becoming more important.	Major Risks	High-pressure gas, new	Volunteer leave sabbatical syste his Issue)P.94	m conservatio cooperatio communiti Wild orchid cor	on through im n with local sub es (This Is ref conservation grove forest	lucing environr aact of chemica stance manage sue P.54-55	

**Sustainability Management System** 

The cornerstone of AGC Group's sustainability management is the creation of three types of social value: "Blue Planet," "Innovation," and "Well-being."

These have been identified as "major opportunities" among the opportunities and risks (material issues) that are crucial for the AGC Group's contribution to solving long-term social issues faced by the world and for achieving the AGC Group's sustainable growth. These areas are set as domains where we will contribute to solving social issues through our products and technologies.

## **Three Types of Social Value**

1 🛞 F	Blue planet Realization of a sustainable global environment	We contribute to the sustainability of the planet on which all life depends by reducing the environmental impact of our products from raw material procurement to use by customers.
- Q- C	Innovation Creation of an innovative future society	We contribute to the creation of innovative future society by providing materials and solutions that support the world's most advanced technologies.
We contribute to safe, secure, comfortable, a		We contribute to safe, secure, comfortable, and healthy lives by providing products necessary for daily life, infrastructure, and healthcare in a more stable manner.

# Sustainability Committee

Based on our material issues, we have established the Sustainability Committee as a body to deliberate on and determine basic policies and measures for the AGC Group's sustainability management initiatives that create the three types of social value. Among these, particularly important matters are decided by the Board of Directors.

The Sustainability Committee, which has an organizational rank equivalent to that of the Management Committee, is chaired by the CEO, and its meetings, held four times a year, are attended by the CFO, CTO, auditors, and all heads of In-house company/ SBU and corporate division. Additionally, the Sustainability Division, which belongs to the Corporate Planning General Division, acts as the secretariat for the Sustainability Committee and leads the formulation and execution of sustainability management strategies for the entire AGC Group.



# AGC Group sustainability KPIs

In light of trends in long-term social issues, the AGC Group sets long-term management strategies, business strategies, and sustainability goals and KPIs based on major opportunities and risks to achieve both contribution to a sustainable society and the sustainable growth of the Group.

#### KPIs to Measure the Sustainability of Our Management Foundations

КРІ			
GHG (Scope 1 and 2) Emissions	Employee engagement score		

#### KPIs to Measure Business Growth from a Sustainability Perspective

Three Types of Social Value	КЫ		
Blue planet	Shipment volume index for architectural products contributing to GHG reduction	Index for GHG emissions reduction by low-GWP products of Chemicals segment	
Innovation	Total sales index for products contributing to next-generation society (Electronics, Mobility, Performance Chemicals)		
Well-being	Shipment volume index for products contributing to social infrastructure development in fast-growing regions (main chlor-alkali products)	Index for Life Science sales	

## **Environmental Response Meeting**

With regard to environmental issues such as climate change, which we regard as factors that have a significant impact on the Group's corporate value and business strategy decisions, we will consider management strategies and risk responses based on internal and external changes brought about by these issues. Specifically, timely discussions are held in the Environmental Response Meeting and its task forces. These were established by a resolution of the Sustainability Committee and are chaired by the General Manager of the EHSO Division and the General Manager of the Sustainability Division in the Corporate Planning Division. These meetings bring together divisions with expertise in global and cross-business data management, technology innovation, energy management, and supply chain management.



**Stakeholder Engagement** 

# **Fundamental Approach**

The corporate behavior of the AGC Group is based on its relations not only with customers but also all stakeholders, including shareholders, investors, business partners, governments, NPOs / NGOs, local communities, and employees and their families. Accordingly, the AGC Group Charter of Corporate Behavior states that the Group will seek to communicate with all its stakeholders, including customers, local communities, shareholders, and employees. The Group listens to their opinions and discloses corporate information promptly and fairly.

# **Management Structure**

The AGC Group has established a support department for each stakeholder group and cooperates with relevant departments to proactively disclose corporate information in a prompt and proper manner. The Group also creates opportunities to act on the opinions of its stakeholders for business management, promoting two-way communication between stakeholders and the AGC Group.

## The AGC Group Communication with Stakeholders

etc.



We are AGC!

Shareholders and Investors Regular stockholders' meetings Financial settlement briefings Information sessions for investors

 Facility tours Publishing AGC Financial Review,



Customers Information dissemination with press releases Publication of advertorials in online media



ocal Communities Plant tours, on-site classes Employee participation in local events Social contribution activities, etc.

outreach science class (Japan)

# NPOs / NGOs

• Periodic opinion exchanges Cooperation on individual projects, etc.



Donation to a foundation for the visually impaired (Thailand)

#### Governments

- Dialogue through economic organizations and industry associations
- Dialogue and cooperation with local governments

Social contribution activities, etc.



CSR-DIW Continuous Award 2021

# **Groupwide Initiatives**

Formulation of Group Communication Guidelines The AGC Group has established Group Communication Guidelines to accurately disseminate Group information. Adhering to guidelines of the public relations divisions of Group companies in Japan, the rest of Asia, Europe, and the Americas, the Group follows rules regarding the dissemination and receipt of information within and outside the Group.

Concerning the timely disclosure of Company information, supervisors nominated from each department and major Group companies obtain and release information through the Corporate Communications and IR offices. In addition, negative information is also appropriately disclosed on the AGC website and via the media.

## Communication Tools for Each Type of Stakeholder

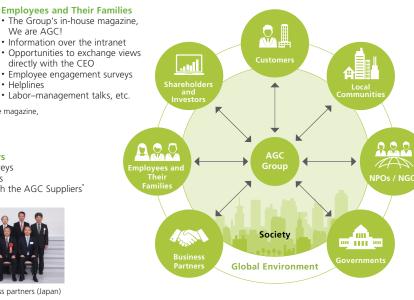
The AGC Group employs a variety of communication tools to satisfy stakeholders' requests, such as pamphlets that introduce the Group management and initiatives (AGC Integrated Report, Financial Review) and the AGC website. Since 2013, the Group has been sharing information through social media including Facebook and Instagram.

## Feedback from Stakeholders via the AGC Website

The AGC Group regularly asks for opinions and comments regarding the AGC Integrated Report and the homepage via its website.

We take these responses into account to further improve our CSR activities and use them in the creation of various reports and our website

Q&Aでっかむ! 10 <sup>10</sup> We are AGC! A Information over the intranet Opportunities to exchange views directly with the CEO ...... Employee engagement surveys Helplines Labor–management talks, etc. The Group's in-house magazine, We are AGC! **Business Partners**  Satisfaction surveys ployees and Their Social gatherings Dialogue through the AGC Suppliers' Association, etc. · And Meeting with business partners (Japan)



Exhibition booth

# **Corporate Governance**

# **Fundamental Approach**

AGC is constantly working to strengthen and improve its corporate governance with a view to raising the Group's corporate value over the medium to long term and ensure its continuous growth. Accordingly, the AGC Group has established the AGC Group Corporate Governance Basic Policy, a basic approach to its corporate governance system.

#### **Basic Approach to the Corporate Governance Structure**

- Clearly separate the management oversight and business execution functions
- Clearly define group corporate and business operations functions in the context of business execution

#### Corporate Governance

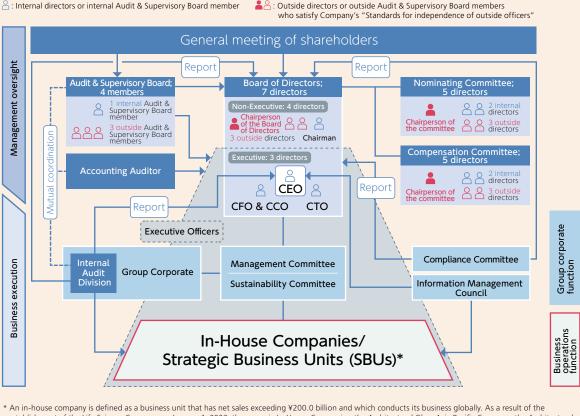
#### Attendance of Directors at Board of Directors' Meetings

FY	Attendance
2021	99%
2022	100%
2023	99%

#### Attendance of Audit & Supervisory Board Members at **Board of Directors' Meetings**

FY	Attendance
2021	100%
2022	100%
2023	100%

# The AGC Group's Corporate Governance System (as of March 31, 2024)



Cutside directors or outside Audit & Supervisory Board members

establishment of the Life Science Company on January 1, 2023, there are six In-House Companies: the Architectural Glass Asia Pacific Company, the Architectural Glass Europe & Americas Company, the Automotive Company, the Electronics Company, the Chemicals Company, and the Life Science Company, as of March 31, 2024. Business units of a smaller size than this are defined as SBUs (strategic business units), and currently there is AGC Ceramics Co., Ltd.

# **Internal Controls**

# Establishment and Operation of the Internal Control System

The AGC Group is strengthening its internal control system as detailed below:

- The Board of Directors, which fulfills a management supervisory function, monitors the establishment and operational status of the AGC Group's internal control system.
- The president & CEO, who is responsible for management's executive functions, establishes and operates the internal control system of the AGC Group.
- Audit & Supervisory Board members monitor and verify the internal control system.

With respect to buniness excution, the AGC Group develops and manages governance and internal controls based on the AGC Group Three Lines of Defense Model, which classifies respective bodies and divisions as first, second, and third lines of defense.

# Management Structure

In response to the enforcement of the Companies Act, the establishment of AGC's Corporate Policy over Internal Control was approved by a resolution of the Board of Directors at a meeting held in May 2006. The aim was to review and ensure the appropriateness of the Company's business operation systems, including the compliance system.

## **Basic Items for Corporate Policy over Internal Control**

- 1. Compliance program
- 2. Information retention and management system
- 3. Risk management system
- 4. System for efficient business execution
- 5. System for reports to AGC by AGC Group companies
- 6. Audit system of the Audit & Supervisory Board Members



## The AGC Group Three Lines of Defense Model



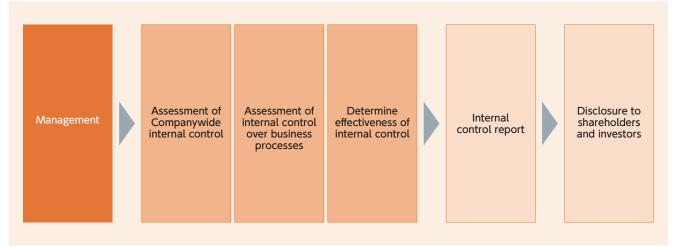
2. In-house Companies and SBUs have established various systems for managing subsidiaries, including a "2nd line of defense" function (in such organizations as the Business Planning & Administration Divisions and CSR Divisions) for them. The AGC Corporate Divisions provide support and guidance to the subsidiaries in cooperation with these organizations. Reporting, guidance or advice

# Internal controls for financial reporting

After introducing a system for preparing internal control reports in compliance with the Financial Instruments and Exchange Act, the AGC Group Internal Control over Financial Reporting Implementation Regulations were established. Based on these regulations, the Group establishes, operates, and evaluates internal controls for financial reporting.

Internal controls regarding financial reporting were evaluated as being effective in 2023, and the appropriateness of the valuation has also been reported by the external auditor.

# Processes Based on Internal Control Implementation Regulations Related to the AGC Group's Financial Reporting



# **EHSQ Monitoring**

Under the management policy based on the AGC Group's Vision **"Look Beyond,"** the Group aims to contribute to the realization of a sustainable society through EHSQ (Environment, Industrial Safety & Security, Occupational Health & Safety, Quality) management in its all business activities. The Group also aims to improve social trust, customer satisfaction (CS), and employee satisfaction (ES).

See also: Environment P.23, Safety and disaster prevention P.84, Occupational health and safety P.74, Quality P.96

# ocial

**Internal Audits** 

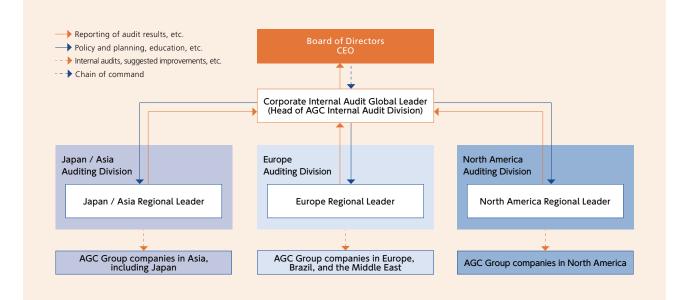
To maintain its independence, the Internal Audit Division has appointed a corporate internal audit global leader (head of the Internal Audit Division at AGC) who reports directly to the president & CEO, overseeing the person in charge of each audit division (regional leader) located in Japan/Asia, Europe, and North America.

Under this system, audit departments in each region promote the establishment, operation, and improvement of Group companies' internal controls through effective and efficient auditing. In addition, the corporate internal audit global leader promptly reports important matters identified by audits to the president & CEO and also regularly reports to Audit & Supervisory Board members.

In carrying out internal audits, the AGC Group establishes common global auditing items. In 2023, it established (1) Compliance with Antitrust Laws and Regulations, (2) Information Security Management, (3) Anti-Bribery Control, and (4) Data Accuracy as focus items. In addition, when selecting items for audit, the Group uses criteria established on the basis of risk. In 2023, the Group audited 37 affiliated companies globally by combining on-site audits, remote audits, collaborative audits with the internal audit divisions of the affiliated companies, and data-enabled digital audits in ways that were best suited to the situations at the affiliated companies being audited.

The Group also conducts pre-operational and M&A audits to assess the internal control status of newly established companies and companies that have joined the AGC Group through M&A. In 2023, it performed two such audits globally.

#### **Global Internal Auditing Structure**



# **Risk Management**

# **Management Structure**

The Group has established the AGC Group Enterprise Risk Management Basic Policies based on its Corporate Policy over Internal Control, the establishment of which was approved by a resolution of the Board of Directors. The Group as a whole is working on enterprise risk management based on this policy.

Among the risks that could hinder the achievement of the Group's management targets, those that require particularly intensive monitoring from the perspective of their potential impact on the Group's management and the likelihood of their occurrence are selected as major risks. The Group implements measures aimed at mitigating the materialization of such risks, and conducts annual self-assessments across the Group to continuously improve the level of risk management. For long-term sustainability risks, the AGC Group identifies major opportunities and risks that could affect the long-term direction of management and corporate value, based on future trends in global social issues and risks, as well as the social issues our customers are working to resolve, as the AGC Group's materiality. Based on this process, we have established sustainability targets aimed at leveraging opportunities and dealing with risks, and are working to resolve them. Under the supervision of the Board of Directors, the Sustainability Committee determines policies to address such long-term risks related to sustainability and deliberates on future measures based on the progress of the targets.

## **AGC Group Risk Classification**

- Strategy
- Operation
- Compliance
- Sustainability
- Natural disasters / Infectious diseases
- Cybersecurity / Information security
- Financial

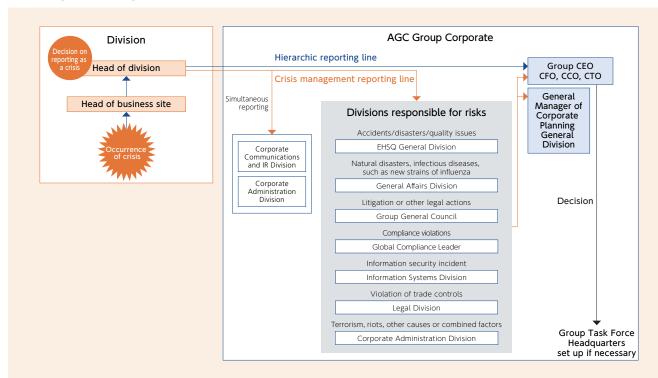
# Business Continuity Management and Crisis Management

The AGC Group has established a business continuity management (BCM) system to minimize the impact of crises that may have a significant effect on business activities and has set forth procedures for reporting and responding to such crises in the AGC Group Rules for Crisis Management and Business Continuity Management.

Under this system, we have established a "Crisis Management Reporting Line" to ensure prompt and reliable access to information in the event of a crisis. We have also established response procedures so that the Group Task Force Headquarters can be immediately set up as necessary to ensure a smooth crises response.

In order to respond properly to crises especially in the event of accidents or disasters, each site implements safety and disaster prevention initiatives. In addition, the AGC Group has developed a Business Continuity Plan (BCP) to ensure the continuation of operations, and strive to continuously enhance and improve its level of responsiveness to achieve recovery and restore operations in a rapid manner.

#### **Reporting Line During a Crisis Situation**



# BCP Establishment and Improvement

The AGC Group, under the AGC Group Risk Management and Business Continuity Management Rules, has established four basic policies for responding to risks that significantly impact the Group's business activities. These policies are: "human life and safety first," "prevention of secondary disasters," "contribution to and co-existence with society," and "business continuity." Each business division and site develops its own BCP.

In line with these policies, we have evaluated risks relating to earthquakes, high winds, floods, etc., across our major Group sites around the world (approximately 200 locations). We have created a hazard map, which categorize the severity of hazard risks through color-coding. At sites in high-risk areas, we are advancing efforts to develop BCPs.

For earthquakes in particular, we have developed BCPs for our main high-risk sites in Japan and Asia. Additionally, every year at our headquarters, we conduct tabletop drills involving the Group CEO, division heads, and relevant key personnels, with the aim of raising awareness and improving the effectiveness of BCPs. In 2023, we conducted a drill simulating an earthquake directly under Tokyo, and held an online workshop to discuss initial responses, potential damage and our responses in each division, and cross-organization coordination when a disaster strikes.

At the AGC Group (Japan), we have been operating an employee safety confirmation system since 2009 that checks the safety of employees and their families in case of a disaster, and we conduct Group-wide safety notification drills twice a year in Japan. We also conduct response training for power outages caused by natural disasters at our business locations in Southeast Asia.

We will verify the effectiveness of our established BCPs through repeated drills while continuing to improve our BCPs.

Regarding infectious diseases, we have continued our operations through the implementation of BCP prepared by business including each site during the global spread of COVID-19 started in 2020. Even today, in preparation for the next outbreak of large-scale infectious diseases, the AGC Group has established and maintain a BCP based response system that incorporates various measures, such as remote work, to ensure human life and safety as well as to minimize the impact and continue operations in such an event.

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# Compliance

# **Fundamental Approach**

#### Formulating a Groupwide Code of Conduct

Compliance is the fundamental premise underlying the AGC Group's business activities. To that end, the AGC Group Code of Conduct sets forth requirements for all employees in the workplace. The code comprises global requirements of business conduct that all employees must follow, regardless of country or region, and regional requirement that take into account the laws, regulations, and business customs of those areas.

The working regulations of each AGC Group company state that a violation of the AGC Group Code of Conduct is grounds for disciplinary action. In addition, if an employee voluntarily reports his or her own Code of Conduct violation, this will be taken into consideration when determining disciplinary action.

# Management Structure

## Establishment of Global Compliance System

The AGC Group has appointed a Chief Compliance Officer (CCO) responsible for the development of the compliance framework and promotion of compliance in the AGC Group. Under the supervision of the CCO, a global compliance leader, the Global Compliance Committee, and regional compliance committees plan and implement compliance programs, monitor respective regions' compliance efforts, and regularly report to the Board of Directors regarding Groupwide policies and the current status of the compliance system. In accordance with the guidelines of the

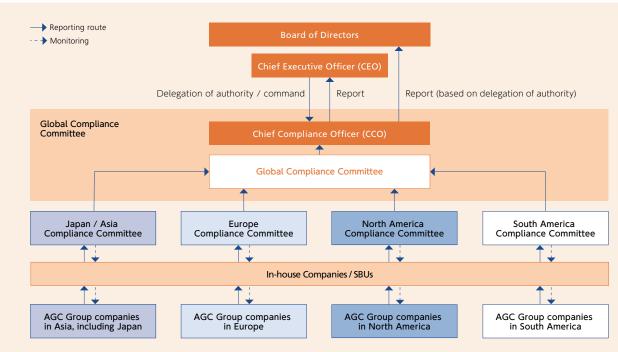
compliance reporting system, the AGC Group has established a system for promptly reporting serious compliance violations to senior management.

# Submission of Personal Certification on the Code of Conduct

The AGC Group has introduced a system in which its employees periodically submit a personal certification to follow the AGC Group Code of Conduct. The goal of the system is to turn the submission of certifications into an opportunity for all employees to renew their awareness of compliance and take a fresh look at business affairs and the workplace.

# Governance

#### **Global Compliance System (as of December 31, 2023)**



Note: The CEO and CCO currently serve concurrently as directors.

# Governance

# **Groupwide Initiatives**

## **Establishment of a Global Hotline**

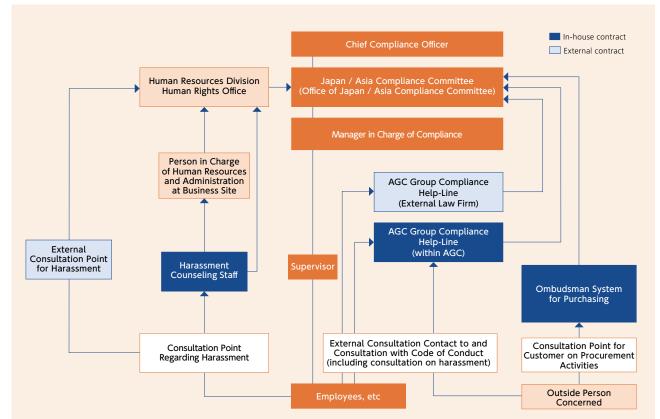
The AGC Group has established various reporting and consultation hotlines regarding our Code of Conduct, including human rights. As a general rule, hotlines are set up at each Group company, while additional area-wide hotlines have been established in Europe, North America, and Asia. Further, in Japan, we have established a hotline for all employees of the Group to report to, as well as a hotline for them to seek advice from external lawyers, while in global locations we have established a common external hotline.

To encourage employees to use the hotlines, the Group makes full consideration to ensure the anonymity of whistleblowers and strictly forbids any act of retaliation. When whistleblowers offer their real names, communication is facilitated, and feedback is provided on the status and results of handling the reported issues.

To provide contact information for the hotlines, hotline contacts are listed in the AGC Group Code of Conduct distributed to all employees. These contacts are also publicized in each country and region through efforts such as placing posters at each site.

## Number of reports received via hotlines (AGC Group)

2023	Japan/ Asia	Europe	North America	Others	Total
A: Alleged violation of Group Code of Conduct (excluding B case)	65	14	11	7	97
B: Trouble between employees (sexual harassment, power harassment, etc.)	149	12	24	10	195
C: Inquiries, requests and opinions regarding the Code of Conduct and company systems	239	13	14	3	269
Total (A + B + C)	453	39	49	20	561



# Hotline Reporting Route (AGC)

# Implementing Compliance Training

In order to promote the Code of Conduct globally, the AGC Group provides various training opportunities to its employees around the world and has placed particular emphasis on strengthening compliance training worldwide.

For example, the Group continuously implements compliance-related training for officers and employees. It proactively promotes training activities intended to reinforce compliance in each country and region, including classroom training, implementing e-learning using training materials incorporating illustrations and quizzes, as well as the production of pocket-sized compliance cards, newsletters, video materials for training, and educational posters. In addition, in light of the strengthening of anti-corruption regulations and measures against bribery in the international community, we are focusing on implementing anti-bribery education particularly in countries and regions with high bribery risks. Despite the COVID-19 pandemic, since 2020 the Group has proactively carried out training activities by holding numerous online training sessions in various regions.

# Implementing Compliance Surveys

The AGC Group uses surveys to gauge the level of compliance in the workplace and awareness of hotlines, and implements any necessary measures based on the results.



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# **Tax Payments**

# **Fundamental Approach**

The AGC Group recognizes that proper tax payments impact the economic and social development of each country and region. Ensuring proper tax payment as a corporate social responsibility, we endeavor to ensure accurate and timely tax return pursuant to the tax laws and the spirit of law of each country and region. We have formulated the AGC Group Tax Compliance Policy based on this basic view of taxation.

#### AGC Group Tax Compliance Policy

(Established on June 29<sup>th</sup>, 2018, revised on March 27<sup>th</sup>, 2024)

I. Basic stance on taxation (proper tax payments are a corporate social responsibility)

Under its management policy, **AGC plus 2.0**, the AGC Group is committed to providing positive value to all stakeholders. Through this, the Group aims to earn the trust and expectations of society, and also contribute to realizing a sustainable society.

Compliance is a fundamental principle underlying the AGC Group's all business activities. The "AGC Group Code of Conduct" (7. Reports and Records), which summarizes matters that the AGC Group's employees are expected to observe, states the following:

We honestly record, report and disclose information so that our records reflect the facts.

We comply with financial, accounting and tax laws and company accounting policies and rules.

AGC and AGC Group companies endeavor to ensure accurate and timely tax returns pursuant to the tax laws and the spirit of law of each country and region. We recognize that proper tax payments impact the economic and social development of each country and region, and that ensuring proper tax payments is one of our corporate social responsibilities.

# II. Transactions between affiliated companies (based on arm's length pricing)

As set out in the following "AGC Group Transfer Pricing Policy," the AGC Group determines the transfer pricing for transactions between affiliated companies by applying arm's length principle.

1. The transfer pricing for tangible goods and/or services should be determined by applying arm's length principle

reflecting the functions performed by the parties, taking into account the assets used by and risks assumed by them based on product groups and/or service categories.

2. The intellectual ownership (including patents, copyrights, trade secrets, know-how, brands and so on) is legally registered in the name of the contributing companies of the group who have developed the technologies and know-how. The right to use the Intellectual asset can be afterwards granted to other companies of the group but an arm's length compensation will have to be paid by those companies. To determine the compensation, reference will be made to the acquisition costs, the fair market value, and so on.

3. The transfer pricing of financial transactions should be reasonably determined by applying arm's length principle, by reference to estimated funding rates for borrowers and estimated return rates for lenders from investment or deposit or in consideration of the level of margin for lenders.

III. Relationship with tax authorities (building relationships of trust in good faith, reducing uncertainty, and preventing double taxation)

In addition to appropriate tax reporting and payments to the respective tax authorities in each country and region, the AGC Group will respond in good faith with regard to various types of tax investigations, preliminary consultations, disclosure of relevant information, etc.

The AGC Group is dedicated to building constructive relationships of trust with the tax authorities of each country and region to ensure proper tax compliance. The AGC Group also strives to reduce taxation uncertainty and prevent double taxation by building and maintaining fair trust relationships with the tax authorities of each country and region.

IV. Transparency - responding to international efforts (enhancement of corporate value and fulfillment of corporate social responsibility through appropriate tax payment and information disclosure according to the BEPS Action Plan)

The AGC Group recognizes the BEPS Action Plan (a countermeasure against Base Erosion and Profit Shifting), established by OECD/G20, as an important international tax framework for preventing international tax avoidance and excessive tax planning, and for ensuring tax transparency through tax information disclosure.

The AGC Group shall refrain from using excessive tax

incentive schemes in low or no-tax countries and regions.

The AGC Group also understands that arbitrary tax avoidance or lack of tax compliance may result not only in immediate financial risks such as tax litigation and penalties, but also poses a risk to the AGC Group's reputation in addition to a risk of adversely affecting economic and social development or damaging relationships with the countries and regions in which the Group operates.

As a global business entity with social responsibilities, the AGC Group is committed to closely monitoring trends in international tax frameworks and responding to any changes in a timely manner. In addition to aiming to improve its corporate value through these efforts, the AGC Group also considers these efforts to be vital in fulfilling its social responsibilities as a global business entity.

# **Environmental Management**

# **Fundamental Approach**

In the AGC Group Vision "Look Beyond," we have identified the environment as one of Our Shared Values, that all AGC Group members must share as the basis for every action we take. The concept "We will contribute to the creation of a sustainable society in harmony with nature as successful and responsible global citizens" is an important element of our sustainability management that leads to the creation of social value, which the AGC Group has pursued in its business activities. Going forward, while ensuring compliance with laws and regulations at all our global sites, we will contribute to the sustainability of the planet on which all life depends by reducing the environmental impact of our products throughout the value chain, from raw-material procurement to the disposal of products after customer use.

As a company that promotes sustainability management, the AGC Group considers environmental initiatives to be among its most important management priorities. In 2023, we established the AGC Group EHSQ Policy and revised the AGC Group Environment Policy as its subordinate policy.

Through our commitment to sustainability across the entire value chain of our business activities, from procurement to production, sales, logistics, use, and disposal, we have pledged to realize a sustainable global environment and business management.

# Key Areas of Focus Based on AGC Materialities

The AGC Group recognizes that "addressing climate change," "using resources effectively" and "considering relationships with local communities and the environment" are long-term social issues (materiality) that are closely related to environmental activities. We will address these material issues after appropriately assessing our Company's impact on these issues and their potential impact on our Company.

# AGC Group EHSQ Policy (Excerpt)

(Established January 1<sup>st</sup>, 2023) To realize a sustainable society and to grow and evolve continuously, AGC Group pursue the Group Vision "Look Beyond" and engages in EHSQ (Environment, Industrial Safety & Security, Occupational Health & Safety, Quality) as prerequisite of our business activities.

#### AGC Group Environment Policy

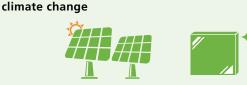
(Established on February 9<sup>th</sup>, 2001, Revised on January 1<sup>st</sup>, 2023)

We commit to achieve sustainability in society and our company by contributing to decarbonization, a circular economy, and harmony with nature in all phases of our value chain.

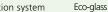
- 1. In order to contribute to decarbonization, a circular economy, and harmony with nature, we set environmental goals based on our sustainability targets and strive to achieve and further improve them.
- 2. We strive to develop and offer to the society, products, technologies, services, and equipment taking into due consideration of the sustainability and our entire value chain, and respond to the changing era with innovative solutions.
- 3. We continuously improve our environmental performance, in accordance with our environmental management system.
- 4. We comply with the relevant internal and external environmental rules, work toward the prevention of pollution and relevant issues, and contribute to environmental protection.

# **Key Initiative Areas Based on AGC Materiality**

Addressing



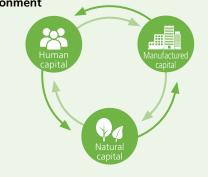






Recycling





# **Management Structure**

### Groupwide Decision-Making Organizations

The AGC Group has constituted the organizations shown in the diagram below in order to make effective use of plan–do–check–action (PDCA) cycles aimed at achieving the environmental targets it has set.



The AGC Group's Board of Directors deliberates and determines the appropriateness of governance, including management targets and responses to risks and opportunities related to environmental issues.

The Sustainability Committee, chaired by the CEO, has been established as a body for deliberating and deciding on the basic policies and measures related to the AGC Group's sustainability management. The Sustainability Committee's meetings, held four times a year, are attended by the CEO, CFO, CTO, auditors, and all business division heads, the details of which are reported to the Board of Directors twice a year. For important matters related to AGC's materiality, the Sustainability Committee deliberates and makes decisions, which are then discussed and approved by the Board of Directors. Under the supervision of the Board of Directors, the Sustainability Committee is positioned on par with the Management Committee and is responsible for the decision-making and monitoring of the execution of sustainability-related matters, including environmental activities. Its activities entail the formulation of policies related to sustainability, including environmental activities, the promotion of risk management, and control of information disclosure.

We have established the AGC Group EHS Committee as a

forum for discussing and deliberating on environmental issues related to stable business operations, such as compliance with environment-related laws and regulations, based on the decisions and reports of the Sustainability Committee. The AGC Group EHS Committee is held four times a year, chaired by the executive officer in charge of environmental matters (EHSQ General Div.) based on the AGC Group EHS Committee Criteria, and is attended by the general managers in charge of environmental activities at in-house companies and strategic business units (SBUs) and employees in charge of such activities at corporate divisions.

On the other hand, environmental-related sustainability management issues, including climate change responses, are discussed and deliberated at the Environmental Response Meeting. The meetings are co-hosted by the General Manager in charge of environmental affairs (EHSQ General Div.) and the General Manager in charge of sustainability promotion (Sustainability Div., Corporate Planning General Div.), and are held approximately twice each guarter, with the attendance of the sustainability and CSR managers from each company and SBUs as well as the general managers of each corporate division involved in sustainability management strategy planning, including the strategic planning, technology, R&D, procurement, and intellectual property divisions. This Environmental Response Meeting, which began operating in 2024, aims to address a wide range of environmental sustainability management issues, including other themes. It succeeds the company-wide climate change response frameworks previously conducted as the Strategy Meeting for Climate Change and the GHG Emissions Reduction Framework Steering Committee under the previous medium-term management plan. Under this system, we will advance integrated strategic management and promotion, including effective use of resources and considering relationships with local communities and the environment, as well as strategies for opportunities.

Through these decision-making processes, we verify various initiatives to achieve environmental targets and responses to risks and opportunities in the operation of the ISO 14001 environmental management system. Specifically, the CEO conducts an annual EHSQ Management Review to assess the results of all environmental activity monitoring and formulate action plans for subsequent years.

## AGC Group Environmental Management Working Rules

The AGC Group, which has nearly 200 Group companies globally, has established the AGC Group Environmental Management

Working Rules to ensure that appropriate environmental management is established at all of its bases around the world. The rules establish three environmental activity levels for all AGC Group sites according to their environmental impact, assigning environmental activities to them based on their respective level. Of these, Category 1 sites, which have high-environmental risks, are required to obtain ISO 14001 certification. Of our global Category 1 manufacturing sites, 110 have already obtained certification, and the remaining 6 sites are working to obtain certification. Small-scale manufacturing sites without glass melting furnaces or exhaust gas treatment facilities are classified as Category 2 sites, which are recognized as having moderate risk. While obtaining certification is not mandatory at these sites, they are required to record activities and environmental performance data in accordance with ISO 14001. For low-risk Category 3 sites, such as sales offices, it is mandatory to report environmental accidents to the head office. For all of Categories 1, 2, and 3, the Group stipulates that sites carry out fundamental activities—such as raising awareness of and thoroughly implementing the AGC Group Environmental Policy, and adhering to legal requirements, the AGC Group's standards, and other regulations—and monitors such activities periodically.

# Environmental Management System in Accordance with ISO 14001

With the understanding that achieving our environmental objectives requires all employees to work in unison to implement environmental activities in accordance with their different roles and the business models at each site, and also that strong involvement from management is necessary to implement effective environmental activities, the AGC Group has established an environmental management system based on ISO 14001 and put the CEO in charge as the environmental management officer.

As mentioned above, according to the AGC Group Environmental Management Working Rules, manufacturing sites of a certain scale are obliged to obtain certification for environmental management systems, such as ISO 14001, or to carry out environmental activities in accordance with these standards. The status of the operation of the environmental management systems at each site and the results of these efforts are evaluated through internal and external audits. The results are monitored by the business divisions (in-house companies and SBU headquarters) responsible for the sites and the EHSQ General Division at the AGC head office, and are used to promote the PDCA cycle both at the business division level and for the AGC Group as a whole. Results are also reported to management personnel through the AGC Group EHS Committee, the Sustainability Committee, and the EHSQ Management Review.

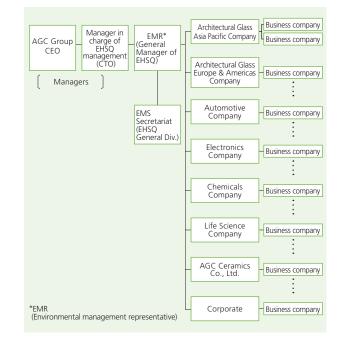
Since 2003, the AGC Single Certificated Environmental Management System (Single Certificated EMS) has been in place for AGC and its affiliated companies. Organizations participating in the Single Certificated EMS have obtained a single certification as a result of being audited by the same external audit agency globally under identical standards. Single Certificated EMS allows the AGC Group to receive unified audits, and to monitor priority issues by setting common focus areas (areas to be particularly scrutinized during audits). In 2023, we adopted "improvement of organization's activities to cope with climate change by using EMS," and confirmed that each site's environmental activities incorporate the perspective of responding to climate change.

As of the end of March 2023, 83 business sites in Japan and 107 overseas (AGC and a total of 86 Group companies) acquired ISO 14001 certification. The ratio of these certified sites to the Company's total production sites and laboratories is 83%. We also aim to obtain ISO 14001 certification for all our production facilities.

#### Number of Companies That Have Obtained ISO 14001 Certification in Fiscal 2023 (including small-scale non-manufacturing sites)

AGC Group (Japan)	21 companies
Overseas, excluding Japan	65 companies
Total	86 companies

#### **Management Structure**



# **Regional Environmental Offices**

To implement more timely and substantial environmental, safety, and guality activities in accordance with the legal systems and customs of the countries and regions where it operates, the AGC Group has established organizations that provide support for activities at subsidiaries in each region. Our regional environmental office in Shanghai, which we established in 2019, determines the impact of Chinese government policies—such as rapidly changing environmental laws and regulations—on the AGC Group, building a cross-organizational backup system that allows subsidiaries to devise necessary countermeasures in a timely manner to comply with laws and regulations. We established new regional offices in Europe and South America in June 2022 and in Southeast Asia in 2023 in order to advance environmental, safety, and quality activities in tune with the regional characteristics of each region. We plan to further expand such functions in other regions in the future.

# Examples of Regional Environmental Office Activities (Shanghai office)

In many cases, regulations are set not only at the national level, but also at the provincial level or the city level that has jurisdiction over each site. To ensure strict compliance with regulations, we are focusing on disseminating regulatory information and conducting on-site reviews of the management conditions at each location. This initiative, which began in 2019 primarily at our manufacturing bases in China, supports the stable operation of production by ensuring compliance with laws and regulations.



The first round of on-site reviews was conducted at 12 major manufacturing sites in China from 2019 to 2023. The photo shows a general solid waste storage area that has been organized and improved through the review process.

# **Environmental Risk Management**

#### Process for Identifying and Assessing Environment-Related Risks

Environment-related risks are managed under the Group's risk management system.

For short-term and medium-term environment-related risks, we identify and assess major risks that require a response as part of risk analyses under enterprise risk management conducted every three years. We address identified risks in accordance with the AGC Group Integrated Risk Management Basic Policies, which are the fundamental policies for the AGC Group's risk management structure.

Long-term environment-related risks include addressing climate change, using resources effectively, and considering relationships with local communities and the environment, which we have identified as long-term social issues (materiality) that could potentially impact our long-term management direction and corporate value, based on future trends in global social issues and risks, as well as the social challenges our customers are working to resolve.\* The AGC Group strives to identify various risks and opportunities arising from these factors. We aim to minimize risks and reinforce our competitiveness by continuing to evaluate the appropriateness of our strategies through the deliberations of the Sustainability Committee.

 $^{\ast}$  We recognize addressing climate change and using resources effectively as both risks and opportunities.

#### **Process for Management of Environment-Related Risks**

The Board of Directors and the Management Committee regularly monitor the management status of identified environment-related risks. Corporate divisions, in-house companies, and SBUs analyze risks and examine countermeasures for each business and project. If necessary, such risks are reported to and deliberated on by the Board of Directors and the Management Committee.

#### Integration of Risk Management Processes with Environment-Related Risk Identification, Assessment, and Management Processes

In accordance with the AGC Group Risk Management Implementation Rules, risk factors that are expected to have a significant impact on AGC Group management if manifested have been selected as "important risk factors." Risk control plans are established for important environment-related risk factors, and the corporate division, in-house companies, and SBUs will endeavor to establish and improve management levels in accordance with that plans. Around the end of the year, each division regularly selfchecks its own risk management level, and management monitors the results and runs a PDCA cycle.

# External Communication Regarding Environmental Management

The AGC Group proactively and earnestly discloses information externally regarding its environmental management through responses to various external questionnaires and via its Integrated Report, Sustainability Data Book, and AGC Website. We previously conducted tours of manufacturing sites, but had refrained from doing so due to the impact of COVID-19. We have gradually begun to resume allowing tours. Internally, we share our responses to external questionnaires and strive to communicate through our own internal materials, various meetings, and environmental education.

#### Status of Occurrence and Prevention of Violations of Environmental Laws and Regulations and Serious Environmental Accidents

In 2023, there were no infractions of environment-related laws and regulations, sanctions, or cases brought to dispute settlement mechanisms that would significantly impact the financial results or corporate valuation of the AGC Group, nor were there any major environmental accidents affecting local residents or environmentrelated stakeholders.

As a Groupwide initiative, the Environmental Accident Prevention Project has been launched under the AGC Group EHS Committee, with the EHSQ General Division at the AGC head office and the environmental departments of each company and SBU taking the lead in promoting activities to prevent environmental accidents and legal violations. In this project, we are strengthening management systems to prevent leakage accidents and ensure compliance with legal and regulatory values, as well as implementing risk management and implementation of software and hardware measures in collaboration with the manufacturing and production technology departments. In the unlikely event of a serious accident, we have established a system through this project to quickly share information about the accident and deploy preventive measures globally.

At each site, the AGC Group assesses the risks and impacts of environmental incidents based on ISO 14001, and in addition to creating manuals and procedures for leak prevention and troubleshooting and conducting regular drills, it implements physical measures such as installing liquid containment barriers, alarms, and telemeters.

# Environmental Legal Compliance

In addition to declaring its respect for the law in the AGC Group Charter of Corporate Behavior, the AGC Group makes identifying and complying with legal requirements compulsory throughout the entire Group in the AGC Group Environmental Management Working Rules, which establish an environmental management system framework as a mechanism to ensure environmental legal compliance. We have also set voluntary standards at sites where legal standards are applicable to mitigate risks.

## Environmental Training and Education

The AGC Group incorporates environmental education into rank-specific training programs organized by the Human Resources Division for senior managers, newly appointed managers, and new employees, providing appropriate education tailored to their respective responsibilities. In addition, we provide a variety of elective training programs for environmental personnel to support their professional development.

We also hold environmental education seminars for Group employees in Japan and overseas several times a year. From basic knowledge of legal compliance to the latest trends in the sustainability environment, we provide appropriate content based on the needs of the Group and international trends.

We are also working to raise environmental awareness by broadcasting original animated content and disseminating this Sustainability Data Book. These materials and publications are produced in multiple languages, mainly Japanese, English, and Chinese.

In addition, we are working to develop human resources with skills in environmental management and raise the level of environmental management at our business sites by leveraging a skills map, the AGC Group's own human resource database. The Group facilitates mutual communication among employees in charge of the environment by holding meetings, lectures, and site visits five or six times a year for such employees from headquarters and various business sites, in order to provide them with opportunities to share information on recent environmental trends and environmental management technologies and to enable them to communicate on topics such as environmental management methods and challenges, as well as measures for addressing such challenges.

Moreover, starting in 2023, the AGC Group introduced an award system for exemplary environmental activities. This system

provides incentives and recognizes outstanding environmental efforts across various activity units within the AGC Group, and shares these best practices with all employees.

In addition to such Groupwide educational activities, in-house companies and SBUs continuously hold meetings, training, and other activities for employees in charge of the environment from Group companies with a view to achieving their environmental targets and solving environmental issues.

AGC's human resource systems have established programs supporting employees in their acquisition of qualifications, including those related to the environment, as a measure to improve the environmental skills of individuals.

# Environmental Initiatives in the Value Chain Other than AGC's Own Activities

Environmental initiatives in AGC's supply chain and its environmentally conscious procurement methods are described on pages 87–89 of this document.

# Environmental Awards in 2023

Many business sites of the AGC Group have received awards from local governments and environmental groups for their excellent environmental initiatives. A few examples of these awards are listed in the table on the right.

## **Environmental Awards in 2023**

Country / Region	Company	Environmental Awards in 2023
	Optical Coatings Japan	Gotemba City Environmental Sanitation Self-Governance Promotion Association, Environmental Sanitation Meritorious Service Award
Japan	AGC Electronics Co., Ltd.	Chairman's Award from the Tohoku Seven Prefectures Electricity Utilization Promotion Committee (Excellent Energy Management Operator)
	AGC Inc. Kansai Plant Takasago Factory	2023 High Pressure Gas Safety Institute of Japan Excellent Manufacturing Facility Award
Mexico	AGC Automotive Glass México S.A. de C.V.	Recognition for its participation in the sustainable campaign
	PT Asahimas Flat Glass Tbk	Contribution to Tree Planting and Maintenance Movement in Critical Land District in West Java
Indonesia		Green Rating of PROPER Award 2023
	P.T. Asahimas Chemical	Green Rating of PROPER Award 2023
<b>.</b> .		Taiwan Corporate Sustainability Awards—Taiwan Sustainable Foreign Enterprise Excellence Award
Taiwan	AGC Display Glass Taiwan Inc.	Fifth National Corporate Environmental Protection Award—Bronze Award
		Environmental Good Governance Award 2023 (White Flag Gold Star)
	AGC Vinythai Public Company Limited	Green Industry Level 4 award (Green Culture)
Thailand		Sustainability Disclosure Recognition 2023
	AGC Automotive (Thailand) Co., Ltd.	Environment Award 2023 by Honda Automobile Thailand (HATC)
	AGC Micro Glass (Thailand) Co., Ltd.	2023 Factory with outstanding commercial waste management by Ministry of Industry Lamphun province

# AGC's Contributions to the Global Environment

At the AGC Group, we visualize the contributions of our products to achieve SDGs by mapping SDGs to our products to clarify how they can help reach these goals. In particular, we aim to offer more products that lead to solutions for issues related to three AGC materialities related to the environment: addressing climate change, Using resources effectively, and considering relationships with local communities and the environment (conservation of natural capital).

Such products include eco-glass (Low-E double glazing) that enhances building energy efficiency, EPINITY®, a 100% bio-based Epichlorohydrin (ECH) made from renewable glycerin, and ACLESYA, a highly reactive neutralizing agent for exhaust gas treatment. We introduce these products along with other representative products in the AGC Sustainability Data Book. We are committed to providing products that help solve environmental issues, while also striving for even higher functionality and performance.

Furthermore, the AGC Group aims to reduce environmental impacts throughout the product life cycle. We have begun to assess the environmental impact using Life Cycle Assessment (LCA) methodologies from the planning, design, and development stages of our products. In order to further accelerate our efforts to respond to climate change, we have established and put into effect the AGC Group Product Carbon Footprint (PCF) Guidelines as a new approach to visualizing  $CO_2$  emissions per product. We have previously evaluated the impact on climate change using PCF values. However, by standardizing the approach to PCF value calculation within the AGC Group, we will further promote the development and provision of products that contribute to reducing environmental impact during use and products with longer lifespans. We will continue to promote the active use of LCA methodologies from the product design and development stages.

We are also pursuing third-party certification for our products. AGC Glass Europe S.A. was the first company in Europe to obtain Cradle to Cradle (C2C) certification<sup>®</sup> for flat glass and coated glass in 2010. Architectural Glass Asia Pacific Company was the first in Japan to obtain an Environmental Product Declaration (EPD) for architectural float glass, and in Asia, it obtained Cradle to Cradle (C2C) certification<sup>®</sup> for mirror glass. Since these products give credits toward LEED (Green Building Certification), they not only satisfy the requirements of government regulations for buildings around the world, but also help customers improve their environmental ratings.



Cradle to Cradle Certificate®

In parallel with the development and provision of products that contribute to a low-carbon society and reduction of environmental impact, we are also leveraging our knowledge in research, development, and manufacturing to work on the formation of rules in order to realize a sustainable society.

For instance, we have participated in the standardization of buildings aimed at achieving a net-zero primary energy balance, known as Zero Energy Buildings (ZEBs), under the rule formation process at the International Organization for Standardization (ISO). Using these technical specifications, we engage in activities to promote ZEB in emerging countries in Asia. As part of efforts by the ISO to standardize the circular economy, we continuously participate in developing indicators and rules in relation to circularity, such as the recyclability of products, which will contribute to the effective utilization of resources. At meetings of the International Electrotechnical Commission (IEC), we are advancing the standardization of GHG emissions reduction contributions, which quantify the amount of GHG emissions reduced throughout the life cycle of products subject to evaluation that have an impact on reducing environmental load. Moreover, we have been involved in the protection of biodiversity at the ISO. the standardization of fuel cells at the IEC, and the standardization of BIPV (Building Integrated Photovoltaics) being developed by both the ISO and IEC. Additionally, we are participating in standardization to define standards that serve as a common foundation for individual product standards.

In Europe, which is leading the way in rule-making on sustainability, we are also participating in the formation of rules focusing on resource recycling and climate change and promoting measures to deal with these issues.

AGC is actively engaged in obtaining environment-related patents, with 643 patents<sup>\*1</sup> classified<sup>\*2</sup> under SDG targets (7, 12, and 13) for contributing to the creation of a low-carbon society (as

of December 2023), accounting for just under 11% of all patents held by AGC.

\*1 The Group classifies its patents using classifications by each SDG in PatentSight, a patent analysis tool developed by Lexis Nexis Intellectual Property Solutions.
\*2 Patent families that have been registered or are in the process of being registered.

# Environmental Initiatives and Other Efforts Signed or Supported by AGC

### AGG endorses the following initiatives.

経団連自然保護基金

Keidanren Nature Conservation Fund



法人会員

since 2021

Corporate Member of WWF Japan

# List of ISO 14001 Certified Sites (As of December 2023)

• Corporate		
	Head office Shin-Marunouchi Build	
AGC Inc.	AGC Yokohama Technical Cente	
	Kitakyushu Site	
	Head office	
AGC Mineral Co., Ltd	Izu Site	
	Toyota Technical Center	
Architectural Glass: Asia Pacific Company	/	
AGC Inc.	Higashiueno Sales Office	
	Head office	
	Kashima Plant	
	Ichinoseki Site	
	Eniwa Site	
	Tsurumi Site	
	Noda Site	
	Oyama No. 2 Plant	
	Oyama Plant	
AGC Glass Products Co., Ltd.	Nagoya Site	
	Hisai Site	
	Yomogawa Site	
	Kumayama Site	
	Yamaguchi Site	
	Tosu Site	
	Koriyama Site	
	Ohira Site	
	Head office	
AGC Fabiritec Co., Ltd	Osaka Branch	
	Hokuriku Sales Office	
	Cikampek	
PT Asahimas Flat Glass Tbk	Sidoarjo	
AGC Flat Glass (Thailand) Plc.	Head Office, Samut Prakan	
Architectural Glass: Europe and the Ame	ricas Company	
	Brno	
	Hradec Kralove	
	Moravske Budejovice	
AGC Fenestra	Nesovice	
	Salas	
	Stod	
	Zdar nad Sazavou	
	Barevka	
AGC Flat Glass Czech A.S.	Coating Teplice	
	Kryry plant	

	Olovi		
AGC Flat Glass Czech A.S.	Teplice Kryry		
	Retenice		
AGC FLAT GLASS IBERICA S.A.	Sagunto		
AGC Flat Glass Italia S.r.l	Cuneo		
	Lodelinsart		
	Mol		
	Moustier		
AGC Glass Europe	Seneffe		
	Technovation Center		
	Zeebrugge plant		
AGC Glass France S.A.	Boussois		
AGC Glass Osterweddingen GmbH	Osterweddingen		
	Gdansk		
AGC Glass Poland Sp. z o.o. *1	AGC Glass Seingbouse S.A.		
	AGC KempenGlas GmbH		
AGC Mirodan S.A.	Seingbouse		
	Kempenglas		
AGC Processing Teplice s.r.o.	Seapane		
AGC Mirodan Industries			
AGC Processing Teplice a.s.	Teplice Guaratinguetá Lauenforde		
AGC Vidros Do Brasil			
Interplane E&B GmbH			
Interpane Glasgesellschaft	Belgern		
Interpane International Glas GmbH	Lauenforde		
Interpane Sicherheitsglas GmbH	Hildesheim		
Automotive Company			
	Sagami Plant		
AGC Inc.	Aichi Plant		
	Head office / Sagami		
AGC Automotive AMC Co., Ltd.	Kyushu		
	Tochigi Technical Center		
	Ogawa Plant		
AGC Automotive Window Systems Co., Ltd.	Suzuka Plant		
AGE Automotive window systems CO., Llu.			
	Kyushu Plant		
	Hanno Plant		
AGC Display Glass Yonezawa Co., Ltd.	Yonezawa Plant		
AGC Automotive (Qinhuangdao) Inc.			
AGC Automotive (Suzhou) Inc.	Head office / Plant		
Acc Automotive (Suzhou) inc.	Shenyang Site		

AGC Automotive (Foshan) Inc.

Ticaret A.Ş.

AGC Otomotiv Adapazari Üretim Sanayi Ve

	AGC Polymer Material Co., Ltd.			
	Keiyo Monomer Co., Ltd.			
Plant No.1	AGC Chemicals Americas, Inc.			
Plant No.2				
Plant No.3	AGC Chemicals Europe, Ltd.			
Zhongli	AGC Chemicals Vietnam Co., Ltd.			
	AGC Vinythai Public Company Limited			
Rayong	PT Asahimas Chemical			
Head office				
Plant No.1	Life Science Company			
Plant No.2				
Neltec	AGC Wakasa Chemicals Co., Ltd.			
Plant No.1	AGC Biologics A/S			
Plant No.2	AGC Biologics GmbH			
Plant No.3	AGC Biologics Milan (Italy)			
Nagoya Branch	AGC Biologics, Inc.			
Osaka Branch	AGC Pharma Chemicals Europe, S.L.U.			
Fukuoka Branch	Ceramics Business			
Kashima Plant	AGC Ceramics Co., Ltd.			
Chiba Plant				
Osaka Branch				
Fukuoka Branch	ACC Dibrico Co. 1td			
Ohami-Shirasato Mining Station	AGC Plibrico Co., Ltd.			
Head office				
Chiba Plant				
Osaka Sales Office	AGC Plibrico (Dalian) Industries Inc.			
Head office				
Tokyo Branch	ZIBO AGC ALUMINA MATERIALS CO., LTD			
Head office	*1 The company name was changed to AGC Glass F			

Development Center

Branch Nishinihon Branch Fukuoka Branch Head office / Chigasaki

Kashima Plant Head office

Kuki Site Osaka Sales Office

Development Center Kamagaya

AGC Display Glass (Huizhou) Co., Ltd.

AGC Flat Glass Protech (Shenzhen) Inc.

AGC Display Glass (Kunshan) Inc.

AGC Display Glass (Shenzhen) Inc.

AGC Display Glass Ochang Co., Ltd.

AGC Micro Glass (Thailand) Co., Ltd.

AGC Techno Glass (Thailand) Co., Ltd.

AGC Multi Material Europe SA

Korea Taconic Co., Ltd. \*3

AGC Engineering Co., Ltd.

AGC Si-Tech Co., Ltd.

AGC Coat-Tech Co., Ltd.

AGC Seimi Chemical Co., Ltd.

AGC Polymer Material Co., Ltd.

Chemicals Company

AGC Inc.

AGC Display Glass Taiwan Inc.

AGC Electronics Taiwan Inc. AGC Fine Techno Korea Co., Ltd. AGC Flat Glass (Thailand) Plc.

\*1 The company name was changed to AGC Glass Poland in 2024.

\*2 The company name was changed to AGC Automotive Poland in 2024.

\*3 The company name was changed to AMMK in 2024.

Nagoya Sales Office

Kyushu Sales Office

Sendai Sales Office

Hokkaido Branch

Head office

Thorndale

Head office Plant

Head office / Obama Plant

Pharmaceutical plant

Kaminaka Plant Copenhagen

Takasago Plant

Chigasaki Plant

Head office

Plant

Head office Osaka Sales Office Nagoya Sales Office Mizushima Sales Office Fukuoka Sales Office

Heiderberg Mlan

Seattle Bolder

28

Fargmington Hills HQ				
Ypsilanti R&D				
Richmond				
Bellefontaine				
Belletech				
Elizabethtown				
Alabaster				
Fleurus				
Bradford				
Chuderice				
Aniche				
Guadalajara				
Roccasecca				
San Luis Potosi				
Kenitra				
Chomburi				
Wegberg				
Tatabanya				
Northampton				
Betim				
AGC Vidros do Brasil Ltda.				
Cikampek				
Koszalin				
Slupsk				
Amagasaki Plant				
Takasago Factory				
Head office				
Motomiya Site				
Head office				
Nakahata Plant				
Head office				
Kameido Site				
Head office				
Gotemba Plant				

Adapazari

# **Climate Action**

# Fundamental Approach

Risks and opportunities associated with climate change affect the entire value chain of the AGC Group, and we consider them to be factors that significantly influence our decisions on business strategies to realize the AGC Group's corporate philosophy. The Group, which operates an energy-intensive business, as exemplified by the manufacture of glass and chemicals, has recognized the importance of this issue and made it a priority. In our efforts, we are strongly aware of contributing to the Paris Agreement and the Glasgow Climate Pact. We recognize the importance of regularly reviewing our transition plans while considering the trends in international discussions and policies in various countries and regions. Additionally, we will continue to take advantage of opportunities to contribute to the environment through our own products and integrate addressing these issues into our management strategies.

The AGC Group endorses the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), established by the Financial Stability Board, and properly discloses information useful to stakeholders based on its analysis of climate change risks and opportunities.

# Addressing Climate Change

# Governance

### **Management Structure**

The AGC Group's Board of Directors deliberates and makes decisions on the appropriateness of governance, including management targets and responses to risks and opportunities related to climate change issues for the entire Group.

The Sustainability Committee, which is the body responsible for determining and monitoring the execution of sustainabilityrelated matters, decides the climate change-related matters to be brought before the Board of Directors for discussion and reporting.

We have established an Environmental Response Meeting as an advisory body on sustainability management issues related to the environment, including climate change response, among the matters decided and reported by the Sustainability Committee. The Environmental Response Meeting has been operational since 2024, inheriting the companywide climate change response framework previously conducted as the Strategy Meeting for Climate Change and the GHG Emissions Reduction Framework Steering Committee, to advance discussions and deliberations with a broader range of internal stakeholders. The meetings are co-hosted by the General Manager in charge of environmental affairs (EHSQ General Div.) and the General Manager in charge of sustainability promotion (Sustainability Div., Corporate Planning General Div.), and are held approximately twice each guarter, with the attendance of the sustainability and CSR managers of the business divisions and the general managers of each corporate division involved in sustainability management strategy planning.

The meeting has established projects for each theme and a promotion system that can promptly respond to issues. Through these decision-making flows, we are advancing initiatives toward achieving climate change-related targets and responding to the associated risks and opportunities. The progress and validity of these initiatives and activities are verified within the operation of the ISO 14001 environmental management system.

For detailed information on each committee, please refer to the chapter "Environmental Management."

## **Climate Change Management Structure**



# Identification of Climate Change-Related Risks and Opportunities

The AGC Group analyzes the likelihood and extent of significant impacts on business activities, earnings, and expenses from the perspectives of both climate change mitigation and adaptation, as well as risks and opportunities associated with climate change. In 2023, we built on the analysis conducted in 2022.

Since the occurrence of risks and opportunities varies depending on the business domain, we analyze them by business segment and use this information to respond accordingly. We define short-term as up to the following year, mid-term as up to three years, and long-term as the years beyond that.

#### Evaluation of Climate Change-Related Impact on Each Business Segment

As a result of the analysis, with regard to risk, we identified rising carbon prices and physical risks in each country and region as factors that affect the entire Group. In addition, although the impact of customers' expectations to reduce our GHG emissions has been confirmed across multiple businesses, the degree of manifestation differed by business.

Regarding opportunities, in a market environment that is changing due to climate change, there are various possibilities to expand business opportunities in each business domain. In the field of architectural glass, for example, the long-term expansion of the building renovation market in developed countries is accelerating, and in the fields of automotive glass, electronic components, and chemicals, the market growth of materials for the ZEV (zero-emission vehicle/EV,<sup>\*1</sup> FCV<sup>\*2</sup>) market is accelerating. In the chemicals field, we expect to expand our business in markets for next-generation energy, coolants, and solvents, and we are also preparing to provide various solutions for the hydrogen-related market.

\*1 EV (Electric vehicles) \*2 FCV (Fuel cell vehicles)

#### Analysis of Climate Change Scenarios

Among the identified risks and opportunities, we conducted a more detailed impact analysis of those risks and opportunities that are common to the entire Group or multiple businesses. The results of the scenario analysis are used to formulate management strategies and business plans to reduce risks and seize opportunities for the AGC Group to maintain its resilience to the impacts of climate change. Risks and opportunities were identified and evaluated based on multiple scenarios. Here, we mainly show the results of identifying and evaluating risks and opportunities based on two scenarios that have a large impact on our Group: NZE, which limits the temperature rise to  $1.5^{\circ}$  or less from before the industrial revolution as a socioeconomic scenario, and RCP8.5, where the temperature rise progresses around 4°C as a temperature rise scenario.

## Results of Climate Change-Related Risks and Opportunity Assessments by Business Segment

Businesses segments where risks have been identified			Businesses segments where opportunities have been identified							
Climate change scenarios	Identified Risks and Opportunities			Business segment						
	Main categories			Occurrence time frames	Architectural Glass	Automotive	Electronics	Chemicals	Life Science	Ceramics
NZE (1.5°C ), etc.	Transition risks	Government policies, laws, and regulations	Increase in carbon prices	Short to medium term						
		Reputation	Customer demands to reduce GHG emissions	Medium term						
		Technologies	Scope 1 emission reductions at in-house power generation facilities	Medium term						
	Opportunities	tunities Products and services	Building renovation market	Short to medium term						
			Solar power generation market	Short to medium term						
			Hydrogen-related market	Medium to long term						
			Electric vehicle / fuel-cell vehicle market	Medium to long term						
			Next-generation coolants and solvents market	Medium to long term						
RCP8.5 (4°C ), etc.	Physical risks	Acute	Sudden disasters	Long term						
		Physical risks Chronic	Water stress	Long term						
			Rising temperatures	Long term						

## **Business Impact Analysis and Response Based on Climate Change Scenarios**

Main Categories	Risks / opportunities	Scenarios	Financial Impact	 Response
Transition risks	Increase in carbon prices	Developed countries: US $140/t$ -CO <sub>2</sub> Emerging countries: US $90/t$ -CO <sub>2</sub> 2030 / NZE (1.5°C )*1	Up to US\$1,109 million • Assumes no change from 2022 emissions level (Scope 1, 2) • Considers possible introduction of carbon pricing in each country and region by 2030 consolidated basis / NZE(1.5°C)	<ul> <li>Fuel conversion, oxygen combustion, electrification of float glass melting furnaces</li> <li>Reduce electricity consumption intensity and introduce renewable energy in chlor-alkali electrolysis facilities</li> <li>Reflect internal carbon pricing in investment decisions</li> <li>Evaluate and transform business portfolio based on scenario analyses and carbon efficiency</li> </ul>
Physical risks	Sudden disasters (Floods and storm surges)	2030 / RCP8.5 (4°C )	Up to ¥20 million / year (23 sites in Japan) Yearly average impact amount <sup>*2</sup>	Installation of flood and storm surge prevention     equipment
	Building renovation market	2030 / NZE (1.5°C )	Renovation rates in Europe to double by 2030	<ul> <li>Sales of window glass that excels in heat insulation and recyclability</li> <li>Sales of Building Integrated Photovoltaics (BIPV)</li> </ul>
Opportunities	Market for next-generation coolants and solvents	2030 / NZE (1.5°C )	Low-GWP coolant market expected to expand 2.2x in size by around 2030	Sales of next-generation coolants and solvents
	Hydrogen market	2030 / NZE (1.5°C )	Increased water electrolyzer installation capacity (cumulative) (2.2 GW to 599 GW)	• Sales of materials related to the production and use of hydrogen

\*1 The NZE scenario-based calculation results that represent the highest risk for calculating financial impact based on multiple scenarios

\*2 The yearly average impact amount is calculated based on the total impact at the time of the disaster, taking into account the frequency of occurrence and other factors.

# Identified Risks and Opportunities and AGC Group Response

## Analysis Based on a 1.5°C Climate Change Scenario

### **Transition Risks**

• Increase in carbon prices

Acceleration in pricing policies (carbon tax and emission credit trading) for GHG emissions of businesses may lead to all businesses that use fossil fuels incurring costs for fuel payments or emission allowance purchases. In the NZE scenario, we assessed the extent to which transitional policies, such as carbon pricing, could lead to cost increases. In this scenario, it is projected that a carbon price of US\$140/t-CO<sub>2</sub> could be imposed in developed countries and US\$90/t-CO<sub>2</sub> in emerging countries that have declared carbon neutrality. Reconciling these figures with the recent emissions of the AGC Group by country of operation, we estimate the financial impact to be up to US\$1,109 million\* for the Group as a whole.

\* Assuming no change from 2022 emissions levels (Scope 1 and 2), and considering the potential introduction of carbon pricing in each country and region on a consolidated basis by 2030 under the NZE  $(1.5^{\circ}C)$  scenario

- Customer expectations regarding Scope 1 and 2 emission
   reductions

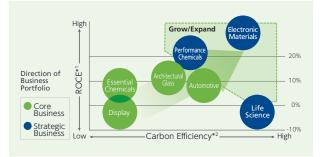
Demands on raw material suppliers to reduce GHG emissions may accelerate.

• GHG emissions reductions at in-house power-generation In the Chemicals Business, although we have in-house power-generation for chlor-alkali electrolysis equipment, there is a possibility of increased demands to phase out coal-fired power generation, which has a high GHG emission factor.

To mitigate the impact of these transition risks, the AGC Group is working on a combination of measures. In the Glass Manufacturing and Chemicals Businesses, which are strongly affected by these risks, we have drawn a roadmap for reducing Scope 1 and 2 emissions based on the characteristics of the regions and businesses in which they are deployed. We have also introduced an internal carbon pricing system as a mechanism to promote investment in reduction and the development of reduction technologies. The internal carbon price (ICP) for 2023 was  $\xi$ 79/t-CO<sub>2</sub>. We are regularly reviewing the system to enhance its effectiveness, and starting in 2024, we will set prices along regional and time axes to more accurately grasp risks and opportunities based on social trends related to decarbonization. From 2024 to 2050, the range is set as US\$0–200/t-CO<sub>2</sub>.

In the companywide business portfolio evaluation, in addition to ROCE, the AGC Group assesses each business using carbon efficiency as an indicator while considering the risk of carbon costs. It also takes other factors into consideration when deciding how to allocate management resources.

### Direction of the Business Portfolio Transformation (Carbon Efficiency · ROCE)



ROCE: (OP for the year)  $\div$  (Operating assets at the year-end); OP for each business is before allocation of common expenses \*1 Created based on 2023 results

\*2 Based on 2022 emissions per 2023 sales

#### **Opportunities**

To address changes in its product markets, the AGC Group organizes market projections and other information from reliable third-party organizations and uses this information for formulating business plans within the Group.

Building renovation market

Acceleration in renovations to improve energy efficiency in buildings is likely to expand the market for insulating glass (architectural glass business), PVC sashes, and polyurethane insulating products (Chemicals Business). As a result of our scenario analysis, we estimate that the renovation rate in Europe will double from the current level by 2030, and we will continue to provide products that meet the needs of the market while closely monitoring trends.

• Solar power generation market — With the acceleration of solar power equipment installations, we anticipate a market expansion for ceramic refractories used in melting furnaces for manufacturing cover glass for solar panels (Ceramics Business) and fluoropolymer resin films (Chemicals Business).

#### • Hydrogen market --

With the expansion of production of hydrogen derived from renewable energy sources, the introduction of electrolysis-related equipment has accelerated, and it is estimated that the cumulative water electrolyzer installation capacity will grow from 2.2 GW to 599 GW by 2030. Along with this, the market for ion exchange membranes for electrolysis is expected to expand. The AGC Group has decided to build a new manufacturing facility to meet the increased demand for these products.

• Electric vehicle / fuel-cell vehicle market The movement toward fuel conversion in automobiles is accelerating, and the market for products used in electric and fuel cell vehicles, such as electrolytes for solid-state batteries and electrolyte polymer solutions for fuel cells, is expected to expand. In 2023, the AGC Group succeeded in developing a new production technology for sulfide solid electrolytes for automotive all-solid-state batteries, and is working to create value in this area.

• Next-generation coolants and solvents market The market for new-generation coolants and solvents (Chemicals Business) is expected to expand as the shift to fluorocarbons with low global warming potential (GWP) accelerates. The market is estimated to expand to 2.2 times its current size by around 2030. The AGC Group possesses coolants with extremely low ozone depletion potential (ODP) and GWP, and we expect demand for these coolants to expand.

# Analysis Based on the 4°C Climate Change Scenario

## Physical Risks

Rising temperatures

A rise in global average temperatures could impact sales by causing all businesses to suspend operations to prevent heat stroke among employees and constrain business activities due to the need to conserve electricity amid tight electricity supply demand conditions.

#### • Sudden disasters

The increase in frequency of localized extreme weather, such as heavy rain, heavy snowfall, heat waves, and typhoons, may lead to a heavier cost burden to deal with damage and impact on sales from halts in operations due to equipment damage and supply chain disruptions across all businesses.

In 2021, the AGC Group analyzed the risk of floods, storm surges, and droughts at all of its business sites, including sales offices. In addition, in order to make more specific damage estimates for 2022–2024, we calculated the amount of damage at 23 group sites in Japan and estimated the annual average impact\* to be up to ¥20 million per year. The results of these assessments are used to implement flood prevention measures at the site level. Going forward, we will continue to identify specific risks and implement risk avoidance measures.

\* Annual average impact is calculated based on the total amount of impact at the time of the disaster taking into account the frequency of occurrence, etc.

#### Water stress

There is a possibility of impact on sales across all businesses if a localized decline in water resources at business operation sites necessitates the reduction or stoppage of production at manufacturing sites that use large quantities of water. In 2022, AGC Group evaluated the risk of water shortages by obtaining current drought risk information for each site from the Aqueduct Water Risk Atlas of the World Resources Institute (WRI). Based on the results of this baseline assessment, the Group conducted simulations using two scenarios, RCP2.6 and RCP8.5, to project the future impact of climate change. The simulations were categorized into four cases, considering the future rate of change in annual precipitation for the years 2055 and 2090 under these scenarios. This evaluation revealed relatively low risks that could not be completely negated in Japan and the Americas. On the other hand, the evaluation identified relatively high risks associated with climate change, mainly in Europe and the Middle East. These results are being utilized to implement water shortage countermeasures at each site.

# Investment in Addressing Climate Change-Related Risks and Opportunities

A total of ¥80 billion worth of investments are planned under **AGC plus-2026** to address these climate change-related risks and opportunities.

### Managing Climate Change-Related Risks

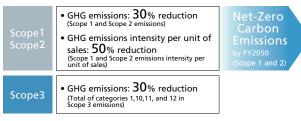
As described in "Environmental Risk Management" in the previous chapter, "Environmental Management," the evaluation and management of climate change-related risks are conducted in accordance with the AGC Group Integrated Risk Management Basic Policies, which are the fundamental policies for the AGC Group's risk management structure.

# **Metrics and Targets**

As a metric used to assess climate change risks and opportunities, AGC sets and manages reductions in Scope 1, 2, and 3 emissions as a KPI, and calculates and monitors the emissions for each of them. With the aim of achieving carbon net-zero<sup>\*1</sup> by 2050, AGC has set a milestone target of reducing GHG emissions by 30% by 2030 compared with the 2019 levels for Scope 1 and Scope 2. For Scope 3, we aim to reduce GHG emissions by 30% by 2030 compared to the 2019 levels for Categories 1, 10, 11, and 12, which account for approximately 70% of Scope 3 emissions. These 2030 milestones,<sup>\*2</sup> along with the engagement goal to encourage suppliers accounting for 30% of Scope 3 Category 1 and Category 3 emissions to obtain Science Based Targets certification by 2027, was approved as a Science Based Target to limit the global average temperature increase well below 2℃ above pre-industrial levels. AGC received certification from SBTi for its "WB2°C" reduction target.

We are also working to refine our data, and from 2022, we began full-scale operation of an online platform that manages various environmental performance data, including Scope1, 2, and 3 emissions. Doing so has helped us visualize emissions at each base and identify challenges toward reduction. From 2023 onward, we will set targets each year for Scope1 and 2 emissions from our business activities, and create a structure for advancing a PDCA cycle while keeping track of actual emission results. With the launch of **AGC plus-2026**, which aims to deepen sustainability management, a new sustainability KPI has been established to incorporate sustainability perspectives into overall management and monitor the status of its implementation. As a result, the Scope 1 and 2 emissions intensity per unit of sales has been added as an indicator for calculating stock compensation for directors and executive officers. Additionally, to quantify and further enhance contributions to Blue Planet, we have decided to monitor the shipment volume index of architectural glass products that contribute to GHG reduction and the Index for GHG emissions reduction by low-GWP chemical products.<sup>\*3</sup>

#### FY2030 milestone (compared with FY2019)



#### \*1 Scope 1 and 2

 \*2 The electricity CO2 emission coefficient for 2030 is based on the figures determined using the Sustainable Development Scenarios (SDS) published by the IEA.
 \*3 For both, figures for 2023 and after are calculated with 2022 as 100.

# Scope 1 and 2 Emissions from Our Operations

Approximately 99% of GHG emissions come from the Glass Business (broadly divided into construction and automotive applications), the Electronics Business, and the Chemicals Business. Total emissions from the Glass and the Electronics Business, and emissions from the Chemicals Business, are approximately 50% each.

The glass segment and the Electronics Business have float glass furnaces in common, and nearly 70% of the emissions from these businesses come from the energy consumption required to operate the furnaces. To achieve the 2030 milestone, we are formulating measures based on the projected  $CO_2$  emission factor for electricity power in each country. In Europe and Americas where a decline in the emission factor is expected, we will prioritize the introduction of electrical boosters (electrical auxiliary heating). In Asia, where the progress in reducing the emission factor is relatively slower, we plan to prioritize the introduction of energy-saving technologies. In parallel, we will promote the demonstration test and introduction of clean fuels. Toward 2050, we aim to achieve the 2050 net-zero target by reducing our GHG emissions during manufacturing by switching the heat source of furnaces to electricity and clean fuels, reducing emissions from raw materials by recycling glass cullet (offcuts and debris), and recycling CO<sub>2</sub> emitted from the operation of the furnaces. Once a float glass melting furnace is operational, it will continue to operate for about 15 years. In order to appropriately incorporate new technology at the timing of replacement of each furnace, prioritization of technology development is carried out under a project directly supervised by the CTO, and the overall progress is managed.

Scope 1, 2 emissions from the Chemicals Business are mainly derived from the electricity used to operate chlor-alkali electrolysis facilities, and decarbonization is a challenge here. Approximately 40% of the emissions come from on-site power generation for the chlor-alkali electrolysis facilities, and the remaining 60% comes from electricity purchased externally for the electrolysis facilities. While taking into consideration the progress of renewable energy supply capacity in the market, we are promoting the use of biomass fuel in our own power generation facilities, purchasing electricity derived from renewable energy, and switching to energy-saving battery containers.

## **Glass Business: Innovations in Glass-Melting Process**

The material melting process emits the most GHG in glass production. In 2022, AGC Group made progress converting glass furnace fuels from fuel oil to natural gas. Moreover, the Company began to install electric boosters in Europe and the U.S. for the melting process, which reduces the amount of fuel used.

We are implementing optimal measures to reduce our GHG emissions in all countries and regions through a combination of raw material recycling technologies, energy conservation technologies, fuel conversion, and the electrification of melting furnaces, while monitoring the difference in GHG emission coefficients for electric power in each region. We are keen to increase energy efficiency through synergies between the glass melting technologies and highly insulative ceramics technologies of the AGC Group.

#### **Fuel Conversion**

The AGC Group has begun converting fuel at its facilities to replace heavy oil, which is used in processes including glass melting, with

natural gas. Natural gas emits approximately 20% less CO<sub>2</sub> than heavy oil during combustion. In addition, using natural gas reduces sulfur oxide (SOx) emissions, as such emissions arising from fuel are virtually zero.

#### **Total Oxygen Combustion**

The total combustion method uses only oxygen for fuel combustion to produce glass. This method improves energy efficiency as it does not heat nitrogen, which accounts for approximately 80% of air and is not required for combustion. In addition, given that combustion gas contains almost no nitrogen, this method also helps reduce nitrogen oxide (NOx) emissions.

#### All-Electric Melting

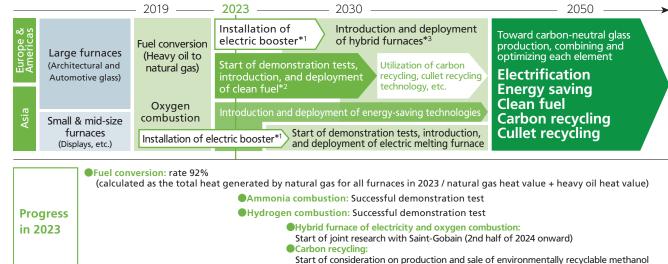
All-electric melting is a method by which electric current is applied directly to glass materials to melt them, making it suitable for relatively small furnaces. This method improves energy efficiency as materials are heated directly rather than heated and melted by the heat radiated from combustion flames

#### Introduction of Clean Fuel: Ammonia Combustion **Technology Development Project**

AGC has been selected by the New Energy and Industrial Technology Development Organization (NEDO) as a contractor on a project to develop fuel ammonia combustion technology for industrial furnaces. AGC will develop this project jointly with Taiyo Nippon Sanso Corporation, the National Institute of Advanced Industrial Science and Technology (AIST), and Tohoku University from the end of December 2021 to March 2026. In 2023, we succeeded in the world's first demonstration test.

We installed an ammonia-oxygen co-fired burner in the production facility at the AGC Yokohama Technical Center and conducted tests to verify the effects on glass guality, furnace material, flame temperature.<sup>\*1</sup> furnace internal temperature.<sup>\*2</sup> and the effectiveness in reducing nitrogen oxide (NOx) emissions. We will continue to conduct demonstration tests under various conditions, and plan to conduct more scaled-up burner tests and demonstration tests at other AGC sites.

#### Technology Roadmap and Progress in Reducing GHG Emissions from Float Glass Furnaces



Cullet recycling: Successful demonstration test of glass recycling for solar panels

\*1 Energized auxiliary heating \*2 Ammonia, hydrogen, etc. \*3 Energy sources are provided by a combination of electricity and fuel





Glass-melting furnace used for demonstration tests

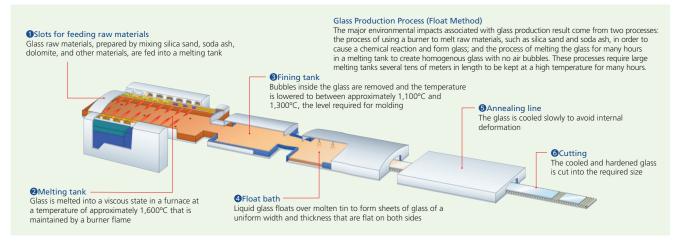
Ammonia fuel storage tanks

\*1 The temperature of the flame burning at the tip of the burner installed in the furnace \*2 The temperature of gases inside the furnace and the inner wall surface

#### Introduction of Clean Fuel: Hydrogen Combustion Technology Development Project

With the support of Air Liquide Japan G.K., AGC successfully conducted a demonstration test of glass manufacturing using hydrogen fuel by integrating the company's hydrogen combustion burners into a section of the conventional oxygen combustion process, which traditionally uses natural gas. This demonstration evaluated technical challenges associated with the use of hydrogen as a fuel. The aspects tested included glass guality, the impact on furnace materials, flame temperature, furnace temperature, and nitrogen oxide (NOx) emissions. In this test, we were able to maintain the appropriate temperature in the glass melting furnace while keeping the NOx concentration in the exhaust gas at the same level as with 100% natural gas. Aiming for full-scale deployment, the AGC Group plans to conduct scaled-up tests of the combustion capacity of the hydrogen combustion burner and conduct demonstration tests at its global sites to determine the scope of application of hydrogen combustion technology, with the aim of introducing this technology on a full-scale basis.

## Initiatives for Reducing CO<sub>2</sub> Emissions Resulting from Glass Melting



## Use of Cullet (Glass Shards)

In the process of making sheet glass, cullet (glass shards) is used instead of virgin raw materials such as silica sand. The use of cullet as a raw material for the production of flat glass leads to a reduction in the amount of raw materials and fuel materials used, which reduces CO<sub>2</sub> emissions during glass production. In addition, some of the mineral resources used as raw materials for glass are imported from overseas, and CO<sub>2</sub> is emitted during the processes of refining and procuring these raw materials. Therefore, effectively utilizing waste glass as cullet raw material, which would otherwise be disposed of in landfills in Japan, is important from the perspective of creating social value. This includes Scope 3 CO<sub>2</sub> emission reduction, life extension of landfill sites, and promoting the circular economy. Using 1 ton of cullet instead of virgin raw material has the effect of reducing GHG emissions by 0.5 to 0.7 tons (Scope 1 to 3) and saving about 1.2 tons of virgin raw material.

Until now, we have mainly used glass scraps generated in the manufacturing process and part of the waste glass generated in the processing stage as raw materials for cullet, but now we are actively working with various business partners to horizontally recycle used waste glass that has finished its role as a product.

#### Joint Research with Saint-Gobain (Volta Project)

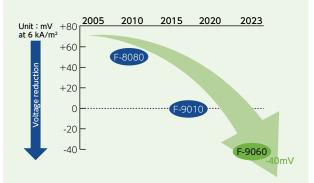
In February 2023, AGC and Saint-Gobain S.A., a France-based glass manufacturing company, agreed to jointly develop technology to reduce GHG emissions during flat glass manufacturing. We aim to completely renovate AGC's patterned glass manufacturing plant in Barevka, Czech Republic, in the second half of 2024 and to begin demonstration tests at the state-of-the-art pilot plant to be constructed there. This joint development aims to establish hybrid furnace technology for the production of flat glass, utilizing 50% electric melting and 50% oxygen combustion using natural gas. This technology, if realized, could significantly reduce GHG emissions in flat glass production.

For details and project examples, please visit AGC Glass Europe's website

# Chemicals Business: Environmental Contribution through Brine Electrolytic Membrane FLEMION<sup>™</sup>

FORBLUE™ FLEMION™ is the world's first ion exchange membrane for brine electrolysis, developed by AGC. The new generation membrane F-9060, announced in 2023, achieves the industry's lowest voltage and highest current efficiency to reduce electricity use and improve carbon emission efficiency during the production of chlor-alkali products. AGC supplies this product to brine electrolysis manufacturers around the world, contributing to the improvement of the environment.

#### Voltage Reduction in Ion Exchange Membranes



AGC lab cell, 6 kA/m², 90 °C, 32 wt% NaOH, 200 g/l NaCl

	CE	⊿cv	Characteristics
F-8080	≧96.0	+50 mV	Previous standard membrane
F-9010	≧96.8	0mV	AGC standard membrane
<b>New F-9060</b> $\geq$ 97.0 -40mV Achieves high current efficiency (CE) and low voltage			
Note: The AGC Gr	oup's brine el	ectrolyzers al	ways use the latest FLEMION <sup>™</sup>

membranes, aiming to reduce electricity consumption per unit.

# Chemicals Business: Reduction of Fluorocarbon Leakages (Japan)

AGC manages fluorocarbons used as refrigerants in commercial air-conditioners and refrigeration units based on the Act on Rational Use and Appropriate Management of Fluorocarbons, strengthening the operation and management of refrigeration units as well as improving the recovery of refrigerants and optimizing replenishment amounts during maintenance. Thanks to these efforts, AGC's estimated leakage volume for fiscal year 2023 was 3,578 t-CO<sub>2</sub>. We will continue to reduce fluorocarbon leakages by maintaining leakage prevention measures and steadily replacing aging refrigeration units with state-of-the art units that use low-GWP refrigerants.

#### Use of Renewable Energy

In order to reduce Scope 2 emissions, the AGC Group is introducing renewable energy at its sites around the world. Our sales offices had been prioritized in this initiative, and we have been preparing for and examining the large-scale rollout of renewable energy at our manufacturing bases as well. We established a cross-group examination structure and have been working on preparations and considerations with a focus on ensuring stable production. In 2022, AGC began to actually install renewable energy facilities at its production bases around the world. The AGC Group will continue to advocate for renewable energy through efforts that include the creation of a global framework for formulating renewable energy procurement policies.

#### Solar Power Case Study

At AGC Display Glass (Shenzhen) Inc., our display glass production subsidiary in Shenzhen City, China, solar panels installed on the roof of its plants began producing electricity in November 2022. We expect these solar panels to produce 6,180 MWh in the initial year and a total of 150,000 MWh over the next 25 years, reducing GHG emissions by at least 125,000 tons. The generated electricity will be used internally, and any excess amounts will be sold to the local electric power company.

# Purchase Contract for Renewable Energy Electricity Certificates

PT Asahimas Chemical is our chemical product production and sales subsidiary in Indonesia. It entered into an agreement to purchase approximately 15 years' worth of renewable energy electricity certificates (about 18,000GWh) issued by PT Perusahaan Listrik Negara (PLN), and began using them in October 2022. This will reduce CO<sub>2</sub> emissions by as much as 15 million tons over a 15-year period, and might cut the AGC Group's total CO<sub>2</sub> emissions by around 10% in the future.

#### Note: Calculated assuming 0.87t-CO<sub>2</sub>/MWh for PLN's electricity emissions factor in 2021.

### Initiatives Aimed at Reducing Scope 3 GHG Emissions

Throughout the value chain, expectations are increasing for companies to work on reducing their GHG emissions. To accelerate initiatives, the AGC Group has set a target for reducing Scope 3 GHG emissions in categories 1, 10, 11, and 12 by 30% by 2030 versus the 2019 level. AGC has also established an engagement target to encourage suppliers— who account for 30% of category 1 and category 3 GHG emissions—to obtain SBT certifications by 2027. The Company has obtained SBT certifications for these targets.

In order to grasp and reduce Scope3 emissions from the products and services we purchase, we are deepening communication with our suppliers through questionnaires. Eventually, we will collect primary GHG emission factor data from each supplier and create a system to incorporate their reduction efforts into our Scope 3 measurements, and we aim to explore collaborative initiatives to reduce GHG emissions.

We are endeavoring to improve the precision of our calculations of GHG emissions in the flow of a product after its production and transport to use and disposal by a customer, and plan to take steps to reduce emissions at each stage of this process. For example, we are taking the following steps to increase transportation efficiency.

#### Use of IoT in Glass Transportation Pallets

Since logistics for glass entails significant  $CO_2$  emissions, AGC is working to improve logistics efficiency by using special pallets for transportation whose locations can be traced. Pallets can be traced in real time using special equipment to determine location, inventory, and delay information. This prevents the loss of pallets and improves transport efficiency by reflecting timely information on transportation routes and cargos in transportation plans, which leads to a reduction in GHG emissions in the transportation stage.

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AGC · Fitted logistics trackers on 3,000 large pallets

#### Creation of Logistics System Using RFID Tags for Collecting Sodium Bicarbonate Pallets

At the Kashima Plant, AGC attached RFID tags to approximately 20,000 special pallets for transporting sodium bicarbonate, leading to an increase in recovery rates from customers. This decreased opportunity loss in pallets and eliminated the GHG emissions that would have occurred to produce replacement pallets. At the same time, it has helped to reduce GHG emissions by increasing efficiency in transportation by incorporating more accurate position information.

#### Greening Transportation

#### Introduction of Hydrogen Fuel Trucks

AGC Display Glass (Shenzhen) Inc., which belongs to the Electronics Company, introduced hydrogen fueled trucks for transporting products in May 2023. AGC Display Glass (Shenzhen) Inc. became the first company in Shenzhen City to use hydrogen-fueled trucks through this trial, based on a partnership with Hercules Logistics, a local logistics firm based in Shenzhen City. These trucks are currently being used to transport raw glass, and will be used for other transportation needs in the future.

AGC Display Glass (Shenzhen) Inc. has been recognized by the Chinese government with Green Company certification for its various environmental efforts to conserve water, this initiative with hydrogen fueled trucks, and solar power generation.

#### **Initiatives for Green Logistics in Europe**

The AGC Architectural Glass Europe & Americas Company is working on green logistics in collaboration with its logistics partner, Lannutti in the Europe.

We are working to reduce GHG emissions through innovative initiatives such as streamlining transportation in the processing

step and introducing clean fuel vehicles. In 2023, we succeeded in switching the diesel fuel used for transportation in Italy to hydrogenated vegetable oil (HVO) fuel produced from 100% renewable raw materials.

#### Initiatives to Address Climate Change Issues in Back-Office Section

AGC (China) Holdings Inc., which provides corporate services to AGC Group companies located in China, introduced a green-savings account service provided by MUFG Bank, Ltd. (Beijing Branch) with the aim of indirectly addressing climate change issues. By putting temporarily available excess funds into the green-savings account, these funds can be invested in ESG-related projects, such as energy conservation, environmental improvement, and clean energy projects in China. Interest generated from these funds can also be used in activities that help society, such as donations to the soccer league for people with vision impairments.

## **Participation in Climate Change Initiatives**

The AGC Group complies with laws and regulations while endorsing the policies of governments in each country and region to mitigate and address climate change. In Japan, for example, AGC Group supports and appropriately responds to the Act on Rationalization of Energy Use and Shift to Non-fossil Energy and the Act on Promotion of Global Warming Countermeasures.

AGC Group also addresses climate change issues by collaborating and coordinating with other companies through participation in industry groups and initiatives that aim for decarbonization.

#### • Energy Conservation Center

The AGC Group supports the spread of energy conservation activities by having the chairman of the AGC Group also serve as a member of the Energy Conservation Center, Japan (ECCJ), which disseminates information, provides technologies, and seeks international cooperation related to energy conservation.

• Japan Climate Initiative (JCI)

As AGC, we have been participating since 2021. In November 2023, we endorsed a carbon pricing proposal to simultaneously achieve our 2030 GHG emission reduction targets and enhance international competitiveness.

#### • GX League

Following our endorsement of the GX League Basic Concept announced by the Ministry of Economy, Trade and Industry (METI) in 2022, we have participated in the GX League since it was established by METI in 2023 as a place for public-private collaboration for GX.

• Flat Glass Manufacturers Association of Japan

As a member of the Flat Glass Manufacturers Association of Japan, the AGC Group played a leading role in the activities of the Special Committee for the Review of CO<sub>2</sub> Emissions and Reduction Effectiveness Evaluation Indicators, which was established within the Association. These activities have been succeeded by the Whole Carbon Subcommittee under the newly established Sustainability Special Committee within the Association in 2024. Together with the Flat Glass Recycling and Reuse Subcommittee within the Sustainability Special Committee, we will continue our efforts to reduce whole-life carbon emissions in buildings.

• National Movement for New and Prosperous Lifestyles toward Decarbonization—Participation in Public-Private Collaborative Association

The Architectural Glass Asia Pacific Company has been participating in a public-private partnership council (nicknamed the "Deco-Katsu Ouendan") initiated by the Ministry of the Environment. This council aims to promote a national movement for creating create new and affluent lifestyles that lead to decarbonization, since its inception, and been actively collaborating and consulting with the secretariat and other stakeholders to enhance consumer appeal for its products and services and to propose government policies.

In addition, we advocate for policies to promote the spread of high-insulation glass products, emphasizing the importance of energy-saving measures for homes and buildings through the adoption of highly insulating window glass, particularly in the promotion of highly insulating glass products in existing homes and non-residential buildings, where efforts are currently lagging. We also support policies to expand the use of Building-Integrated Photovoltaics (BIPV) to enhance the adoption of renewable energy. By providing specialized expertise, we contribute to the formulation of energy-saving measures.

#### **Products That Help Address Climate** Change

#### Initiatives to Contribute to the Reduction of GHG Emissions

In the AGC Group, products that contribute to the environment and energy field account for about 10% of total sales. We will continue to utilize our technological capabilities to identify areas where we can contribute to the reduction of GHG emissions in the world and work to contribute through our products.

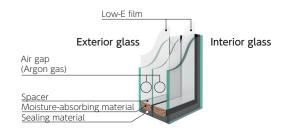
In **AGC plus-2026**, we have set "the shipment volume index for architectural products contributing to GHG reductions" and "index for GHG emissions reduction by low-GWP products" as sustainability KPIs. We will monitor these indices and accelerate the creation of social value through our products.

- Products marked with " $\star$ " are included in "Products contributing to GHG reduction for buildings."
- The index of low-GWP chemical products that contribute to GHG reduction includes the AMOLEA<sup>®</sup> series 1234vf/1224v

#### Eco-Glass (Low-E Double-Glazing Glass) ★ Improving the Energy Efficiency of Buildings through the

#### Selective Transmission of Light and Heat

The use of low-E double-glazing glass, which reflects solar radiation and other far infrared rays while letting through light, has outstanding thermal insulation performance, helping enhance heating efficiency in winter.



#### BIPV (Building Integrated Photovoltaics) ★ Unlocking New Possibilities for Architecture through **Photovoltaic Glass**

BIPV modules are a type of glass that facilitate the generation of solar power by sandwiching power generation cells between sheets of glass. These modules simultaneously create energy functions and maintain the aesthetic appeal of buildings while retaining the natural lighting innate to glass. Another advantage of BIPV modules is that they allow the use of existing murals and windows without installing solar panels.

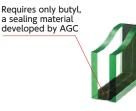


The Singapore Institute of Technology's new Punggol Campus

#### Thermocline<sup>™</sup>

#### Realizing Recyclable Double-Glazing Glass Using AGC's Unique Material

Thermocline<sup>™</sup> is a double-glazing glass achieving durability and insulation by using a material developed by the AGC Group. In addition, as Thermocline<sup>™</sup> allows double-glazing glass to be assembled and disassembled through a simple process, it contributes to reduced CO<sub>2</sub> emissions throughout its life cycle.



Simple structure of Thermocline™

#### Low-Carbon Glass

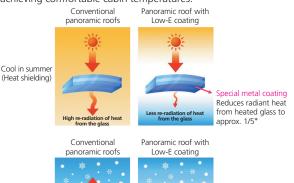
#### Major Reduction in Carbon Footprint of Products Compared with Ordinary Products

Products being developed and sold by AGC Glass Europe S.A. feature a 40% smaller carbon footprint than ordinary products while preserving the same aesthetics, guality, and technical specifications. All of AGC's technologies are brought together to produce these products in high-energy-efficiency melting furnaces that use sustainable raw materials and large volumes of cullet.

#### Low-E glass for vehicle roofs

#### ▶ High Heat Shielding and Insulation Properties Reduce Air Conditioning Load and Improve Fuel Efficiency

The AGC Group also offers Low-E glass products for automotive applications. The roof glass with a special metal coating is designed to prevent heat from entering from outside the vehicle while retaining heat inside. This reduces environmental impact while achieving comfortable cabin temperatures.



Warm in winter (Heat insulating)

\* These are our values measured by the

Infrared-Cut Glass for Comfortable Cabin Temperature

Infrared rays are blocked by sandwiching a special film between

two pieces of glass. By suppressing the rise in temperature inside

extending the cruising range of EVs and reducing CO<sub>2</sub> emissions.

Infrared

Visible

light

ravs

the vehicle and improving cooling efficiency, it contributes to

Company, not guaranteed values.

frared rays are blocked

between two panes of glass

by placing a special film

Cool verre<sup>™</sup>

Even in Summer

pecial metal coating Reduces heat dissipation from the glass to about

Vehicle

exterior

UV

rave

Vehicle

interior

2/3\*

#### **AMOLEA<sup>™</sup> Series**

Refrigerants and Solvents with a Global Warming Potential (GWP) Equivalent to 1/100th of Previous Products

The next-generation refrigerants and solvents of the AMOLEA<sup>™</sup> series have extremely low GWP. Practical application is underway in car air conditioners and centrifugal chillers, and is scheduled to be expanded to commercial air conditioning equipment in the future.



## F-CLEAN<sup>®</sup> Fluoropolymer Resin Film for Greenhouses

▶ Supporting Agriculture through Long-Life Greenhouses F-CLEAN<sup>®</sup> is a fluoropolymer resin film for greenhouses. While ordinary agricultural film has a life span of between three and five years, F-CLEAN<sup>®</sup> lasts for over 30 years without being replaced, thereby helping minimize plastic waste. With a high light transmission ratio, this film also contributes to improved productivity for agricultural products.

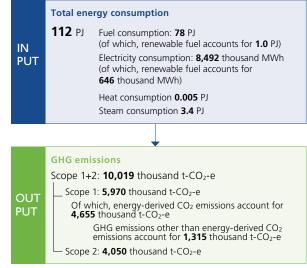


F-CLEAN<sup>®</sup> in use at a greenhouse

## Scope 1, 2, and 3 Emissions Data Collection

The AGC Group's Energy and Material Balance (2023) The AGC Group mainly uses heavy oil, natural gas, city gas,

hydrogen, and coal as direct energy; and electricity, steam, and heat as indirect energy.



Note: 1. Scope 2 emissions were calculated using the market-based method. 2. Electricity usage does not include electricity generated in-house, which is

- Electricity usage does not include electricity generated in-house, which is counted in fuel usage.
   CO<sub>2</sub> emissions from biomass fuels was 93,000 t-CO<sub>2</sub>-e (not included in the
- above figures because it is outside Scope 1 and 2).

#### **Energy Consumption and Intensity Per Unit of Sales**

				2022	
Total amount used (PJ)	123	123	124	120	112
Intensity per unit of sales (TJ/¥100 million)	8.1	8.7	7.3	5.9	5.7
Fuel used (PJ)	84	87	88	83	78
(of which, renewable energy derived (PJ))	0.06	0.04	0.05	0.60	0.95
Electricity used (1,000 MWh)	9,686	8,921	8,951	9,341	8,492
(of which, renewable energy derived (1,000 MWh))	25	61	71	199	646
Heat used (PJ)	0.006	0.004	0.004	0.004	0.005
Steam used (PJ)	3.7	3.3	3.6	3.2	3.4

#### Scope 1, 2, and 3 Emissions

				(Thousa	na t-CO <sub>2</sub> -e)
	2019				2023
Scope 1 (direct emissions)	6,200	6,469	6,903	6,075	5,970
Scope 2 (indirect emissions from purchased energy)	5,493	4,792	4,595	4,835	4,050
Scope 3 (other indirect emissions)	13,341	11,659	11,585	10,508	9,501
Total	25,035	22,920	23,084	21,418	19,520

Note: The 2023 results do not include emissions from the Russian business (transferred in February 2024).

#### Scope 3 Emissions (by category)

	(mousand reco <sub>2</sub> -e)					( ( ( ) 2 - ( )
Category	Business	2019 actual	2020 actual		2022 actual	2023 actual
1	Purchased goods and services	4,321	3,716	3,406	4,004	3,746
2	Capital goods	389	684	685	778	744
3	Fuel and energy-related activities (not included in Scope 1 and Scope 2)	1,297	1,102	2,266	1,334	1,263
4	Transportation and distribution (upstream)	1,021	1,007	1,293	954	901
5	Waste generated in operations	56	35	14	49	91
6	Business travel	19	43	18	53	90
7	Employee commuting	21	51	20	31	38
8	Leased assets (upstream)	NA	NA	NA	NA	NA
9	Transportation and distribution (downstream)	NA	NA	NA	NA	NA
10	Processing of sold products	245	269	261	344	154
11	Use of sold products	2,302	1,945	1,681	1,483	1,378
12	End-of-life treatment of sold products	3,442	2,581	1,716	1,259	806
13	Leased assets (downstream)	167	167	167	162	151
14	Franchises	NA	NA	NA	NA	NA
15	Investments	59	58	58	58	139
Tota	I GHG emissions (Scope 3)	13,341	11,659	11,585	10,508	9,501

Note: 1. Figures for 2019, 2020, and 2021 have been retroactively adjusted due to a change in the emissions intensity set used to calculate GHG emissions (Scope 3) 2. GHG emissions in 2023 totaled 9.5 million t-C0<sub>2</sub>-e for Scope 3. Due to the shift from products with high GWP to those with lower GWP in the sales of coolants and solvents, there was a 28.4% reduction compared to the reference year of fiscal 2019 and a 9.6% reduction compared to the previous fiscal year.

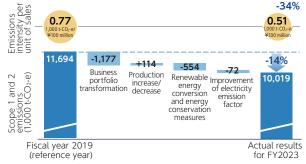
(Thousand t-CO<sub>2</sub>-e)

#### Sales (Market-Based Method) (Thousand t-CO<sub>2</sub>-e) (Thousand t-CO<sub>2</sub>-e/¥100 million) 14,000... ----- 1 4 11,694 12.000 11,261 1<u>1,</u>499 1.2 10,910 10,019 10,000 1.0 8.000 0.8 6.000 0.6 4,000 0.4 0.39 2,000 0.2 0 0 2019 2020 2021 2022 2023 2024 2030 target reduction target Scope1 Scope2 Intensity per unit of sales (right)

Scope 1 and 2 Emissions and Intensity per Unit of

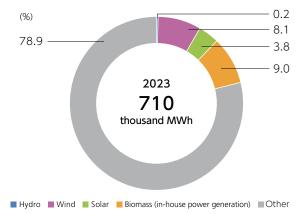
Note: The actual value for 2023 is 10.3 million t-CO₂-e when calculated using the location-based method. In fiscal 2023, Scope 1 and 2 GHG emissions totaled 10.0 million t-CO₂-e and intensity per unit of sales was 510 t-CO₂-e per hundred million yen, representing cuts of 14% and 34% versus the 2019 reference year. On a year-on-year basis, total Scope 1 and 2 emissions were reduced by approximately 890,000 t-CO₂-e. This reduction was achieved through the divestment of our Russian business, the purchase of renewable energy certificates, the greater use of biomass fuels and other renewable energy sources, and progress in fuel conversion for the dass melting process.

#### Scope 1 and 2 Emissions and Achievements in Reducing Emissions Intensity per Unit of Sales (2019 to 2023)



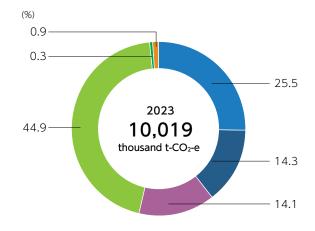
In accordance with its long-term management strategy and medium-term management plan, the AGC Group is working to build a business portfolio resilient to changes in market conditions with high asset efficiency, growth potential, and carbon efficiency. To achieve this, the Group is focusing on transforming the business structure and business models of its core businesse, expanding strategic businesses, and accelerating growth. As a result, GHG emissions (Scope 1+2) in fiscal 2023 were reduced by 14% (approx. 1.7 million t-CO-e) compared to 2019, and emissions intensity per unit of sales was reduced by 34%. To achieve the 2030 targets set as milestones toward the long-term goal of achieving carbon net-zero by 2050. the AGC Group is focusing on several key initiatives. These include technological innovations in the glass melting process, which is a major source of emissions, transitioning the power source for the chlor-alkali business to renevable energy, and utilizing biomass tuels in our in-house thermal power generation facilities.

## Breakdown of Electricity Derived from Renewable Energy Sources



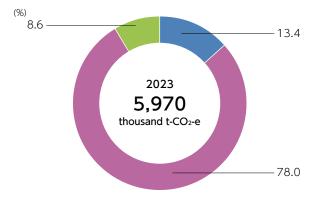
Note: The electricity derived from renewable energy sources that is adopted by the AGC Group is sourced from in-house solar power generation, in-house biomass fuel power generation, electricity from renewable energy sources utilizing a 100% non-feed-in tariff scheme, non-fossil-fuel certificates designated as renewable energy (Japan), and the use of a renewable energy integrated power grid, etc. Other sources include renewable energy from renewable energy electricity certificates.

#### Scope 1 and 2 Emissions Breakdown by Segment



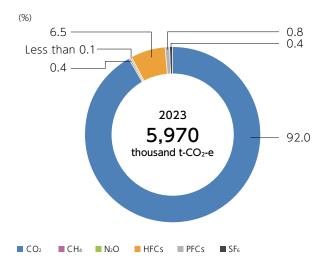
Architectural Glass Automotive Electronics Chemicals



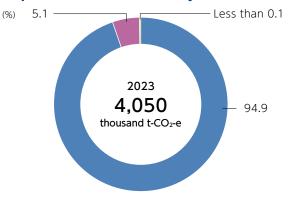


Raw materials
 Energy consumption
 GHGs other than those derived from raw materials and energy sources

## Scope 1 Emissions Breakdown by Gas Type



#### Scope 2 Emissions Breakdown by Source



#### Electricity Steam Heat

#### Calculation Terms for GHG Emissions and Other Environmental Impacts

- Values reported by the AGC Group's environmental data-base system in fiscal 2023 (January 1, 2023, to December 31, 2023)
- AGC on a non-consolidated basis and its subsidiaries (excluding affiliated companies and equity-method companies) are included in the scope of calculations. The scope of other detailed calculations is in accordance with the AGC Group Guidelines for Calculating GHG Emissions and the AGC Group's Environmental Performance Data Guidance, which are based on the Greenhouse Gas Protocol.
- Scope 1 and 2 calculation scope: AGC Inc. and its consolidated subsidiaries (a total of 128 manufacturing and non-manufacturing sites as defined by the Company's standards)
- Scope 3 calculation scope (target sites): AGC Inc. and its consolidated subsidiaries, comprising a total of 197 manufacturing and non-manufacturing sites as defined by the Company's standards
- The scope and conditions for Scope 1, 2, and 3 are described in the GHG Emissions and Environmental Performance Data Calculation Report.
- Thermal units and emission factors used in Scope 1 and Scope 2 calculations are based on the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures, as detailed in the Greenhouse Gas Emissions Calculation and Reporting Manual (Ver.4.9). Additionally, they reference the Environmental Protection Agency's Greenhouse Gas Reporting Program and other sources.

- Electricity emission factors used in Scope 1 calculations use emission factors by electricity utility operator and factors stipulated by the International Energy Agency and the governments of various countries.
- The global warming potential of GHGs other than CO<sub>2</sub> uses the values in the Intergovernmental Panel on Climate Change's Fifth Assessment Report.
- Emission factors for fluorinated gases with GHG effects not specified in the Act on Promotion of Global Warming Countermeasures use values stipulated by AGC based on technical literature.
- Actual values prior to 2022 differ from values disclosed in previous years due to improvements in data accuracy and other factors.
- When contracts and other documents confirm the market-based method, the market-based factor is used in calculations. In any other cases, the location-based method is used.
- Scope 3 calculations are based on the IDEA v3.2 and the Ministry of the Environment's database v3.2.

	Calculation methodology
1	The volume of resources used in conjunction with producing products multiplied by the emissions intensity* per resource
2	The amount of investment in capital goods multiplied by the emissions intensity* per investment amount
3	The amount of fuel and energy used multiplied by the emissions intensity $\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$ for each type of fuel and energy
4	The volume of emissions related to the procurement of materials and parts and the volume of emissions from transportation when shipping products, based on the volume of resources used during product production and the ton-kilometer data for product transportation, multiplied by the emissions intensity*
5	Volume of waste resulting from business activities that is processed by external service providers multiplied by emissions intensity* per method
6	Global emissions calculated based on the result of multiplying AGC business travel expenses by the emissions intensity <sup>*</sup> per transportation method, using estimates based on employee composition ratios
7	Global emissions calculated based on the result of multiplying AGC commuting expenses by the emissions intensity* per transportation method, using estimates based on employee composition ratios
8	Emissions for leased properties calculated in Scope 1 and Scope 2
9	The AGC Group does not calculate emissions from its products as they are intermediate components, such as parts and materials, which do not consume energy during use.
10	Weight of sold products multiplied by the basic unit of processing per product and the electricity emissions intensity
11	GHG emitted directly through the use of products sold at sales outlets multiplied by emissions intensity* per product, based on assumed use conditions
12	The weight of products sold multiplied by the basic unit per type of waste matter. For a portion of products, it is calculated by determining the volume of leakage from the weight sold and multiplying the figure by their global warming potential.
13	Leased floor space in a building multiplied by basic unit of floor space and emissions intensity*
14	Not applicable as the AGC Group does not operate franchises
15	Scope 1 and 2 emissions at affiliated companies in which AGC's ownership is less than 50% are calculated based on its percentage ownership.

#### Emissions intensities are based on the Sustainable Management Promotion Organization Inventory Database for Environmental Analysis (IDEA) Ver.3.3, the Ministry of the Environment Database (Ver.3.3), and Gabi (2021).

## Information Disclosure through the CDP

The AGC Group has been completing the CDP's climate change questionnaire since 2010. The Group's responses to the questionnaire can be viewed here.

CDP Climate Change 2023



# **Effective Use of Resources**

## Fundamental Approach

The AGC Group's products are made from natural resources such as silica sand and fluorite. We aim to effectively utilize the Earth's limited resources and enhance resource circulation throughout the product life cycle by deepening our existing 3R initiatives (Reduce, Reuse, Recycle), expanding the use of recycled resources, reducing new resource extraction, and improving resource productivity, including packaging materials. Furthermore, we will expand the provision of products with long lifespans and products designed for the 3Rs, aiming to realize a resource recycling society, thereby achieving both social sustainability and economic growth.

#### Initiatives for Product Life Cycle and Resource Recycling



# Targets for the Effective Utilization of Resources

The AGC Group aims to make effective use of resources throughout the product life cycle in order to realize a resource recycling society. This will help conserve natural capital and mitigate the progression of climate change while preserving limited resources.

In the production process, AGC is conscious of extending the life of products and designing products that are suitable for the 3Rs, and we are promoting initiatives to enhance the reuse of resources in the process and to recycle and reuse products that have been used in the world and reached the end of their lifecycle. We are also promoting the introduction and conversion of renewable resources, and have set the introduction of non-fossilderived materials such as biomass materials as one of our 2025 goals. Starting in 2023, we set KPIs for the utilization rate of new extracted resources for our major products—glass products, basic chemical products, fluorine-related products, and brick products and have begun efforts to monitor our actual performance and reduce the dependency on these resources.

The AGC Group is also working to reduce the amount of waste generated during the manufacturing stage, and as a result, we have set a goal of reducing the Group's final landfill ratio to less than 1% by 2025. In recent years, we have also started working with our business partners to recycle and reuse used products as resources after they have been sold.

We are currently discussing the setting of long-term goals for the Group toward 2030.

## Initiatives for the Effective Use of Resources and the Appropriate Disposal of Waste

#### Initiatives for Recycling Plastic Resources

With plastic waste accumulating in the ocean, there is an urgent need to recycle more plastics. AGC Group is taking steps to reduce the volume of waste plastic and is working to cut the amount of plastic waste by thoroughly separating used plastic so that it can be used in the production of new plastic products as a side industry. One of our environment target KPIs for 2025 is to use more recycled plastic and biomass plastic in order to reduce petroleum-derived plastic use. The AGC Group trains employees on the recycling and reuse of plastics through internal environmental education videos and special contents created in online shopping web sites for office supplies. Furthermore, in the production process for products that use plastic film, we are collaborating with film suppliers to collect plastic film scrap and return it to the suppliers to be used as raw material for producing recycled film materials.

The main initiatives being taken to recycle plastic resources are as follows:

1. Employee training: Employees receive training about the Law for Recycling Plastic Materials and promoting the use of recycled plastic and biomass plastic through internal environmental education videos, our resource procurement website, and other educational events.

2. Limit emission of waste plastic: AGC Group restricts the emission of plastic waste by thoroughly separating used plastic and working with side industries to reuse it in the production of new plastic products.

3. Promote reuse of waste plastic: Waste emitted from our business activities is properly disposed of through the exchange of manifests with waste management companies. We have recycled waste, including the collection of waste heat, and promote the reuse of waste by converting it in the material cycle.

4. Promote use of recycled plastic and biomass plastic: AGC Group has set environmental targets as KPIs for 2025. It promotes the use of recycled plastic and biomass plastic through internal environmental education videos, a special page on its materials procurement website, and other educational events.

#### Targets for the Effective Utilization of Resources

#### Use of Cullet (Glass shards)

The AGC Group uses natural resources such as silica sand, dolomite, and soda ash as raw materials in the glass manufacturing process. Even if glass breaks and becomes refuse glass (cullet), heat can be applied to melt it down and produce glass with the same qualities as the original glass. Therefore, using cullet as a raw material for glass can reduce the use of virgin raw materials. At the same time, it can reduce CO<sub>2</sub> emissions derived from carbonate raw materials such as dolomite and soda ash. Additionally, GHG emission volume can also be reduced in the raw material refining process and in the transportation of raw materials from overseas. Using 1 ton of cullet can reduce the use of virgin raw materials by 1.2 tons and GHG emission volume (Scope 1–3) by 0.5 to 0.7 tons in CO<sub>2</sub> equivalent.

The AGC Group has made effective use of cullet and glass scraps generated in the glass manufacturing and processing steps.

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In addition, in recent years, we have been actively promoting the use of waste glass that has finished its role as a product, in collaboration with a variety of business partners.

Further, the Group uses glass cullet as a raw material for smartphone glass, which must be of particularly high quality. Most types of smartphone glass are coated, and cullet generated from coated glass is generally difficult to utilize as a glass input because the coating material affects the quality of the glass. Nonetheless, based on strict quality control, the AGC Group uses cullet generated from coated glass as a recycled resource. Also, labeling that shows the percentages of recycled materials in our products is in accordance with ISO 14021 and has acquired certification from third-party organizations.

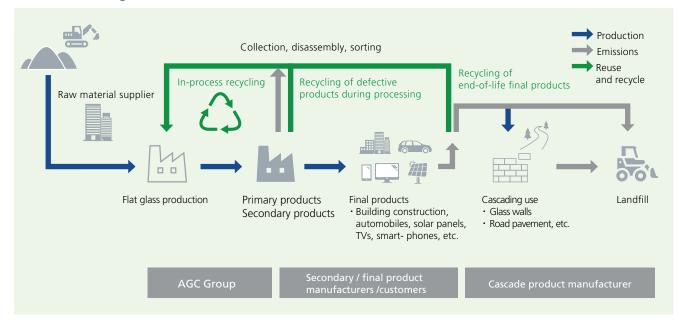
#### Recycling of Waste Glass from Building Demolition

In Japan, most window glass is either used as roadbed material or disposed of in landfills after demolition. If properly recovered as pure glass, these glass cullet can be utilized as raw material for glass production. It is estimated that several hundred thousand tons of waste glass originating from buildings are generated annually in Japan. However, due to challenges such as ensuring the guality of cullet, establishing cost-effective construction methods, and reducing the collection costs for waste glass, recycling it as raw material for flat glass has been considered difficult until now. The AGC Architectural Glass Asia Pacific Company has begun horizontal recycling of waste glass generated from building demolition sites, in collaboration with major general contractors and various business partners in the venous industry, which had been considered difficult to achieve in the past. Last year, we carried out horizontal recycling of more than 200 tons of waste glass, reducing the use of virgin raw materials derived from natural resources by approximately 240 tons and leading to a GHG emission reduction (Scope 1–3) of approximately 120 tons.

The AGC Architectural Glass Europe & Americas Company is also promoting efforts to recycle waste glass during building demolition.

For details and project examples, please visit AGC Glass Europe's website.

#### Flow for Retrieving Cullet



#### **Recycling of Cover Glass for Solar Panels**

The service life of solar panels, which are the main source of renewable energy, is estimated to be 20–30 years, and hundreds of thousands of tons of used solar panels are expected to be disposed of annually in Japan from the late 2030s. Of this, the recycling of cover glass, which accounts for more than 60% of the weight of the panels, is considered a key challenge. In 2023, AGC collaborated with a solar panel recycler to overcome technical challenges through a special heat treatment process, successfully utilizing approximately 24 tons of cover glass from solar panels as raw material for architectural glass for the first time in Japan. By utilizing the cover glass of solar panels, which is expected to be disposed of in large quantities in the future, as a raw material for the high-volume production of architectural glass, this initiative will contribute to reducing industrial waste, decreasing the use of virgin raw materials, and promoting the circular economy. It will also lead to the reduction of CO<sub>2</sub> emissions in the manufacturing processes involving carbonate raw materials such as soda ash, as well as the reduction of GHG

emission volume during the raw material refining process and the transportation of raw materials from overseas.

#### **Initiatives for Automotive Glass Recycling**

The Automotive Company is promoting the recycling of automotive window glass. Car windows are made of laminated glass, consisting of two layers of glass and an intermediate plastic film. We have started an initiative to collect laminated glass, separate the glass from the intermediate film, and return it to the glass kiln as cullet.

At the same time, we have also started to recycle the intermediate film. Scraps of intermediate film generated during manufacturing are collected and returned to the manufacturer for reuse as raw materials in the production of intermediate films.

#### Initiatives to Reduce Waste Generation

#### **Reuse of Refractory Materials**

From the perspective of waste reduction in the ceramics business, we are taking actions aimed at a circular economy, such as the reduction of raw material loss, the recycling and reuse of used refractory materials, and increasing the usage rate of recycled refractory materials. AGC Plibrico Co., Ltd. provides monolithic refractories for use in steelmaking processes, such as in blast furnaces at steelworks, and engages in activities to recycle and reuse used refractories. Furthermore, AGC Ceramics Co., Ltd. undertakes research and pilot testing related to the recycling and reuse of monolithic refractories and refractories for glass kilns.

#### **Recycling of Fluorine Products**

The AGC Group is committed to reusing and recycling fluoropolymer resin films.

Not only are we reusing scrap materials generated in the manufacturing process as raw materials, we are also retrieving and recycling used fluoropolymer resin films from customers, especially ethylene tetrafluoroethylene (ETFE) films, such as the ETFE film for agricultural greenhouses F-Clean.<sup>®</sup>

The latter is retrieved using special bags, and then cleaned and crushed for reprocessing. These materials are then regenerated into fluororesin molded products, such as waterproofing films.



F-Clean<sup>®</sup> collection bags

#### **Returnable Glass Pallets for Transporting Glass Products**

For pallets used to transport glass products, we use a returnable type of iron pallet that can be reused as a platform for transporting glass products. In 2020, we introduced a pallet IoT system, a location management system for pallets, with the aim of ensuring the recovery of pallets and increasing the efficiency of their transportation.

#### **Reusable Packaging and Transportation Pallets**

For many years, AGC Glass Europe S.A. has been implementing measures for glass transportation pallets and packaging boxes pursuant to European Directive 94/62/EC, which includes stipulations on packaging waste.

Traditionally, wooden pallets were used for transporting flat glass. However, AGC Glass Europe S.A. began using iron pallets at an early stage. These sturdy and easy-to-handle pallets are retrieved from our customers for reuse. Currently, our reuse rate in Belgium is as high as 98%. Additionally, while wooden pallets are still used for some maritime transportation, for products shipped from our main glass manufacturing bases in four major countries in Europe, pallets are made from sustainable wood that has received PEFC certification.\*

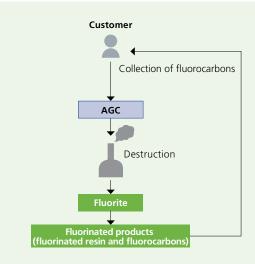
\* PEFC (Programme for the Endorsement of Forest Certification schemes) is the world's largest forest certification system, operated by a non-profit NGO that aims for sustainable forest management.

# Recovery and Recycling of Fluorocarbons and Calcium Fluoride

In the Chemicals Company, the AGC Group manufactures various fluorinated products such as alternatives for hydrochlorofluorocarbons (HCFC and HFC) and hydrofluoric acid. Calcium fluoride (fluorite) is a natural resource used as a raw material for these fluorinated products, but deposits and producing countries are limited, and most Japanese enterprises, including the AGC Group, depend on imports from China.

Since 1997, the AGC Group (Japan) has been recovering used fluorocarbon products from customers and then destroying and recycling them at the AGC Chiba Plant. In 2022, fluorocarbons equivalent to approximately 1.07 million tons of CO<sub>2</sub> were recovered, and the calcium fluoride obtained through the destruction process was reused as raw material. Also, at the same plant calcium fluoride (fluorite) is recovered and reused from waste fluid generated in the manufacturing process. Furthermore, after customers use hydrofluoric acid in the wastewater treatment process, the Group recovers and reuses the waste calcium fluoride generated.

#### **Recovery and Recycling of Fluorocarbons**



Targets for the Effective Utilization of Resources

#### **Initiatives to Reduce Hazardous Waste**

AGC's Kashima Plant is significantly reducing specially controlled industrial waste by using boilers to combust waste oil that contains hazardous oxidizing agents. Moreover, exhaust heat from this process is recovered and used as a source of energy.

Further, the Group's Chiba Plant helps reduce the amount of hazardous waste in society by collecting and destroying used fluorocarbons. The technology we use for recovering and recycling fluorocarbons earned the Minister of Economy, Trade and Industry Award at the Resource Recirculation Technology and System Awards in 2014.

# Initiatives Tasked with the Appropriate Disposal of Waste

As sites that dispose of waste, the AGC Group's bases in Japan meet the responsibilities that they have to monitor the generated industrial waste until the completion of its disposal by confirming the status of disposal through on-site inspections of waste disposal service providers. These measures are pursuant to the Waste Management and Public Cleansing Act. The Groupwide goal is to conduct on-site inspections of all waste disposal service providers over a three-year period. AGC plants that are geographically close to waste disposal service providers cooperate by conducting on-site checks and sharing the results of these checks. Since fiscal 2020, we have changed certain plans due to the COVID-19 pandemic.

#### **Proper Management and Treatment of PCBs**

The Stockholm Convention on Persistent Organic Pollutants calls for the use of equipment containing PCBs to be discontinued by 2025 and for such equipment to be disposed of by 2028. The AGC Group is advancing the discontinuation and disposal of equipment containing PCBs in accordance with the laws and regulations of each country and region in which it operates.

AGC and the AGC Group's sites in Japan ended their use of electric devices using high-concentration PCBs in 2005 and 2009, respectively. At present, these devices are stored according to the relevant legislation and their treatment, which is entrusted to the Japan Environmental Storage & Safety Corporation (JESCO), has been progressing. Furthermore, the AGC Group will continue to systematically dispose of low-concentration PCBs.



Storage area for PCB waste (Yokohama Technical Center)

# Participation in Initiatives for the Effective Use of Resources

AGC Corporation is a member of Circular Partners, a partnership established by the Ministry of Economy, Trade and Industry to promote collaboration between industry, government, and academia aimed at realizing a circular economy.

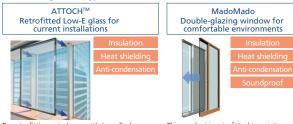
AGC also participates as a member of the Clean Ocean Material Alliance (CLOMA), a group of companies working together to solve the problem of plastic waste (microplastic) in our oceans. The AGC Group plans to advance activities to further recycle and reuse plastic materials by collaborating with film manufacturers and other companies, while obtaining information about biomass / recycled plastics, material recycling, and chemical recycling.

#### Products Contributing to Effective Use of Resources

Retrofittable Energy-Saving Glass Products: MadoMado and ATTOCH<sup>™</sup>

Design of These Products Improves the Effective Use of Resources

MadoMado is a high-performance secondary window that is primarily installed on the interior side of residential windows, while ATTOCH<sup>™</sup> is a glass for renovations that can be retrofitted to windows of buildings, transforming them into low-E double glazing (Eco Glass). Since these products can be used without replacing existing window frames and glass, there is no generation of waste from old frames or glass. Moreover, as they are installed from the inside, there is no need for external scaffolding around buildings, enabling the reduction of installation time and costs for customers. These products enhance heat-shielding and insulation performance in existing buildings, contributing to energy conservation and the effective use of resources.



By retrofitting windows with Low-E glass (insulating glass) from the inside, it is possible to install double-glazing glass with high energy conservation properties.

This product is retrofitted to existing window frames and glass by attaching an additional sheet of high-performance glass on the inside.

## EPINITY<sup>®</sup>

#### 100% Bio-Based Epichlorohydrin (ECH)

Epichlorohydrin (ECH) is one of the main raw materials in epoxy resins that are widely used in protective coatings, adhesives, and electronic components in the automotive, electronics, and construction industries. EPINITY,<sup>®</sup> which is manufactured and sold by AGC Vinythai Public Company Limited in the Chemicals Business, is a 100% bio-based ECH that uses renewable glycerin derived from palm oil, a by-product from the production of bio diesel and oleochemicals. In addition to curbing the extraction of new resources and reducing environmental impact, sustainability is considered throughout the production, such as reusing 100% of the wastewater generated during manufacturing. Compared to conventional petroleum-derived ECH, it has up to 67% less GHG emission. It not only contributes to the effective use of resources, but also addresses climate change issues.

The product is certified by credible sustainability standards: the RSB certification<sup>\*1</sup> to demonstrate its sustainable operation and reduction on negative impact to environment; and the RSPO certification<sup>\*2</sup> to support the use of sustainable palm oil and derivatives along the supply chains.

\*1 RSB: Roundtable on Sustainable Biomaterials \*2 RSPO: Roundtable on Sustainable Palm Oil



#### Unified Brand for Silica Products: RESIFA™

Products That Contribute to the Reduction of Marine Microplastics

Silica, a material that exists in various forms in nature, is expected to become an alternative to microplastics, which have had a concerning impact on ecosystems due to outflow into oceans. AGC SI-Tech Co., Ltd., a wholly owned subsidiary of AGC, offers silica products suitable for a variety of applications, including cosmetics, industry, and medicine, under the unified brand RESIFATM. In the medical field, it is used in some purification applications for novel coronavirus vaccines, thereby contributing not only to the environment, but also to solving various social issues.

RESIF/ SUNSPHERE M.S.GEL SUNLOVELY Binder for coating Cosmetics, antiperspirant fillers HPLC column packing material Filler for resins and films Hydrophilic filler Purification of pharmaceuticals Functional microparticle Functionally coated carrier and natural products Contact carrier Functionally coated carrier binder

#### DA CAPO

# Products That Contribute to the Effective Use of Social Resources

A skin care cosmetic for sensitive skin produced by Hokkaido Soda Co., Ltd., DA CAPO includes chitosan extract, a moisturizing ingredient that the company manufactures by recycling the shells of crabs caught in the seas around Hokkaido.

#### CONCEPT | DA CAPO | Tomakomai-City

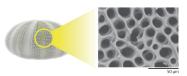


#### Uniporous

#### A Biological Filter Material Effectively Utilizing Discarded Sea Urchin Shells (Hokkaido Soda Co., Ltd.)

Hokkaido Soda Co., Ltd., in collaboration with the Fisheries Research Department, Hokkaido Research Organization, has developed and is selling a biological filter material called Uniporous that effectively utilizes sea urchin shells.

The annual catch of sea urchin in Hokkaido is about 4,300 tons, but only about 15% of that is edible flesh, and it takes much time and effort to process the sea urchin shells, which account for most of the waste.



Porous sea urchin shell, which is effective as a biological filter material

Based on the management policy of the AGC Group, Hokkaido Soda aims to solve this social issue through science and technology cultivated over many years. With cooperation from the Fisheries Research Department of the Hokkaido Research Organization, Hokkaido Soda has commercialized a biological filter material that takes advantage of the lightweight, porous structure of the sea urchin shell, creating a highly adherent surface for bacteria.

This product has been recognized for its high recyclability and was selected as a Hokkaido Certified Recycled Product in November 2019.

#### LUMIFLON<sup>™</sup> Fluoropolymer Resin for Coatings ▶ Products That Contribute to the Effective Use of Resources by Extending Life Cycles

It is the main raw materials for paints have been used in various architectural structures, such as Tokyo Skytree, Akashi Kaikyo Bridge, and Marina Bay Sands in Singapore. These paints offer high weather resistance and corrosion protection, eliminating the need for repainting for several decades. Compared to other paint products, they consume fewer resources due to less frequent repainting, and they also reduce opportunities for the emission of volatile harmful substances associated with painting. We also offer products with low environmental impact, such as water-based and flake-type paints.



Pearl River Tower

(China)



Akashi Kaikyo Bridge F (I

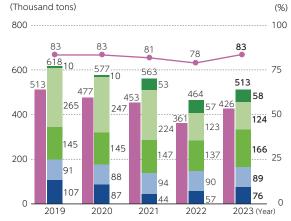
Ferrari World Abu Dhabi (United Arab Emirates)

46



## **Related Data**

#### **Total Volume of Waste Generated by Region**

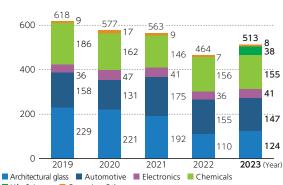


AGC ■ Group companies in Japan ■ Group companies in Asia
 Group companies in Europe ■ Group companies in the Americas
 Recycled volume → Recycling rate (global) (right axis)

Note: Until 2021, valuable materials were included in the results figures of certain regions. From 2022 onward, only the volumes of generated waste are presented.

#### Total Volume of Industrial Waste Generated by Business Segment (excluding valuable materials)

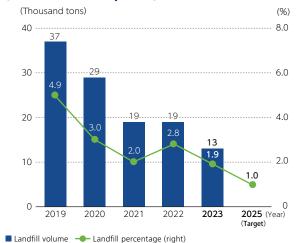
(Thousand tons) 800 -----



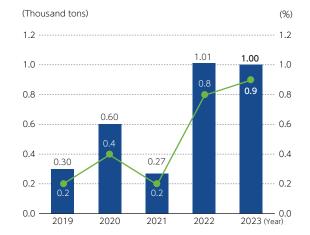
Life Science Ceramics, Others

Note: Until 2021, valuable materials were included in the results figures of certain regions. From 2022 onward, only the volumes of generated waste are presented.

#### Landfill Volume and Landfill Percentage (Global / AGC Group total)



# Landfill Volume and Landfill Percentage (AGC / AGC Group [Japan])



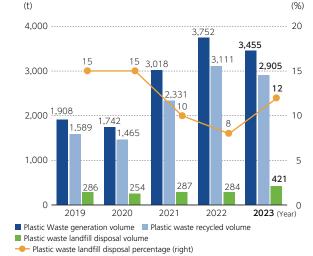


#### **Resource Input for Main Raw Materials for Glass**



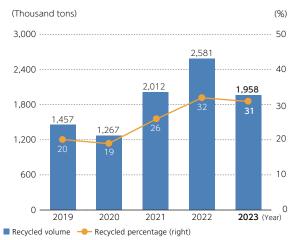
Silica sand Soda ash Dolomite Limestone

#### Plastic Waste Generation Volume and the Landfill (AGC / AGC Group [Japan])



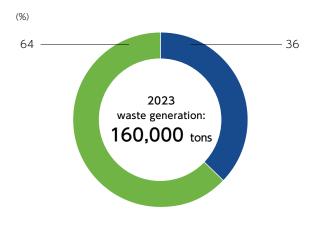
Notes: 1. Plastic waste does not include plastic waste that is converted into valuable materials. 2. Volume of waste plastic recycling includes heat utilization (thermal recycling)

# Volume and Ratio of Recycled Materials Used as Glass Inputs



Note: Recycled volume + (Recycled volume + Mineral-derived resources (new input)) Recycled resources: Recycled cullet (pre-consumer recycled materials) and recovered salt cake





## Plastic Emission Volume and Treatment Methods

AGC Inc. and AGC Glass Products Co., Ltd. are large emitters of plastic as defined by the Law for Recycling Plastic Materials

#### **Plastics Emissions Volume (2023)**

		AGC	Inc.	AGC Glass Products Co., Ltd.	
		Weight (tons)	Ratio (%)	Weight (tons)	Ratio (%)
Tot	al emissions of plastics	4,718	100	807	100
down	Sold as valuable material	3,242	68.7	33	4.1
Breakdown	Emitted as industrial waste	1,476	31.3	774	95.9

#### Waste Plastic Processing Methods (2023)

Method of treating waste plastics	AGC Inc.	AGC Glass Products Co., Ltd.	
piastics	Ratio (%)		
Recycling*1	26.4	21.5	
Thermal Utilization (thermal recovery)* <sup>2</sup>	49.2	55.6	
Simple incineration	7.7	20.4	
Landfill	16.7	2.6	

\*1 Chemical or material recycling

\*2 Disposal as RPF (waste solid fuel) or fuel to make cement, disposal through incineration to generate electricity or heat

# **Conservation of Natural Capital and Biodiversity**

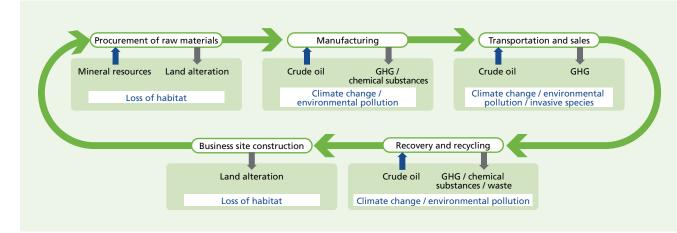
## **Fundamental Approach**

Natural capital, including biodiversity, is one of the management resources that underpin the value creation of the AGC Group. We recognize that maintaining the soundness of natural capital is essential for our business continuity, so we are striving to minimize our environmental impact by managing the impact factors of our business activities on natural capital throughout the value chain. Based on this thinking, we are promoting activities to realize a society in harmony with nature by identifying issues from various perspectives such as preventing environmental accidents, proper use of water, and reduction of pollutants. We are also setting mid- to long-term goals while aiming to achieve short-term KPIs. In addition to minimizing any negative impacts, we aim to contribute to recovery of natural capital.

## The AGC Group's Relationship with Natural Capital and Biodiversity

In order to provide an overview of the dependence and impacts of the AGC Group's operations on natural capital and biodiversity, we conducted an analysis of the Group's direct operations utilizing tools such as ENCORE provided by the Natural Capital Finance Alliance, the Biodiversity Risk Filter (BRF in the table) provided by WWF, and the Materiality-Screening-Tool (MST in the table) provided by the Science Based Targets Network. It became clear that the operations of our main product categories (manufacturing of glass and basic chemical products) have an impact on the ecosystem due to dependencies on water resources, resource extraction, GHG emissions, waste emissions, and the release of pollutants (into air, water, and soil).

#### **Relationship between the Value Chain and Impacts on Nature**



#### Dependence and Impacts of the AGC Group's Business on Natural Capital and Biodiversity

	AGC's activities	Natural capital im	pacts and dependencies sh	own by each tool		Indicators	Activities
	AGC S activities	ENCORE BRF MST		MST	Targets	indicators	Activities
Dependencies	Water use	Ground water / Surface water	Water scarcity	_	Not set	Water intake by business and water source	From P.50
	Water use	Water use	_	Water use			
	GHG emissions	GHG emissions	_	GHG emissions	Reduce Scope 1, 2, and 3 emissions by 30% by 2030 compared to 2019	GHG emissions	From P.29
	Waste	Solid waste	-	Solid waste	Final landfill ratio of less than 1% in 2025	Waste volume, final landfill ratio	From P.42
Impacts		Non-GHG air pollutants / Soil pollutants / Water pollutants	Pollution	Soil pollutants / Water pollutants	Not set	Appropriate management of pollutant emissions and chemical substances contained in our products	From P.50 From P.53
	Mineral resource extraction/Land use	Terrestrial ecosystem use	Tree cover loss	Use of terrestrial ecosystems, freshwater ecosystems, and marine ecosystems	Not set	Not set	From P.56

## Water Resource Initiatives

#### Water as a Shared Resource

The AGC Group draws on approximately 90 million cubic meters of water annually for its business activities. Water is not only a crucial resource for the AGC Group's operations, but it is also a precious resource for companies and citizens in the entire water basin. The Group regards the consumption of water resources and the potential for water pollution throughout the value chain as future risks, and is committed to efficient use of water resources and reduction of pollutants. In addition to developing technologies for water resource use and purification in its own production activities, the AGC Group is also actively developing products that can reduce water resource consumption and water pollution around the world.

#### Use of Water Resources

#### Assessing the Impact of the Use of Water Resources

The AGC Group recognizes the need for sustainable use of water resources in its business activities, and commits to the appropriate utilization and discharge of these water resources in the future. Given the regional variability of environmental impacts due to water usage and water quality contamination, it is crucial to evaluate water usage at the location of each site.

In 2022, the AGC Group conducted evaluations of water resource usability at each site where its bases are located using three indicators: Baseline Water Stress from the Aqueduct Water Risk Atlas provided by the WRI, as well as the Baseline Water Depletion and Blue Water Scarcity from the Water Risk Filter offered by the World Wildlife Fund (WWF). For each of these indicators, we scored each one on a five-point scale and assigned the highest score from the three evaluations as the final water resource utilization risk for each site. Out of approximately 200 sites, 25 sites received the highest score of 5. By 2027, we will analyze the relationship between water usage and local water stress at 25 high-risk sites and establish activity targets accordingly.

#### Assessing the Risk of Reduced Water Resource Usability

In 2022, AGC Group also evaluated the risk of water shortages. We first gathered current information on drought risk at each site from the WRI's Aqueduct Water Risk Atlas and graded risk from A to E. To predict the future impact of climate change on the outcome of this baseline evaluation, two scenarios were used: the IPCC AR5 Atlas of Global and Regional Climate Projection Supplementary Material's RCP 2.6 and RCP 8.5 scenarios. On this basis, we categorized and identified the rate of change in future annual precipitation by 2055 and 2090, giving four distinct cases in total. This evaluation revealed relatively low risks that could not be completely negated in Japan and the Americas. On the other hand, the evaluation identified relatively high risks associated with climate change, mainly in Europe and the Middle East.

Given the possibility of higher water resource prices due to water shortages, the introduction of water resource taxes and the implementation of water extraction regulations that could result in operational stoppages, the AGC Group is implementing region-specific measures, such as the installation of water storage tanks at sites where water shortage risks have been identified. We aim to attain a 100% implementation rate for these measures at high-risk sites by 2025. Furthermore, to reduce water extraction, we are reusing water used for cooling chemical facilities in a cascading manner while managing water quality.

# Initiatives and Targets Related to Effective Use of Water Resources

The AGC Group is taking steps to reduce water usage as a response to water risks and to minimize environmental impact. The Group has set goals based on the business and location characteristics of each business unit and site. In the Architectural Glass Europe Company, for example, we aim to reduce water intake per square meter of glass production by 15% by 2030 compared to the 2020 level. In the Automotive Company, for each region, we set water intake targets per square meter of glass production by 2039 compared to the 2020, compared to the 2019 level, and we have been making progress toward each target. Additionally, the Production Technology Division, which is responsible for equipment maintenance and utility management at Group plants across business units, supports the reduction of water usage by improving equipment efficiency.

#### Initiatives with Stakeholders

#### Implementation of Water Purification Project in India

AGC Inc. and AGC Engineering Co., Ltd. are conducting a demonstration project in Maharashtra to promote the spread of an electrodialysis water purification system for supplying safe drinking water to rural areas, as part of a JICA-supported initiative. This initiative aims to contribute to local residents' access to safe water by introducing an electrodialysis purification system using ion exchange membranes powered by solar power in the area, where groundwater contamination by nitrates is a problem.

# Participation in Local Government Project to Use Recycled Water

At AGC Advanced Electronics Display Glass (Shenzhen) Inc., which produces LCD display glass in Shenzhen City, China, we participate in a project to use reclaimed water in Guangming District, Shenzhen City where the company is located, and together with neighboring companies, we helped reduce water volume by 3 million cubic meters annually in the region. Through this initiative, reclaimed water is being used to wash roads and water plants in the Guangming District.

# Products Contributing to Effective Use of Water

For instance, the production and sale of sodium hypochlorite will contribute to providing safe and reliable drinking water worldwide, as well as protecting rivers and other water bodies through appropriate sewage treatment. Additionally, through the sale and technical transfer of electrolytic and dialysis processes utilizing ion exchange membranes, we will help to solve water problems in regions with underdeveloped water and sewage infrastructure, by securing potable water from saline sources using small-scale facilities and promoting the reuse of water by purifying industrial wastewater.

## **Related Data**

# Water Stress Evaluation: Survey Results (by level, number of sites)

Water stress level	No. of bases
5…High	25
4Medium to high	29
3···Medium	63
2···Medium to low	52
1…Low	20

Note: The evaluation was conducted in 2021. There were 189 manufacturing sites at that time. All 189 manufacturing sites were subject to the evaluation.

# Water Stress Assessment Number of Sites and Water Intake Trends by Level

Water		(Thousand	m³)		
stress level	2019	2020	2021	2022	2023
5	2,198	2,173	2,309	2,184	1,987
4	11,510	12,562	12,073	11,477	10,533
3	52,261	51,618	49,318	50,904	50,052
2	11,095	11,887	14,908	12,544	12,465
1	1,011	982	983	1,049	650

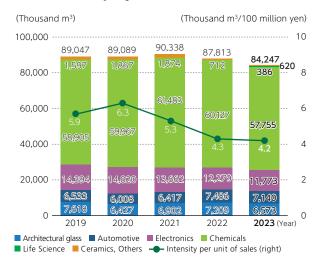
Note: Data from 189 Group manufacturing sites where water stress assessments were conducted in 2021.

#### Total Water Emissions by Destination (AGC Group)



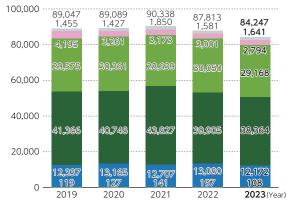
Sewerage Sea Other

#### Water Intake and Intensity per Unit of Sales by Business Segment (excluding seawater for cooling on-site power generation facilities utilized by the Chemicals Company)



#### Water Intake by Source (excluding seawater for cooling on-site power generation facilities utilized by the Chemicals Company)

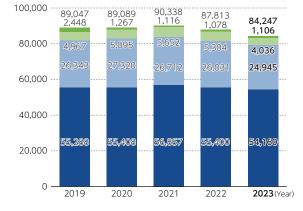
(Thousand m<sup>3</sup>)



Seawater
 Municipal water
 Industrial water
 Groundwater
 River water
 Other

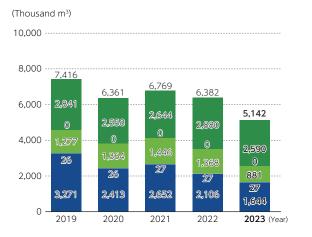
#### Water Intake by Region (excluding seawater for cooling on-site power generation facilities utilized by the Chemicals Company)

(Thousand m<sup>3</sup>)



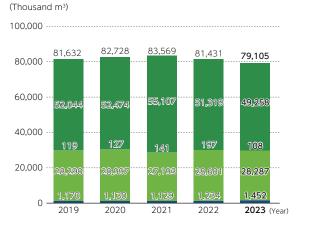
Japan Other parts of Asia Europe Americas

Water Intake by Source (Europe and the Americas) (excluding seawater for cooling on-site power generation facilities utilized by the Chemicals Company)



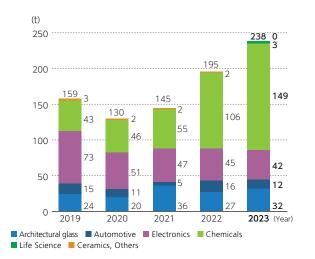
Surface water Rainwater Groundwater Seawater Third-party water

#### Water Intake by Region (Japan and Other Parts of Asia) (excluding seawater for cooling on-site power generation facilities utilized by the Chemicals Company)

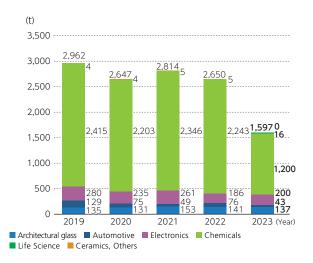


Surface water Rainwater Groundwater Seawater Third-party water

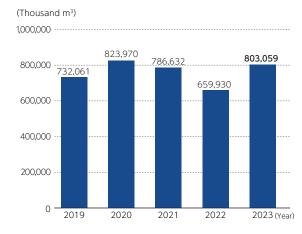
#### Emissions of Water Pollutants (Biochemical Oxygen Demand) by Business Segment



# Emissions of Water Pollutants (Chemical Oxygen Demand) by Business Segment



#### Use of Seawater for Cooling On-Site Power Generation Facilities Utilized by the Chemicals Company



## Information Disclosure through the CDP

The AGC Group has been completing the CDP's climate change questionnaire since 2010. The Group's responses to the 2023 questionnaire can be viewed here.

CDP Water Security 2023



#### Initiatives for the Management of Air Pollutants

Given the emissions of such air pollutants as sulfur oxides, nitrogen oxides, soot, and dust generated when fossil fuels are combusted during the glass manufacturing process, the AGC Group is reducing its air pollutant emissions by enforcing at manufacturing sites voluntary standards that are stricter than statutory standards. We are implementing a wide range of initiatives to reduce air pollutants.

These include switching to manufacturing methods that minimize the release and transfer of hazardous chemical substances, reducing the use of hazardous chemical substances by changing product designs and specifications, introducing recovery and treatment equipment that lowers chemical substance emissions into the atmosphere and water, and changing over to alternative chemical substances. In Japan, we are also voluntarily monitoring the handling, release, and transfer of hazardous chemical substances that are not covered by the stipulations of the Pollutant Release and Transfer Register (PRTR) Law.

## Products That Help Prevent Air Pollution

# ACLESYA, a Highly Reactive Neutralizing Agent for Exhaust Gas Treatment

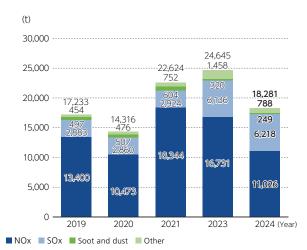
ACLESYA neutralizes hydrogen chloride and sulfur oxide in the exhaust gases of waste incinerators, thereby significantly eliminating a cause of air pollution. The product also helps curb fly ash and reduces the environmental impact of final disposal.

ACLESYA | Products and Service Information | AGC Chemicals Company (agc-chemicals.com)



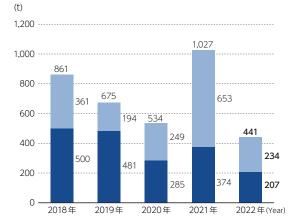
## Related Data

#### **Air Pollutant Emissions of the AGC Group**



Note: "Other" includes HAP, VOC, etc.

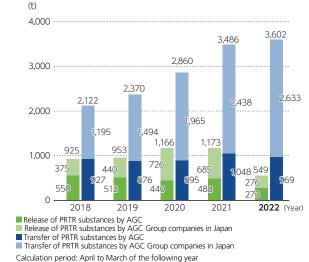
# Volatile Organic Compound Emissions of the AGC Group (Japan)



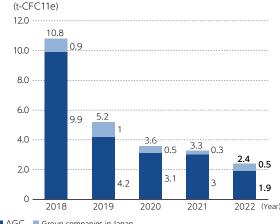
AGC Group companies in Japan

Calculation period: April to March of the following year





#### Atmospheric Release of Ozone-Depleting Substances Subject to Notification under the PRTR Law



AGC Group companies in Japan

t-CFC11e = Ozone-depleting substances (t) × Ozone depletion potential Ozone depletion potential is a coefficient that expresses the destructive effect of the unit weight of substances released into the atmosphere, with chlorofluorocarbon-11 assigned a relative value of 1.0

Calculation period: April to March of the following year

# Initiatives for the Prevention of Soil and Groundwater Contamination

To prevent soil and groundwater contamination, the AGC Group Guidelines regarding Measures for Soil and Groundwater Control set out standards for the storage and handling of hazardous substances, the management of storage tanks, and the management of wastewater and rainwater. Further, the guidelines stipulate methods of disclosing information on countermeasures if soil or groundwater contamination is discovered. We appropriately submit progress reports to administrative agencies and disclose information on the Group website with respect to measures for preventing the spread of and purifying known soil or groundwater contamination.

When acquiring, selling, or leasing land, we conduct environmental due diligence to evaluate in advance whether the real estate in question has any environmental defects. If soil or groundwater contamination is discovered, we minimize risks associated with laws and regulations and then acquire, sell, or lease the land.

#### Initiatives at the Chiba Plant

In 2001, the volatile organic compounds 1,2-dichloroethane, tetrachloroethylene, trichlorethylene, dichloromethane, and carbon tetrachloride were detected in a groundwater survey conducted at the Chiba Plant. AGC is taking measures to prevent the external spread of these substances by pumping up groundwater, purifying soil through soil vapor extraction, and establishing water insulation walls.

In addition, pursuant to the Water Pollution Prevention Act, we are taking measures to prevent underground seepage from the surface of the ground on which manufacturing equipment is installed.

#### Initiatives at the Kashima Plant

Dichloromethane and carbon tetrachloride were detected in a groundwater survey at the Kashima Plant in 2006. AGC is taking measures to prevent the external spread of these substances by pumping up groundwater, purifying soil through soil vapor extraction, and establishing water insulation walls. Also, as fluorine and arsenic surface soil contamination was discovered, soil was replaced and the surface re-covered.

# Reducing the Environmental Impact of Management of Chemical Substances

As well as a range of different types of glass for use in architecture, automobiles, and displays, the AGC Group sells electronic device components, chemicals, and ceramics. Moreover, our products have a wide range of applications. They are not only indispensable to various industries but also used to improve the convenience of day-to-day life. Due to concerns regarding the environmental impact of chemical substances used in manufacturing processes and as components in products, we are committed to establishing risk management practices that consider environmental impacts across the entire value chain. Our goal is to provide safe and reliable products.

#### Addressing Regulations in Each Country and Region

The AGC Group shares information and develops human resources within the Group to comply not only with Japanese environmental regulations but also with the environmental regulations of various countries and regions. Specifically, we are disseminating information about world-wide environmental regulatory trends within the Group and sharing changes and developments in regulatory trends during regular information sharing sessions. In addition, as part of our awareness-raising activities, we conduct internal training from a broad perspective for all stakeholders involved in the management of chemical substances contained in our products, including trends in environmental regulations in each country and region, and approaches to managing chemical substances. Similarly, for those who are directly involved in the management of chemical substances on a daily basis, we conduct internal training to comply with the PRTR system, which stipulates the registration of releases and movements of harmful substances.

#### Management of Chemical Substances in Value Chains

In accordance with AGC Group Chemicals in Products (CiP) Management Standards, we minimize risks associated with the inclusion and use of hazardous and dangerous chemical substances in processes. These efforts extend from R&D on products and manufacturing methods through to product disposal.

#### Development

At the development stage, we reduce hazardous chemical substances used in both manufacturing processes and products.

#### Procurement

As for procurement, we have established and follow the AGC Group Integrated Green Procurement Guidelines, which require reporting on the volumes of chemical substances that are subject to management under customers' green purchasing guidelines as well as the provision of declarations on the non-inclusion of environmentally hazardous substances. Further, we seek reductions in the environmental impact of chemical substances used in the manufacturing processes of business partner companies.

#### Manufacturing

When using chemical substances during manufacturing, we not only comply with laws and regulations but also follow voluntary guidelines: the AGC Group Chemical Substance Management Regulation Guidelines. Based on these guidelines, we manage chemical substances used, assign chemical substance managers, and conduct chemical substance risk assessments. Moreover, taking into consideration the risk of environmental pollution or adverse health effects, we manage all chemical substances that we use, including those that are not regulated by law, under an original Chemical Substance Registration System.

In Japan, with the aim of ensuring proper understanding of PRTR Law requirements and calculation methods for reporting values, the AGC Group carries out PRTR training, standardizes data calculation methods in line with manufacturing processes, and raises awareness of rule changes while maintaining systems for data collection, calculation, checking, and notification. In addition, we engage in a broad range of reduction measures, including switching to manufacturing methods that do not use substances subject to the PRTR Law.

Further, a wide variety of chemical substances are used in the buildings and equipment required for our business activities. The Group thus complies with the laws and regulations of each country in respect to these chemical substances and also voluntarily manages them.

The Chemical Company's rigorous compliance with laws and regulations coupled with efforts to reduce its environmental burden led to participation in the perfluorooctanoic acid (PFOA)\* stewardship program of the U.S. Environmental Protection Agency, which resulted in the discontinuation of the manufacture and use of PFOA\* by the Group at the end of 2015. We have also been actively engaged in the voluntary management of fluorochemical substances. For example, the Group achieved the 2020 GHG emission volume reduction targets set by the Ministry of Economy, Trade and Industry, the Japan Fluorocarbon Manufacturers Association, and the Japan Chemical Industry Association under Environment

a voluntary action plan in collaboration with these organizations. In addition, ahead of industry peers, we have developed and introduced alternative products and technologies that have excellent safety and sustainability performance. For example, we have recently developed the AMOLEA<sup>™</sup> series, which provides alternatives to hydrofluorocarbon refrigerants and solvents and has low GWP. Also, we have developed an ion exchange membrane for use in the electrolysis of water that produces hydrogen, which promises to be a next-generation energy source.

Recent years have seen the strengthening of regulations related to fluorochemical substances and growing interest in environmental protection worldwide. By continuing to appropriately manage chemical substances, we will reduce our environmental impact and make effective use of resources. At the same time, we will contribute to the development of a sustainable society by making maximum use of the characteristics of fluorochemical substances.

AGC issues Safety Data Sheets (SDS) for each product in Japanese, English, Chinese, Korean, and Malaysian. Information about the correct way to use and dispose of our products, as well as their impact on the environment and health, is provided to customers in each country where our products are actually used. Moreover, we provide information about harmful chemical substances contained in our products in accordance with laws, regulations, and the needs of our customers.

#### Transportation

At the transportation stage, Yellow Cards are used at AGC Group sites within Japan to share information about emergency procedures that should be the taken when transporting our products in accordance with the characteristics of chemical substances and products loaded on trucks and other means of transportation. In addition, industrial waste, including harmful substances, emitted during the manufacturing process is noted on Waste Data Sheets (WDS), which contain information about the properties of the industrial waste and are provided to collection and transportation companies and waste management companies.

#### Usage and disposal

At the usage and disposal stages, through answers to customer's environmental surveys, the AGC Group shares information about its initiatives to manage substances that impact the environment, reduce regulated chemical substances, reduce packaging materials and waste, cut  $CO_2$  emissions in the manufacturing process and logistics, and reduce the amount of water resources consumed.



#### Initiatives for Managing Chemical Substances in Value Chains

#### Initiatives to Reduce Hazardous Chemical Substances

The AGC Group completed the removal of friable asbestos from its Japanese business sites in 2008. The Group also disposes of non-friable asbestos in an appropriate manner.

In response to the Minamata Convention on Mercury, the AGC Group has conducted a survey on the inclusion and use of mercury not only in manufacturing processes but across entire supply chains. The results showed that mercury is still used to some extent in porosimeters and other measuring equipment. However, no operational risks are posed by this equipment as the aforementioned convention permits the use of appropriately managed equipment. Naturally, we utilize permitted mercury-containing equipment in compliance with laws and regulations. Further, although alternative equipment is often unavailable, we replace equipment with substitutes wherever possible.

#### **Initiatives in PFAS Management**

PFAS (per- and polyfluoroalkyl substances) is a collective term for organic fluorinated compounds mainly composed of carbon and fluorine, each of which has different properties. According to the United States Environmental Protection Agency (EPA), there are approximately 12,000 types of PFAS. The production and use of three types of PFAS, PFOS, PFOA and PFHxS, have been restricted under the Stockholm Convention due to concerns for bioaccumulation and potential effects on human health. AGC has never engaged in the production of PFOS and PFHxS and had already ceased the production and use of PFOA prior to its restriction under the Stockholm Convention.

PFAS have various combinations of properties and, except for these three restricted types of PFAS, are used in various applications in daily life and industries such as energy, semiconductors, and telecommunications.

To fulfill our corporate responsibility to society, AGC is committed to proactive efforts to minimize environmental impacts resulting from our business activities as well as through our product offerings, based on scientific evidence. AGC will continue to responsibly provide fluorine products that are indispensable for customers and society and support the daily lives of people around the world.

Regarding PFAS, we also provide information on our website. "What is PFAS?" - Information on types, uses, and regulations

## Initiatives for Biodiversity Conservation

As described at the outset of this chapter, we conducted a biodiversity risk survey at each AGC Group site, as it was expected that our direct operations would have a significant impact on natural capital and biodiversity. It was found as a result of the surveys that there are currently no plant or animal species requiring direct protection at any site. However, biodiversity is of great importance to the AGC Group, and we are engaged in various activities to avoid biodiversity loss, as well as to conserve and restore biodiversity.

#### Engagement with Ecologically Protected Areas

As nature conservation areas are at the core of ecosystem protection, the AGC Group thinks that we must protect these areas and pass on their value to future generations. Accordingly, the AGC Group regularly confirms and categorizes the status of protected areas within a 10-kilometer radius of 270 manufacturing and non-manufacturing bases in Japan and overseas. In these activities, the AGC Group gathers information on Japan and other countries concerning their Key Biodiversity Areas (KBA<sup>\*1</sup>), which are included in the World Database on Protected Areas (WDPA<sup>\*2</sup>), as well as information regarding species on the International Union for Conservation of Nature (IUCN) Red List by using open data in Japan and the Integrated Biodiversity Assessment Tool (IBAT<sup>\*3</sup>). Going forward, the AGC Group will not only identify protected areas and species but also evaluate whether our business activities affect them.

\*1 KBA: Key biodiversity area (an important area for the conservation of biodiversity) \*2 WDPA: The world database on protected areas (World protected areas database) \*3 IBAT: Integrated biodiversity assessment tool

#### Number of Protected Areas and IUCN Red List Species within 10 Kilometers and within 50 Kilometers of AGC Group Bases

		Within 50 km		
	Protected areas	WDPA	КВА	IUCN Red List species, etc.
Asia	127	124	77	134
Europe	102	100	60	104
Americas	15	15	8	14

#### Number of Species on the IUCN Red List and Domestic Conservation Lists in Areas within 50 km of AGC Group Bases

Critically endangered	265 species
Endangered	650 species
Vulnerable	1,050 species
Near threatened	1,006 species

#### **Initiatives to Conserve Biodiversity**

#### **Conversion of Cullet into Artificial Silica Sand**

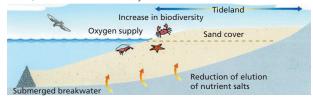
During manufacturing processes, the glass business generates glass waste called cullet. Cullet is mainly recycled as a raw material for asphalt. However, by converting cullet into artificial silica sand, the AGC Takasago Factory is helping regenerate tidal flats through the creation of artificial tidal flats.





#### Pulverized cullet

With the decrease in the number of tidal flats and a renewed appreciation of their value, many regions have begun attempts to regenerate their tidal flats in recent years. One method of regeneration is the creation of artificial tidal flats, which are designed to cover the seabed with clean sand to reduce the elution of nutrient salts from the seabed, supply oxygen that purifies water, and restore biodiversity.



Source: The Fisheries Agency website (Japanese only)

To use cullet as silica sand for tidal flats, the removal of sharp edges so that people and animals can step on it without being injured and conformity with standards on water bottom sediment are necessary. Therefore, the cullet that the Takasago Factory generates is only used in artificial tidal flats after being made edgeless through the use of a milling machine and passing elution tests.

#### **Conservation of Wild Orchids**

Golden, silver, and sword-leaved helleborine orchids grow naturally on the grounds of the AGC's Yokohama Technical Center. As endangered species, these orchids have been included in the red lists of the Ministry of the Environment, Kanagawa Prefecture, and other prefectures. Although the coastal areas are not the natural habitat of the orchids, we aim to look after them carefully given their status as local assets whose annual flowering attracts visitors and because of the scarcity of green spaces in Yokohama. Accordingly, under the guidance of external experts, our employees weed out invasive species and perform other maintenance tasks in the area to protect these rare orchids. The area has been designated as a Natural Symbiosis Site by the Ministry of the Environment, as part of the international "30 by 30" initiative, which aims to conserve at least 30% of land and marine areas by 2030 to protect biodiversity.





From foreground, Guinlan, Kugenumaran, Kinran orchids Conservation activity

Golden orchid: Designated as vulnerable in the Ministry of the Environment's Red List 2020 and Kanagawa Prefecture's Red List 2020 Silver orchid: Designated as critically endangered, vulnerable, and near threatened in the red lists of 39 prefectures Sword-leaved helleborine orchid: Designated as vulnerable in the Ministry of the Environment's Red List 2020 and Kanagawa Prefecture's Red List 2020

**GRI Standards Inde** 

#### **Initiatives for Species Conservation**

AGC Vinythai Public Company, which operates the Chemicals Business in Thailand, has been continuously implementing the Coral Reef Cultivation Project since 2003, and so far, it has planted more than 100,000 coral colonies around the Gulf of Thailand. This initiative is carried out by AGC Vinythai Public Company in collaboration with the Department of National Parks, Wildlife and Plant Conservation of Thailand, academic institutions, local governments, and neighboring communities. In addition to coral conservation, the initiative supports eco-tourism and enhances the income of local residents. The project has expanded to 11 coastal regions, with over 10,000 participants engaging in coral cultivation activities annually.

Since 2016, similar efforts have been made in Indonesia, with PT Asahimas Chemical, which operates a chemical business, working with the Indonesian NPO, KEHATI to promote coral reef conservation activities on Sangiang Island.



Coral conservation foundation workers plant coral seedlings in a PVC pipe nursery



#### **Initiatives to Conserve Mangrove Forests**

Asahimas Chemical has also supported the mangrove planting project implemented by NPO KEHATI since 2021. Mangrove forests create rich ecosystems and play various roles, including acting as breakwaters to protect the coast from erosion by high waves. With employees of PT Asahimas Chemical joining hands with local residents, this project aims to plant about 140,000 mangroves by 2026 on roughly 14 hectares of land to rehabilitate mangrove forests in the Pandeglang Regency, Banten Province, Java, and neighboring areas that were washed away by a tsunami in 2018. In addition, we plan to academically verify the carbon dioxide absorption effect of the mangroves, report the results to the Indonesian government, and consider possible avenues for contributing to carbon net-zero.

#### Participation in Initiatives Aimed at Conserving Natural Capital and Biodiversity

We are actively engaged in biodiversity conservation efforts by collaborating with other companies and organizations to share challenges and deepen our understanding of conservation practices. We support the 30 by 30 Alliance, led by the Ministry of the Environment, and as a member of the Keidanren Committee on Nature Conservation, we endorse the Keidanren Biodiversity Declaration and Action Guidelines. Furthermore, we are committed to preserving natural capital and biodiversity. As a member of the Japan Business Initiative for Biodiversity (JBIB), we participate in study groups and foster dialogues between industry and academia.

In 2023, we established the AGC Nature Positive Evaluation Research Field within the Graduate School of Engineering at Hokkaido University to develop methods for quantifying the impact of corporate activities on natural capital, focusing on creating new industrial opportunities. Leveraging the academic expertise of Hokkaido University and the extensive knowledge AGC has accumulated in glass and chemicals, we aim to establish a method for quantitatively evaluating the relationship between business activities, products, and nature.

#### Affiliation with the Roundtable on Sustainable Palm Oil

With the large-scale development of oil palm plantations around the world, environmental problems such as the deforestation of tropical rainforests and CO<sub>2</sub> emissions from peat areas, as well as forced labor and child labor of plantation workers have become issues. In 2020, the Chemicals Company joined the RSPO, a non-profit organization that promotes sustainable palm oil production and use. To support the use of sustainable palm oil in value chains, our subsidiary, AGC Vinythai Public Company Limited, which produces bio-based ECH has been certified by RSPO Supply Chain Certification Standard (RSPO SCCS) under mass balance model. This model allows for mixing of RSPO and non-RSPO certified palm-based products at any stage in the supply chain. In this way, we can offer RSPO certified bio-based ECH, which is derived from sustainable palm-based glycerine and delivered to downstream users under a credible and transparent tracking system.

## Verification Statement

The AGC Group has received third-party assurance from SGS Japan Inc. for the environmental performance data for 2023, as listed in the table in the following section.

#### **Environment-Related Data Covered under This** Assurance:

• GHG emissions (Scope 1, 2, and 3)

- Water use
- Amount of wastewater
- Data on waste volumes, including valuable materials

#### 独立した第三者保証報告書

2024年6月20日 意見書番号:SGS24/110

AGC 株式会社 東京都千代田区丸の内一丁目5番1号 代表取締役兼社長執行役員 平井 良典 様

SGSジャパン株式会社(以下、当社)は、AGC株式会社(以下、組織)からの依頼に基づき、組織が作成した 「AGC統合レポート2024 AGCサステナビリティデータブック2024」(以下、統合レポート2024)に記載される 2023年度のパフォーマンスデータのうち、「GHG排出量及び環境パフォーマンスデータ 算定報告書」に★マークを 付して記載されたGHG排出量及び環境パフォーマンスデータ(以下、ステートメント)について、限定的保証業務 を実施した。

#### 組織の責任

組織は、組織が定めたステートメントの算定・報告規準(以下、組織の定めた規準)統合レポート2024に記 載。)に準拠してステートメントを作成する責任を負っている。なお、GHG の算定は、様々なガスの排出量を結合 するため必要な排出係数と数値データの決定に利用される科学的知識が不完全なため、固有の不確実性の影響下に ある。

#### 当社の独立性と品質管理

当社は、誠実性、客観性、職業的専門家としての能力と正当な注意、守秘義務、及び職業的専門家としての行動 に関する基本原則に基づく独立性及びその他の要件を含む、国際会計士倫理基準審議会の公表した「職業会計士の 倫理規程」を遵守した

当社は、国際品質管理基準第1号8に準拠して、倫理要件、職業的専門家としての基準及び適用される法令及び規 則の要件の遵守に関する文書化された方針と手続を含む、包括的な品質管理システムを維持している。

#### 当社の責任

当社の責任は、実施した手続及び入手した証拠に基づいて、ステートメントに対する限定的保証の結論を表明す ることにある。当社は、国際監査・保証基準審議会の公表した国際保証業務基準(ISAE) 3000 「過去財務情報の 監査又はレビュー以外の保証業務」及び国際保証業務基準(ISAE) 3410「温室効果ガス報告に対する保証業務」 に準拠して、限定的保証業務を行った。

- 当社が実施した手続は、当社の職業的専門家としての判断に基づいており、下記を含む。
- ステートメントの測定・集計・算定・報告方法に関する質問及び適切性の評価
- ステートメントとその基礎となる記録が一致していることの照合 ステートメントに関する算定方法並びに内部統制の整備状況に関する質問
- 定量的データに対する分析的手続きおよび質問 横浜テクニカルセンターおよび千葉工場の現地調査 .
- 組織の見積りを開発する方法が、適切であり、一貫して適用されていたかどうかの評価 .
- ※見積りの基礎となったデータのテスト・見積りを評価するための独自の見積りの開発を含めていない

限定的保証業務で実施する手続は、合理的保証業務に対する手続と比べて、その種類が異なり、その実施範囲は 狭い。その結果、限定的保証業務で得た保証水準は、合理的保証業務を実施したとすれば得たであろう保証ほどに は高くない。

#### 限定的保証の結論

当社が実施した手続及び入手した証拠に基づいて、統合レポート2024に記載されるステートメントが、組織の定める規準に 準拠して作成されていないと信じさせる事項は、全ての重要な点において認められなかった。

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SGSジャパン株式会社 神奈川県横浜市保土ヶ谷区神戸町134 横浜ビジネスパーク ノーススクエアI ビジネスアシュアランス 認証・認定統括責任者 竹内 裕二



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1. Period for Calculation

January 1, 2023–December 31, 2023

2. Calculation Results

The figures marked with  $\bigstar$  below have received third-party verification.

## **GHG Emissions and Environmental Performance Data Report**

	Calculation targets	Scope of calculation	Values	Calculation method/Definitions of calculation targets	*
Scope 1		313 domestic and overseas sites	5,969,608 t-CO2e	Direct GHG emissions are calculated for corporate activities as defined in the GHG Protocol.	*
Scope2	Location-based method	321 domestic and overseas sites	4,328,790 t-CO <sub>2</sub> e	Indirect GHG emissions are calculated by multiplying the activity data from corporate activities, as defined in the GHG Protocol, by the location-based emission factor.	*
Scopez	Market-based method	321 domestic and overseas sites	4,049,637 t-CO <sub>2</sub> e	Indirect GHG emissions are calculated by multiplying the activity data from corporate activities, as defined in the GHG Protocol, by the market-based emission factor.	*
	Category 1	114 domestic and overseas sites	3,746,384 t-CO <sub>2</sub> e	The volume of resources used in conjunction with producing products multiplied by the emissions intensity* per resource	*
	Category 2	401 domestic and overseas sites	743,652 t-CO <sub>2</sub> e	The amount of investment in capital goods multiplied by the emissions intensity* per investment amount	*
	Category 3	321 domestic and overseas sites	1,262,641 t-CO <sub>2</sub> e	The amount of fuel and energy used multiplied by the emissions intensity* for each type of fuel and energy	*
	Category 4	153 domestic and overseas sites	901,392 t-CO <sub>2</sub> e	The emissions associated with the procurement of materials and components, as well as with the transportation of products at the time of shipment, are calculated based on the resource input amount accompanying product production and the ton-kilometer data for product transportation. These calculations use the emissions intensity* specific to each resource type.	*
	Category 5	267 domestic and overseas sites	90,921 t-CO <sub>2</sub> e	Volume of waste generated in operations that is processed by external service providers multiplied by emissions intensity* per method	*
	Category 6	401 domestic and overseas sites	89,804 t-CO <sub>2</sub> e	Global emissions calculated based on the result of multiplying AGC business travel expenses by the emissions _ intensity* per transportation method, using estimates based on employee composition ratios	*
	Category 7	401 domestic and overseas sites	38,174 t-CO <sub>2</sub> e	Global emissions calculated based on the result of multiplying AGC commuting expenses by the emissions intensity* per transportation method, using estimates based on employee composition ratios	*
Scope 3	Category 8	Not subject to calculation	- t-CO <sub>2</sub> e	Emissions from leased properties and leased vehicle fuel are calculated using Scope 1 and 2, so Category 8 is excluded.	
	Category 9	Not subject to calculation	- t-CO <sub>2</sub> e	Transportation of products from the company's production plant to the material processing plant is included, but because all transportation costs are borne by the company, it is accounted for in Category 4 and not included in Category 9.	
	Category 10	Products of the AGC Group in the relevant category	153,743 t-CO <sub>2</sub> e	Weight of sold products multiplied by the basic unit of processing per product and the electricity emissions intensity	*
	Category 11	Products of the AGC Group in the relevant category	1,377,878 t-CO <sub>2</sub> e	GHG emitted directly through the use of products sold at sales outlets multiplied by emissions intensity* per product, based on assumed use conditions	*
	Category 12	Products that were sold by the AGC group	806,407 t-CO <sub>2</sub> e	The weight of products sold multiplied by the basic unit per type of waste matter. For a portion of products, it is calculated by determining the volume of leakage from the weight sold and multiplying the figure by their global warming potential.	*
	Category 13	Eight Group companies in Japan	151,155 t-CO <sub>2</sub> e	Leased floor space in a building multiplied by basic unit of floor space and emissions intensity*	*
	Category 14	Not subject to calculation	- t-CO2e	Not applicable as the AGC Group does not operate franchises	
	Category 15	15 investee companies, including domestic and international Group companies	138,964 t-CO <sub>2</sub> e	Calculated by multiplying the Scope 1 and 2 emissions of investee companies by the investment ratio.	*
	Water intake	239 domestic and overseas sites	887,305,883 m <sup>3</sup>	The amount of water intake associated with corporate activities.	*
Mater	Water intake (excluding seawater for cooling)	239 domestic and overseas sites	84,246,983 m <sup>3</sup>	The amount of seawater used for cooling is deducted from the amount of water intake for corporate activities.	*
Water	Amount of wastewater	208 domestic and overseas sites	868,524,400 m <sup>3</sup>	The amount of wastewater generated by corporate activities.	*
	Volume of wastewater (excluding seawater for cooling)	208 domestic and overseas sites	68,639,950 m <sup>3</sup>	The amount of seawater used for cooling is subtracted from the amount of wastewater generated by corporate activities.	*
Waste	Amount of valuable materials generated	266 domestic and overseas sites	187,690 t	The amount of valuable materials generated in conjunction with corporate activities.	*
Traste j	Amount of waste generated	267 domestic and overseas sites	525,744 t	The amount of waste generated by corporate activities (including the amount of general waste generated).	*

\* Emissions intensity calculations are based on the Sustainable Management Promotion Organization's LCA inventory database IDEA (Ver. 3.3), the Ministry of the Environment's database (Ver. 3.3), and Gabi (2021).

# **Respecting Human Rights**

## Fundamental Approach

Society

In 2011, the United Nations Human Rights Council (UNHRC) announced its Guiding Principles on Business and Human Rights ("Guiding Principles"). Among the stated principles is "the responsibility of companies to respect human rights." The AGC Group has stipulated "Respect for People" in the AGC Group Charter of Corporate Behavior and the AGC Group Human Rights Policy, and acts in accordance with this Guiding Principles and other internationally recognized human rights standards. As part of our corporate responsibility to respect human rights, we have included the concept of human rights in the AGC Group Purchasing Policy, which specifies items that we will work on in cooperation with our suppliers, in order to promote human rights-conscious business activities not only within the AGC Group but also throughout our supply chain, and we ask for their cooperation in this regard.

Furthermore, regarding employees' rights, the Group complies with the laws and regulations of each country and region and respects the rights to freedom of association and collective bargaining.

## Management Structure

The AGC Group conducts human rights efforts in collaboration with relevant departments. The Sustainability Committee, which meets four times a year and is attended by the CEO. CFO. CTO. Audit & Supervisory Board members, and all division heads, discusses initiatives to address human rights issues, such as responsible mineral sourcing, based on the AGC Group Human Rights Policy. The discussions of the Sustainability Committee are reported to the Board of Directors twice a year. Making efforts to spread awareness of human rights throughout the Group and to promote initiatives related to human rights and labor practices, we carry out in cooperation with relevant divisions as part of daily operations. The Human Resources Division conducts education on human rights and implements voluntary inspections in relation to human rights and labor practices. Meanwhile, the Procurement & Logistics Division is responsible for a questionnaire survey on sustainable procurement, which covers the status of and initiatives in relation to human rights and labor practices in supply chains. In addition, the Human Resources Division and the Compliance Division have established internal and external consultation contact channels (harassment consultation desks, helplines, etc.) in a manner that takes into consideration those seeking consultation.

including employees, customers, and suppliers. The Procurement & Logistics Division also has a compliance consultation desk for procurement activities.

## Groupwide Initiatives

# Responding to Issues Regarding Human Rights and Labor Relations

In the event that it becomes clear that the Group's business activities have caused or contributed to any negative impact on human rights, the AGC Group will take appropriate remedial measures and strive to take corrective and preventive measures. Specifically, the Human Resources Division, Compliance Division, and the relevant workplaces will work together to respond to each case.

# Regular Self-Assessments of Human Rights and Labor Practices

The AGC Group conducts a voluntary risk assessment of human rights and labor practices every three years at Group companies in and outside of Japan, including inspections for child labor and forced labor, in order to ascertain the status of respecting human rights and the labor practices within the Group. The Group carried out such an assessment at approximately 190 companies in 2022 and found no cases related to human rights issues. The next assessment is scheduled for 2025, during which the Group will update its checklist based on social trends and other factors, conduct the survey, and promptly address any cases that require rectification.

#### Support for the UK Modern Slavery Act 2015

AGC Chemicals Europe released the following official statement in accordance with the UK Modern Slavery Act 2015.

#### MODERN SLAVERY & HUMAN TRAFFICKING STATEMENT

# Governanc

## AGC's Initiatives

#### The Salient Human Right Issues for the AGC Group

We analyzed and evaluated the characteristics of the AGC Group's business areas, business activities, and value chains, and our stakeholders, and identified the 14 items in the table below as human rights issues that require attention. From these, we identified the prominent issues that have a particularly significant impact on human rights and on which the AGC Group should focus its efforts to reduce potential risks. The AGC Group will work to mitigate risks related to these prominent human rights issues by implementing human rights due diligence. The AGC Group will continually conduct risk assessments and review its significant human rights issues in response to changes in social conditions and business activities.

# Human Rights Issues for the AGC Group to consider (14 items)

#### Salient Human Rights Issues: 5 items

- 1. Worker's health and safety
- 2. Rights of local people
- 3. Conflict minerals (responsible mineral procurement)
- 4. Procurement of raw materials
- 5. Discrimination and harassment in the workplace and employment

#### Other Human Rights Issues to Consider: 9 items

- 1. Consumers' health and safety
- 2. Forced labor
- 3. Child labor
- 4. Freedom of association and collective bargaining
- 5. Adequate working hours
- 6. Decent wages
- 7. Rights of foreign and migrant workers
- 8. Right to privacy
- 9. Corruption

# Measures to Deal with Human Rights Issues and Harassment

AGC conducts harassment prevention and compliance training programs and endeavors to ensure a healthy work environment free from discrimination and harassment. We educate and take measures to prevent sexual harassment, power harassment, and various other types of harassment through stratified training. If harassment occurs, we take corrective measures to prevent recurrence, which include reeducation of the individual at fault. To facilitate early detection of problems, AGC has established internal and external consultation contact channels (harassment consultation desks, helplines, etc.) in a manner that takes into consideration those seeking consultation, including employees, customers, and business partners. Through these contact channels, we expedite the provision of consultations to employees with concerns, address problems, and prevent their occurrence. Moreover, the internal reporting helpline managed by the Compliance Department is available not only to AGC employees but to all Group employees.

# Freedom of Association and the Right to Collective Bargaining

Within AGC, the employees' union, the AGC Labor Union, works to maintain and strengthen healthy labor-management relations. In negotiations between management and labor, each side respects the other position and logic, and tires to solve problems through discussion. The labor union negotiates with management on working and other conditions for its members. The union managers and top management of AGC have meetings that are focused on management of the entire business at least twice a year.

#### **Data about the AGC Labor Union**

	Number of members*	Average age	Length of service
2019	4,212	39.4	15 year and 3 months
2020	4,386	39.6	15 year and 2 months
2021	4,526	39.7	15 year and 3 months
2022	4,535	40.0	15 year and 6 months
2023	4,574	40.2	15 year and 7 months

\* AGC adopts a union shop system under its labor agreement.

# **Human Resource Management**

## **Fundamental Approach**

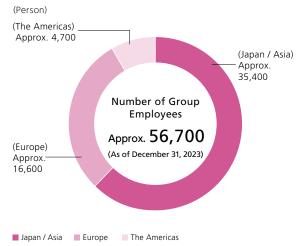
To continuously evolve as a truly global enterprise, the AGC Group has set out the "7 Key Principles for People," which are aimed at realizing progressive human resource management.

## **Management Structure**

In the AGC Group, the Human Resources Division takes the initiative in conducting human resource management in line with the "7 Key Principles for People," which define our philosophy toward human resource management.

Taking into account the labor laws and practices in each country and region, as well as employee awareness, we are working on various measures in collaboration with Human Resources representatives in each company and region.

#### Number of Employees by Region (AGC Group)



#### AGC Group "7 Key Principles for People"

The AGC Group wishes to pursue these principles as the foundation of our "7 Key Principles for People" to maximize our performance as a truly global corporation.

#### Implementation of "Look Beyond"

AGC Group requires all employees to commit to our Shared Values of "Look Beyond" — Our four Shared Values: Innovation & Operational Excellence, Diversity, Environment, and Integrity.

#### Diversity for Organizational Competitiveness

AGC Group builds teams of diverse people who support our four Shared Values of **"Look Beyond"** and have the abilities to contribute to organizational competitiveness. **Development and Growth** 

AGC Group encourages employees to grow and provides them with opportunities for self-development.

#### Job Satisfaction and Pride

AGC Group encourages employees to achieve their goals so that they feel a sense of pride and satisfaction in their work.

#### Work Environment and Conditions

AGC Group provides a safe and healthy work environment. **Open Communication** 

AGC Group emphasizes open communication in the workplace to create a better organizational climate.

#### Evaluation, Recognition, and Rewarding Performance

AGC Group evaluates and recognizes employees who contribute to the organization and rewards their contributions.

## **Groupwide Initiatives**

#### Fostering Global Leaders

To systematically promote the fostering of leaders who can lead the Group forward globally, the AGC Group identifies talent from all over the world regardless of nationality and gender, and trains diverse talent at the global, national, and regional levels.

In addition, in accordance with the current status of each business and region, we are holding Groupwide training courses and on-site training, including assignments and projects outside the home country.

From 2020 to 2022, despite some cancellations due to the spread of COVID-19, we offered programs, including online training, targeting future leaders of the Group, its departments, and companies at the global level and in all countries and regions where we operate.

#### AGC Group's Leader Training Programs



#### Human Resource Management System

AGC manages employees fairly in consideration of their abilities and performance. The Company aims to provide its diverse range of employees with the systems and environments necessary to help them perform their jobs, without discrimination based on gender, age, or disability.

For that reason, the Company clarifies employees' roles, functions, and responsibilities and utilizes and evaluates capable employees fairly, regardless of age, length of service, or gender.

#### Number of Employees at AGC

As of end of December, 2023, excluding those dispatched from other Group companies

Classi	fication	Male	Female	Total	Percentage of female employees
Managers		2,567	232	2,799	8%
Non- managers	Career- track positions	791	215	1,006	21%
	Shop-floor workers	3,167	160	3,327	5%
	Clerical positions	11	497	508	98%
	Subtotal	3,969	872	4,841	18%
Total	<u>.</u>	6,536	1,104	7,640	14%

#### **Employee-Related Data for AGC**

		As of end	of December, 2023
Item	Male	Female	Total
Average age	43.4	42.4	43.2
Average length of service	18.0 years	14.5 years	17.2 years
Average overtime working hours	18.9 hours/month (average for members of the labor union)		
Paid leave acquisition 94.4 % rate (average for members of		94.4 % members of the	labor union)

#### Number of Employees Retiring (AGC)

Period: April 2023 to March 2024 Excludes employees retiring upon reaching the mandatory retirement age

	Number of employees
Number of employees retiring	170
Average length of service for retirees	12.3 years

## Retention Rate of New Career-Track Employees (AGC)

As of end of March, 2024

Year of recruitment	Number of employees	Retained employees	Retention rate
2021	111	106	95.5%
2022	122	118	96.7%
2023	140	139	99.3%

#### Percentage of mid-career hires among Career-Track Employees

Year	Percentage of mid-career hires
2021	52.5%
2022	57.9%
2023	58.8%

# **Improving Employee Engagement**

## **Fundamental Approach**

The AGC Group, under the banner "AGC People: Driving our Growth!," is committed to fostering an organizational culture where diverse individuals can demonstrate their potential and contribute to enhancing the Company's value through high engagement. Engagement is about nurturing an environment where motivated individuals and a company striving for a better organizational culture mutually grow and uplift each other. To this end, employees, managers, and members of the senior management team all consider ways to solve problems and find appropriate measures through dialogue. The Group also strives to make these approaches and activities part of its employees' daily work.

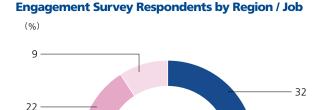
## **Groupwide Initiatives**

Since 2005, every three years the Group has conducted engagement surveys targeting Group company employees both inside and outside Japan, with the aim of improving overall engagement. Based on the results of these surveys, the Group formulates and executes necessary policies at individual divisions or workplaces and confirms the positive effect of the policies in the following survey.

Most recently, in September 2022 the Group conducted its seventh survey, in 24 languages targeting approximately 50,000 individuals. The positive response rate increased compared with the previous survey in 2019, and the effect of measures taken by each division and workplace was evident. Based on the results of the 2022 survey, we have been discussing workplace issues and developing additional measures to resolve them. The effectiveness of the measures is confirmed through simplified annual survey, while we are committed to ongoing activities to improve engagement.

#### Employee Engagement Survey 2022 Details

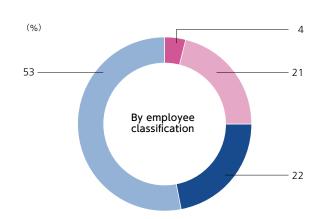
AGC Integrated Report 2023 P81 Employee Engagement Survey 2022



Country / Region

37





Executive Manager / supervisor Professional / administrative
 Shop floor

#### **Engagement Survey Respondents**

	Eligible employees	Respondents	Response rate
First survey (conducted in July 2005)	9,247	8,435	91%
Second survey (conducted in November 2007)	40,100	31,126	78%
Third survey (conducted in November 2010)	39,055	31,729	81%
Fourth survey (conducted in November 2013)	40,321	33,214	82%
Fifth survey (conducted in November 2016)	43,546	36,773	84%
Sixth survey (conducted in September 2019)	47,533	41,897	88%
Seventh survey (conducted in September 2022)	49,468	42,656	86%

#### **Engagement Survey Topics**

Employee	Employee	Change from Previous	
Engagement	Enablement	Iterations	
<ol> <li>Clear and promising direction</li> <li>Leadership</li> <li>Quality and customer focus</li> <li>Respect and recognition</li> <li>Development opportunities</li> </ol>	<ol> <li>Performance management and compensation</li> <li>Authority and empowerment</li> <li>Resources</li> <li>Collaboration</li> <li>Work efficiency</li> </ol>	Understanding and practice of <b>"Look Beyond"</b>	

#### Establishment of AGC Group CEO Award System

Society

The AGC Group has set up the annual AGC Group CEO Award System with the goal of creating a positive corporate culture where employees respect each other and commend each other's success and efforts. Nominations are received from around the world, out of which up to 42 projects that embody AGC's four key values will receive the AGC Group CEO Award (41 projects in fiscal 2023), and the **Look Beyond** Award will be presented to the most outstanding initiative among them. Information on the awardwinning activities is shared via the intranet website, and award ceremonies are held in each region of Japan / Asia, Europe, and the Americas. To maintain a high level of motivation among our employees, the Group regularly reviews ways to acknowledge and commend their contributions.

# Commendations Awarded across the AGC Group in Fiscal 2023

Division	Number	
Architectural Glass Asia Company	4	
Architectural Glass Europe and US Company	5	
Automotive	7	
Electronics	8	
Chemicals	8	
AGC Ceramics	2	
CTO Office*1	5	
CFO Office*2 and Internal Auditing	2	
Total 41		

\*1 Digital & Innovation Promotion Division, Business Development Division, Intellectual Property Division, EHSQ General Division, and Technology General Division

\*2 Corporate Planning General Division, Corporate Communications & Investor Relations Division, Legal Division, Human Resources Division, Finance & Control Division, Procurement & Logistics Division, and Information Systems Division

# Maximizing Employee Potential through Diverse Workstyles

The AGC Group has set out its long-term management strategy, Vision 2030. To put this strategy into practice, since 2016 the Group has been reviewing workstyles that allow all employees to work to their full potential and work environments that allow Group employees to work creatively.

For example, AGC is focusing on initiatives for promoting more flexible and diverse workstyles. These include the introduction of a system giving employees time off in the case of their spouse transferring jobs, and another system that provides teleworking options that are not only limited to cases of childcare or nursing care. Other initiatives include the enhancement of the reemployment registration system, which envisions potential life stage changes for once-retired employees, the introduction of a system providing support for employees undergoing medical treatment that encourages striking a balancing between treatment and work, and the implementation of a system offering paid leave in one-hour increments.

The Group will continue to encourage the use and establishment of these systems. By doing so, the AGC Group aims to become a company that puts into practice its human resource management system— "AGC People: Driving our Growth!" viewing its human resources as the Group's most important asset and drawing out their maximum potential.

To maximize their potential, it is crucial to guarantee the physical and mental well-being of all employees, which directly leads to increased employee activity, satisfaction, and productivity. This is the foundation of "AGC People: Driving our Growth!" To this end, the Group actively supports health management initiatives applicable to the AGC Group as a whole.

# **Global Promotion of Diversity**

## Fundamental Approach

Diversity is one of the four values in the AGC Group's vision, **"Look Beyond**," and it simultaneously forms the bedrock of the AGC Group while being the source of our competitive edge. By utilizing a diverse workforce and providing opportunities for their skills to be fully utilized, management aims to foster innovation and create value. The AGC Group values diversity in terms of not only gender, age, race, nationality, disability status, sexual orientation and gender identity, religious beliefs and creeds, and values, but also in terms of career paths, experiences, and work styles. We strive to convert this diversity into strength by emphasizing equity and inclusion while creating systems and environments that facilitate work by our diverse personnel.

#### AGC's Definition of DE & I

[Diversity] Diversity refers to the respect and appreciation of individual differences. It acknowledges diversity in age, gender, ethnicity, religion, disabilities or illnesses, gender identity, sexual orientation, education, and nationality. The emphasis is on empowering individuals by valuing and leveraging these differences.

[Equity] Equity is about providing each member with unique support to help them succeed and grow.

[Inclusion] Inclusion is a proactive initiative to incorporate each member's ideas, knowledge, styles, approaches, and perspectives to maximize the success of the business and the well-being of its members.

## Management Structure

In order to create an environment where diverse talent can fully utilize their abilities, the AGC Group established the Diversity Council in 2022, chaired by the CEO. This council meets semi-annually to share information and discuss cross-departmental issues, and advances concrete measures based on four key approaches: fostering a supportive culture, recruitment, human resource development, and creating a conducive work environment.

## Groupwide Initiatives

#### Hiring Diverse Personnel

The AGC Group has developed an Employee Value Proposition (EVP) to strengthen its global recruitment branding. Under the common phrase "Make Your Mark Every Day" and based on its concept, the Group is delivering a consistent recruitment brand message.

Furthermore, in the Asia-Pacific, a key region in our business strategy, we established a regional headquarters company, AGC Asia Pacific Pte. Ltd. in Singapore in 2013 to accelerate the development of new businesses and markets. We employ highly motivated and capable talents from within and outside the region, regardless of country of origin.

#### Empowering Women

The AGC Group has set diversity as one of our values in Group Vision **"Look Beyond**," and aims to manage our organization without regard to gender. In addition, the Charter of Corporate Behavior of the AGC Group states the aim to create a comfortable workplace free of discrimination, regardless of gender or other factors, and promotes the advancement of female employees, taking into account discussions at Board of Directors meetings.

## AGC's Initiatives

#### **Hiring Diverse Personnel**

Since 2010, AGC has boosted efforts to hire new graduates for career-track positions, including Japanese and non-Japanese students graduating from overseas universities as well as international students coming to Japan.

#### Non-Japanese Nationals Hired during New Graduate Recruitment for Career-Track Positions (AGC)

Year	Exchange students in Japan	Graduates of overseas universities
2019	2	4
2020	2	9
2021	2	0
2022	6	1
2023	10	1

#### **Empowering Women**

To create an environment that encourages the active participation of women, AGC has established a registration system for leavers who wish to be rehired. Under this system, leavers who wish to be rehired in the future are registered and given priority prior to being hired from the external human resources market. We have also introduced the mentorship system where senior female employees provide support to junior female employees. In addition, we have introduced a system allowing employees to take up to three years off when accompanying their spouse on a job transfer, supporting a flexible work-life balance.

#### Support for Raising Children

AGC provides support through a cross-departmental network of female employees for raising children, examples of which include the introduction of the Nursery Use Support System for external nurseries registered as AGC corporate bodies; the creation and distribution of handbooks for employees and their managers who are expecting or raising children; the holding of meetings between the Women's Activity Secretariat, female employees (both before taking childcare leave and after returning); and the holding of career design seminars after returning to work.

# Promotion of Female Employees to Management Positions

In July 2021, AGC endorsed the goal of "30% by 2030" that the Japanese Trade Union Confederation is encouraging companies to achieve. Accordingly, to provide society with value through the realization of diversity that empowers talented personnel regardless of gender, AGC aims for women to account for 30% of its directors and Audit & Supervisory Board members and 20% of its executive officers by 2030. Further, women accounted for 5.4% of AGC's managers (division manager or higher) as of the end of December 2023. Also, we have appointed one female outside director and one female Audit & Supervisory Board member as well as internally promoting three female employees to the position of executive officer.

Going forward, our initiatives will focus on stepping up the recruitment of talented women, actively promoting female employees through assignment and development, and creating an environment that empowers female employees (the introduction of required systems). Our goal is to raise the percentage of women in management positions (division manager or higher) to approximately 8.0% by 2030.

#### Trends in Percentages of Female Managers (Division Manager or Higher)

Year	Percentage of female employees
2019	3.5%
2020	3.6%
2021	3.9%
2022	4.8%
2023	5.4%

#### Trends in Percentages of Female Managers (General Supervisor or Higher)

As of December 31 each year (excluding employees over 60 years old)

Year	Percentage of female employees
2019	5.7%
2020	5.9%
2021	6.8%
2022	7.0%
2023	7.9%

#### Number of New Female Graduates Recruited for General Career-Track Positions

Year	Number of new female graduates	Total new graduates	Percentage of female employees
2020	30	120	25.0%
2021	17	111	15.3%
2022	23	122	18.9%
2023	40	140	28.6%

#### Wage Gap Between Men and Women

Year	Management positions (division manager or higher)	Non-management positions
2022	98.7%	81.1%
2023	93.9%	81.6%

Note: Gap when dividing regular employees into management and non- management categories

# Employment of People Who Have Reached Retirement Age

In April 2006, the AGC Group introduced a system to continuously employ retiring non-managers who meet personnel criteria for continuous employment. The criteria are provided in the labor-management agreement with the aim of utilizing the expertise, technological prowess, and skills of retirees and of reinforcing personnel ranks.

Since fiscal 2013, AGC has been gradually raising the age limit of employees eligible to apply for continuous employment, in accordance with a revision of the Law Concerning Stabilization of Employment of Older Persons, and plans to abolish age limitations by fiscal 2025.

Similarly, going beyond legal stipulations, AGC decided to raise its retirement age from 60 to 65 and has been gradually implementing this change since 2015. We are working this way to create an environment where employees over 60 can continue thriving in important positions in the workplace.

#### Number of Continuously Employed Individuals Aged 60 or More

Year	Number of reemployed retirees	Number of retirees	Continuous employment rate
2017	63	84	75.0%
2018	64	100	64.0%
2019	_	_	_
2020	41	71	58.0%
2021	58	113	51.3%
2022	_	19	_
2023	49	92	53.3%

Notes: 1. As shown in the table on p.69, the age of retirement is gradually increasing, and there were no retirees in 2019.

An optional retirement system has been in use since fiscal 2021. Employees who opted to retire before the age of retirement are included in the number of retirees.

3. Number of retirees that used the optional retirement system in 2022

Reference: Retirement Age for Employees Based on Date on Which They Become 60 Years of Age (up to 2023 )

Year	Retirement age	Year of retirement
2017	63	2020
2018		2021
2019	64	2023
2020		2024
2021	65	2026
2022		2027
2023		2028

#### **Employment of People with Disabilities**

The AGC Group has expanded employment opportunities for people with disabilities. AGC has exceeded the employment rate of people with disabilities designated by law and continues to promote understanding of this initiative throughout the Company.

#### **Employment of People with Disabilities**

Year	Number of people with disabilities (actual number)	Employment rate
2017	122	2.30%
2018	127	2.28%
2019	129	2.23%
2020	137	2.32%
2021	144	2.36%
2022	145	2.32%
2023	157	2.41%

#### Special Subsidiary, AGC Sunsmile

AGC Sunsmile, Inc. is a special subsidiary established in 2002 with a view to increasing the employment of people with intellectual disabilities. In cooperation with relevant organizations, the Company strives to provide a better work environment for highly motivated employees. Duties consist mainly of cleaning Company offices, and dormitories, and they are also responsible for greening activities at some plants. Depending on the needs of departments at business bases, AGC Sunsmile employees also engage in the conversion of documents into portable document format (PDF) and supplementary work related to manufacturing processes. Through the expansion of their job roles, we are working to create opportunities for AGC Sunsmile employees to thrive.

Previously, the company operated in the Keihin, Sagami, and Kansai areas, but in 2023, as part of its efforts to expand the work area, it established a new Tokyo office within AGC's headquarters. At this office, we aim to contribute to improving operational efficiency within the company by focusing intensively on administrative support tasks extracted from various divisions within the headquarters.

#### Creating a Vibrant Workplace for LGBTQ People

Under the Group Vision of valuing diversity, AGC is committed to creating an environment where diverse human resources can demonstrate their abilities and individuality, regardless of sexual orientation, gender identity, or gender expression. As part of these efforts, we are promoting the development of a workplace environment where LGBTQ people can work with peace of mind, and are developing internal measures in terms of both institutional and cultural aspects.

With regard to institutional measures, we operate internal and external consultation desks for LGBTQ people and recognize same-sex common-law partners as spouses. In terms of cultural measures, we promote internal understanding by holding seminars and expanding the number of ALLY members who understand and support LGBTQ. To increase the visibility of ALLY, we produce ALLY stickers and T-shirts, and volunteer members from within the company participate in cheering along the Tokyo Rainbow Pride Parade.

For LGBTQ people, ALLYs who have accurate knowledge and a willingness to respect others are a reassuring support. Therefore, we will continue to promote internal understanding and expand the number of ALLY members, while also working to enhance internal systems so that LGBTQ people can feel comfortable and supported in their workplace.



Graphical record of an internal seminar on LGBTQ ALLYs created by the participants



Cheering along the route of the 2023 Tokyo Rainbow Pride Parade

Society

# Work-Life Balance

## **Fundamental Approach**

The foundation of the AGC Group's human resource management, the "7 Key Principles for People," outlines how to maintain a work environment that allows employees to work safely. Based on these principles, the Group seeks to secure and maintain a work environment and conditions that enable employees to work with enthusiasm.

## **Management Structure**

The Human Resources Division is the main body in the AGC Group working to ensure a quality work-life balance for all Group employees. Based on the laws and practices of each country and region in which it operates, the Group considers work-life balance on a company-by-company basis, in light of the nature of business conducted by individual companies.

## AGC's Initiatives

AGC is improving its work environment with the aim of helping its employees perform their jobs with peace of mind and fully demonstrate their abilities at every stage of their lives. As part of this effort, we have established work-life balance-related systems that enable employees to work in harmony with their work and personal lives. We are also working to create a corporate culture that makes it easier for employees to take advantage of these systems.

#### Supporting Employees Caring for Children or Family Members

AGC has implemented several systems for employees who care for children and family members, including a childcare leave system, a child nursing leave system, and a shortened working-hour system. In 2012, the Group introduced a flexible work-from-home system that eliminates commuting times and allows employees to spend more time with their children and others requiring care.

In recognition of the results of these various initiatives, in 2008, 2011, 2015, and 2019 AGC was certified by the Tokyo Labor Bureau of the Ministry of Health, Labour and Welfare, based on the Act on Advancement of Measures to Support Raising Next-Generation Children, and authorized to use the Kurumin certification mark to indicate its support for the next generation. Further, AGC was selected by the Ministry of Economy, Trade and Industry in cooperation with the Tokyo Stock Exchange as a NADESHIKO brand company for its exceptional promotion of women's success (fiscal 2019 and fiscal 2020).

#### **Employees Taking Childcare / Family Care Leave**

Year	Number of employees who took childcare leave	Number of employees who took family care leave
2019	99 (including 30 male employees)	10
2020	109 (including 49 male employees)	2
2021	132 (including 61 male employees)	3
2022	205 (including 129 male employees)	11
2023	221 (including 129 male employees)	13

# Comparison between AGC's System and Legal Requirements

	Details	
Childcare leave	Available until the child becomes two years old	
Childcare leave at birth	Possible to take up to four weeks of leave within eight weeks from the date of birth	
Shortened working hours for childcare	Working hours can be shortened by up to two an a half hours per day until the child completes thirc grade at elementary school	
Capping of the number of overtime and holiday working hours for childcare, including exemptions for late- night work	If an employee wishes, their overtime, holiday, and late-night working hours may be capped or exempted	
Childcare nursing leave	Five days allowed per child each year until the child completes the third grade of elementary school Possible to take leave in one-hour installments	
Support for nursery use	Nurseries that AGC is affiliated with may be used ir areas of high need (Tokyo and Kanagawa)	
Working from home	Working from home is possible without stating reasons, such as raising children or nursing care (no limit on number of days)	
Flextime	Flextime without core working hours is possible without stating reasons, such as raising children or nursing care	
Paid leave in one-hour increments	Employees may take a maximum of five days of their allotted annual paid leave in one-hour increments	
Expired annual leave accumulation system (life support leave)	Possible to accumulate unused expired annual paid leave and use it for childcare, nursing care, etc.	
Leave of absence during spouse's job transfer	Leave of absence is possible if required to accompany spouse on new job transfer (maximum three years)	
Registration for reemployment of retirees	Possible to register for reemployment for those who quit the company for personal reasons	

In 2023, AGC employees took 94.4% of their leave (average for labor union members). Annual paid leave can be taken in half-day or hourly increments.

#### **Average Percentage of Annual Paid Leave Used**



#### ---AGC --- All industries (with 1,000 employees or more)

Notes: 1. Labor union member average

2. Data for all industries is sourced from a General Survey on Working Conditions by the Ministry of Health, Labor and Welfare.

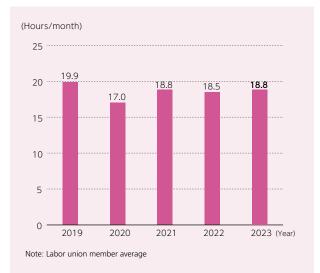
### **Reducing Overtime Working Hours**

AGC strives for the proper management of its employees' working hours. Currently, based on the principles of striving to reduce overtime and holiday work through efficient and well-balanced working methods, ensuring that unpaid overtime does not occur, and, in principle, limiting overtime to 45 hours per month except under special circumstances, AGC manages daily work through sufficient communication between administrators and their subordinates, implements agreements with the labor union based on the Labor Standards Act, and promotes appropriate management of working hours using data recorded by ID card readers and PC logs.

To prevent health complications caused by overworking, AGC has set in-house standards, which are stricter than those mandated by law, requiring employees who have completed a certain amount of overtime to visit an occupational physician.

In addition, the sharing of case studies is promoted so that human resource managers at each Group company in Japan can discover activities that promote the effective management of working hours.

#### **Overtime Working Hours (AGC)**



## **Employee Education**

## **Fundamental Approach**

The AGC Group outlined its policy on Development and Growth in the "7 Key Principles for People," which aim to realize progressive human resource management.

The AGC Group aims to become a company that puts into practice its human resource management slogan— "AGC People: Driving our Growth!"—and we believe that human resources are the driving force for the growth of the Group's business operations. The AGC Group have established a variety of training programs, such as technology and skills training provided alongside rank-specific training to further support employee growth.

## **Management Structure**

The AGC Group organizes an educational system, chiefly through the Human Resources Division, in cooperation with the personnel officers of each in-house company and region. In addition, the training systems and methods are continuously reviewed and improved.

## **Groupwide Initiatives**

## AGC MONOZUKURI Training Center

The AGC MONOZUKURI (Quality Manufacturing) Training Center is an in-house educational facility designed to effectively develop AGC Group personnel. The training center comprises two areas, one for training and one for practical application, and it provides training on about 120 (business and technical) topics, principally for AGC Group employees in Japan. In terms of practical training, technical education is designed around the concept of "GENBA (real place), GENBUTSU (real product), and GENJITSU (reality)." The training center, equipped with the same machines and equipment as those used in AGC Group plants, provides trainees with practical, hands-on learning opportunities. Training is also provided to business partners to boost the standard of manufacturing excellence and personnel cultivation throughout the supply chain.



## **Training Programs**

The AGC Group continuously works to develop human resources by implementing rank-specific training programs, from new employees up to management level.. In addition, the Group enhances and carries out many types of selective training in various specializations and for improving business skills.

## **Provision of Online Training**

Since 2014, the AGC Group has been offering employee training online as part of its "learn anytime, anywhere" work-place-building initiative. We have been promoting web-based and video-based training since then, and as of the end of 2023, more than 60 of the training courses had been made available online or through videos. In addition to face-to-face training, which brings participants together, we are working to diversify learning by combining training held online and via video distribution. Going forward, we will continue to consider various training methods and expand content to create an environment where employees can easily learn.

## 2023 Training Participation Results

The number of participants and the number of hours of training\* at AGC and its Group companies are as follows.

### **2023 Training Participation Results**

	Number of participants	Hours	Average time/ Participant
AGC	3,261	67,006.0	20.5
Group companies	1,463	3,284.0	2.2
Total	4,724	70,290.0	14.9

\* Training results (face-to-face training, online training, e-learning) operated by the AGC MONOZUKURI Training Center. Does not include training conducted independently by individual divisions or Group companies.

#### Human Resource Development to Create Digital Innovation

#### Promoting AGC Group Improvement and Innovation Activities

The AGC Group promotes improvement and innovation activities in order to raise the productivity of the entire Group. In addition to increasing productivity throughout the supply chain, the Group is actively expanding the scope of activities to related departments, such as sales and marketing. In recent years, by simulating optimal productivity when new businesses and products are about to be launched, the Group has been raising the likelihood of success in its business ventures. In addition, we have begun new activities to build rewarding work environments and improve employee engagement by systematically identifying and promoting the resolution of issues in organizations.

#### Kaizen Manager Development Program

The AGC Group develops core personnel who are able to drive innovation for business improvement. Through practical instruction based on each participant's own business challenge themes, they learn problem-solving methods that lead to digital transformation by combining the design approach of industrial engineering with the latest data analysis techniques. More than 250 people have completed the program to date, and they are leading improvement and innovation efforts at sites around the world.

### **Development of Dual-Skilled Personnel**

To develop the human resources essential for the acceleration of digital transformation, we are focusing on fostering dual-skilled personnel who possess expertise in their particular business fields as well as digital technology skills. To this end, we are independently evolving a multi-layered training curriculum tailored to each employee's job. The Data Science Plus program aims to develop data scientists through a comprehensive training system encompassing three levels: introductory, basic/applied, and advanced. To date, we have trained over 80 employees at the advanced level, with a target to train 100 employees by 2025. Further, we offer the Digital Transformation Training for Managers, which targets the senior managers of in-house companies, and the Data Utilization Training for Plant Technicians.

### **CNA: Cross-Divisional Network Activities**

In the CNA program, which aims to improve employees' specialized skills,\* employees can register their own skills and engage in cross-divisional activities with other employees who have the same skills. Each community, organized around a skill, is led by a skill leader and includes various workshops, in-house conferences, and study sessions on technology-related matters, human resource development, and exchange activities. Recently, there has been an increase in cases where employees register skills they wish to learn, in addition to their area of expertise, as desired skills for participation, and apply them to their relearning efforts. In fiscal 2023, the number of participants in these activities, including global activities, exceeded 10,000. These activities in the CNA program provide valuable opportunities for employees to get to know members from other organizations based on skills and gain a wealth of ideas and stimulation. Such experiences allow employees to feel that they are contributing to the company's value and competitiveness. Building on these experiences, we will continue to utilize internal networks to support the provision of "spaces for spontaneous learning" for individual learning and growth. These spaces serve as a "third place" (i.e., not at home or the workplace) where participants can enjoy a comfortable environment that

### **Cross-Divisional Network Activity**



fosters constructive exchanges. AGC aims to further develop and evolve this unique organizational culture that connects diversity and generates value.

\* AGC's original 41 specialized skills which comprised of 29 technical categories and 12 sales and administrative categories, used as a skill map.

## AGC's Initiatives

#### Career Development Support

AGC has introduced the "Challenge Career System" to encourage employees to apply for the jobs of their choice. The system assigns appropriate people to newly launched businesses and operations that need strengthening, further invigorating the organization in the process. In addition, the "Professional System" and the "Meister System" have been adopted in order to appropriately evaluate and manage those with highly specialized expertise or advanced technological skills.

#### **Challenge Career System**

- An in-house voluntary recruitment system, under which employees apply to job offers publicly posted by in-house organizations once a month (a total of 240 employees to date)
- An in-house free agent system, under which employees register for the jobs that they wish to perform at other departments and undergo screening individually for job consideration (a total of 124 employees to date)
- Job Challenge (in-house side jobs): A system that lets employees apply to internal job postings in any division and work a side job (started in 2023)

#### **Professional System**

A system under which manager level employees, who have extremely high practical knowledge, skills, or behavioral traits regarding technical skills and expertise vital to the AGC Group and can exercise them to a great extent, are certified as professionals, and treated with adequate conditions (59 managers).

#### Meister System

A system under which technicians, who have outstanding technical skills and knowledge vital to the continuous development of the AGC Group and can exercise them to a great extent and who are responsible for the training and guidance of their successors, are certified as meisters, and treated with adequate conditions (7 employees)

Note: Current numbers are as of December 31, 2023 . The number listed for the Challenge Career System is the total number of users since 1999.

## **Occupational Health and Safety**

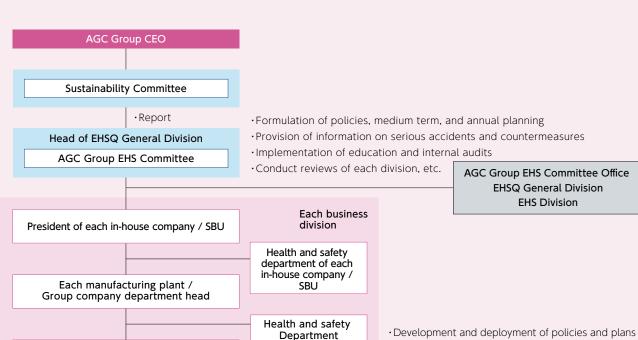
## **Fundamental Approach**

The AGC Group has established the AGC Group EHSQ Policy and the AGC Group Occupational Health and Safety Policy to contribute to the realization of a sustainable society while pursuing the Group vision **"Look Beyond"** for continuous growth and evolution. We are committed to EHSQ (Environment, Industrial Safety & Security, Occupational Health & Safety, Quality) as a prerequisite for our business activities.

Manufacturing / Development departments, etc.

### AGC Group's Health and Safety Management Initiatives

The policies and measures regarding occupational health and safety in the AGC Group are deliberated and decided upon by the Sustainability Committee, chaired by the CEO of the AGC Group, after being reviewed by the AGC Group EHS Committee, which is chaired by the head of the EHSQ General Division. The findings of the Sustainability Committee are reported to the Board of Directors. Furthermore, important issues based on materiality are deliberated and decided upon by the Sustainability Committee, and then reviewed and resolved by the Board of Directors.



• Report on execution and operational status • Respond to and report on occupational injuries

## Excerpts from AGC Group EHSQ Policy

(Established on January 1<sup>st</sup>, 2023) To realize a sustainable society and to grow and evolve continuously, AGC Group pursue the Group Vision **"Look Beyond"** and engage in EHSQ (Environment, Industrial Safety & Security, Occupational Health & Safety, Quality) as a prerequisite of our business activities.

#### AGC Group Occupational Health and Safety Policy

(Established on February 9<sup>th</sup>, 2001, revised on January 1<sup>st</sup>, 2023)

Our motto is "No Production without assurance of safety". We are committed to sharing and demonstrating this motto with all workers of the AGC Group.\*

- 1. We comply with OHS-related laws and other requirements.
- 2. We set objectives and strive to achieve them to continuously improve the OHS Management System.
- 3. We create a safe and healthy workplace through continuous risk assessment.
- 4. We foster a safety culture in the AGC Group through all the workers' participation in the OHS activities.
- \* "All workers of the AGC Group" include contractors and other stakeholders.

The AGC Group is pushing ahead with health and safety activities based on the concept of an occupational health and safety management system (OHSMS).

Since fiscal 2013, the Group has been using the EHSQ Management System to manage EHSQ across the entire Group. Based on the approach of ISO 45001, the Group stipulates aspects of EHSQ management that it must carry out in the AGC Group Occupational Safety and Health Regulations and applies them globally at each in-house company and SBU.

Additionally, each business site engages in activities based on the OHSMS framework. Since 2021, we have introduced the OHSMS self-diagnosis system (Audit Module) to monitor and refine the construction and operation status of OHSMS. The Group strives to improve the level of safety and health management through audits conducted by the corporate divisions and each business division. We are also working to obtain third-party OHSMS certification for organizations and sites with significant occupational health and safety risks.

Each business unit examines its policies and measures, reports the progress at EHSQ management reviews and other occasions, and continuously conducts improvement activities.

### Number of Plants Obtaining OHSMS Third-Party Certification

As of end of December, 2023 (per site)

Coverage	Number of certified plants
Japan	8
Asia (excluding Japan)	20
Europe	39
The Americas	1
Total	68

## Groupwide Initiatives

#### **Developing a System to Collect Global Occupational** Accident Data

In 2021, the AGC Group introduced the Incident Module, a system for collecting all of the standardized occupational accident data of the Group globally, including that of its business partners at business sites, and sharing this information laterally. Using the Incident Module, we collect and analyze information on past disasters in order to prevent disasters and their recurrence. We have also set and are working to achieve occupational safety and health targets that should be achieved by 2025 to prevent disasters.

In the past few years, the number of occupational accidents has leveled off, although some areas have experienced an increase. We have therefore launched occupational safety and disaster prevention projects across Group divisions, and are taking steps globally to create systems and frameworks for ensuring workplace safety and security. Our ultimate aim is to foster a safety culture at AGC.

### Number of Occupational Accidents (AGC Group, Including Business Partners)

In 2023, the AGC Group experienced one fatal accident involving an employee. This occurred when an employee was working underneath equipment, and the table for the equipment tilted due to energy being retained in the air cylinder, causing the employee's body to get stuck between the machine table and the floor. In response to this accident, we have now compiled a list of similar equipment and have taken measures to change the design so that no energy remains and to prevent people from getting underneath the equipment. We are promoting the addition of safety devices and in particular the deployment of interlocks. In addition, we are strengthening safety education to ensure that all employees understand the possibility that energy may be retained in air cylinders and other equipment even when the control power supply is disconnected.

### **Occupational Safety Targets and Results**

KPIs	Scope	Target	2020	2021	2022	2023
Number of fatalities (persons)	AGC Group employees (including contract and temporary employees)	0	0	0	0	1
	Business partners employees	0	0	0	0	0
Number of fatalities and injuries caused	AGC Group employees (including contract and temporary employees)	0	2	0	1	0
by serious accidents, including partial loss of bodily functions	Business partners employees	0	0	0	0	0
Lost Time Injury Frequency Rate(LTIFR)	AGC Group employees (including business partners)	Halve LTIFR by 2025 compared with 2019 level 0.99 to 0.48	0.98	0.77	0.83	0.68

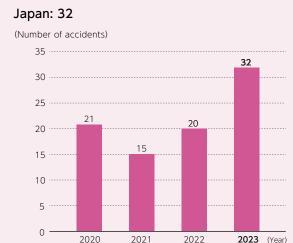
Occupational Safety and Health is a top priority for the AGC Group, and we are committed to preventing reoccurrence and ensuring safety.

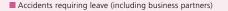
### Number of Accidents Requiring Leave

In 2023, there were 111 accidents requiring leave among AGC Group employees and business partners. Regarding the types of accidents, there has been a tendency for a higher occurrence of incidents involving reactionary movements, falls, getting caught or entangled, cuts or abrasions, and slips or falls. The AGC Group continuously implements measures to prevent the occurrence and recurrence of accidents, including the following.

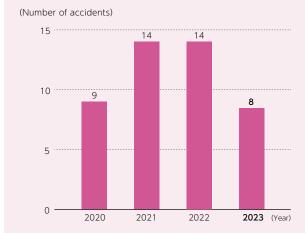
These revisions were made from the figures in Sustainability Data Book 2023.

- · Japan: Revised from 19 cases to 20 cases in 2022 (due to recognition in later years of work-related accidents)
- · Asia: Revised from 13 to 14 in 2021 (due to recognition in later years of work-related accidents)
- Europe: Revised from 83 to 88 in 2022 (based on the revised reporting of the number of accidents)



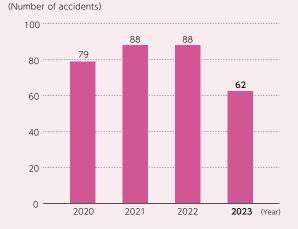


## Asia (other than Japan): 8



Accidents requiring leave (including business partners)

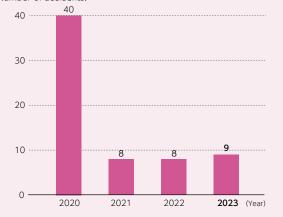
Europe: 62



Accidents requiring leave (including business partners)

## The Americas: 9

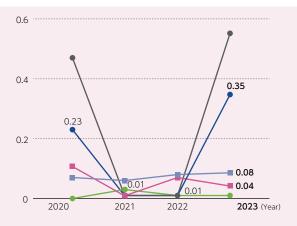
(Number of accidents)



#### Accidents requiring leave (including business partners)

- Notes: 1. Lost time injury(LTI) are occupational accidents where a doctor instructs the affected person to take at least one day of leave. However, this excludes cases where the affected person is given time off to get evaluated at a hospital.
   The final determination of whether it is a LTI or not varies between Japan/Asia and Europe/Americas due to differences in physician assessment. However, the purpher of note is meaned based on the physician curves in the other is in the physician section.
  - number of cases is managed based on the physician's judgment.

### Severity of Accidents (AGC and business partners)

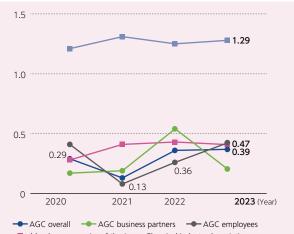


- --- AGC overall --- AGC business partners --- AGC employees
- ---- Member companies of the Japan Chemical Industry Association

#### ---- Manufacturing industry overall

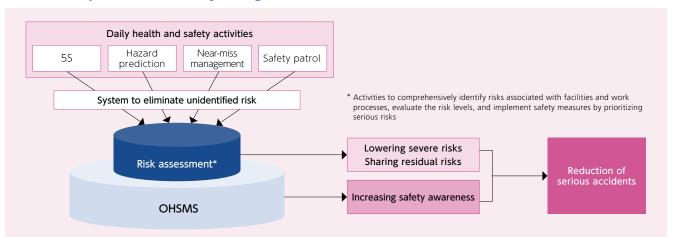
- Notes: 1. "Severity" expresses the severity of accidents as the number of days lost per 1,000 working hours. 2. "AGC overall" is the combined figure for AGC employees and
  - employees of AGC business partners. 3 The calculation method for severity is based on the calculation
  - The calculation method for severity is based on the calculation method of the Ministry of Health, Labour and Welfare of Japan.

## Frequency of Accidents Requiring Leave (AGC and business partners)



- ---- Member companies of the Japan Chemical Industry Association
- ---- Manufacturing industry overall
- Notes: 1. "LTIFR" expresses the frequency of occupational accidents as the number of lost time injuries per one million working hours. 2. "AGC overall" is the combined figure for AGC employees and
  - employees of AGC business partners. 3. The calculation method for the frequency is based on the
  - calculation method for the frequency is based on the calculation method set by the Ministry of Health, Labour and Welfare of Japan.

### The AGC Group's Health and Safety Management Initiatives



## Improving the Level of Safety Management (Safety Culture Assessment Activities)

The AGC Group has been conducting safety culture assessment with Niigata University since April 2020 with the aim of improving the level of safety management, not only at its sites in Japan and Asia, but also at its European sites starting in 2023. We are working to expand the scale of our operations, with plans for the Americas from 2024.

The AGC Group is working to improve its safety management level by enhancing the strengths and improving the weaknesses identified from the results of its safety culture assessment.

Since July 2021, as part of our joint research with Niigata University, we have been engaged in industry-academia collaborative activities, including training of highly specialized human resources for safety management and cooperation in education at undergraduate and graduate schools.

### Promoting Safety Activity-Related Information Sharing That Transcends National and Departmental Boundaries

Every year, the AGC Group holds a safety meeting where safety managers gather to share issues that need to be addressed and examples of improvements for a safe and hygienic workplace environment, and to work together to improve our capabilities.

This is not limited to the national level. In 2023, we held the first Global OHS Conference with the main themes of "Mindset, Top Message, Recognition, and Praise." In this conference, messages from the CEO, in-house company presidents, and the General Manager of the EHSQ General Division were conveyed, embodying the company's deep commitment and mindset toward safety. In addition, regional OHS meetings were held in China, Thailand and Belgium, bringing together health and safety officers from different divisions in different regions, with consideration given to the differences in the laws and culture of each country. These meetings provided an opportunity to share region-specific challenges and best practices and to deepen each other's knowledge.



We also have established an awards system for outstanding safety and health activities as an opportunity for recognition and praise. In 2023, 10 awards were given globally.



Regional OHS Conference (China)

#### **Continuing to Advance Risk Assessments**

The AGC Group is taking steps to improve its risk assessments with an initiative to reduce the risk of occupational accidents. The AGC Group (Japan) trains managers and supervisors and implements routine training for employees who conduct risk assessments at manufacturing sites. Additionally, the in-person training sessions at the training center and other locations, which could not be held due to COVID-19 prevention measures since 2020, were resumed in 2023. In addition to periodic training, the Group began safety enhancement activities in 2009, selecting gualified individuals from those in charge of development, manufacturing, equipment, or other key areas at each manufacturing site. This initiative includes intensive education on risk assessments and traditional safety and health activities such as 55 (Sort, Set in order, Shine, Standardize, Sustain), hazard prediction, near-miss reporting, and safety patrols. In 2023, 27 employees completed the program, and they are playing active roles at the various sites as key personnel in promoting risk reduction activities in the workplace as core safety personnel. There are more than 450 core safety personnel working at the various sites

## Installation of Safe Production Machinery and Operations

Reducing risks associated with manufacturing machinery is essential for realizing safe production workplaces. In addition to reducing risks associated with existing equipment through conventional risk assessment methods, the AGC Group is also implementing initiatives to introduce safer manufacturing machinery and operations. This includes making risk assessments at the design stage through prior safety reviews for new business activities or projects.

In Europe, risk-reduced facilities were introduced based on the local law-enforced system of CE marking.<sup>\*1</sup> Additionally, the crucial role of risk assessments by facility users is stipulated in the European Union framework.

In Japan and the rest of Asia, the Group encourages all managers responsible for safety to obtain qualifications as a safety assessor and safety basic assessor under a certification system,\*<sup>2</sup> so they have a full understanding of international safety standards when adopting plans and machinery. The number of employees with this certification rose further in fiscal 2018, with a particularly large increase in the number of employees from Asian Group companies obtaining safety.

- \*1 Products with the CE mark are certified as meeting the standards set by all member states of the European Union.
- \*2 The safety assessor certification is awarded for understanding and possessing the practical skills related to machinery safety. Based on international safety standards and developed by Nipon Electric Control Equipment Industries Association and other organizations, the certification is verified by a third party. Three levels of certification are available: safety lead assessor, safety assessor, and safety sub-assessor. The certification for the assessment of basic safety, which targets operators of machinery and tests fundamental knowledge of machinery safety, is verified by a third party.



Machinery safety training (Thailand)

#### **Continuing to Advance Risk Assessments**

The AGC Group strives to prevent adverse health effects, fires, and explosions from occurring by managing chemical substances used at each worksite by appointing experienced chemical substance managers, conducting appropriate risk assessments, implementing risk-reduction measures, and training personnel who handle chemical substances.

For risk assessments of chemical substances, the Group created its own standardized assessment method and has made it known Groupwide by conducting in-house training at production sites and other worksites. Based on the Globally Harmonized System of Classification and Labeling of Chemicals, the Group's

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Society

assessment method is a simple and useful way to assess the risks, danger, or toxicity of chemical substances and can be applied in any country worldwide. In addition, the Group promotes the implementation of risk assessments of work areas based on actual surveys of workplaces.

### Improving Occupational Health Standards

To prevent health hazards associated with work processes involving noise, thermal environments, dust, and chemical exposure, and to create a comfortable working environment, the AGC Group has established global standards and undertakes various measures such as work environment measurements, risk assessments, risk reduction strategies, and health screenings.

Providing a safe and comfortable work environment will lead to the protection of the human rights of workers, and as a result, it will contribute to the improvement of engagement, so we are promoting measures to this end as a priority issue. In addition, we are focusing on creating a system that will enable the horizontal expansion of best practices within the company to other locations facing similar challenges.



At the Yokohama Technical Center, as one of the activities to realize a safe workplace, we are focusing on preventing heatstroke and thoroughly implementing measures to reduce workloads according to WBGT values. We have implemented a WBGT monitoring system to prevent heatstroke by continuously measuring and monitoring the heat stroke index notifying managers with alerts, and taking appropriate actions and management measures according to the situation at each work site.

WBGT monitoring system

### Improving the Level of Safety Awareness

To enhance safety awareness among employees, the AGC Group conducts safety and health education tailored to different levels for new hires, newly appointed managers, mid-career recruits, and recently promoted workers.

To enhance the expertise of employees in charge of safety and health, we regularly hold specialized health and safety training sessions covering topics such as safety activities, laws and regulations, machinery safety, risk assessment, chemical substance management, internal audits, industrial hygiene, and hazard experience.

The Human Error Prevention Manual, among others, is a proprietary textbook that has been translated into multiple languages for use in training courses at each plant. The Group also conducts practical training for safety patrols in Asia, including Japan, to give workers the skills needed to identify latent but serious workplace risks while on patrols. As part of the training, participants conduct safety patrols from the perspective of machinery safety and relevant laws and regulations along a mock production line with more than 140 flaws. This firsthand experience in machinery safety fosters the ability to identify the risks caused by unsafe situations in facilities. Since fiscal 2012, this training has been conducted for safety managers throughout Japan, and several safety managers from Group companies outside of Japan have also received the training. At PT Asahimas Flat Glass Tbk in Indonesia, part of the training facilities from the safety patrol methods used at the training center in Japan has been implemented, and local management is being trained in these safety patrol techniques.

Furthermore, safety and health materials are made available on the AGC Group's intranet through the Safety Materials Library, so that they can be used for safety and health education and training at various sites.

#### Implementing Hazard Simulation Training

The AGC Group conducts hazard simulation training that allows participants to experience various dangers, including being caught in machinery, falls from heights, electric shocks, cuts and abrasions, chemical burns, slips and trips, and the effects of reactionary movements (such as back pain). This training aims to increase hazard sensitivity and promote the avoidance of unsafe behaviors that could lead to occupational accidents. In recent years, we have also held training sessions that utilize virtual reality (VR) technology to enhance hazard awareness using simple devices.

Currently, the AGC Group is equipping major domestic and international sites, including Group companies, with hazard simulation equipment and VR content that simulate site-specific dangers. The Group is also holding regular training sessions and promoting the training and skill enhancement of instructors who can lead the hazard simulation training.



Practical safety patrol training



発きに主わけ成

Experiencing getting caught in a revolving belt and roller (Japan)



Experiencing getting caught in machinery (China)



### Labor Union Participation in Health and Safety Measures (AGC)

At AGC, based on collective labor agreements, labor unions' advice and guidance regarding safety and health are considered. Business partners working with us at business sites participate in the meetings of safety and health committees held at the business sites. Safety officers and employee representatives are given regular opportunities to exchange opinions, which are then reflected in various safety and health measures.



Getting a physical sense of the impact of a fall through numerically based visualization (Japan)



Experiencing getting caught in a revolving belt and roller (Japan)



Experiencing the danger of a forklift crash through the use of virtual reality technology (Japan)



Experiencing getting caught in a chain (Japan)



Experiencing the danger of a forklift crash

(Japan)

through the use of virtual reality technology

Experiencing a robot crash through the use of virtual reality technology (Japan)

## Creating a Comfortable Workplace

## Fundamental Approach

Through occupational health and safety activities, the AGC Group promotes the creation of a comfortable workplace environment based on its Occupational Health & Safety Policy. Further, we have established the AGC Health Declaration, and we are pursuing initiatives aimed at maintaining and enhancing employee health.

#### AGC Health Declaration

With our Group Vision "Look Beyond" as our motto, we will maintain and improve the health of employees so that we can continue creating value worldwide.



Note: Initially, AGC will rigorously inform its employees about and implement measures based on the AGC Health Declaration. In the future, the Company will consider adopting the same approach with respect to the employees of Group companies in Japan and overseas.

## Management Structure

## Occupational Health Management through Divisional Cooperation

Through occupational health and safety activities, the AGC Group promotes the creation of a comfortable workplace environment based on its Occupational Health & Safety Policy. Further, we have established the AGC Health Declaration and we are pursuing initiatives aimed at maintaining and enhancing employee health. Additionally, since fiscal 2020, we have been regularly holding "labor-management health communication meetings" with the labor union, to identify and discuss issues related to employee occupational health and well-being.

## **Groupwide Initiatives**

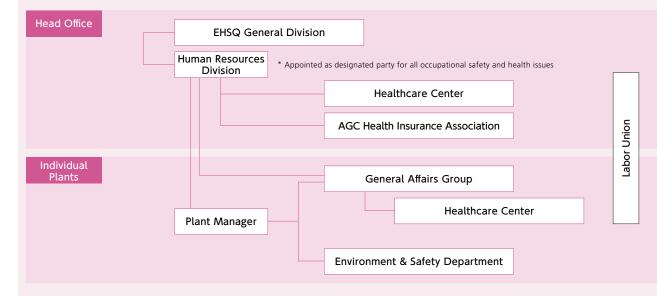
#### AGC Group General Affairs and HR Personnel Network Conference (AGC Group (Japan))

The AGC Group holds regular conferences for GA and HR personnel from each Group company in Japan. Outside lecturers are invited to speak, providing a chance for such personnel to deepen their understanding on the latest trends in labor laws. Through discussion, participants also review health management, workstyles, and Group policies on matters including harassment prevention.

In addition to the conferences, the Group regularly checks employee working hours and the status of responses to legal changes, thus aiming to enhance collaboration within the AGC Group. In response to growing attention from society regarding compliance, the AGC Group is promoting the creation of comfortable working environments through occupational safety and health activities for everyone at the Group.

### The AGC Group's Health and Safety Management Initiatives

Chief Promotion Officer: Representative Director & Senior Executive Vice President Promotion Officer: Senior Executive Officer & General Manager of the Human Resources Division



Furthermore, in 2020, we expanded the scope of participation in "AGC Walk," a walking event that started in 2019, to Group companies in Japan, positioning it as a core event to promote health and productivity management as a group.



#### Flyer of AGC Walk

#### The Focuses of AGC's Initiatives

While advancing following initiatives to maintain and enhance health in accordance with the AGC Health Declaration, the Group will further develop its Health and Productivity Strategy Management Map, establish key performance indicators, and proceed through PDCA cycles.

### Aim of Health and Productivity Management



## AGC's Initiatives

#### **Promoting Health and Productivity Management**

- This is a strategic initiative to ensure that all employees working at the AGC Group can continue to maximize their potential.
- Maintaining and improving the physical and mental health of every employee improves employee vitality and productivity and is a fundamental element in aiming to become a company that puts into practice its human resource management slogan— "AGC People: Driving our Growth!"
- Continuously maintaining and promoting health By looking after their health, AGC employees are encouraged to continue to work actively as they get older.
- Improving productivity and job satisfaction AGC employees are encouraged to work productively by utilizing diverse and flexible workstyles and improving their physical and mental conditions.

Employees are encouraged to make the most of their potential and derive satisfaction from their work.

• Enriching public and private life Every AGC employee should have a fulfilling life at the Company and at home, deriving satisfaction from both work and private life.

Through maximizing the potential of its human resources, the Company becomes stronger as a whole.

### Health and Productivity Management Strategy Map

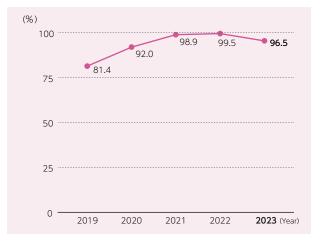
Take Health Measures	Change Employee Awareness and Behavior	Set Health Goals	Accomplish Management Goals
Enhancing lifestyles and health awareness	Increasing the number of employees leading healthy lifestyles	Personal health	AGC People: Driving our Growth!
<ul> <li>Medical checkups</li> <li>Smoking cessation measures</li> <li>AGC Walk</li> <li>AGC Health Points Plan</li> </ul>	Percentage of employees who have abnormalities detected, hypertension, body mass index, percentage of employees who receive secondary health checkups, specific health guidance consultation, etc.	Improving health and labor productivity	Aim of health and productivity management Maintaining and
Health support app Health seminars (lifestyle, women, elderly, etc.)	Enhancing lifestyles Use of health support app, participation in AGC Walk, Participation in seminars, etc.	Enhancing lifestyles Use of health support app, participation in AGC Walk,	
Improving and enhancing organizational conditions	Reducing the number of employees with mental health issues	$\bigcup$	Enhancing productivity and job satisfaction
Stress checkups	employees, percentage of employees with mental health issues, etc.	Organization health	
• Workplace improvement • Mental health training • Management of working hours, etc.	Increasing number of non-smokers Number of participants in smoking cessation programs, percentage of smokers, etc.	Improving the performance of organizations	Enabling fulfillment in public and private life

## Progress of Activities to Maintain and Enhance Health

Society

- Enhancement of follow-ups for employees who have abnormalities detected during physical examinations AGC is committed to activities that support the health of employees who have abnormalities detected, recommending they get secondary health checkups and helping with medical costs (i.e., the entire cost of the secondary health checkup is borne by the Company). In recent years, the percentage of employees who have abnormalities detected has declined, and we remain committed to activities to help employees maintain and enhance their health.
- Percentage of employees receiving regular health checkups Fiscal 2023: 100%  $\Rightarrow$  Continue as current
- Percentage of employees receiving secondary health checkups Fiscal 2022: 99.5%; Fiscal 2023: 96.5%  $\Rightarrow$  Aim for 100%
- Percentage of employees who have abnormalities detected Fiscal 2022: 18.4%; Fiscal 2023: 18.4%  $\Rightarrow$  Aim for 16.0% by fiscal 2025
- Health guidance implementation ratio Fiscal 2022: 83.2%  $\Rightarrow$  Fiscal 2023: 75.7%

### Percentage of Employees Who Received a Second Health Checkup

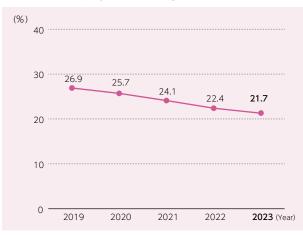


- Preventing mental health issues
- Percentage of employees receiving stress checkups Fiscal 2023: 95.0%  $\Rightarrow$  Aim for 100%
- $\boldsymbol{\cdot}$  Of those who took stress checkups, percentage of employees

found to have high stress levels Fiscal 2023: 10.4%

- Ensuring that employees are not exposed to secondhand smoke and reducing the employee smoking rate
- Smoking prohibited during working hours (starting in 2023)
- Smoking rate Fiscal 2022: 22.4%  $\Rightarrow$  Fiscal 2023: 21.7%  $\Rightarrow$  Aim for below 20.0% by fiscal 2025

### **Trends of Employee Smoking Rates**



- Establishing of exercise habits (walking) Fiscal 2023: 8,452 total participants
- Raising awareness of health We are helping employees maintain and improve their health by investing around ¥50 million in the AGC Health Points Plan, an incentive plan for all employees to engage in healthy activities, and our Health Support App, a tool for individuals to manage their health (as of 2023, 49.5% of employees had installed the app). In 2023, we held a



Health support app

total of 26 health events and seminars at all of our bases, and participants were given AGC Health Points as an incentive. We will continue to raise awareness of health issues and help our employees enhance their health.

- Health and productivity indicators
- Presenteeism<sup>\*1</sup> Fiscal 2022: 16.4% ⇒Fiscal 2023: 17.2%
- Absenteeism<sup>\*2</sup> Fiscal 2022: 2.9 days  $\Rightarrow$  Fiscal 2023: 2.2 days

## Work engagement<sup>\*3</sup> Fiscal 2022: 3.0 points ⇒ Fiscal 2023: 2.4 points

- \*1 A state where employee productivity worsens due to sub-optimal health. Calculated using SPQ (University of Tokyo's first version)
- \*2 All-employee average of total number of days taken off and long-term absences due to illness
- \*3 The employee survey measured the statements "I can engage positively with my work" and "I find my work fulfilling." The responses are averaged across all employees, using a scale where 0 means "Not at all," 1 means "Hardly ever," 3 means "Sometimes," and 5 means "Very much."
- Status of leave due to injury or illness Fiscal 2023: 2.4%
- Addressing women's health issues
- Health seminars held: "Balancing Fertility Treatments and Work" and "Cervical and Endometrial Cancer" with a total of 170 participants.
- Gynecological cancer screening rate: 72%
- Use of other healthcare support services (outsourced) (coupons for use at medical institutions such as obstetrics and gynecology, infertility treatment, breast treatment, etc.)
- Employee satisfaction with various health management initiatives
- Overall: 92% (satisfied to slightly satisfied)
- Health seminars: 98% (very informative to informative)
- Status of employee health literacy
  - Understanding of the AGC Health Declaration: 85% (understand to a little understand)
- Prevention and management of global health issues
- Novel coronavirus diseases
   Vaccinations were administered at variable

Vaccinations were administered at workplaces within the company, and at some business sites, vaccinations were also administered to employees' families.

The Company made it mandatory for employees to get a health checkup once a year to facilitate the early detection of tuberculosis with chest x-rays and provided guidance related to lifestyle-related diseases. The Company also made concerted efforts to reduce the risk of COVID-19 cases developing serious complications.

complications.
Infectious diseases around the world
To protect the health and safety of employees and their families working globally, we provide necessary support by offering up-to-date information on the occurrence and spread of infectious diseases such as malaria, tuberculosis, and HIV in various countries, as well as the latest information on local medical facilities. AGC also offers vaccinations to employees and their families for various infectious diseases, such as polio, tetanus, rabies, and typohid.

## **Industrial Safety and Security**

## **Fundamental Approach**

The AGC Group, which develops its businesses in local communities, believes that ensuring safety and security is a major prerequisite for achieving sustainable growth. Based on this belief, the AGC Group has established the AGC Group Industrial Safety & Security Policy to promote various issues surrounding industrial safety and security.

### **AGC Group Industrial Safety & Security Policy**

(Established on February  $7^{th}$ , 2003, and revised on January  $1^{st}$ , 2023)

We proactively engage in industrial safety and security activities based on the philosophy, "ensuring security is our fundamental obligation as a company operating business in local communities".

- 1. We comply with relevant laws, and internal and external rules concerning industrial safety and security.
- 2. We develop and continuously improve management initiatives to prevent incidents associated with industrial safety and security.
- 3. We strive to proactively communicate with internal and external stakeholders.

## Management Structure

In addition to striving to prevent accidents and other crises, such as unforeseen accidents, the AGC Group is working under the AGC Group Industrial Safety & Security Policy to prevent the escalation of accidents that do occur by promoting countermeasures to deal promptly and accurately with such crises.

The Group promotes risk reduction and preventive measures in its business activities by applying a PDCA cycle. Each business division promotes fire prevention, countermeasures for industrial safety accidents, and risk assessments for natural disasters based on action plans drawn up for that year from the EHSQ General Division. In addition to these measures, the Group strives for continuous improvement through internal audits that monitor the extent to which the above measures have been carried out.

In the Chemicals Business, the Chiba Plant and the Kashima Plant have been certified to utilize high-pressure gas by the Ministry of Economy, Trade and Industry. To promote a higher level of voluntary safety at business sites certified to utilize high-pressure gas, AGC has established a safety management system headed by the CEO and with the general manager of the EHSQ General Division and the president of Chemicals Company as the officers in charge of safety.

## Groupwide Initiatives

#### Measures Taken in Response to a Severe Warning under the High Pressure Gas Safety Act

On June 9, 2023, the Ministry of Economy, Trade and Industry gave a severe warning to the Kashima Plant, which is a high-pressure gas certified plant, for failing to report a leakage incident as required under the High Pressure Gas Safety Act. We deeply apologize for the concern and inconvenience we have caused to the people living nearby, the local government, and other involved people. All of the unreported leaks were minor and did not impact the local environment.

In response to this issue, we launched a project to restructure the system for high-pressure gas certified sites. This project includes dedicated audits to ensure legal compliance, assess operational performance, and evaluate resource allocation at the certified sites (Chiba Plant and Kashima Plant), with a focus on strict compliance with regulations and adherence to safety protocols. The plant sites and headquarters are collaborating closely to implement measures that address identified issues and prevent recurrence. We are also promoting activities to improve the management system for legal compliance at sites other than our certified sites on a global basis.

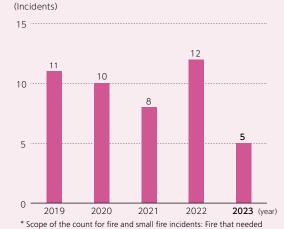
#### Prevention of Accidents with Preliminary Assessments for New Facilities

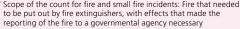
When building, expanding, or modifying facilities deemed to be at risk, the AGC Group conducts risk assessments for safety and disaster prevention during the design, construction, and startup phases based on its Prior Safety Assessment System, and verifies that the facilities are truly safe. At chemical plants, if our safety assessments find an area that ranks high in terms of danger, we implement HAZOP, ESD-HAZOP, and procedural HAZOP risk assessments that test for accidents triggered by deviations in process equipment (pressure changes, valve malfunctions, etc.), unsteady operations, and procedural operation mistakes during emergencies (emergency shutdowns).

### Prevention of Fire and Prevention of Recurrence

The AGC Group is continuously improving preventive activities to avoid serious security incidents at its domestic and overseas sites through environmental, industrial safety, and security preservation audits conducted by each business division and the EHSQ General Division. In recent years, we have been intensifying our preventive activities, including reinforcing fundamental rules and re-examining countermeasures based on past internal incidents, particularly in response to fires, hazardous material leaks, and accidents in glass melting furnaces. In 2023, there was a noticeable decrease in the number of fire incidents and small fires, with five cases reported. This decline reflects the effectiveness of our focused preventive activities. Going forward, we will maintain our efforts to prevent serious security incidents through appropriate recurrence prevention measures and ongoing preventive activities.

### Number of Fire Incidents and Small Fires\* (AGC Group)





Social

## Initiatives to Improve Self-Managed Industrial Safety and Security Capabilities

Society

The AGC Group launched the AGC Group Industrial Safety & Security Policy with the goals of reducing risks related to industrial safety and security and strengthening its self-managed industrial safety and security capabilities. Under this policy, the Group continuously improves such capabilities by implementing third-party assessments and clarifying items for improvement based on assessment results. The assessments are as follows: (1) the Japan Industrial Safety Competency Center carries out assessments of self-managed industrial safety and security capabilities at designated worksites in Japan managed under the Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities; (2) the Group implements safety culture assessments (adoption of the guestionnaire format mainly developed by Professor Kenichi Takano of Keio University and Associate Professor Akira Tose of Niigata University) at mediumand large-sized manufacturing plants in Japan, other countries in Asia, and Europe; and (3) the Group conducts activities to improve industrial security capabilities at processing and assembly plants under the guidance of local fire departments. The activities are being implemented not only in Japan but also globally with the cooperation of each in-house company and SBU.

 Designated worksites in Japan managed under the Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities

Assessments of self-managed industrial safety and security capabilities by the Japan Industrial Safety Competency Center are carried out at the Chiba and Kashima plants, the Kansai Plant (Takasago Factory), and AGC Ceramics Co., Ltd. (Takasago). An assessment is scheduled to be carried out at the AGC Yokohama Technical Center. The Group reconfirmed the problems with the safety foundations and safety culture at these plants that came to light through the safety assessments, drew up a three-year improvement plan, and is in the process of rolling out improvement activities. In addition to such assessments at manufacturing plants, AGC is promoting initiatives to improve comprehensive industrial safety capabilities, including those of headquarters, by carrying out interviews of executives based at headquarters (those in general manager positions at each company) by an expert from the Japan Industrial Safety Competency Center. We believe that these new initiatives can also contribute to research efforts into the comprehensive industrial safety capabilities of Japanese industry.

2) Medium- and large-sized manufacturing plants: Safety culture assessments (adoption of the guestionnaire format mainly developed by Professor Kenichi Takano of Keio University and Associate Professor Akira Tose of Niigata University) The Group has concluded a joint research contract with Niigata University on safety culture assessments, under which it implements assessments of more than 40,000 employees in Japan, other countries in Asia, and Europe. The Group will implement improvement activities based on a three-year improvement plan that reflects the strengths and weaknesses revealed by the assessments and will monitor the effect of improvements by carrying out second assessments in about three years' time. From 2023, we commenced secondary assessments in Japan and the Asia region. We are implementing full-fledged measures to promote safety culture assessments and improvement activities in Europe and the Americas.

Year	Japan	Asia	Europe	The Americas	Number of plants assessed (implemented)
2023	8	1	10	2	21
2024	7	13	31	1	52
2025	12	12	15	5	44

#### 2023–2025 Assessment (Implementation) Plan

Other activities under the joint research contract with Niigata University include accepting interns, building the foundations of safety culture through safety culture assessments, and dispatching employees to Niigata University as lecturers. In addition, with the aim of fostering a safety culture, we conduct exchanges with other companies and exchange information and opinions on progress in advancing safety culture assessments.

#### Processing and assembly plants: Activities to improve industrial security capabilities under the guidance of local fire departments.

In these activities, processing and assembly plants conduct education and training focused on fire prevention with the cooperation of municipal fire departments. AGC Glass Products Co., Ltd. has already started activities at its Eniwa and Tosu Plants.

### Education and Training for Security Incidents

The AGC Group conducts planned education and training at its business sites with the objective of minimizing the impact on employees and local communities in the event of an industrial safety and security incident occurring. At the Chiba and Kashima plants, in particular, which are located in regions with industrial complexes, we implement the following education and training based on annual plans.

[Education]

- Industrial safety and security education (for employees and employees of business partners)
- Basic first-aid training courses (in-house) [Training]
- Indoor fire hydrant training (initial firefighting tournament)
- Training on the reporting of matters anomalous with the Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities (training on the emergency call-up of divisional employees)
- Training on responding to natural disasters, including earthquakes (evacuation and safety confirmation drills)
- Safety confirmation training using the emergency call system (the AGC Group in Japan)

Fire extinguisher handling training

- Training based on the International Convention for the Safety of Life at Sea (SOLAS)
- Combined disaster prevention training at industrial complexes
- Joint disaster prevention and reporting training at offshore industrial complexes
- Offshore disaster prevention training (oil fence extension training)
- External education and training

[Plant contests]

- Outdoor fire hydrant handling techniques contest
- Respirator application contest

In November 2023, at the Yokohama City Firefighting Technique Competition, a volunteer firefighting team formed mainly of young employees of the AGC Yokohama Technical Center participated as representatives of Tsurumi Ward in the indoor fire hydrant operation category. The women's team achieved excellent results, taking first place. We will continue to engage in steady training on a daily basis so that we can respond guickly in the event of an emergency.



Fire prevention training in combination with the fire department at the Chiba Plant



Outdoor fire hydrant handling techniques contest at the Chiba Plant



Respirator application contest at the Chiba Plant



Fire prevention training in combination with the fire department at the Kashima Plant

Yokohama City Firefighting Technique Competition at AGC Yokohama Technical

Center



Fire prevention training in combination with the fire department at the Kashima Plant



Fire prevention training in combination with the fire department at AGC Glass Products' Eniwa Plant

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## **Fundamental Approach**

As described in the AGC Group Charter of Corporate Behavior, the AGC Group strives to establish mutually beneficial and appropriate relationships with business partners, ensuring that the principles of compliance with the charter are in line with the fundamental stance of the AGC Group. By so doing, the Group seeks to promote good supply chain management.

## **Management Structure**

The Procurement & Logistics Division plays the main role in continuing the stable procurement of raw materials and other materials. The division also conducts initiatives to solve social issues involving human rights, labor practices, and the environment with business partners and the rest of the supply chain. The Group has established the AGC Group Purchasing Policy, which clearly states the Group's responsibility to help realize a sustainable society. The Group has made the policy available to business partners worldwide by posting it on the AGC Group website and has asked them to understand and cooperate with the policy. We also presented the policy to participants at policy briefings for business partners in an effort to train and educate our business partners on this content.

In accordance with the aforementioned policy, from 2022 to 2023 we conducted a questionnaire on sustainable procurement, verified conditions at 280 companies based on the responses received from business partners, and identified the locations of potential risks. Also, we requested that business partners make improvements in areas where they had low scores.

## Groupwide Initiatives

## Point of Contact for Compliance in Procurement Activities

The AGC Group works to ensure the transparency of purchasing transactions and the prevention of fraud. As part of these efforts, we have set up a point of contact for compliance in procurement activities. The contact can be used by business partners to point out problems related to transactions with AGC Group employees by e-mail or regular mail, and the issues raised are kept strictly confidential and resolved promptly.

### **Regular Review of the Content of Contracts**

To promote good supply chain management, the AGC Group uses the most up-to-date contract with relevant CSR clauses when making new contracts or renewing contracts with business partners.

#### AGC Group Purchasing Policy

(Established in 2009 and revised on January 1<sup>st</sup>, 2020) AGC Group pursues values of the Group Vision **"Look Beyond"** and the "AGC Group Charter of Corporate Behavior" and will regulate our performances on purchasing which are explicitly stated in the following AGC Group Purchasing Policy".

#### 1. Basic Purchasing Principles

- Fair & equitable transactions
   Our procurement policy is to consistently search for
   innovative technologies, products, and services with a fair
   and equitable manner globally.
- Compliance to related laws and regulations, and behavior considering safety, environment & human rights. In carrying out purchasing activities, AGC will comply with the applicable laws and regulations of each country and international norms, act with integrity, and give due consideration to safety, the environment, natural resource conservation, and human rights.

In particular, in order not to promote conflicts or foster human rights violations through the procurement of mineral resources, identifying conflict minerals (tin, tantalum, tungsten, gold) and cobalt as high-risk minerals, we will promote responsible mineral procurement through the adoption of smelters and refiners that have been certified as not using minerals that are related to armed forces or injustice such as human rights violations.

3. Partnership with business partners AGC will establish a long-term, mutual prosperous partnership to produce a better product with our business partners.

To this end, we will endeavor to keep close communication with our business partners to build and enhance our trusting relationship.

4. Protection of information, intellectual property, and other assets

AGC will properly manage and protect the proprietary information, intellectual property and other assets of our business partners while procuring goods and services.

#### 2. Criteria for Selecting Business Partners

AGC will apply key criteria to evaluate and select business partners, as follows.

- 1. Sound management, steady supply, and flexibility to match with the fluctuating demand.
- 2. Appropriate quality, pricing, delivery date punctuality, consideration to safety & environment and technical service level.
- 3. Making endeavors to realize each item of the "Request for Cooperation in Sustainable Procurement" below.

#### 3. Request for Cooperation in Sustainable Procurement

AGC strives to be a company trusted by all its stakeholders, a company that meets the expectations of the world business community to grow and develop responsibility, and a company that significantly contributes to a healthier global society.

In order to fulfill our social responsibilities towards the realization of a sustainable society as the AGC Group, we would like to promote our efforts together with the companies linked to our supply chain.

Accordingly, we would like to share with and request to our business partners compliance and enforcement of the following points and would like to ask our partners' understanding and cooperation.

- Legal compliance, fairness, and integrity
   To comply with laws and international norms of each
   country and region, conduct fair transactions, and execute
   the following:
- Maintain healthy and normal relations with politics and government, and do not give or receive inappropriate profits in relation to stakeholders.
- Do not engage in activities that hinder fair competition in the market or abuse superior bargaining position.
- Establish a management system for the import and export of goods and technologies regulated by laws and regulations of each country and region and carry out proper export procedures.
- In the procurement of mineral resources contained in

products, identify conflict minerals (tin, tantalum, tungsten, gold) and cobalt as high-risk minerals, and promote responsible mineral procurement through the adoption of smelters and refiners that have been certified as not using minerals that are related to armed forces or injustice such as human rights violations.

- Do not have any relationship with anti-social forces.
- Establish and put into practice a mechanism such as policies, organizations, guidelines, reporting systems and educations, to enforce thorough compliance and to prevent and detect inappropriate practices at an early stage.
- Environment, safety, and quality
   To provide high-quality, safe and environmentally friendly
   products and services, reduce environmental burdens,
   ensure product and workplace safety, and implement the
   following:
- Comply with the laws and regulations of each country and region regarding the environment, and appropriately manage chemical substances contained in products and chemical substances discharged to the external environment based on laws and regulations.
- Strive to protect the environment and natural resources and reduce the final disposal volume of waste.
- Establish an environmental management system and continuously operate and improve it.
- Contribute to the prevention of global warming and strive to save energy.
- Work for safety, security and disaster prevention, and work to prevent accidents.
- Products meet the safety standards stipulated by the laws and regulations of each country and region and provide accurate information on items that may cause danger or health damage to users.
- Human rights and labor Respect the dignity and human rights of all people and do the following:
- Do not discriminate against people regardless of race, ethnicity, religion, nationality, political affiliation, age, gender, disability, marriage, sexual preference or any other positions.
- Do not engage in acts such as sexual harassment or power harassment that deny the personality of others or harm personal dignity.

- Do not allow forced labor, slave labor, child labor, unfair low-paid labor, and do not participate in human rights violations.
- Respect employee rights and build and maintain good relationships with employees through discussion and dialogue.
- Comply with the laws and regulations of each country and region regarding employee working hours, holidays, paid leave grants and wages.
- Establish an environment where employees can work safely and physically and mentally healthily.

#### 4. Risk, information and intellectual property management

Establish a system to avoid risk on business and execute the following for information and intellectual property management

- Establish a business continuity plan that provides measures to enable business continuity or early recovery when an unforeseen circumstance such as a disaster or accident occurs, and upon such occurrence, cope with it promptly and disclose accurate information.
- Make proper recording and reporting necessary for the business activities based on the facts, and as well as keeping record, make appropriate information management so that confidential information of the parties such as customers, business partners and own companies including personal information will not be leaked.
- Disclose information such as financial status, business results, and details of business activities appropriately to stakeholders as appropriate.
- Properly manage own and other parties' intellectual properties, and do not obtain third-party trade secrets by illegal means or perform any act that infringes on the intellectual property of a third party.

### Initiatives in Concert with Our Business Partners

The AGC Group regularly conducts CSR procurement surveys. To better understand the implementation of CSR activities at its business partners, the Group has created questionnaires and guidelines used to confirm the progress of CSR activities.

#### **Policy Briefing for Business Partners**

The AGC Group has held policy briefings for business partners since 1997. Through this, we deepen communications with our partners and expand and unify our business activities across the supply chain. At the 2024 policy briefing, approximately 220 business partners from 150 companies in various industries in Japan and overseas attended the session. The business partners were presented with a letter of appreciation for their ongoing cooperation, and AGC Group CEO Yoshinori Hirai gave a presentation on the Group's medium-term management plan, which includes the social value that the AGC Group provides.

We also provided information on the AGC Group Purchasing Policy and aligned our perspectives with our business partners. Following the meeting, a lively exchange of views took place among the business partners, AGC Group executives, and AGC Group division heads.



Social gathering with business partners

## Hosting Workshops on the Environment, Safety, and Compliance

In 2020, the Group revised the AGC Group Integrated Green Procurement Guidelines, which provide a common approach for all business divisions. In accordance with these guidelines, green procurement guidelines for each business division have been created. Based on each business division's green procurement guidelines, new and existing business partners' environmental management and the inclusion of chemical substances with high levels of environmental impact are checked and risk assessed by requesting the completion of prescribed forms. Moreover, these guidelines are used to facilitate green procurement of raw materials and other materials suited to each business.

AGC Group Integrated Green Procurement Guidelines

## Initiatives Related to High-Risk Minerals (Conflict Minerals and Cobalt)

As part of its efforts to realize sustainable and responsible supply chains, the AGC Group procures minerals responsibly. When procuring minerals that could potentially be associated with conflicts (tantalum, tin, tungsten, and gold) and high risk minerals such as cobalt, we confirm whether there is any risk of the minerals being associated with human rights violations related to the mining, transportation, and trade of minerals or with support for armed groups in conflict-affected and high-risk areas. Further, we use smelters and refineries that are certified as not using minerals for which there are concerns in relation to the aforementioned issues. With the cooperation of related business partners, we identify risks through due diligence and take corrective action if a significant risk is found in a supply chain.

In 2021, we established the AGC Group Responsible Minerals Sourcing Policy, which we posted on the AGC website to make it available to business partners worldwide. Further, we requested the cooperation of business partners in achieving this initiative for the responsible procurement of minerals.

In addition, as a result of conducting a survey from 2022 to 2023 on the procurement of high-risk minerals and products containing high-risk minerals, which targeted AGC Group business sites worldwide, the Group was able to identify 445 upstream refiners, of which 294 were certified by the Responsible Minerals Initiative. Going forward, we will continue to identify and take corrective actions in response to risks.

AGC Group Responsible Minerals Sourcing Policy

## Hosting Workshops on the Environment, Safety, and Compliance

AGC regularly hosts workshops on the environment, safety, and compliance for major business partners. The Group also holds lectures on strategies and environmental targets in relation to its sustainability management, organizes gatherings aimed at sharing information on each Group company's activities, and conducts tours of outstanding plants.

Also, the Group organizes various training programs for its business partners with a view to promoting manufacturing and personnel development that is based on an awareness of the entire supply chain.

## Assessing Business Partners' Satisfaction with the AGC Group through an Annual Survey

Since 2008, AGC has been conducting an annual survey of its major business partners to assess the level of satisfaction they have in their relationships with the AGC Group. The purpose of the survey is to build trusting relationships with these business partners and create a mutually beneficial environment for offering better products.

The anonymity of the survey is guaranteed so that respondents can feel comfortable in answering questions candidly and honestly. About 200 business partners have been surveyed each year, and the overall results were shared with business partners who responded to the survey and relevant personnel at AGC.

## **Fair Transactions**

## **Fundamental Approach**

The AGC Group stipulates that it will conduct appropriate transactions and its business in accordance with the principle of fair competition and all applicable laws and regulations in AGC Group Charter of Corporate Behavior. We also strive to maintain sound relationships with politicians, governments, other organizations, and individuals and firmly confront anti-social forces as it aims to conduct fair transactions.

## Management Structure

Since 2006, the AGC Group has been implementing a global legal management system and strengthening monthly reporting on and monitoring of disputes faced by the Group, in order to grasp their status quickly and deal with each case appropriately. With regard to the disputes faced by the Group, information is gathered at the Group General Counsel level and is promptly reported to senior management and the Group CEO. Moreover, periodic reports are given to the Board of Directors on the progress of the disputes and the status of the global legal management system.

In addition, the AGC Group is working to reduce legal management risk by hosting legal conference with Regional General Counsels and cooperating with related in-house divisions.

## **Groupwide Initiatives**

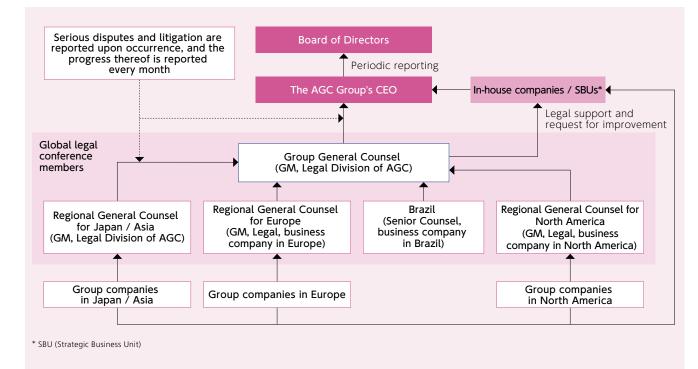
## **Compliance with Antitrust Laws**

In addition to the AGC Group Code of Conduct that summarizes matters all employees must comply with in their work, the AGC Group has established and is operating global guidelines for compliance with antitrust laws. The guidelines state that, when meeting with a competing company, (1) the legality of the purpose of the meeting shall be fully examined and participation shall be allowed only on an extremely limited basis, (2) advance permission to attend must be obtained from a supervisor, and (3) following attendance, meeting minutes must be prepared. Moreover, the Group is promoting face-to-face and e-learning education regarding compliance with antitrust laws in each region and organization. One of the global common priority audit items for internal audits is "organization and procedure for compliance with antitrust laws." Audits of the status of compliance with these global guidelines are also implemented.

## Status of Implementing Measures for Complying with Antitrust Laws (AGC Group)

	Number of participants in e-learning	Number of internal audits
2023	Approx. 3,500	39

### **Global Legal Management System**



#### Society

#### **Anti-Corruption Measures**

The AGC Group Code of Conduct stipulates that the AGC Group maintain sound relationships with politicians, government agencies and other responsible organizations and individuals, and the Group works to comply with the laws and regulations of each country and region relating to anti-corruption.

Moreover, with the prevention of bribery and other corrupt practices being strengthened worldwide, the AGC Group is promoting relevant education for its employees. In addition to the AGC Group Anti-Bribery Rules for public officers, the Group established and is operating guidelines that provide specific procedures, approaches, and judgment criteria for high-risk countries and regions.

Further, in 2023 the AGC Group was not subject to any punitive measures issued by authorities in relation to corruption.

## Compliance with Contractual Requirements and the Revised Worker Dispatching Act

The AGC Group conducts business in collaboration with business partners involving contracted companies and temporary workers. In addition, the Group conducts a survey every year on compliance with contractual requirements at AGC production plants and major Group companies in Japan and confirmed again in 2023 that compliance-related rules are being observed. The Group will continue to make efforts to disseminate and thoroughly comply with contractual requirements and comply with the revised Worker Dispatching Act.

## Compliance with the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors

At the AGC Group, we strive to rectify any transaction and business practices that impede the formation of partnerships with our business partners, while complying with criteria stipulated in the Act on the Promotion of Subcontracting Small and Medium-sized Enterprises, in accordance with our Partnership Building Declaration in December 2020, in light of the importance of creating a mutually beneficial environment and increasing value added throughout our supply chain.

As a part of these efforts, in February 2024, we shared information to about 20 people, including managers in charge of managing outsourcing and procurement in each business segment, about key points to be aware of when complying with the Act against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors, including how to respond to the recent rise in raw material and fuel prices.

The AGC Group continues to train controllers and managers on best practices for compliance with this Act. In 2023, we conducted an e-learning program on the Act for approximately 10,000 trainees.

### Prevention of Insider Trading

To protect its shareholders and investors and ensure the fairness and reliability of securities markets, the AGC Group is making every effort to spread awareness of the prevention of insider trading. In addition to clearly stating in the AGC Group Code of Conduct that insider trading is forbidden, systems intended to prevent it are stipulated in the Information Control Council Establishment Guidelines and the Insider Trading Prevention and Control Rules.

Furthermore, regular opportunities to learn about the AGC Group Code of Conduct are provided, and information regarding the prevention of insider trading is thoroughly disseminated. Special training is implemented for directors, executive managers, and personnel in specific posts (corporate planning, accounting, finance, corporate communications, the investor relations division, etc.).

Furthermore, if an AGC Group director or employee has concerns as to whether buying or selling stocks could fall under insider trading, the Information Control Council prepares a system for review and works to prevent any instance of insider trading.

## **Respect for Intellectual Property Rights**

## **Fundamental Approach**

As stipulated in the AGC Group Charter of Corporate Behavior, the AGC Group properly manages and protects the Company's information, intellectual property rights, and assets, and it strives to respect the intellectual property rights of others, including customers and business partners.

## Management Structure

The AGC Group considers intellectual property rights such as patents, utility model rights, trademark rights, design rights, and copyrights as valuable intangible assets, and the Intellectual Property Division takes the lead in protecting and enforcing these rights.

## **Groupwide Initiatives**

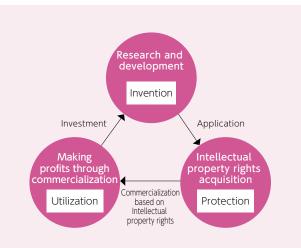
### Protection and Utilization of Intellectual Property Rights Created within the AGC Group

In addition to making intellectual property rights as a vital business strategy resource, the AGC Group works to protect and further expand such rights and promote the use of intellectual property to heighten its competitive advantage.

For example, the Group globally files intellectual property applications for inventions created at development sites in each country and works to acquire rights adapted to its business activities. Since procedures for the protection of intellectual property rights differ by country, rights acquisition is conducted in cooperation with local patent attorney offices and Group companies. The Group also takes strict action on any infringements of its intellectual property rights by other parties in compliance with the local laws and regulations of each country.

In addition, to use the intellectual property rights held by the Group to promote intellectual property strategies linked to the business and brand strategies of each business division, intellectual property conferences attended by the heads of each business division are held regularly by each division.

### **Cycle of Intellectual Property Creation**



### Prevention of Infringement of the Intellectual Property Rights of Other Parties

The AGC Group is creating a framework, including employee education, to prevent infringement of the intellectual property rights of others. The Group continuously monitors the intellectual property rights of others and checks to make sure it will not be violating said rights before new products are released or new business operations commence.

# Employee Training regarding Intellectual Property Rights

The AGC Group emphasizes employee training regarding intellectual property rights from the dual perspectives of adequately protecting its own intellectual property rights and respecting those of others.

In Japan, aside from hosting intellectual property training for employees in the initial stages of their joining the firm, the Group carries out intellectual property training and promotes intellectual property education for each in-house company, technical division, and research division as necessary. Additionally, intellectual property training is implemented at overseas Group companies and tailored to suit local conditions.

## Initiatives at Individual Companies

## Award System for Inventors of Employees

AGC has a substantial Award System for Inventors in place for outstanding employee inventions. Similar systems are being prepared at Group companies in Japan. In addition, reward systems are being prepared overseas based on the legal framework in each country and region, taking each location's present circumstances into consideration.

Award System for Inventors

## **Maintaining Information Security**

## Fundamental Approach

Based on ISO 27000, the international standard for information security management systems, the AGC Group established the AGC Group Information Security Basic Policy, which is shared Group-wide, the Group appropriately stores, uses, and manages information assets and protects personal information.

## Management Structure

Under the AGC Group Information Security Basic Policy, the AGC Group has formulated its management regulations and guidelines based on the AGC Group's common initiative items, and has established a necessary management system. In addition, in the event of a serious information security incident occurring, the Group has established a system to minimize the impact in accordance with the AGC Group Rules for Crisis Management and Business Continuity Management.

## **Groupwide Initiatives**

## Strengthening Response Capabilities against Cyberattacks

To maintain stable transactions with its customers, the AGC Group is reinforcing initiatives for tackling the increasing threat of cyberattacks.

- We have formulated Groupwide common management regulations based on international standards for measures to address the security of our information systems and production equipment as well as improve our protection and detection equipment. At the same time, we have put in place a management system under which we are working to improve structures and carry out training with a view to strengthening our ability to respond quickly in the event of an information security incident occurring.
- To achieve this goal, we are continuously implementing technological penetration testing and comprehensive assessments by third parties.
- In light of the diversification of working patterns in the post-COVID-19 era, we have responded by strengthening our existing security measures for remote work.

## Internal Audits on Information Security

The AGC Group has selected "measures for preventing leaks of important confidential information" as one of the shared priority items for internal audits (see page 14: Internal Audits).

## Initiatives at Individual Companies

## Information Security Training

Information security training is implemented at AGC as part of training for new-graduate hires and mid-career employees.

We also provide annual e-learning on a common Group platform for employees.

## **Social Contribution Activities**

## The AGC Group's Social Contribution Activities

Under the three pillars of the AGC Group Social Contribution Basic Policy—support for the next generation, harmony with local communities, and natural environment conservation—the AGC Group carries out social contribution activities in over 20 countries and regions throughout Japan and Asia, the Americas, and Europe.

Social contribution activities at each base are positioned as an element of "consideration for relationships with local communities," which is recognized as a long-term social issue. By leveraging our various expertise and resources, we are fostering good relationships with local residents and governments in the areas around our operational sites, which also contributes to enhancing our brand image.

Moving forward, the Group will continue to actively promote social contributions for its diverse stakeholders and conduct activities that lead to the resolution of social issues.

### AGC Group Social Contribution Basic Policy

(Established on February 10<sup>th</sup>, 2010)

In its AGC Group Charter of Corporate Behavior, the AGC Group declares it will "strive to be a trusted corporate citizen, fulfilling its responsibilities to the communities in which it does business." To achieve this goal, we conduct social contribution activities in three priority areas.

#### **Priority Areas**

1. Support for the next generation

We, as a creator of future value, support the development of children, who will carry the future, helping them live out their dreams.

 Harmony with local communities We, as a member of the communities in which we operate, contribute to their sustainable development.

 Natural environment conservation We, as a global enterprise, contribute to the resolution of global environmental problems.

### Total Financial Expenditures on Social Contribution Activities (the AGC Group)

Year	Amount
2020	¥477 million
2021	¥373 million
2022	¥517 million
2023	¥572 million

### Total Number of Employees Participating in Social Contribution Activities (the AGC Group)

Year	Number of Employees
2020	11,543
2021	9,648
2022	14,848
2023	18,848

### Total Expenditures by Field of Emphasis: 2023 (the AGC Group)

Category	Amount	Rate
Support for the next generation	¥198 million	35%
Harmony with local communities	¥181 million	32%
Natural environment conservation	¥57 million	10%
Others	¥136 million	23%

### Expenditures by Use: 2023 Results (the AGC Group)

Purpose of Use	Amount	Rate
Donations, material donations	¥362 million	63%
Employee participation and dispatch	¥120 million	21%
Voluntary programs	¥70 million	12%
Opening of facilities, acceptance of tours	¥20 million	4%

## Internal Systems

AGC has introduced the Volunteer Leave and Sabbatical System in order to support, as a company, the self-directed volunteer activities of individual employees.

### For volunteer activities that meet predetermined criteria

Volunteer Leave System: 5 days a year Volunteer Sabbatical System: 3 to 30 months (up to two times within this timeframe)

## Anti-Corruption

## **Political Donations**

AGC complies with the Political Funds Control Act with regard to political donations, which requires pre-approval with checks each time on their necessity.

In fiscal 2023, AGC made political donations amounting to  $\ensuremath{\mathtt{Y5,000}}$  .

## **Ensuring Quality**

## **Fundamental Approach**

The AGC Group pursue "Innovation & Operational Excellence," one of our shared values in Group Vision, **"Look Beyond**," and declare in the "AGC Group Quality Policy" to continuously create the value that meet customer expectations. The AGC Group develop and provide products and services giving due consideration to safety and the environment, and work to improve the quality of our products and services in order to gain the satisfaction and trust of our customers.

## Management Structure

Under the "AGC Group Quality Policy," each division establish quality management system based on ISO 9001 and similar standards. Divisions conduct internal audits and reviews in a manner best suited to its business, and continuously improve the effectiveness and efficiency of its quality management system.

In addition, since 2013, based on the EHSQ Management System concept, the EHSQ General Division comprehensively covers the EHSQ initiatives of the entire Group, establishing a structure that contribute to the entire group management activities relevant to EHSQ. In 2021, the AGC Group established the "AGC Group Quality Management Working Rules" to further improve our quality.

The AGC Group holds annual "Quality Conference" gathering divisions' quality management representatives to share issues and relevant knowledge. In 2023, the conference featured a review of the previous fiscal year, confirming the issues that the AGC Group should cope with, sharing initiative of efforts in improving quality of each division.

### ISO 9001 and ISO/IATF 16949\*1 Certification Status

١S	of	end	of	December,	2023
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Location	Number of certified organizations*2
Japan	25
Asia (excluding Japan)	28
Europe	24
North America and South America	8
Total	85

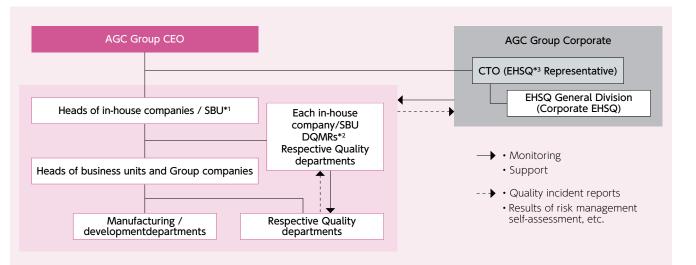
\*1 Standards for quality management systems applied in the automotive industry, which requires compliance with the global procurement criteria for automotive parts.
\*2 Single certification may include multiple sites and/or legal entities.

### The AGC Group Quality Policy

(Established on September  $8^{th}$ , 2004, and revised on January  $1^{st}$ , 2023)

Based on the principle of "incorporating Customer Satisfaction perspective into our daily work", we develop and provide products and services to continuously create the value that meet customer expectations.

- 1. We provide our products and services in conformance with the requirements of laws, regulations, and customers.
- We ensure and improve the quality of our products and services, including safety and appropriate environmental consideration.
- 3. We record necessary information related to our products and services on a factual basis, and appropriately control, report, and disclose such information.
- 4. We together participate in the continual improvement of effectiveness and efficiency of our quality management, and strive to enhance the value of individual's work.
- 5. To ensure the above are materialized, we determine individual policy and targets, and facilitate in the PDCA cycle.



\*1 SBU (Strategic Business Unit)

\*2 DQMR (Division Quality Management Representative)

\*3 EHSQ (Environment, occupational health and safety, industrial safety and security, and quality)

## **Groupwide Initiatives**

## Compliance with Legal and Regulatory Requirements regarding Products

Through risk management self-assessments, which are based on an integrated risk management system, the AGC Group annually checks the operational status related to compliance with laws and regulations on products at each business division and continuously pursues improvements.

### **Ensuring Data Integrity in Inspections**

The AGC Group is working to maintain, reinforce, and systematize data governance in order to ensure data integrity in inspections.

## Initiatives at Indivisual Companies

### Improvement of the Reliability of Product Inspection Data

As an initiative to improve the reliability of product inspection data, the AGC Group is promoting IoT-based automated inspection systems that do not require human intervention through a corporate-level team dedicated to the automation of product inspections, to develop and introduce to Group Companies. In addition, for inspection processes that are difficult to automate, the team continuously works to reinforce management measures to ensure delivering reliable quality data to customers.

## **Product Safety Initiatives**

## Fundamental Approach

Under the AGC Group's management policy of "providing safety security, and comfort to society," the Group conducts reviews, from the perspective of product safety, when moving from product development stage to prototyping and manufacturing. We ensure that our products do not cause any harm or danger to the customers. In addition, AGC Group ensure that appropriate information is disclosed so that our products are used safely.

For some of our products, we acquired local certification base on the country standard where the product is sold, to ensure product safety from the perspective of a third-party.

## Management Structure

Within the AGC Group, each division establish quality management system based on ISO 9001 and similar standards. Divisions conduct internal audits and reviews in a manner best suited to its business, and continuously improve the effectiveness and efficiency of its quality management system.

## **Groupwide Initiatives**

### **Compliance with the Consumer Product Safety Act**

In Japan, in the event of serious product accident, the AGC Group promptly reports to the Consumer Affairs Agency and takes organizational measures to prevent the spread of harm, which is taken in accordance with the "Safety Control and Product Accident Handling Standards for Compliance with the Consumer Products Safety Act" (enacted in 2014). We also work to prevent accidents by regularly confirming risk control-status according to the risk level set for each product.

Adding to these efforts, information on product accidents released by the Consumer Affairs Agency and the National Institute of Technology and Evaluation (NITE) is consolidated, categorized, and shared among the Group, so to be utilized as reference for the AGC Group's product safety initiatives.

Study sessions are held for the persons in charge at relevant divisions, to maintain and update their knowledge.

There were no serious product accidents reported to the Consumer Affairs Agency in 2023.

### the Number of Reported Serious Product Accidents (the AGC Group Companies in Japan)

Year	Number
2019	1
2020	0
2021	1
2022	1
2023	0

#### Society

#### Product accident Initial report Division in charge Customers promptly collects information Correspond Division in charge and Emergency response committee other related departments Decide measures to prevent the spread of harm Serious Consumer Affairs Agency Must be reported within 10 days after becoming aware of the accident Serious product accidents National Institute of Technology and Not serious Evaluation (NITE) Provide relevant information of the accident (voluntary)

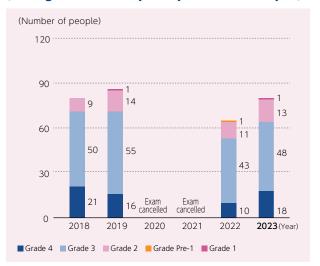
## **Reporting Flow for Serious Product Accidents under the Consumer Product Safety Act**

## Implementing Quality Education and Trainings

The AGC Group provides quality education and training in each division according to their respective needs. When necessary, we provide quality compliance education for employees, using internal and external quality incident case-studies, to maintain and raise quality awareness. Within the AGC Group companies in Japan, we encourage employees to take an official examination on quality control (QC KENTEI).\*

\* QC KENTEI: Quality Management and Quality Control Examination, a measure for assessing knowledge of quality management, quality control and Kaizen, administrated by Japanese Standards Association.

### Number of Employees that Passed the QC KENTEI\* (among the AGC Group Companies within Japan)



## **Pursuit of Customer Satisfaction (CS)**

## **Fundamental Approach**

The AGC Group continuously strives to achieve customer satisfaction (CS). The Group defines customers as "people and organizations who receive the result (value) of one's work, such as the products (including services) and information." As such, the Group works to achieve CS of not only business customers but also between the employees within the Group.

## Management Structure

Under the quality management system of the AGC Group, in-house companies take various initiatives to enhance CS. CS trainings are implemented in stratified training, and the Group actively works to root the spirit of CS in the AGC Group's corporate culture.

## **Groupwide Initiatives**

### Implementing CS Training

Based on the management policy of "creating new value and functions for customers and business partners and building trust with them," the employees of the AGC Group incorporate CS perspective into their daily activities as a fundamental approach to their work. To add further value for our customers, the Group provides specialized CS trainings and other types of trainings to the divisions based on their specific needs. Moreover, CS is an important theme in the Group's stratified training.

As of December 31, 2023, a total of 8,264 employees have taken CS training. (This number do not include training provided individually by the divisions).

### **Customer Service**

The AGC Group seeks to provide CS by establishing customer centers and customer service windows for specific businesses.

The Architectural Glass Asia Pacific Company (Japan) operates a customer center for architectural glass to respond accurately to inquiries from customers in the building industry, as well as from individual customers (consumers). The Architectural Glass Europe & Americas Company (Europe) provides websites in multiple languages to correspond to each local needs.

Additionally, the Chemicals Company offers inquiry forms on its website in 10 languages. It is organized to automatically forward inquiries to the appropriate person-in-charge, depending on the business, product, and region/country of the sender, so as to respond in a timely manner.

AGC refers to GRI Standards (GRI 1: Foundation 2021) and reports information based on the GRI content index for the period from January 1, 2023, to December 31, 2023.

## 1. The organization and its reporting practices

Universal Standards			Requirements	Page listed
GRI 2: General Disclosures 2021	2-1	Organizational details	a. report its legal name; b. report its nature of ownership and legal form; c. report the location of its headquarters; d. report its countries of operation.	•AGC Integrated Report 2024 (P.89) Corporate and Stock Information • Company Overview • Company Overview for Investors
	2-2	Entities included in the organization's sustainability reporting	<ul> <li>a. list all its entities included in its sustainability reporting;</li> <li>b. if the organization has audited consolidated financial statements or financial information filed on public record, specify the differences between the list of entities included in its financial reporting;</li> <li>c. if the organization consists of multiple entities, explain the approach used for consolidating the information, including:</li> <li>i. whether the approach involves adjustments to information, and disposal of entities or garts of entities, acquisitions, and disposal of entities or parts of entities;</li> <li>ii. how the approach takes into account mergers, acquisitions, and disposal of entities or parts of entities;</li> <li>iii. whether and how the approach differs across the disclosures in this Standard and across material topics.</li> </ul>	<ul> <li>Sustainability Data Book 2024 (P.1)</li> <li>Scope of This Report</li> <li>Financial Review 2023 (English only) (P.72-78)</li> </ul>
	2-3	Reporting period, frequency and contact point	<ul> <li>a. specify the reporting period for, and the frequency of, its sustainability reporting;</li> <li>b. specify the reporting period for its financial reporting and, if it does not align with the period for its sustainability reporting, explain the reason for this;</li> <li>c. report the publication date of the report or reported information;</li> <li>d. specify the contact point for questions about the report or reported information.</li> </ul>	AGC Integrated Report 2024 (P.2)     Sustainability Data Book 2024 (P.1) Scope of This Report     Inquiries Regarding Sustainability
	2-4	Restatements of information	a. report restatements of information made from previous reporting periods and explain: i. the reasons for the restatements; ii. the effect of the restatements.	
	2-5	External assurance	<ul> <li>a. describe its policy and practice for seeking external assurance, including whether and how the highest governance body and senior executives are involved;</li> <li>b. if the organization's sustainability reporting has been externally assured: <ol> <li>provide a link or reference to the external assurance report(s) or assurance statement(s);</li> <li>describe what has been assured and on what basis, including the assurance statement(s), the level of assurance obtained, and any limitations of the assurance process;</li> <li>describe the relationship between the organization and the assurance provider.</li> </ol> </li> </ul>	• Sustainability Data Book 2024 (P.58) Verification Statement • Financial Review 2023 (English only) (P.72-78)

## 2. Activities and workers

Universal Standards				Page listed
	2-6	Activities, value chain and other business relationships	<ul> <li>a. describe its policy and practice for seeking external assurance, including whether and how the highest governance body and senior executives are involved;</li> <li>b. if the organization's sustainability reporting has been externally assured: <ol> <li>provide a link or reference to the external assurance report(s) or assurance statement(s);</li> <li>describe what has been assured and on what basis, including the assurance standards used, the level of assurance obtained, and any limitations of the assurance provider.</li> </ol> </li> </ul>	AGC Integrated Report 2024 (P.40-55) Company Overview Company Overview for Investors Products Procurement Policy
GRI 2: General Disclosures 2021	2-7	Employees	<ul> <li>a. report the total number of employees, and a breakdown of this total by gender and by region;</li> <li>b. report the total number of: <ol> <li>perport the total number of:</li> <li>perport the total number of:</li> <li>temport of this total by gender and by region;</li> <li>temporary employees, and a breakdown by gender and by region;</li> <li>temporary employees, and a breakdown by gender and by region;</li> <li>non-guaranteed hours employees, and a breakdown by gender and by region;</li> <li>ty full-time employees, and a breakdown by gender and by region;</li> <li>v. full-time employees, and a breakdown by gender and by region;</li> <li>c. describe the methodologies and assumptions used to compile the data, including whether the numbers are reported:</li> <li>in head count, full-time equivalent (FTE), or using another methodology;</li> <li>d. report contextual information necessary to understand the data reported under 2-7-a and 2-7-b;</li> <li>e. describe significant fluctuations in the number of employees during the reporting period and between reporting period.</li> </ol> </li> </ul>	• Sustainability Data Book 2024 (P.62-64) Human Resources Management
	2-8	Workers who are not employees	<ul> <li>a. report the total number of workers who are not employees and whose work is controlled by the organization and describe: <ol> <li>the most common types of worker and their contractual relationship with the organization;</li> <li>the type of work they perform;</li> <li>describe the methodologies and assumptions used to compile the data, including whether the number of workers who are not employees is reported:</li> <li>in head count, full-time equivalent (FTE), or using another methodology;</li> <li>at the end of the reporting period, or using another methodology;</li> </ol> </li> <li>ecscribe significant fluctuations in the number of workers who are not employees during the reporting period and between reporting periods.</li> </ul>	

## 3. Governance

Universal Standards				Page listed
GRI 2: General Disclosures 2021	2-9	Governance structure and composition	<ul> <li>a. describe its governance structure, including committees of the highest governance body;</li> <li>b. list the committees of the highest governance body that are responsible for decisionmaking on and overseeing the management of the organization's impacts on the economy, environment, and people;</li> <li>c. describe the composition of the highest governance body and its committees by: <ul> <li>i. executive and non-executive members;</li> <li>ii. independence;</li> <li>iii. tenure of members on the governance body;</li> <li>iv. number of other significant positions and commitments held by each member, and the nature of the commitments;</li> <li>v. gender;</li> <li>vi. under-represented social groups;</li> <li>viii. stakeholder representation.</li> </ul> </li> </ul>	• AGC Integrated Report 2024 (P.72-73) • Sustainability Data Book 2024 (P.11) Corporate Governance • Corporate Governance
	2-10	Nomination and selection of the highest governance body	<ul> <li>a. describe the nomination and selection processes for the highest governance body and its committees;</li> <li>b. describe the criteria used for nominating and selecting highest governance body members, including whether and how the following are taken into consideration: <ol> <li>views of stakeholders (including shareholders);</li> <li>diversity;</li> <li>independence;</li> <li>competencies relevant to the impacts of the organization.</li> </ol> </li> </ul>	• AGC Integrated Report 2024 (P.72)
	2-11	Chair of the highest governance body	<ul> <li>a. report whether the chair of the highest governance body is also a senior executive in the organization;</li> <li>b. if the chair is also a senior executive, explain their function within the organization's management, the reasons for this arrangement, and how conflicts of interest are prevented and mitigated.</li> </ul>	• AGC Integrated Report 2024 (P.80) Corporate Governance
	2-12	Role of the highest governance body in overseeing the management of impacts	<ul> <li>a. describe the role of the highest governance body and of senior executives in developing, approving, and updating the organization's purpose, value or mission statements, strategies, policies, and goals related to sustainable development;</li> <li>b. describe the role of the highest governance body in overseeing the organization's due diligence and other processes to identify and manage the organization's impacts on the economy, environment, and people, including:</li> <li>i. whether and how the highest governance body engages with stakeholders to support these processes;</li> <li>ii. how the highest governance body considers the outcomes of these processes;</li> <li>c. describe the role of the highest governance body in reviewing the effectiveness of the organization's processes as described in 2-12-b, and report the frequency of this review.</li> </ul>	<ul> <li>AGC Integrated Report 2024 (P.73)</li> <li>Sustainability Data Book 2024 (P.21-24)</li> <li>Environmental Management</li> <li>Sustainability Promotion System</li> </ul>

	2-13	Delegation of responsibility for managing impacts	<ul> <li>a. describe how the highest governance body delegates responsibility for managing the organization's impacts on the economy, environment, and people, including:</li> <li>i. whether it has appointed any senior executives with responsibility for the management of impacts;</li> <li>ii. whether it has delegated responsibility for the management of impacts to other employees;</li> <li>b. describe the process and frequency for senior executives or other employees to report back to the highest governance body on the management of the organization's impacts on the economy, environment, and people.</li> </ul>	<ul> <li>AGC Integrated Report 2024 (P63,P.73)</li> <li>Sustainability Data Book 2024 (P.22-23)</li> <li>Environmental Management</li> <li>Sustainability Promotion System</li> </ul>
	2-14	Role of the highest governance body in sustainability reporting	a. report whether the highest governance body is responsible for reviewing and approving the reported information, including the organization's material topics, and if so, describe the process for reviewing and approving the information; b. if the highest governance body is not responsible for reviewing and approving the reported information, including the organization's material topics, explain the reason forthis.	
GRI 2:	2-15	Conflicts of interest	<ul> <li>a. describe the processes for the highest governance body to ensure that conflicts of interest are prevented and mitigated;</li> <li>b. report whether conflicts of interest are disclosed to stakeholders, including, at a minimum, conflicts of interest relating to: <ol> <li>cross-board membership;</li> <li>cross-shareholding with suppliers and other stakeholders;</li> <li>existence of controlling shareholders;</li> <li>v. related parties, their relationships, transactions, and outstanding balances.</li> </ol> </li> </ul>	• AGC Integrated Report 2024 (P.80-81, P.89)
General Disclosures 2021	2-16	Communication of critical concerns	<ul> <li>a. describe whether and how critical concerns are communicated to the highest governance body;</li> <li>b. report the total number and the nature of critical concerns that were communicated to the highest governance body during the reporting period.</li> </ul>	AGC Integrated Report 2024 (P.76)     Sustainability Data Book 2024     (P.15-16)     Risk Management     Sustainability Data Book 2024     (P.17-19)     Compliance
	2-17	Collective knowledge of the highest governance body	<ul> <li>a. report measures taken to advance the collective knowledge, skills, and experience of the highest governance body on sustainable development.</li> </ul>	AGC Integrated Report 2024 (P.82)
	2-18	Evaluation of the performance of the highest governance body	<ul> <li>a. describe the processes for evaluating the performance of the highest governance body in overseeing the management of the organization's impacts on the economy, environment, and people;</li> <li>b. report whether the evaluations are independent or not, and the frequency of the evaluations;</li> <li>c. describe actions taken in response to the evaluations; including changes to the composition of the highest governance body and organizational practices.</li> </ul>	• AGC Integrated Report 2024 (P.75)
	2-19	Remuneration policies	<ul> <li>a. describe the remuneration policies for members of the highest governance body and senior executives, including:</li> <li>i. fixed pay and variable pay;</li> <li>ii. sign-on bonuses or recruitment incentive payments;</li> <li>iii. termination payments;</li> <li>iv. clawbacks;</li> <li>v. retirement benefits;</li> <li>b. describe how the remuneration policies for members of the highest governance body and senior executives relate to their objectives and performance in relation to the management of the organization's impacts on the economy, environment, and people.</li> </ul>	• AGC Integrated Report 2024 (P.77-78) • Corporate Governance

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Universal Standards			Requirements	Page listed
GRI 2: General Disclosures 2021	2-20	Process to determine remuneration	<ul> <li>a. describe the process for designing its remuneration policies and for determining remuneration, including:</li> <li>i. whether independent highest governance body members or an independent remuneration committee oversees the process for determining remuneration;</li> <li>ii. how the views of stakeholders (including shareholders) regarding remuneration are sought and taken into consideration;</li> <li>iii. whether remuneration and, if so, whether they are independent of the organization, its highest governance body and senior executives;</li> <li>b. report the results of votes of stakeholders (including shareholders) or remuneration policies and proposals, if applicable.</li> </ul>	• AGC Integrated Report 2024 (P.77-78) • Corporate Governance
	2-21	Annual total compensation ratio	<ul> <li>a. report the ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual);</li> <li>b. report the ratio of the percentage increase in annual total compensation for the organization's highest-paid individual to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual);</li> <li>c. report contextual information necessary to understand the data and how the data has been compiled.</li> </ul>	

## 4. Strategy, policies and practices

Universal Standards				Page listed
	2-22	Statement on sustainable develop- ment strategy	a. report a statement from the highest governance body or most senior executive of the organization about the relevance of sustainable development to the organization and its strategy for contributing to sustainable development.	AGC Integrated Report 2024 (P4-8) Message from the CEO Sustainability Data Book 2024 (P2-3) Message from the CEO Message from the GM of Sustainability Division
GRI 2: General Disclosures 2021	2-23	Policy commitments	<ul> <li>a. describe its policy commitments for responsible business conduct, including: <ol> <li>the authoritative intergovernmental instruments that the commitments reference;</li> <li>whether the commitments stipulate conducting due diligence;</li> <li>whether the commitments stipulate applying the precautionary principle;</li> <li>whether the commitments stipulate respecting human rights;</li> <li>describe its specific policy commitment to respect human rights;</li> <li>the internationally recognized human rights that the commitment covers;</li> <li>the categories of stakeholders, including at-risk or vulnerable groups, that the organization gives particular attention to in the commitment;</li> <li>provide links to the policy commitments if publicly available, explain the reason for this;</li> <li>report the level at which each of the policy commitments apply to the organization's activities and to its business relationships;</li> <li>e. report the extent to which the policy commitments are commitments apply to the organization's activities and to its business relationships;</li> <li>f. describe how the policy commitments are commitments are communicated to workers, business partners, and other relevant parties.</li> </ol></li></ul>	Respecting Human Rights • AGC Group Charter of Corporate Behavior Standards • Code of Conduct • Sustainability-related policies, criteria, and guidelines

		1	T	
GRI 2: General Disclosures 2021	2-24	Embedding policy commitments	<ul> <li>a.describe how it embeds each of its policy commitments for responsible business conduct throughout its activities and business relationships, including: <ol> <li>how it allocates responsibility to implement the commitments across different levels within the organization;</li> <li>how it integrates the commitments into organizational strategies, operational policies, and operational procedures;</li> <li>how it implements its commitments with and through its business relationships;</li> <li>training that the organization provides on implementing the commitments.</li> </ol> </li> </ul>	<ul> <li>Sustainability Data Book 2024 (P.3) Message from the GM of Sustainability Division</li> <li>Sustainability Data Book 2024 (P.9) Sustainability Management System</li> <li>Sustainability Data Book 2024 (P.60-61 Respecting Human Rights, R87-89 Supply Chain)</li> <li>Code of Conduct</li> </ul>
	2-25	Processes to remediate negative impacts	<ul> <li>a. describe its commitments to provide for or cooperate in the remediation of negative impacts that the organization identifies it has caused or contributed to;</li> <li>b. describe its approach to identify and address grievances, including the grievance mechanisms that the organization has established or partici- pates in;</li> <li>c. describe other processes by which the organization provides for or cooperates in the remediation of negative impacts that it identifies it has caused or contributed to;</li> <li>d. describe how the stakeholders who are the intended users of the grievance mechanisms are involved in the design, review, operation, and improvement of these mechanisms;</li> <li>e. describe how the organization tracks the effectiveness including stakeholder feedback.</li> </ul>	<ul> <li>Sustainability Data Book 2024 (P.17-18)</li> <li>Compliance</li> <li>Sustainability Data Book 2024 (P.87)</li> <li>Supply Chain Management</li> <li>Point of Contact for Compliance in Procurement Activities</li> <li>Compliance Hot Lines</li> </ul>
	2-26	Mechanisms for seeking advice and raising concerns	<ul> <li>a. describe the mechanisms for individuals to:</li> <li>i. seek advice on implementing the organization's policies and practices for responsible business conduct;</li> <li>ii. raise concerns about the organization's business conduct.</li> </ul>	Sustainability Data Book 2024 (P17-18) Compliance     Sustainability Data Book 2024 (P60-61) Respecting Human Rights     Sustainability Data Book 2024 (P87) Supply Chain     Sustainability Data Book 2024 (P99) Pursuit of Customer Satisfaction (CS)
	2-27	Compliance with laws and regulations	<ul> <li>a. report the total number and the monetary value of fines for instances of noncompliance with laws and regulations that were paid during the reporting period, and a breakdown of this total by: <ol> <li>instances for which fines were incurred;</li> <li>instances for which non-monetary sanctions were incurred;</li> </ol> </li> <li>b. report the total number and the monetary value of fines for instances of noncompliance with laws and regulations that were paid during the reporting period, and a breakdown of this total by: <ol> <li>fines for instances of noncompliance with laws and regulations that occurred in the current reporting period;</li> <li>fines for instances of non-compliance with laws and regulations that occurred in previous reporting periods;</li> <li>c. describe the significant instances of non-compliance;</li> <li>d. describe the significant instance.</li> </ol></li></ul>	• Sustainability Data Book 2024 (P.24) Environmental Management
	2-28	Membership associations	<ul> <li>a. report industry associations, other membership associations, and national or international advocacy organizations in which it participates in a significant role.</li> </ul>	• Sustainability Data Book 2024 (P.27) Environmental Management

## 5. Stakeholder engagement

Universal Standards			Requirements	Page listed
GRI 2:	2-29	Approach to stake- holder engagement	<ul> <li>a. describe its approach to engaging with stakeholders, including: <ol> <li>the categories of stakeholders it engages with, and how they are identified;</li> <li>the purpose of the stakeholder engagement;</li> <li>how the organization seeks to ensure meaningful engagement with stakeholders.</li> </ol></li></ul>	• Sustainability Data Book 2024 (P.10) Stakeholders Engagement
General Disclosures 2021	2-30	Collective bargaining agreements Material Topics	<ul> <li>a. report the percentage of total employees covered by collective bargaining agreements;</li> <li>b. for employees not covered by collective bargaining agreements, report whether the organization determines their working conditions and terms of employment based on collective bargaining agreements that cover its other employees or based on collective bargaining agreements from other organizations.</li> </ul>	• Sustainability Data Book 2024 (P.61) Respecting Human Rights

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## **Material Topics**

versal Standards			Requirements	Page listed
	3-1	Process to determine material topics	<ul> <li>a. describe the process it has followed to determine its material topics, including: <ol> <li>how it has identified actual and potential, negative and positive impacts on the economy, environment, and people, including impacts on their human rights, across its activities and business relationships;</li> <li>how it has prioritized the impacts for reporting based on their significance;</li> <li>specify the stakeholders and experts whose views have informed the process of determining its material topics.</li> </ol> </li> </ul>	AGC Integrated Report 2024 (P.16)     Sustainability Data Book 2024 (P.6) Process for Identifying Long-Term Social Issues (Material Issues)
	3-2	List of material topics	a. list its material topics; b. report changes to the list of material topics compared to the previous reporting period.	<ul> <li>AGC Integrated Report 2024 (P.16)</li> <li>Sustainability Data Book 2024 (P.7-8)</li> <li>The AGC Group's Recognition of Long-Term Social Issues (Material Issues)</li> <li>AGC Sustainability management</li> </ul>
l 3: terial Topics 21	3-3	Management of material topics	<ul> <li>For each material topic reported under Disclosure 3-2, the organization shall: <ul> <li>a. describe the actual and potential, negative and positive impacts on the economy, environment, and people, including impacts on their human rights;</li> <li>b. report whether the organization is involved with the negative impacts through its activities or as a result of its business relationships, and describe the activities or business relationships;</li> <li>c. describe its policies or commitments regarding the material topic;</li> <li>d. describe actions taken to manage the topic and related impacts, including:</li> <li>i. actions to prevent or mitigate potential negative impacts;</li> <li>ii. actions to manage actual and potential positive impacts;</li> <li>e. report the following information about tracking the effectiveness of the actions taken:</li> <li>i. processes used to track the effectiveness of the actions;</li> <li>ii. goals, targets, and indicators used to evaluate progress;</li> <li>iii. he effectiveness of the actions, including progress toward the goals and targets;</li> <li>iv. lessons learned and how these have been incorporated into the organization's operational policies and procedures;</li> <li>f. describe how engagement with stakeholders has informed the actions taken (3-3-d) and how it has informed whether the actions have been effective (3-3-e).</li> </ul></li></ul>	<ul> <li>AGC Integrated Report 2024 (P.16)</li> <li>Sustainability Data Book 2024 (P.78)</li> <li>The AGC Group's Recognition of Long-Term Social Issues (Material Issues)</li> <li>Sustainability Data Book 2024 (P.21-23)</li> <li>Environmental Management</li> <li>Sustainability Data Book 2024 (P.60)</li> <li>Respecting Human Rights</li> <li>Sustainability Data Book 2024 (P.74)</li> <li>Occupational Health &amp; Safety</li> <li>Sustainability Data Book 2024 (P.87-88)</li> <li>Supply Chain</li> <li>AGC Sustainability management</li> </ul>

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## 6. Economic

Universal Standards			Requirements	Page listed
	201-1	Direct economic value generated and distributed	<ul> <li>a. Direct economic value generated and distributed (EVG&amp;D) on an accruals basis, including the basic components for the organization's global operations as listed below. If data are presented on a cash basis, report the justification for this decision in addition to reporting the following basic components: <ol> <li>Direct economic value generated: revenues;</li> <li>Economic value distributed: operating costs, employee wages and benefits, payments to providers of capital, payments to government by country, and community investments;</li> <li>Economic value retained: 'direct economic value generated' less 'economic value distributed'.</li> <li>Where significant, report EVG&amp;D separately at country, regional, or market levels, and the criteria used for defining significance.</li> </ol> </li> </ul>	• AGC Integrated Report 2024 (P.83-84) • Financial Review 2023 (English only)
	201-2	Financial implications and other risks and opportunities due to climate change	<ul> <li>a. Risks and opportunities posed by climate change that have the potential to generate substantive changes in operations, revenue, or expenditure, including:         <ol> <li>a description of the risk or opportunity and its classification as either physical, regulatory, or other;</li> <li>a description of the impact associated with the risk or opportunity;</li> <li>iii, the financial implications of the risk or opportunity before action is taken;</li> <li>iv. the methods used to manage the risk or opportunity;</li> <li>the costs of actions taken to manage the risk or opportunity.</li> </ol> </li> </ul>	<ul> <li>AGC Integrated Report 2024 (P.62-67)</li> <li>Sustainability Data Book 2024 (P.29-41)</li> <li>Climate Action</li> <li>Addressing climate change</li> </ul>
GRI 201: Economic Performance 2016	201-3	Defined benefit plan obligations and other retirement plans	<ul> <li>a. If the plan's liabilities are met by the organization's general resources, the estimated value of those liabilities.</li> <li>b. If a separate fund exists to pay the plan's pension liabilities: <ol> <li>the extent to which the scheme's liabilities are estimated to be covered by the assets that have been set aside to meet them;</li> <li>the basis on which that estimate has been arrived at;</li> <li>when that estimate was made.</li> <li>If a fund set up to pay the plan's pension liabilities is not fully covered, explain the stratey, if any, adopted by the employer to work towards full coverage, and the timescale, if any, by which the employer to a chieve full coverage.</li> <li>Percentage of salary contributed by employee or employer.</li> <li>Level of participation in retirement plans, such as participation in mandatory or voluntary schemes, regional, or country-based schemes, or those with financial impact.</li> </ol> </li> </ul>	• Financial Review 2023 (English only)(P.29, P.46)
	201-4	Financial assistance received from government	<ul> <li>a. Total monetary value of financial assistance received by the organization from any government during the reporting period, including: <ol> <li>tax relief and tax credits;</li> <li>subsidies;</li> <li>subsidies;</li> <li>iii. investment grants, research and development grants, and other relevant types of grant;</li> <li>wavards;</li> <li>royalty holidays;</li> <li>rinancial assistance from Export Credit Agencies (ECAs);</li> <li>vii. financial benefits received or receivable from any government for any operation.</li> <li>b. The information in 201-4-a by country.</li> <li>c. Whether, and the extent to which, any government is present in the shareholding structure.</li> </ol> </li> </ul>	

	203-1	Infrastructure investments and services supported	<ul> <li>a. Extent of development of significant infrastructure investments and services supported.</li> <li>b. Current or expected impacts on communities and local economies, including positive and negative impacts where relevant.</li> <li>c. Whether these investments and services are commercial, in-kind, or pro bono engagements.</li> </ul>	• AGC Integrated Report 2024 (P.13-14) • Sustainability Data Book 2024 (P.94) Social Contribution Activities
GRI 203: Indirect Economic Impacts 2016	203-2	Significant indirect economic impacts	<ul> <li>a. Examples of significant identified indirect economic impacts of the organization, including positive and negative impacts.</li> <li>b. Significance of the indirect economic impacts in the context of external benchmarks and stakeholder priorities, such as national and international standards, protocols, and policy agendas.</li> </ul>	

## 7. Environmental

Universal Standards				Page listed
	301-1	Materials used by weight or volume	<ul> <li>a. Total weight or volume of materials that are used to produce and package the organization's primary products and services during the reporting period, by:</li> <li>i. non-renewable materials used;</li> <li>ii. renewable materials used.</li> </ul>	• Sustainability Data Book 2024 (P.47) Sustainable Use of Resources
GRI 301: Materials 2016	301-2	Recycled input materials used	<ul> <li>a. Percentage of recycled input materials used to manufacture the organization's primary products and services.</li> </ul>	• Sustainability Data Book 2024 (P.42-48) Sustainable Use of Resources
	301-3	Reclaimed products and their packaging materials	<ul> <li>a. Percentage of reclaimed products and their packaging materials for each product category.</li> <li>b. How the data for this disclosure have been collected.</li> </ul>	• Sustainability Data Book 2024 (P.48) Sustainable Use of Resources
GRI 302: Energy 2016	302-1	Energy consumption within the organization	<ul> <li>a. Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used.</li> <li>b. Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used.</li> <li>c. In joules, watt-hours or multiples, the total: <ol> <li>electricity consumption</li> <li>cooling consumption</li> <li>steam consumption</li> <li>lectricity sold</li> <li>heating sold</li> <li>cooling sold</li> </ol> </li> <li>e. Total energy consumption within the organization, in joules or multiples, the total:</li> <li>f. Standards, methodologies, assumptions, and/or calculation tools used.</li> <li>g. Source of the conversion factors used.</li> </ul>	
	302-2	Energy consumption outside of the organization	<ul> <li>a. Energy consumption outside of the organization, in joules or multiples.</li> <li>b. Standards, methodologies, assumptions, and/or calculation tools used.</li> <li>c. Source of the conversion factors used.</li> </ul>	

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Universal Standards			Requirements	Page listed				a. Total water withdrawal from all areas in megaliters,	
	302-3	Energy intensity	<ul> <li>a. Energy intensity ratio for the organization.</li> <li>b. Organization-specific metric (the denominator) chosen to calculate the ratio.</li> <li>c. Types of energy included in the intensity ratio; whether fuel, electricity, heating, cooling, steam, or all.</li> <li>d. Whether the ratio uses energy consumption within the organization, outside of it, or both.</li> </ul>	• Sustainability Data Book 2024 (P.39) Climate Action				and a breakdown of this total by the following sources, if applicable: i. Surface water; ii. Groundwater; iii. Seawater; iv. Produced water; v. Third-party water. b. Total water withdrawal from all areas with water stress in megaliters, and a breakdown of this total	
GRI 302: Energy 2016	302-4	Reduction of energy consumption	<ul> <li>a. Amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives, in joules or multiples.</li> <li>b. Types of energy included in the reductions; whether fuel, electricity, heating, cooling, steam, or all.</li> <li>c. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.</li> <li>d. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>			303-3	Water withdrawal	<ul> <li>by the following sources, if applicable:</li> <li>i. Surface water;</li> <li>ii. Groundwater;</li> <li>iii. Seawater;</li> <li>iv. Produced water;</li> <li>v. Third-party water, and a breakdown of this total by the withdrawal sources listed in i-iv.</li> <li>c. A breakdown of total water withdrawal from each of the sources listed in Disclosures 303-3-a and 303-3-b in megaliters by the following categories:</li> <li>i. Freshwater (&lt;1,000 mg/L Total Dissolved</li> </ul>	• Sustainability Data Book 2024 (P:51-52) Conservation of Natural Capital and Biodiversity (Water Resource Initiatives)
	302-5	Reductions in energy requirements of products and services	<ul> <li>a. Reductions in energy requirements of sold products and services achieved during the reporting period, in joules or multiples.</li> <li>b. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.</li> <li>c. Standards, methodologies, assumptions, and/or</li> </ul>	AGC Integrated Report 2024 (P67)     Sustainability Data Book 2024 (P26)     AGC's Contributions to the Global Environment     Sustainability Data Book 2024     (P38-39) Products That Help Address Climate		Solids); ii. Other water (>1,000 mg/L Total Dissolved Solids). d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.			
GRI 303:Water and Effluents 2018	303-1	Interactions with water as a shared resource	<ul> <li>calculation tools used.</li> <li>a. A description of how the organization interacts with water, including how and where water is withdrawn, consumed, and discharged, and the water-related impacts caused or contributed to, or directly linked to the organization's activities, products or services by a business relation- ship (e.g., impacts caused by runoff).</li> <li>b. A description of the approach used to identify water-related impacts, including the scope of assessments, their timeframe, and any tools or methodologies used.</li> <li>c. A description of how water-related impacts are addressed, including how the organization works with stakeholders to steward water as a shared resource, and how it engages with suppliers or customers with significant water-related impacts.</li> <li>d. An explanation of the process for setting any water-relate to public policy and the local context of each area with water stress.</li> </ul>	Change • Sustainability Data Book 2024 (P.32) Climate Action • Sustainability Data Book 2024 (P50) Conservation of Natural Capital and Biodiversity (Water Resource Initiatives)	GRI 303: Water and Effluents 2018	303-4	Water discharge	<ul> <li>a. Total water discharge to all areas in megaliters, and a breakdown of this total by the following types of destination, if applicable: <ol> <li>Surface water;</li> <li>Groundwater;</li> <li>Seawater;</li> <li>Third-party water, and the volume of this total sent for use to other organizations, if applicable.</li> </ol> </li> <li>b. A breakdown of total water discharge to all areas in megaliters by the following categories: <ol> <li>Freshwater (&lt;1,000 mg/L</li> <li>Total Dissolved Solids);</li> <li>Other water (&gt;1,000 mg/L</li> <li>Total Dissolved Solids);</li> <li>Other water (&gt;1,000 mg/L</li> <li>Total Dissolved Solids);</li> <li>Other water (&lt;1,000 mg/L</li> </ol> </li> <li>Total water discharge to all areas with water stress in megaliters, and a breakdown of this total by the following categories: <ol> <li>Freshwater (&lt;1,000 mg/L</li> <li>Total Dissolved Solids);</li> <li>Other water (&lt;1,000 mg/L</li> <li>Total Dissolved Solids);</li> </ol> </li> <li>Other water (&lt;1,000 mg/L</li> <li>Total Dissolved Solids);</li> </ul>	• Sustainability Data Book 2024 (P.52) Conservation of Natural Capital and Biodiversity (Water Resource Initiatives) • Site Reports
	303-2	Management of water discharge- related impacts	<ul> <li>a. A description of any minimum standards set for the quality of effluent discharge, and how these minimum standards were determined, including:</li> <li>i. how standards for facilities operating in locations with no local discharge requirements were determined;</li> <li>ii. any internally developed water quality standards or guidelines;</li> <li>iii. any sector-specific standards considered;</li> <li>iv. whether the profile of the receiving waterbody was considered.</li> </ul>	<ul> <li>Sustainability Data Book 2024 (P.52)</li> <li>Conservation of Natural Capital and Biodiversity (Water Resource Initiatives)</li> </ul>				<ul> <li>a. how priority substances of concern were defined, and any international standard, authoritative list, or criteria used;</li> <li>ii. the approach for setting discharge limits for priority substances of concern;</li> <li>iii. number of incidents of non-compliance with discharge limits.</li> <li>e. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</li> </ul>	

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Universal Standards			Requirements	Page listed
GRI 303: Water and Effluents 2018	303-5	Water consumption	a. Total water consumption from all areas in megaliters. b. Total water consumption from all areas with water stress in megaliters. c. Change in water storage in megaliters, if water storage has been identified as having a significant water-related impact. d. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modeled, or sourced from direct measurements, and the approach taken for this, such as the use of any sector-specific factors.	
	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	<ul> <li>a. For each operational site owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas, the following information: <ol> <li>Geographic location;</li> <li>Subsurface and underground land that may be owned, leased, or managed by the organization;</li> <li>Position in relation to the protected area (in the area, adjacent to, or containing portions of the protected area) or the high biodiversity value area outside protected areas;</li> <li>Type of operation (office, manufacturing or production, or extractive);</li> <li>Size of operational site in km<sup>2</sup> (or another unit, if appropriate);</li> <li>Biodiversity value characterized by the attribute of the protected area or area of high biodiversity value outside the protected area (terrestrial, freshwater, or maritime ecosystem);</li> <li>Biodiversity value characterized by listing of protected Area Management Categories, Ramsar Convention, national legislation).</li> </ol></li></ul>	• Sustainability Data Book 2024 (P.56) Conservation of Natural Capital and Biodiversity
GRI 304: Biodiversity 2016	304-2	Significant impacts of activities, products, and services on biodiversity	<ul> <li>a. Nature of significant direct and indirect impacts on biodiversity with reference to one or more of the following:</li> <li>i. Construction or use of manufacturing plants, mines, and transport infrastructure;</li> <li>ii. Pollotion (introduction of substances that do not naturally occur in the habitat from point and non-point sources);</li> <li>iii. Introduction of species;</li> <li>v. Habitat conversion;</li> <li>vi. Changes in ecological processes outside the natural range of variation (such as salinity or changes in groundwater level).</li> <li>b. Significant direct and indirect positive and negative impacts with reference to the following:</li> <li>i. Species affected;</li> <li>iii. Duration of impacts;</li> <li>versibility or inreversibility of the impacts.</li> </ul>	<ul> <li>Sustainability Data Book 2024 (P:56-57)</li> <li>Conservation of Natural Capital and Biodiversity</li> <li>Creating a Healthy and Secure Society through Connections</li> </ul>
	304-3	Habitats protected or restored	<ul> <li>a. Size and location of all habitat areas protected or restored, and whether the success of the restoration measure was or is approved by independent external professionals.</li> <li>b. Whether partnerships exist with third parties to protect or restore habitat areas distinct from where the organization has overseen and implemented restoration or protection measures.</li> <li>c. Status of each area based on its condition at the close of the reporting period.</li> <li>d. Standards, methodologies, and assumptions used.</li> </ul>	• Sustainability Data Book 2024 (P:56-57) Conservation of Natural Capital and Biodiversity

GRI 304: Biodiversity 2016	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	<ul> <li>a. Total number of IUCN Red List species and national conservation list species with habitats in areas affected by the operations of the organization, by level of extinction risk:</li> <li>i. Critically endangered</li> <li>ii. Endangered</li> <li>iii. Vulnerable</li> <li>iv. Near threatened</li> <li>v. Least concern</li> </ul>	• Sustainability Data Book 2024 (P.56) Conservation of Natural Capital and Biodiversity
	305-1	Direct (Scope 1) GHG emissions	<ul> <li>a. Gross direct (Scope 1) GHG emissions in metric tons of CO<sub>2</sub> equivalent.</li> <li>b. Gases included in the calculation; whether CO<sub>2</sub>, CH<sub>4</sub>, N<sup>2</sup>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>, or all.</li> <li>c. Biogenic CO<sub>2</sub> emissions in metric tons of CO<sub>2</sub> equivalent.</li> <li>d. Base year for the calculation, if applicable, including: <ul> <li>i. the rationale for choosing it;</li> <li>ii. emissions in the base year;</li> <li>iiii. the context for any significant changes in emissions.</li> </ul> </li> <li>e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source.</li> <li>f. Consolidation approach for emissions; whether equity share, financial control, or operational control.</li> <li>g. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	• AGC Integrated Report 2024 (P68, P85) • Sustainability Data Book 2024 (P39-41) Climate Action
GRI 305: Emissions 2016	305-2	Energy indirect (Scope 2) GHG emissions	<ul> <li>a. Gross location-based energy indirect (Scope 2) GHG emissions in metric tons of CO<sub>2</sub> equivalent.</li> <li>b. If applicable, gross market-based energy indirect (Scope 2) GHG emissions in metric tons of CO<sub>2</sub> equivalent.</li> <li>c. If available, the gases included in the calculation; whether CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>, or all.</li> <li>d. Base year for the calculation, if applicable, including: i. the rationale for choosing it; ii. emissions in the base year;</li> <li>iii. the context for any significant changes in emissions that triggered recalculations of base year emissions.</li> <li>e. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source.</li> <li>f. Consolidation approach for emissions; whether equity share, financial control, or operational control.</li> <li>g. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	• AGC Integrated Report 2024 (P68, P85) • Sustainability Data Book 2024 (P39-41) Climate Action
	305-3	Other indirect (Scope 3) GHG emissions	<ul> <li>a. Gross other indirect (Scope 3) GHG emissions in metric tons of CO<sub>2</sub> equivalent.</li> <li>b. If available, the gases included in the calculation; whether CO<sub>2</sub>, CH<sub>4</sub>, M<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>, or all.</li> <li>c. Biogenic CO<sub>2</sub> emissions in metric tons of CO<sub>2</sub> equivalent.</li> <li>d. Other indirect (Scope 3) GHG emissions categories and activities included in the calculation.</li> <li>e. Base year for the calculation, if applicable, including: <ol> <li>the rationale for choosing it;</li> <li>emissions in the base year;</li> <li>the context for any significant changes in emissions.</li> </ol> </li> <li>f. Source of the emission factors and the global warming potential (GWP) rates used, or a reference to the GWP source.</li> <li>g. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	• AGC Integrated Report 2024 (P.68) • Sustainability Data Book 2024 (P.39-41) Climate Action

Universal Standards			Requirements	Page listed
	305-4	GHG emissions intensity	<ul> <li>a. GHG emissions intensity ratio for the organization.</li> <li>b. Organization-specific metric (the denominator) chosen to calculate the ratio.</li> <li>c. Types of GHG emissions included in the intensity ratio; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3).</li> <li>d. Gases included in the calculation; whether CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, MF<sub>3</sub>, or all.</li> </ul>	• AGC Integrated Report 2024 (P.68) • Sustainability Data Book 2024 (P.40) Climate Action
GRI 305:	305-5	Reduction of GHG emissions	<ul> <li>a. GHG emissions reduced as a direct result of reduction initiatives, in metric tons of CO<sub>2</sub> equivalent.</li> <li>b. Gases included in the calculation; whether CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, PFCs, SF<sub>6</sub>, NF<sub>3</sub>, or all.</li> <li>c. Base year or baseline, including the rationale for choosing it.</li> <li>d. Scopes in which reductions took place; whether direct (Scope 1), energy indirect (Scope 2), and/or other indirect (Scope 3).</li> <li>e. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	• AGC Integrated Report 2024 (P.67) • Sustainability Data Book 2024 (P.33, P.40-41) Climate Action
Emissions 2016	305-6	Emissions of ozone- depleting substances (ODS)	<ul> <li>a. Production, imports, and exports of ODS in metric tons of CFC-11 (trichlorofluoromethane) equivalent.</li> <li>b. Substances included in the calculation.</li> <li>c. Source of the emission factors used.</li> <li>d. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	• Sustainability Data Book 2024 (P.53) Conservation of Natural Capital and Biodiversity (Initiatives for the Management of Air Pollutants)
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOX), and other significant air emissions	<ul> <li>a. Significant air emissions, in kilograms or multiples, for each of the following: <ol> <li>NOX</li> <li>SOX</li> <li>SOX</li> <li>Persistent organic pollutants (POP)</li> <li>Volatile organic compounds (VOC)</li> <li>Hazardous air pollutants (HAP)</li> <li>Particulate matter (PM)</li> <li>Vii. Other standard categories of air emissions identified in relevant regulations</li> <li>Source of the emission factors used.</li> <li>Standards, methodologies, assumptions, and/or calculation tools used.</li> </ol> </li> </ul>	<ul> <li>Sustainability Data Book 2024 (P:53) Conservation of Natural Capital and Biodiversity (Initiatives for the Management of Air Pollutants)</li> <li>Site Reports</li> </ul>
	306-1	Waste generation and significant waste-related impacts	<ul> <li>a. For the organization's significant actual and potential waste-related impacts, a description of: <ol> <li>the inputs, activities, and outputs that lead or could lead to these impacts;</li> <li>whether these impacts relate to waste generated in the organization's own activities or to waste generated upstream or downstream in its value chain.</li> </ol></li></ul>	• Sustainability Data Book 2024 (P42-48) Effective Use of Resources
GRI 306: Waste 2020	306-2	Management of significant waste- related impacts	<ul> <li>a. Actions, including circularity measures, taken to prevent waste generation in the organization's own activities and upstream and downstream in its value chain, and to manage significant impacts from waste generated.</li> <li>b. If the waste generated by the organization in its own activities is managed by a third party, a description of the processes used to determine whether the third party manages the waste in line with contractual or legislative obligations.</li> <li>c. The processes used to collect and monitor waste-related data.</li> </ul>	Sustainability Data Book 2024 (P.42-48) Effective Use of Resources     Site Reports
	306-3	Waste generated	<ul> <li>a. Total weight of waste generated in metric tons, and a breakdown of this total by composition of the waste.</li> <li>b. Contextual information necessary to understand the data and how the data has been compiled.</li> </ul>	• Sustainability Data Book 2024 (P.47-48) Effective Use of Resources

GRI 306: Waste 2020	306-4	Waste diverted from disposal	<ul> <li>a. Total weight of waste diverted from disposal in metric tons, and a breakdown of this total by composition of the waste.</li> <li>b. Total weight of hazardous waste diverted from disposal in metric tons, and a breakdown of this total by the following recovery operations: <ol> <li>Preparation for reuse;</li> <li>Recycling;</li> <li>Other recovery operations.</li> <li>Total weight of non-hazardous waste diverted from disposal in metric tons, and a breakdown of this total by the following recovery operations: <ol> <li>Preparation for reuse;</li> <li>Preparation for reuse;</li> <li>Recycling;</li> <li>Hecycling;</li> <li>Her recovery operations.</li> </ol> </li> <li>d. For each recovery operations.</li> <li>d. For each recovery operation.</li> <li>d. For each recovery operations.</li> <li>d. For each recovery operation.</li> <li>e. ontice;</li> <li>offsite;</li> <li>offsite;</li> <li>offsite;</li> <li>e. Contextual information necessary to understand the data and how the data has been compiled.</li> </ol></li></ul>	• Sustainability Data Book 2024 (P47-48) Effective Use of Resources
	306-5	Waste directed to disposal	<ul> <li>a. Total weight of waste directed to disposal in metric tons, and a break down of this total by composition of the waste.</li> <li>b. Total weight of hazardous waste directed to disposal in metric tons, and a breakdown of this total by the following disposal operations: <ol> <li>Incineration (with energy recovery);</li> <li>Incineration (without energy recovery);</li></ol></li></ul>	• Sustainability Data Book 2024 (P.47-48) Effective Use of Resources
GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	<ul> <li>a. Significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations in terms of:         <ul> <li>total monetary value of significant fines;</li> <li>total number of non-monetary sanctions;</li> </ul> </li> </ul>	• Sustainability Data Book 2024 (P.24) Environmental Management
	308-1	New suppliers that were screened using environmental criteria	<ul> <li>Percentage of new suppliers that were screened using environmental criteria.</li> </ul>	
GRI 308: Supplier Environmental Assessment 2016	308-2	Negative environmental impacts in the supply chain and actions taken	<ul> <li>a. Number of suppliers assessed for environmental impacts.</li> <li>b. Number of suppliers identified as having significant actual and potential negative environmental impacts.</li> <li>c. Significant actual and potential negative environmental impacts identified in the supply chain.</li> <li>d. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which improvements were agreed upon as a result of assessment.</li> <li>e. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which relationships were terminated as a result of assessment, and why.</li> </ul>	• Sustainability Data Book 2024 (P87-89) Supply Chain • Procurement Policy

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## 8. Social

Universal Standards			Requirements	Page listed
	401-1	New employee hires and employee turnover	<ul> <li>a. Total number and rate of new employee hires during the reporting period, by age group, gender and region.</li> <li>b. Total number and rate of employee turnover during the reporting period, by age group, gender and region.</li> </ul>	• Sustainability Data Book 2024 (P.64) Human Resource Management
GRI 401: Employment 2016	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<ul> <li>a. Benefits which are standard for full-time employees of the organization but are not provided to temporary or part-time employees, by significant locations of operation. These include, as a minimum: <ol> <li>life insurance;</li> <li>health care;</li> <li>disability and invalidity coverage;</li> <li>parental leave;</li> <li>retirement provision;</li> <li>stock ownership; vii.others.</li> </ol> </li> <li>b. The definition used for 'significant locations of operation'.</li> </ul>	
	401-3	Parental leave	<ul> <li>a. Total number of employees that were entitled to parental leave, by gender.</li> <li>b. Total number of employees that took parental leave, by gender.</li> <li>c. Total number of employees that returned to work in the reporting period after parental leave ended, by gender.</li> <li>d. Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work, by gender.</li> <li>e. Return to work and retention rates of employees that took parental leave, by gender.</li> </ul>	• Sustainability Data Book 2024 (P.70) Work-Life Balance
	403-1	Occupational health and safety management system	<ul> <li>a. A statement of whether an occupational health and safety management system has been implemented, including whether:</li> <li>i. the system has been implemented because of legal requirements and, if so, a list of the requirements;</li> <li>ii. the system has been implemented based on recognized risk management and/or management system standards/ guidelines and, if so, a list of the standards / guidelines.</li> <li>b. A description of the scope of workers, activities, and workplaces covered by the occupational health and safety management system, and an explanation of whether and, if so, why any workers, activities, or workplaces are not covered.</li> </ul>	• Sustainability Data Book 2024 (P.74-75) Occupational Health & Safety
GRI 403: Occupational Health and Safety 2018	403-2	Hazard identification, risk assessment, and incident investigation	<ul> <li>a. A description of the processes used to identify work-related hazards and assess risks on a routine and non-routine basis, and to apply the hierarchy of controls in order to eliminate hazards and minimize risks, including:</li> <li>i. how the organization ensures the quality of these processes, including the competency of persons who carry them out;</li> <li>ii. how the results of these processes are used to evaluate and continually improve the occupational health and safety management system.</li> <li>b. A description of the processes for workers to report work-related hazards and hazardous situations, and an explanation of how workers are protected against reprisals.</li> <li>c. A description of the policies and processes for workers to remove themselves from work situations that they believe could cause injury or ill health, and an explanation of how workers are protected against reprisals.</li> <li>d. A description of the processes used to investigate work-related incidents, including the processes to identify hazards and assess risks relating to the incidents, to determine corrective actions using the hierarchy of controls, and to determine improvements needed in the occupational health and safety management system.</li> </ul>	• Sustainability Data Book 2024 (P.74-80) Occupational Health & Safety

	403-3	Occupational health services	a. A description of the occupational health services' functions that contribute to the identification and elimination of hazards and minimization of risks, and an explanation of how the organization ensures the quality of these services and facilitates workers' access to them.	Sustainability Data Book 2024 (P.74-80) Occupational Health & Safety     Generating New Value from Fair and Safe Workplaces
	403-4	Worker participation, consultation, and communication on occupational health and safety	a. A description of the processes for worker participation and consultation in the development, implementation, and evaluation of the occupa- tional health and safety management system, and for providing access to and communicating relevant information on occupational health and safety to workers.b. Where formal joint management–worker health and safety committees exist, a description of their responsibilities, meeting frequency, decision– making authority, and whether and, if so, why any workers are not represented by these committees.	<ul> <li>Sustainability Data Book 2024 (P.74-80)</li> <li>Occupational Health &amp; Safety</li> <li>Generating New Value from Fair and Safe Workplaces</li> </ul>
	403-5	Worker training on occupational health and safety	a. A description of any occupational health and safety training provided to workers, including generic training as well as training on specific work-related hazards, hazardous activities, or hazardous situations.	• Sustainability Data Book 2024 (P.78-80) Occupational Health & Safety
GRI 403: Occupational Health and Safety 2018	403-6	Promotion of worker health	<ul> <li>a. An explanation of how the organization facilitates workers' access to non-occupational medical and healthcare services, and the scope of access provided.</li> <li>b. A description of any voluntary health promotion services and programs offered to workers to address major non-work-related health risks, including the specific health risks addressed, and how the organization facilitates workers' access to these services and programs.</li> </ul>	• Sustainability Data Book 2024 (P.81–83) Creating a Comfortable Workplace
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	a. A description of the organization's approach to preventing or mitigating significant negative occupational health and safety impacts that are directly linked to its operations, products or services by its business relationships, and the related hazards and risks.	• Sustainability Data Book 2024 (P.74-80) Occupational Health & Safety
	403-8	Workers covered by an occupational health and safety management system	<ul> <li>a. If the organization has implemented an occupational health and safety management system based on legal requirements and/or recognized standards / guidelines:</li> <li>i. the number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system;</li> <li>ii. the number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system;</li> <li>iii. the number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system that has been internally audited;</li> <li>iii. the number and percentage of all employees and workers who are not employees but whose work and/or workplace is controlled by the organization, who are covered by such a system that has been internally audited;</li> <li>b. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.</li> <li>c. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</li> </ul>	• Sustainability Data Book 2024 (P.74-80) Occupational Health & Safety • Generating New Value from Fair and Safe Workplaces

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		Requirements	Page listed
403-9	Work-related injuries	<ul> <li>a. For all employees: <ul> <li>i. The number and rate of fatalities as a result of work-related injury;</li> <li>ii. The number and rate of high-consequence work-related injuries (excluding fatalities);</li> <li>iii. The number and rate of recordable work-related injuries;</li> <li>iv. The main types of work-related injury;</li> <li>v. The number of hours worked.</li> </ul> </li> <li>b. For all workers who are not employees but whose work and/or workplace is controlled by the organization: <ul> <li>i. The number and rate of fatalities as a result of work-related injury;</li> <li>ii. The number and rate of fatalities as a result of work-related injury;</li> <li>ii. The number and rate of fatalities as a result of work-related injury;</li> <li>ii. The number and rate of recordable work-related injury;</li> <li>v. The main types of work-related injury;</li> <li>v. The number and rate of recordable work-related injury;</li> <li>v. The number of hours worked.</li> <li>c. The work-related hazards that pose a risk of high-consequence injury, including:</li> <li>i. how these hazards have been determined;</li> <li>ii. which of these hazards have caused or contributed to high-consequence injuries during the reporting period;</li> <li>iii. actions taken or underway to eliminate other work-related hazards and minimize risks using the hierarchy of controls.</li> <li>d. Any actions taken or underway to eliminate other work-related hazards and minimize risks using the hierarchy of 00,000 hours worked.</li> <li>f. Whether and, if so, why any workers have been excluded from this disclosure, including the types of work-related and minimize risks using the types of worker excluded.</li> </ul> </li> </ul>	• AGC Integrated Report 2024 (P85) • Sustainability Data Book 2024 (P.75-77) Occupational Health & Safety • Site Reports
403-10	Work-related ill health	<ul> <li>a. For all employees: <ol> <li>The number of fatalities as a result of work-related ill health;</li> <li>The number of cases of recordable work-related ill health,</li> <li>The number of cases of recordable work-related ill health,</li> <li>For all workers who are not employees but whose work and/or workplace is controlled by the organization:</li> <li>The number of fatalities as a result of work-related ill health;</li> <li>The number of fatalities as a result of ill health;</li> <li>The number of fatalities as a result of work-related ill health;</li> <li>The number of cases of recordable work-related ill health;</li> <li>The main types of work-related ill health.</li> <li>The work-related hazards that pose a risk of ill health, including:</li> <li>how these hazards have been determined;</li> <li>which of these hazards have caused or contributed to cases of ill health during the reporting period;</li> <li>iii. actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls.</li> <li>d. Whether and, if so, why any workers have been</li> </ol></li></ul>	
		403-9 Work-related injuries 403-10 Work-related ill health	<ul> <li>403-9</li> <li>Work-related injuries</li> <li>a. For all employees:         <ul> <li>i. The number and rate of fatalities as a result of work-related injury;</li> <li>iii. The number and rate of high-consequence work-related injuries;</li> <li>iii. The main types of work-related injury;</li> <li>v. The number and rate of fatalities as a result of work-related injures;</li> <li>iii. The number and rate of fatalities;</li> <li>iiii. The number and rate of fatalities;</li> <li>iiii. The number and rate of fatalities;</li> <li>iii. The number and rate of fatalities;</li> <li>iii. The number and rate of corcodable work-related injuris;</li> <li>iv. The main types of work-related injury;</li> <li>v. The number of hours worked.</li> <li>c. The work-related hazards that pose a risk of high-consequence injury, including:</li> <li>how these hazards have been determined;</li> <li>iii. which of these hazards have been determined;</li> <li>iii. actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls.</li> <li>e. Whether the rates have been calculated based on 200,000 or 1,000,000 hours worked.</li> <li>f. Work-related inducads, methodologies, and asumptions used.</li> <li>a. For all employees:</li> <li>i. The number of fatalities as a result of work-related ill health,</li> <li>iii. The number of cases of recordable work-related ill health,</li> <li>iii. The number of fatalities as a result of work-related ill health,</li></ul></li></ul>

GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	<ul> <li>a. Operations and suppliers considered to have significant risk for incidents of: <ol> <li>child labor;</li> </ol> </li> <li>young workers exposed to hazardous work.</li> <li>b. Operations and suppliers considered to have significant risk for incidents of child labor either in terms of: <ol> <li>type of operation (such as manufacturing plant) and supplier;</li> <li>countries or geographic areas with operations and suppliers considered at risk.</li> </ol> </li> <li>c. Measures taken by the organization in the reporting period intended to contribute to the effective abolition of child labor.</li> </ul>	• Sustainability Data Book 2024 (P60-61) Respecting Human Rights • Sustainability Data Book 2024 (P87-89) Supply Chain
GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<ul> <li>a. Operations and suppliers considered to have significant risk for incidents of forced or compulsory labor either in terms of:</li> <li>i. type of operation (such as manufacturing plant) and supplier;</li> <li>ii. countries or geographic areas with operations and suppliers considered at risk.</li> <li>b. Measures taken by the organization in the reporting period intended to contribut</li> </ul>	• Sustainability Data Book 2024 (P60-61) Respecting Human Rights • Sustainability Data Book 2024 (P87-89) Supply Chain
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	<ul> <li>a. Percentage of operations with implemented local community engagement, impact assessments, and/ or development programs, including the use of: <ul> <li>i. social impact assessments, including gender impact assessments, based on participatory processes;</li> <li>ii. environmental impact assessments and ongoing monitoring;</li> <li>iii. public disclosure of results of environmental and social impact assessments;</li> <li>ii. cavioronmental velopment programs based on local communities' needs;</li> <li>v. stakeholder engagement plans based on stakeholder mapping;</li> <li>vi. broad based local community consultation committees and processes that include vulnerable groups;</li> <li>vii. works councils, occupational health and safety committees and other worker representation bodies to deal with impacts;</li> </ul> </li> </ul>	• Site Reports
	413-2	Operations with significant actual and potential negative impacts on local communities	<ul> <li>Operations with significant actual and potential negative impacts on local communities, including:</li> <li>the location of the operations;</li> <li>the significant actual and potential negative impacts of operations.</li> </ul>	
	414-1	New suppliers that were screened using social criteria	<ul> <li>a. Percentage of new suppliers that were screened using social criteria.</li> </ul>	
GRI 414: Supplier Social Assessment 2016	414-2	Negative social impacts in the supply chain and actions taken	<ul> <li>a. Number of suppliers assessed for social impacts.</li> <li>b. Number of suppliers identified as having significant actual and potential negative social impacts.</li> <li>c. Significant actual and potential negative social impacts identified in the supply chain.</li> <li>d. Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment.</li> <li>e. Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment.</li> <li>e. Percentage of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment, and why.</li> </ul>	• Sustainability Data Book 2024 (P87-89) Supply Chain • Procurement Policy