

FUTAMURA
CSR REPORT

2024 Edition April 2024 – March 2025

フタムラ化学株式会社
FUTAMURA CHEMICAL CO.,LTD.

President's Message

Thank you for reading our CSR Report.
Since our founding, our company's philosophy has been to be "a company that puts the stability of employees' lives first," and we are dedicated to creating a business structure that can provide stable employment that is not easily affected by economic fluctuations.
We actively strive to provide a safe working environment and improve work-life balance so that our employees can work for us for the long term with peace of mind, and we also focus on building good relationships with the local communities in which our business locations operate.
Our core business is flexible plastic packaging film, which is used to package a wide range of foods, including rice balls, sandwiches, bread, and sweets. It plays an essential role in food logistics infrastructure, reducing food waste and delivering food to consumers in a hygienic and efficient manner. For this reason, our mission is to provide a stable consistent supply of high quality products that can be used with peace of mind. To achieve this mission, we are constantly making improvements at each stage, from raw material procurement to production and product distribution, so that we can respond to sudden fluctuations in orders.
However, to respond quickly to sudden increases in demand, it is essential to put in place a system, but also for everyone involved in the business to work together to achieve the desired effect. For this reason, we strive every day to create a friendly atmosphere within the company and value a corporate culture in which employees cooperate rather than compete with each other.
Futamura's corporate culture of valuing employees and working together is shared throughout the group, and is familiar to overseas subsidiaries in the UK, US and elsewhere, where it is known as "Futamura Family" and "One Futamura."



President
YASUO NAGAE

We are actively working to realise a sustainable society. In addition to our efforts to develop products using non-petroleum-derived raw materials and in developing technologies to make effective use of the natural resource cellulose, we are also making steady progress in business operations, such as building solar power plants, promoting modal shifts, recycling packaging materials, and reducing carbon dioxide emissions through fuel conversion.
The world is entering an era of great change, but Futamura Chemical is determined to fulfil its mission of "stable supply" of "safe and reliable products" with "consistent quality" based on the philosophy of "a company that puts the stability of employees' lives first," and to grow as a company rooted in the local community. We ask for your understanding and support.

長江 泰雄

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Management Philosophy (Formulated in 1966)

Corporate Management Philosophy

1.As human beings, our mission is to work. The company is where we accomplish this mission.

2.Corporate Mission

One of our important corporate missions is to create permanent stability and prosperity in the lives of our employees. This is financed by profits generated by the company. For this purpose, the company itself must be stable. In order to stabilize a company permanently, it is necessary to develop and expand it. Maintaining the status quo will lead to decline. Ensuring ongoing stability and prosperity of a company requires growth through its development and expansion (including the enrichment of its contents).

3.Human Growth = Corporate Growth

The growth of people and the growth of a company are like two wheels of a cart –maintaining balance between the two is necessary. In order for people to grow, there must be a place and vessel that encourages their growth. The company is the vessel, and it is through the growth of the company that the growth of people can be achieved. All employees must strive to grow in their own work, under the principle that those who brighten a corner are national treasures. We should keep in mind that we either grow or we fail.

4.Corporate growth cannot be achieved without harmony. Discord will destroy a company.

Basic Policy

Based on our corporate management philosophy, Futamura Chemical aims to achieve human growth and contribute to society and the wider nation through company-wide cooperation, corporate growth, and development.

Company Motto (Formulated in 1953)

1.We will always strive to make better productsand serve society and the nation through our products.

1.We recognize that helping each other is thebeginning of harmony and that harmony among people is the basis for the development of the company.

1.We are devoted to the idea of creating something from nothing and, at the same time, we are always striving to create new ideas and to work with vigor.

1.We realize that those who are sincere in everything they do will win in the end.

Employee Code of Conduct

1.Be capable
Possess management and leadership abilities

2.Be sincere
Work in good faith

3.Put in effort
Do one's best at work

4.Be responsible
Take responsibility for one's work

5.Be collaborative
Be supportive of your boss, colleagues, and subordinates

VISION

Bringing peace of mind to lives and the environment around the world

Based on our corporate management philosophy, Futamura Chemical's objective is to achieve human growth and contribute to society and the wider nation through company-wide cooperation, corporate growth and development. In addition, we will play a "supporting role" in the lives of people around the world by providing a stable supply of products of high quality that customers can use with confidence.
Our focus is on creating value and achieving sustainable growth for the company group by contributing to the implementation of a sustainable society through our business.

MISSION

With the utmost environmental consideration, we provide a stable supply of products at all times, supporting people's lives from the bottom up.

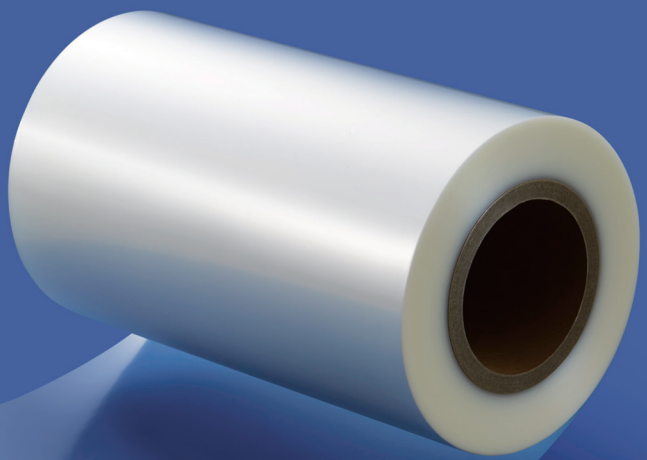
In the plastic film business, there are many ways to be environmentally conscious, such as switching from container packaging to flexible packaging to minimize plastic use, reducing marine microplastics and debris, using plant-derived and recycled materials, water-based printing, monomaterialization, and composting. In cooperation with the cellulose division, whose main raw material is plant-derived, we will develop products and strengthen our ability to make proposals to customers who are seeking environmentally-friendly packaging formats.
In the activated carbon business, we will provide a stable supply of activated carbon, which plays an important role in improving our surroundings and protecting nature by adsorbing impurities from the air and water. We will also expand into fields contributing to the construction of a recycling-oriented society, such as the concentration and storage of methane gas derived from biomass and the purification of hydrogen reformed from methane, using the adsorption properties of activated carbon.

In line with our mission to ensure a stable provision of products that are essential to people' s lives, we have expanded our range of businesses to include activated carbon, cellulose, plastic films, phenolic laminated sheets, starch, and gas separation equipment as we endeavor to improve our products. Currently, with the rise of public interest in environmental issues and SDGs, there is an increasing demand for products that have a lower environmental impact, such as biomass products and recycled materials. At Futamura Chemical, we partner with our global affiliates and promote product development that aligns with the environmental issues of each market, while leveraging our expertise in plastic and cellulose film manufacturing to propose and supply products that address a wider range of needs.

Plastic Film Business

Packaging film, an indispensable material for today's logistic systems

Futamura Chemical' s food packaging products are contributing to people' s lives through keeping food fresh in a safe way and helping reduce food loss during the distribution process. These products are also available for commercial use for various industries, making them a vital daily item for consumers. Emphasizing this, we believe our role in society is to stably provide a stable supply of products with the safety and quality our customers can trust.



Our Products

■ Biaxialliy oriented polypropylene film (OPP)

Biaxially Oriented Film General Grade	Lamination grade
Anti-fogging grade	One side heat-sealable grade
Both side heat-sealable grade	Matt grade
Pearlized grade	Release grade
Coated grade	Barrier grade
Perforated grade	Self-adhesive grade (FSA)
	Permanent antistatic grade (PAS)

■ Cast polypropylene film (CPP)

Single packaging grade	Lamination grade
Retort grade	Base Film for Vacuum Metalizing lene film

■ Linear low density polyethylene film (LL)

Ultra-low temperature heat sealable grade
Low temperature heat sealable grade
General heat sealable grade

■ Polyester film

General grade	Barrier grade
Base Film for Vacuum Metalizing	Antistatic grade
Matt grade	Easy adhesion grade

■ Mono-axially Oriented

PE Grade PP Grade





Cellulose Business

Earth-friendly material

Made from wood pulp. At end of life, microorganisms digest the cellulose, producing water, carbon dioxide and biomass. This makes it a natural, highly sustainable material that is returned to the earth at the end of its life cycle.



Our Products

■ Uncoated cellulose film

This highly transparent, glossy material has excellent, easy-tear properties that allow it to be cut smoothly in all directions. It is also known for its high temperature resistance and anti-static properties.



■ Non-woven Fabric



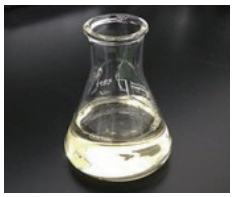
■ Fibrous casing



Non-woven Fabric

Nature Lace: An environmentally conscious, cellulose nonwoven fabric manufactured using the Ogaki method, combining characteristics suitable for cosmetics and sanitary materials with biodegradability.

■ Manufacturing method that does not emit harmful substances process.



Cellulose solvent

Concentrate・Purity

Water
+
Cellulose solvent

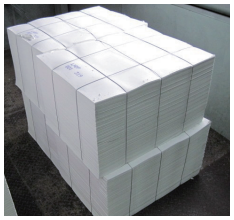
A manufacturing process that generates little exhaust gas and wastewater.

Mix・Dissolve



Cellulose solvent

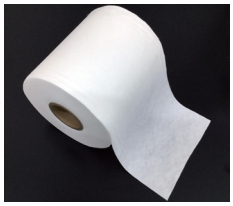
Spinning



Pulp



Cellulose fibre



NatureLace

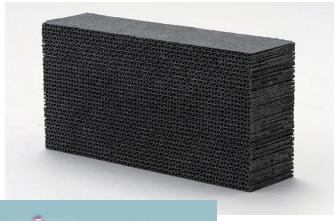
Activated Carbon Business

Activated carbon is a unique type of charcoal with a surface area of 1,000～2,000 ㎡/g

Activated carbon has a large surface area even in small quantities and because of its ability to absorb contaminants in air or water, it is used for environmental conservation as well as improving our quality of life. Activated carbon comes in different forms – powdered, granulated or fibrous.
At Futamura Chemical, we offer a range of active carbon products with various functions, including filters for liquid and gas purification.



Our Products



■ Powdered activated carbon

Activated carbon, made primarily from wood dust, coconut shells or coal, is ground into powder. This fine activated charcoal has an excellent affinity with water and gas.

■ Granulated activated carbon

A granulated form of activated carbon made primarily from coconut shells or coal. The particle size of these products is larger than powdered activated carbon and is ideal for filtering liquid or gas, among various other uses.



■ Functional (activated carbon) products

Taiko series MOF - C
Taiko series MOF - M
Taiko series CRF
Taiko series KFF
Taiko series UF
Taiko series FE . CL
Taiko series YJF . DMF
Water repellent adsorption sheet
Gas separation equipment

Starch Business

Products that contribute to the food industry and are made by processing natural raw materials with our own technology

Based on our proprietary processing technology, we are aiming to enter into the pharmaceutical film market by developing specially processed starch that is suitable for film-making as well as edible films.



Our Products



■ Special Physical Processing Starch “F-Smash”

A starch product with unique properties created using our proprietary physical processing technology.

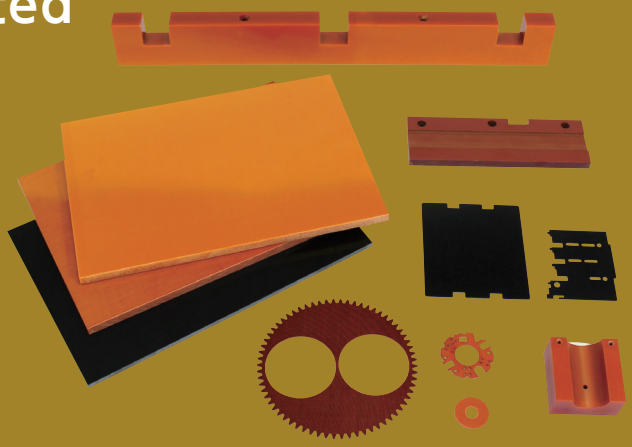
■ Edible and Water-Soluble Film “Kiptokel”

An edible and water-soluble film made from F-Smash which can be printed with edible ink.

Phenolic Laminated Sheets Business

Insulation and structural materials for electronic components, electrical machinery, etc.

Phenolic laminated sheets are one of our long-selling products due to their prominent processability and physical characteristics, and are used in a wide variety of applications. We also proactively customize products for specific purposes, which has been very popular among our customers.



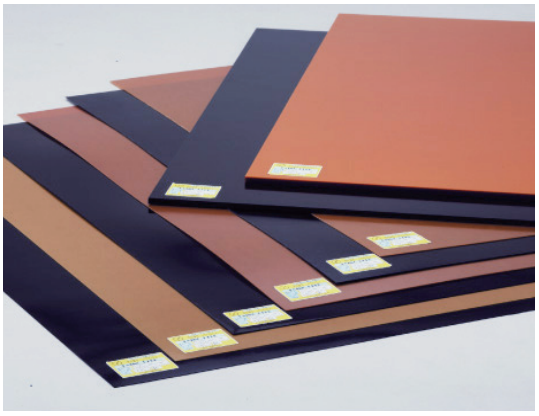
Our Products

■ Under development, Antistatic laminated sheet "FL-AS-21"

Adding innovative technology to the conventional manufacturing method, our FL-AS-21 h as a high antistatic property, while maintaining its excellent mechanical characteristics.

■ Taiko Lite

・Paper-based phenolic laminate
・Fabric-based phenolic laminate



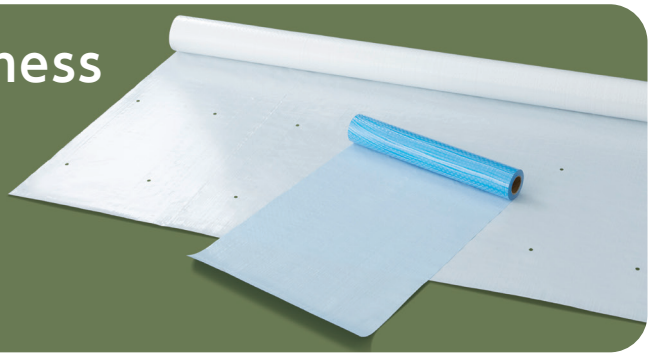
Main Application

The extensive usage of phenolic laminated sheets includes insulation and structural materials for electronic components, automotive applications, and electrical machinery.

Agricultural Business

Production materials that support our farm-based food sources

This composite sheet utilizes the characteristics of film and non-woven materials to improve the quality of crops and achieve energy-saving effects.



Our Products

■ Pearl Light

Our agricultural composite sheets are especially helpful for improving fruit quality, such as color and sugar content. The functional multilayer sheets combine a stain-resistant reflection layer made from white gloss film with a durable fabric layer that prevents tear. Available in perforated type for deciduous fruit trees and non-perforated type for citrus.

■ A heat retaining sheet that is attached inside houses "Dream sheet"

Sustainable, greenhouse cladding made with raw natural material. The heat insulator is designed to be super moisture-absorbent and to retain heat. The top layer is made with fabric, giving extra durability to the sheet.

■ Hat for fruit protection "Fruit hat"

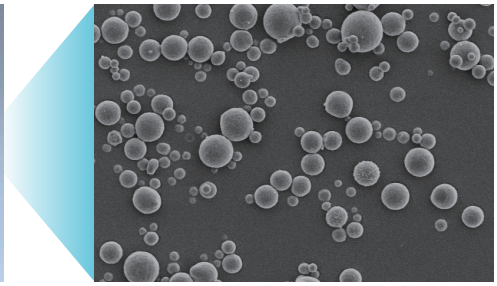
These fruit protection covers are becoming a more critical item with the recent abnormal weather. Our covers can be easily attached with a stapler and used repeatedly for many years. Suitable for grapes, citrus, prunes, kiwifruit, and more. Available in four sizes.



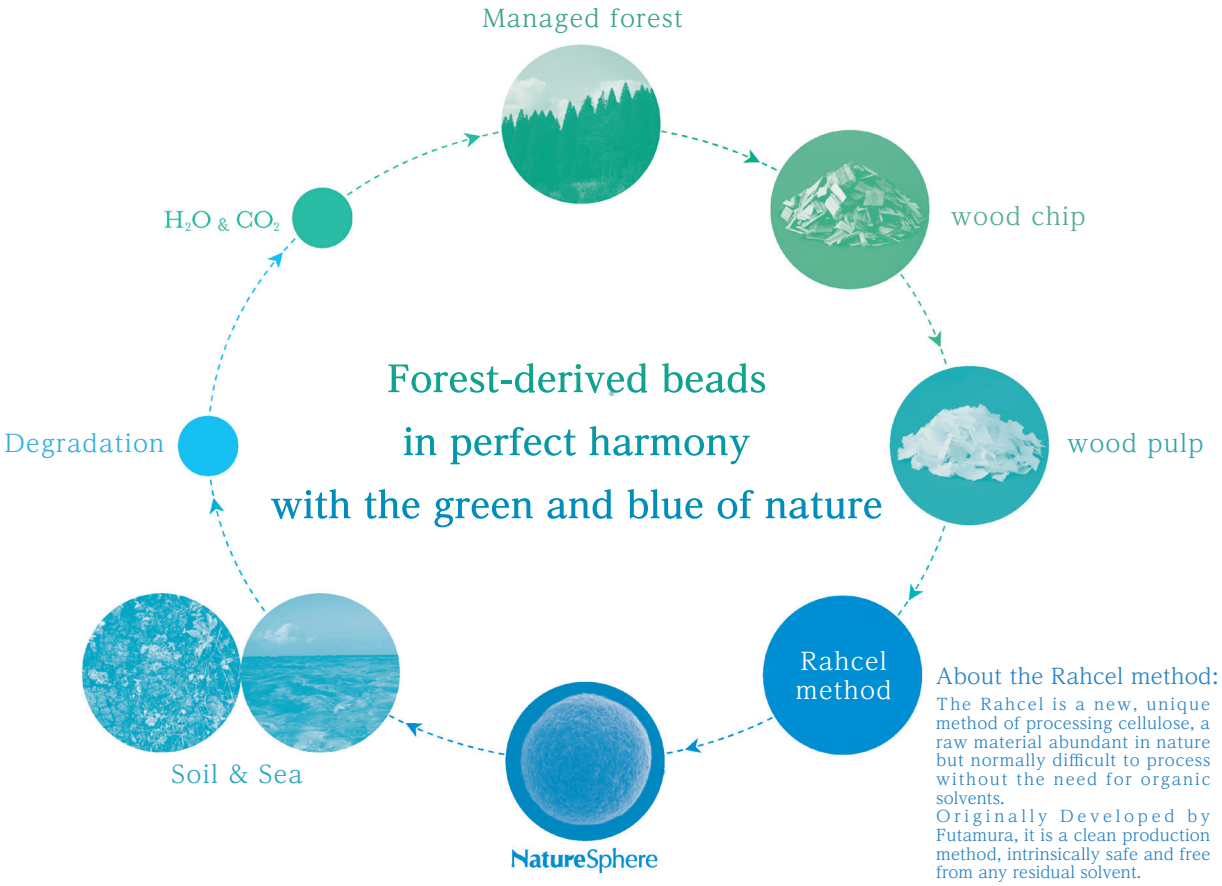
Our next-generation cellulose beads, created using our proprietary manufacturing process, have been completed.

NatureSphere®





NatureSphere is an extremely small natural cellulose bead, about 7 μm in size, made from wood from managed forests.
NatureSphere microbeads are processed into spherical shapes in order to provide a smooth texture. Previous manufacturing methods required the use of organic solvents. In response to this, we have developed a special technique (Rahcel method) that does not use organic solvents. This manufacturing method eliminates the need to worry about organic solvents remaining in the beads, and also eliminates the risk of harmful substances being generated or polluting the air during the manufacturing process. Furthermore, because it is made of cellulose, even if it ends up in the ocean, it will break down, leaving no microplastics.

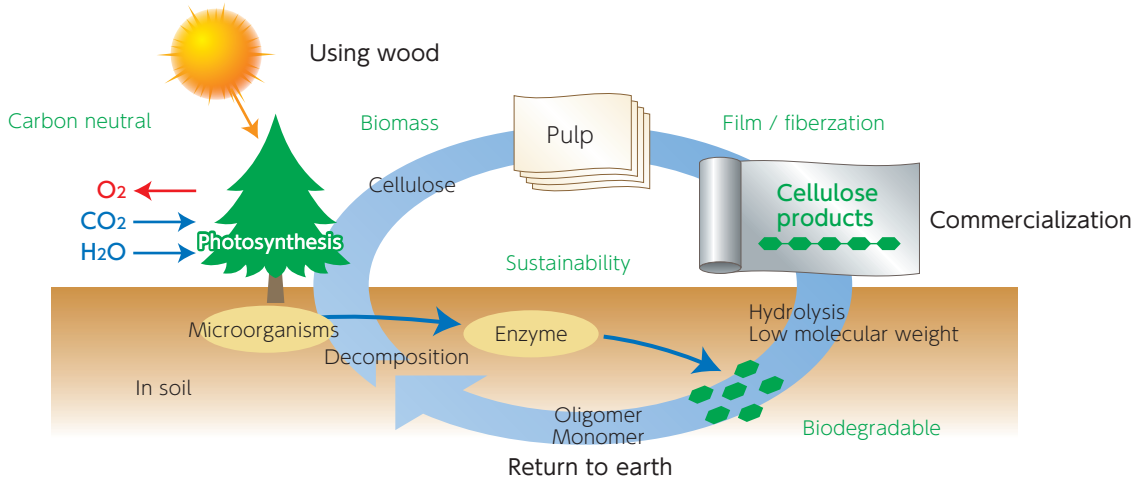


Our company plans to utilise, NatureSphere in the cosmetics industry. The benefits of NatureSpehere include "spreadability and a smooth texture" and "soft focus that blurs dullness on the skin," affording a high-quality impression. With the environmental benefits of the manufacturing process of NatureSphere and the product benefits, we will contribute to society and the SDGs.

We are focusing on the development and branding of compostable and biodegradable materials.

Our cellulose products are examples of the development of compostable and biodegradable materials. Since cellulose is derived from the main components of plants such as wood. it is attracting attention as a renewable material with the ability to return to the soil.
Our company can make a range of products including transparent films, non-woven fabrics, and fine granular beads. We are developing brands of new materials with unique characteristics.

■ Biodegradation potential of cellulose products.



So far, three types of cellulose products have been developed as part of the Nature Series.

Film	Fibre	Beads
 NatureFlex™ NEXT GENERATION PACKAGING	 NatureLace®	 NatureSphere®

We have obtained the following compostable and biodegradable certifications for cellulose based products:

OK compost HOME

NatureFlex films, NatureLace and NatureSphere have passed the OK Compost Home standard for home composting.
They have been certified as being compostable in a regular household compost pile, and can be composted together with food waste.

OK biodegradable MARINE

NatureLace and NatureSphere have passed the OK Biodegradable marine protocol from TUV Austria.
They have been proven to be biodegradable in seawater and will disintegrate with no ecotoxicity effects in this environment.

Products other than the Nature Series have also been certified as biodegradable and compostable.

The benefits of lightweight flexible films

We have entered an era where environmental responsiveness is essential, and plastic materials often seem to be singled out as the villain. But what about the plastic film products we manufacture?
The container and packaging sector is an important customer base that utilises our plastic film products. This packaging is an essential material in your daily life, primarily used to keep food fresh and ensure its safe distribution. Not only food, but also pharmaceuticals and daily necessities require packaging to prevent their contents from spoiling or being damaged.
Within the container and packaging sector, our products are distinguished as flexible packaging (film) materials.
Flexible packaging is thin and lightweight, requiring significantly fewer resources than other materials. This reduces carbon dioxide emissions during production, product transportation and minimises waste after safely delivering goods. In other words, it can be said to be the ultimate packaging material, minimising product loss with the least amount of packaging while minimising the energy consumed during distribution and the amount of waste generated. While plastic often carries misconceptions, it can be said that flexible plastic packaging (film packaging) has many environmental benefits.

■ flexible packaging (Film packaging)

Thin and lightweight



Benefits of flexible plastic packaging film:

①Keeps food fresh and reduces food waste

②Compared to other materials, it can reduce energy consumption and CO_2 emissions

③The amount of waste generated will be minimal.

Our company is focusing on developing products with additional benefits using thin, lightweight film.

Diagram of our sustainable plastic film.

Increased rigidity

Thinner Film

The packaging will use less raw materials but will perform the same function.

1 Sugarcane residue waste cooking oil

biofilm

Use biopolyethylene / biopolypropylene

2 Waste cooking oil

Mass Balance film

3 Recyclate

Chemically recycled film

Adopts mass balance method

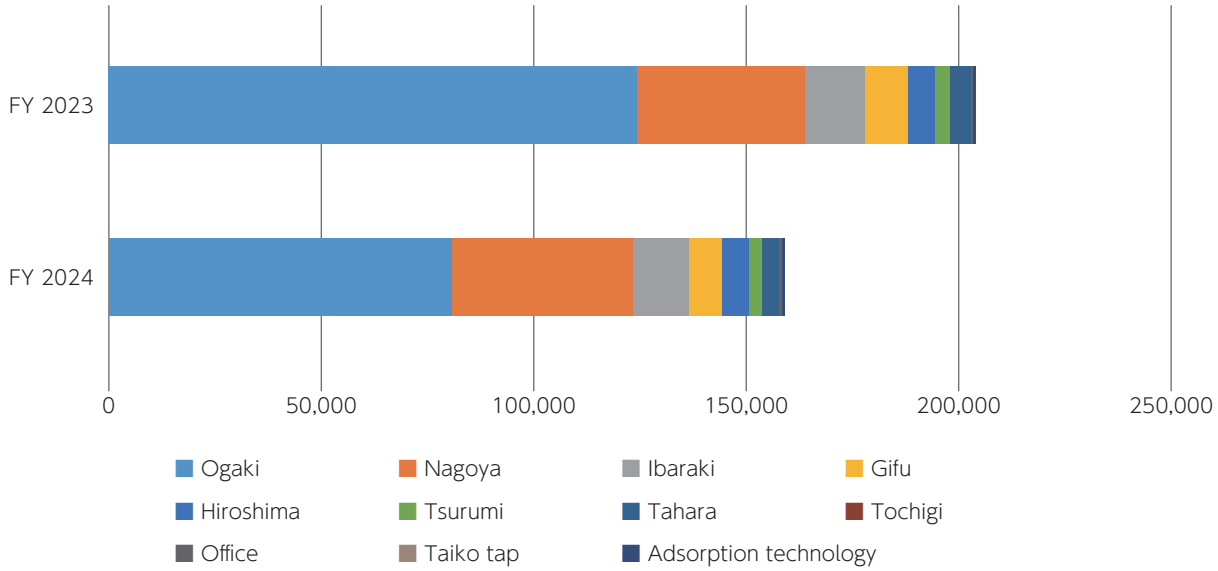
SusFi

In addition to our thinner films, we offer the following three Susfi brands:
①Biofilm: A material based on polyethylene made from sugarcane bagasse and waste cooking oil
②Mass Balance Film: A bio-attributed plastic film made from from waste cooking oil using the mass balance method
③Chemically Recycled Film: A film made from recycled raw materials produced through chemical recycling, using the mass balance method

Contributing to the global environment through clean exhaust emissions and reduced CO_2 generation achieved by fuel conversion

As part of measures to address ageing equipment and reduce CO_2 emissions toward carbon neutrality, the Ogaki Plant introduced a high-efficiency gas turbine cogeneration system utilising natural gas to replace its long-serving coal-fired boiler and steam turbine generator. Operations commenced in February 2024. his enabled us to eliminate coal-fired boilers and, through the simultaneous fuel conversion retrofitting of existing heavy oil-fired boilers, achieve an annual reduction of approximately 70,000 tonnes of CO_2-a 47% decrease-by transitioning entirely to natural gas.

■ CO_2 emissions





The newly introduced equipment is designed to enable 30% hydrogen co-firing, anticipating future decarbonization efforts.



This fuel conversion project received the Excellence Award at the “Cogeneration Grand Prize 2024” hosted by the Cogeneration Foundation.

The following features are available as emergency preparedness measures:

- During power grid failures, operating the cogeneration system in standalone mode within the facility enables continuous operation, allowing the factory to resume operations promptly once the power grid is restored.
- The Ogaki plant is designated as an evacuation shelter for nearby residents during large-scale disasters, equipped with emergency generators and access to water via wells.

Advertisement Placement

To increase recognition of our company logo among fans attending games and watching televised broadcasts, we began displaying our logo advertisement at the Bantelin Dome, home stadium of the professional baseball team the Chunichi Dragons, starting August 1, 2024. We also placed advertisements on the straps of the Nagoya Municipal Subway.







Utilising the Corporate Hometown Tax Donation Program

On March 1, 2025, a donation presentation ceremony utilizing the Oharu Town Corporate Hometown Tax Program was held at the Oharu Town Hall in Aichi Prefecture. At the ceremony, President Nagae presented a donation certificate and received a letter of appreciation from the Mayor of Oharu Town. Furthermore, the construction of the new gymnasium at Elementary School, which was a designated project for the Corporate Hometown Tax Program in Ogaki City, Gifu Prefecture, funded by donations made in fiscal year 2023, was successfully completed. We were invited to the completion celebration for the new gymnasium on January 17, 2025.





DBJ Environmental Rating, BCM Rating

April 10, 2024 The Development Bank of Japan (DBJ) Environmental Rating Awards Ceremony was held.
DBJ Environmental Rating evaluates corporate activities from the perspective of environmental management and sustainability. We received a B rating (advanced initiatives) for our efforts in reducing environmental impact, developing and promoting biomass plastic products, conducting research and development on technologies like the “Ogaki Method,” and utilising activated carbon for the recovery and concentration of hazardous substances.
We also underwent the DBJ BCM Rating, which evaluates corporate activities from the perspectives of “disaster prevention” and “business continuity.” We were recognized not only for our physical disaster prevention measures but also for our disaster prevention framework encompassing consolidated companies, implementation of personnel training and self-inspections, company-wide risk management, and our business continuity strategy based on stable supply as part of our corporate culture. On March 11, 2025, we received a B-rank (Excellent Efforts) award. This represents an upgrade from our previous C-rank rating in 2018.







10th Anniversary of Partnership with Scientex Berhad

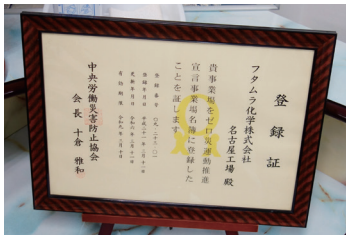
September 4, 2024 A ceremony commemorating the 10th anniversary of the partnership with Scientex Berhad was held in Malaysia.
The event served as an opportunity to further deepen ties, featuring speeches by both presidents and a look back at the history of both companies. We will continue to strive for the development of our partnership with Scientex.







Registration for the Zero Disaster Campaign Promotion Declaration



We have renewed our registration for the Zero Accident Campaign Promotion Declaration.
The Nagoya Plant has continuously renewed its registration since it was first registered in 2009.

Food Hygiene Excellence Facility Award



Tahara Development Center received the Food Hygiene Excellence Facility Award from the Aichi Prefecture Food Hygiene Association Tahara Branch as a licensed confectionery manufacturing facility.

CBC Radio Live Broadcast



Our products and initiatives were featured on CBC Radio's "Dora-Tama King Report Cast" segment.

Seino Stop Project 2024



We participated in the "STOP! Workplace Accidents: Seino Stop Project 2024" hosted by the Ogaki Labor Standards Inspection Office and the Ogaki Labor Standards Association, presenting case studies of activities to prevent workplace accidents at our Ogaki Plant. Furthermore, we achieved zero accidents during the project period and received an award.

Green Power Certificate Presentation Ceremony



A green power certificate presentation ceremony was held in Ogaki City, Gifu Prefecture on March 15, 2025. The environmental value of the electricity generated by solar power generation equipment installed in each household in Ogaki City and consumed by the household is purchased (green power) and sold to businesses in the city with the aim of local energy production and consumption. The Ogaki Plant purchases this green power every year and participates in activities that contribute to reducing the environmental burden.

Closure of Tochigi Office

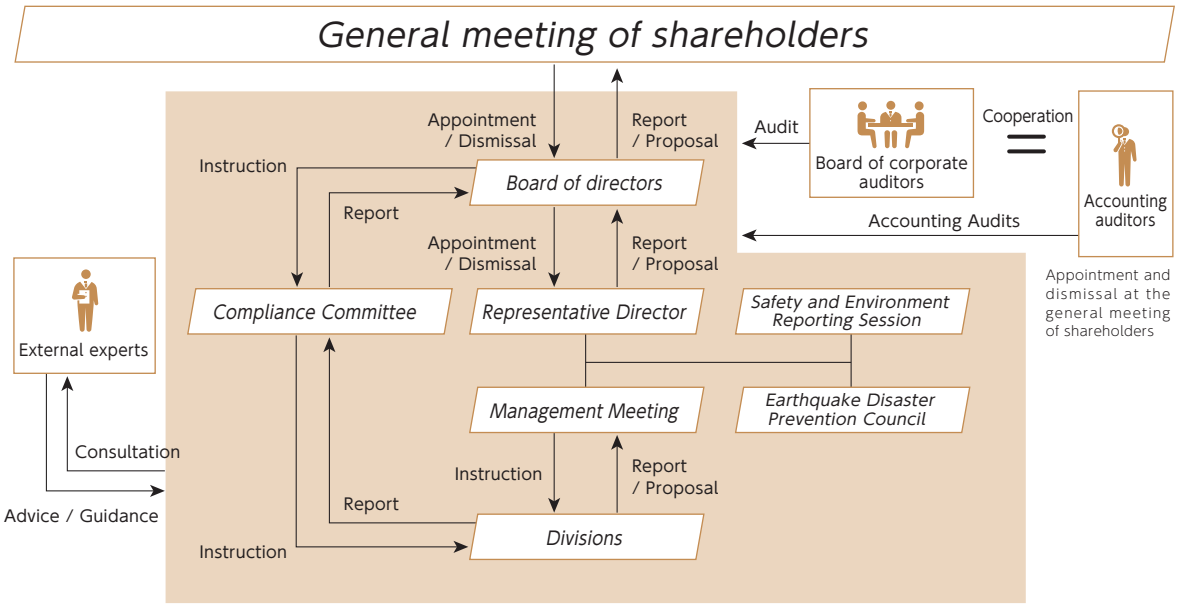


This facility was established in January 2012 to produce refuse-derived fuel (RPF : Refuse derived paper and plastics densified Fuel) from waste generated during the processing of packaging film, such as scrap material and printing errors. However, due to changes in the social environment surrounding RPF, continued operation became difficult, and the facility closed on August 30, 2024.

Corporate governance structure

In order to conduct business activities in accordance with our goals of "giving the top priority to compliance with international laws, regulations, agreements and contracts, priding ourselves on exceeding these standards in many cases", we have established a system that enables us to oversee the entire company to detect issues at an early stage, so we can promptly communicate any problems to the relevant parties and take action.

Corporate governance structure



The President, the Director of Safety and Environment, the Director of Safety and Environment Management, the Safety and Environment Department, managers of each business unit, and the persons in charge of safety, health, environment, and disaster prevention at each business unit attend the safety and environment review meeting and the earthquake disaster prevention review meeting. During these meetings, attendees report on the status of projects and review compliance management, preventive measures and improvement solutions.

Environmental management system

Management system certification

Eight plants have obtained ISO14001 certification, and we are working to maintain and improve our environmental management system. In addition, we are continuously promoting environmental improvement activities within the company by making effective use of reviews at safety and environment briefing sessions and internal audits.

Designated energy management plant

Five of our plants are designated as Type 1 energy management plants, and two as Type 2 energy management plants. Every year, we set energy conservation targets, carry out improvement activities, and report the status of our activities to the government.

Obtaining environmental qualifications

In order to develop human resources who can promote compliance management and disaster prevention at each plant, we encourage employees at each business location to obtain national qualifications and to continue to improve their knowledge and management skills after obtaining qualifications.

Corporate Governance Roles

The Board of Directors decides on basic management policies and important business operations, and monitors their execution.
The Board of Corporate Auditors will monitor the internal control system and its operation, and will audit the day-to-day activities of management, including directors, through operational and accounting audits.
The Management Meeting deliberates and makes decisions on important matters related to management.
The Compliance Committee will formulate a Compliance Charter and select compliance committee members and compliance promotion officers. It will work to promote compliance.
The meeting will address important issues relating to safety, the environment, disaster prevention, and product safety.

Risk Management

The external environment changes daily, and unforeseen circumstances can affect any company.
As a trusted company, we strive to prevent all risks associated with our business activities and minimize the loss and impact on society so we can continue our business, even in the face of unforeseen circumstances.

Risks related to safety, environment, etc. and the department in charge			
Crisis Management Risks		Company	Plant
Product accidents/ Product liability	Product accidents / Complaints	Safety and Environment Department	Quality Control Division
	Compliance with product regulations and laws	Safety and Environment Department	Quality Control Division
Accidents and disasters associated with business activities	Core system-related accidents	Information System Group	–
	Personal injury of employees, such as industrial or traffic accidents	Safety and Environment Department	General Affairs / Safety and Environment Division
	Credit-related accidents	Business Department	–
	Leakage of personal information	Information System Group	General Affairs
	Leakage of trade secrets	Intellectual Property Development Department	–
	Accidents / disasters caused by fires / explosions	Safety and Environment Department	Production Division/Safety and Environment Division
	Compliance with the Industrial Safety and Health Act, Fire Service Act, etc.	Safety and Environment Department	General Affairs / Safety and Environment Division
Slander, mental abuse, and other criminal damage	Cyber terrorism against internal systems/ Hacking/Information leak	Information System Group	–
	Intimidation/Kidnapping/Robbery	General Affairs and Personnel Department	General Affairs
Relationship with antisocial forces	Unreasonable demands from antisocial forces; transactions between business partners and antisocial forces	General Affairs and Personnel Department	General Affairs
Natural disasters	Damage to customers and company assets due to earthquakes, storms and floods, lightning strikes, etc., personal injury	Safety and Environment Department	General Affairs
Violation of laws and regulations in external orders	Violation of the Subcontract Act, fraudulent transactions with business partners	General Affairs and Personnel Department	General Affairs
Intellectual property infringement	Patent / commercial law / copyright infringement	Intellectual Property Development Department	Development Division
Environment issues	Violation of environment-related laws and regulations, violation of industrial waste disposal	Safety and Environment Department	Environment Division
Risks in overseas business activities	Product accidents etc	Safety and Environment Department	Production Division
	Exchange risk	Film Trade Group/Trade Operations Group/Finance Group	–
	Tax risks such as transfer pricing	Film Trade Group/Trade Operations Group	–

Specific Initiatives			
Risk	Viral infections	natural disaster	Climate change
Impact on business	Shutdown	Plant damage	Serious damage to business locations
Countermeasure	Infection Prevention Measures	Emergency Stockpile/ Spare Inventory/ Distribution Placement	Greenhouse Gas Reduction/ Fuel Conversion

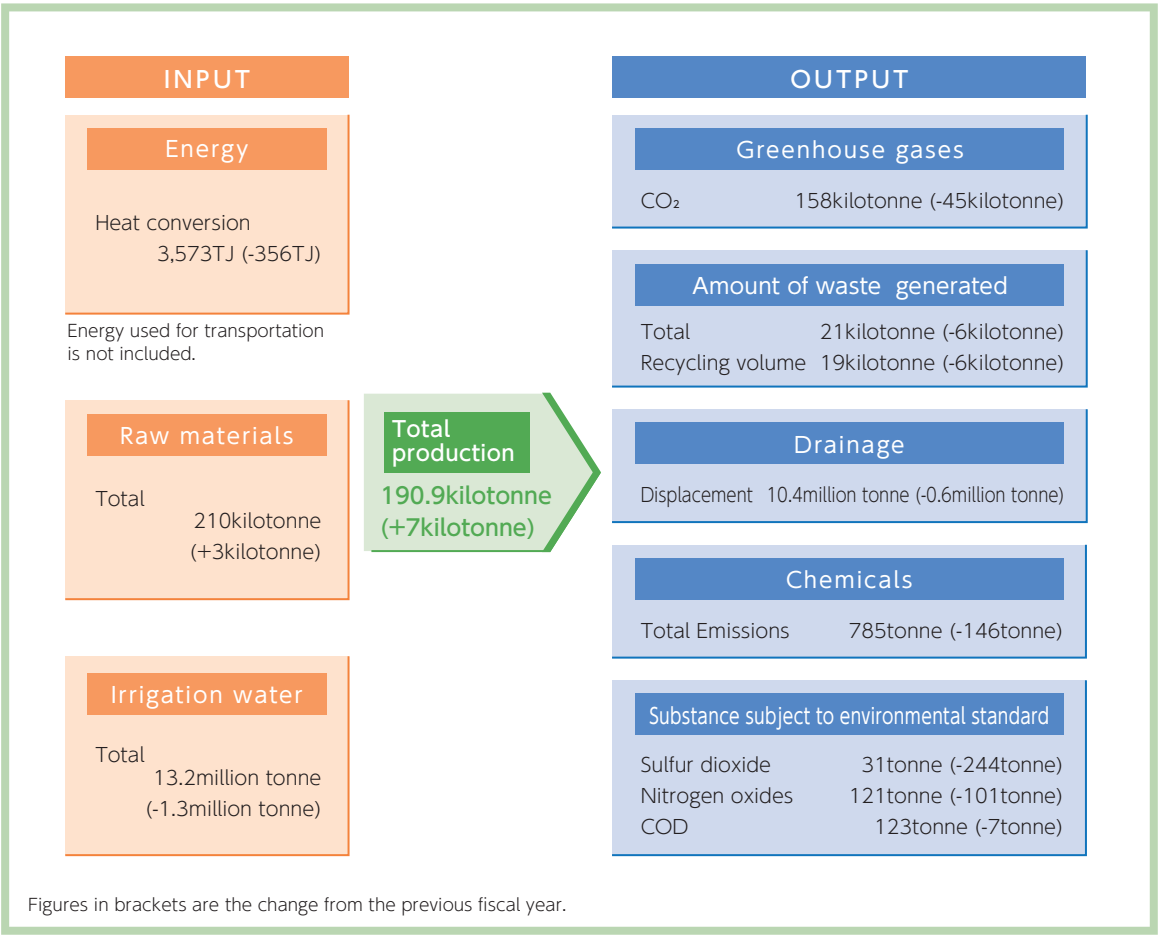
Compliance initiatives

In fiscal year 2024, the Compliance Committee received three reports and enquiries. We responded appropriately in accordance with the compliance regulations.

Compliance with laws and regulations

In fiscal year 2024, there were no violations of laws and regulations to report within the Futamura Group.
In fiscal year 2025, we will continue to engage in corporate activities that comply with domestic and international laws and regulations and international agreements.

Environmental Management



Figures in brackets are the change from the previous fiscal year.

Environmental conservation costs

Unit : million yen

item	Contents	2023				2024				Year-on-year change
		Investment Amount	cost		Annual total	Investment Amount	cost		Annual total	
			Deprecation	Maintenance and operation costs			Deprecation	Maintenance and operation costs		
Pollution Prevention	Air pollution prevention costs Odour prevention costs	50	55	274	379	177	89	280	547	168
	Water pollution prevention costs	166	158	350	674	103	141	344	588	−86
	others	2	6	13	22	5	6	4	14	−7
Global Environmental Conservation	Global warming prevention costs	15	21	16	52	28	20	17	64	13
	others	126	39	89	254	242	97	101	440	187
Reducing waste through resource recycling	Waste disposal costs	0	2	398	400	0	2	293	295	−105
Upstream and downstream	Container recycling costs	0	0	0	0	0	0	0	0	0
Management Activities	ISO Maintenance Training and analysis costs	0	0	463	463	0	0	603	603	140
Social Activities	Local environmental conservation costs	0	0	5	5	0	0	13	13	7.9
Environmental damage	Pollution charges, insurance premiums	0	0	472	472	0	0	29	29	−443
total		359	281	2,081	2,721	555	354	1,685	2,594	−127

Environmental conservation effect data

item	Contents	unit	2023	2024	Year-on-year change
Energy	Total Energy Use	TJ	3,929	3,573	−356
atmosphere	CO_2 Emissions	kilotonne	203	158	−45
	NOx Emissions	tonne	221	121	−100
	SOx Emissions	tonne	275	31	−244
	Dioxin Emissions	mg-TEQ	189	130	−59
Water quality	Water Use	million ㎥	15	13	−1
	Displacement	million ㎥	11	10	−1
Waste	Amount of landfill disposal	kilotonne	2	2	0

Wastewater concentration measurement results

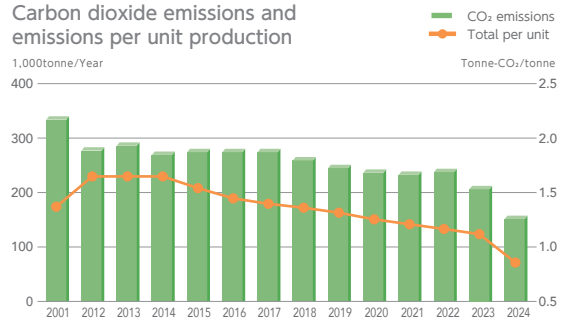
Plant	item	pH	COD	BOD	SS	Nitrogen	Phosphorus
	unit	—	mg/L	mg/L	mg/L	mg/L	mg/L
Nagoya plant	Regulation value	5.8~8.6	30	30	40	10	2
	Average	6.8	3.6	2.9	3.1	0.6	< 0.2
Ogaki plant	Regulation value	5.8~8.6	30	20	30	25	1.5
	Average	7.1	8.4	2.9	12	5.9	0.2
Ibaraki plant	Regulation value	5.8~8.6	20	20	30	45	6
	Average	7.9	3.6	2.8	2.0	1.2	0.3
Gifu plant	Regulation value	5.8~8.6	28	20	75	32	1.6
	Average	7.2	1.0	0.8	1.5	1.4	0.1
Hiroshima plant	Regulation value	5.0~9.0		600	600		
	Average	7.4	194	235	194		
Tsurumi plant	Regulation value	5.0~9.0		600	600		
	Average	7.8	7.7	7.1	26		
Tahara Development Center	Regulation value	5.8~8.6	20	20	20	10	3
	Average	7.6	6.3	2.0	1.0	0.5	0.04

Exhaust gas concentration measurement results

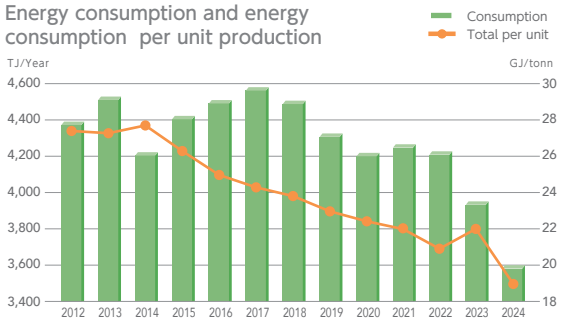
Plant	Environmental measures equipment	Soot g/Nm³		SOx Nm³/H		NOx ppm	
		Regulation value	Average	Regulation value	Average	Regulation value	Average
Nagoya plant	Boiler	0.10	< 0.001		< 1.0	130	33
	Boiler	0.10	< 0.001		< 1.0	130	25
Ogaki plant	Gas turbine boiler	0.02	0.003	7.6	0.02	70	27
	Boiler B2	0.20	0.003	55	0.03	150	68
	Boiler B4	0.10	0.003	54	0.02	130	38
	High pressure boiler B5	0.10	0.003	1.7	0.01	130	43
	High pressure boiler B6	0.10	0.003	1.0	0.01	150	24
	High pressure boiler B7	0.10	0.003	1.0	0.01	130	21
	Thermal incineration exhaust gas boiler	0.15	0.003	45	1.9	250	37
Ibaraki plant	Power generator	0.05	< 0.009			200	
	Boiler	0.10	< 0.01			150	52
Gifu plant	Collective Chimney	0.15	0.019			180	69
Hiroshima plant	Collective Chimney			16	0.04		
Tsurumi plant	Boiler					45	28

Climate change mitigation

Carbon dioxide emissions and emissions per unit production



Energy consumption and energy consumption per unit production



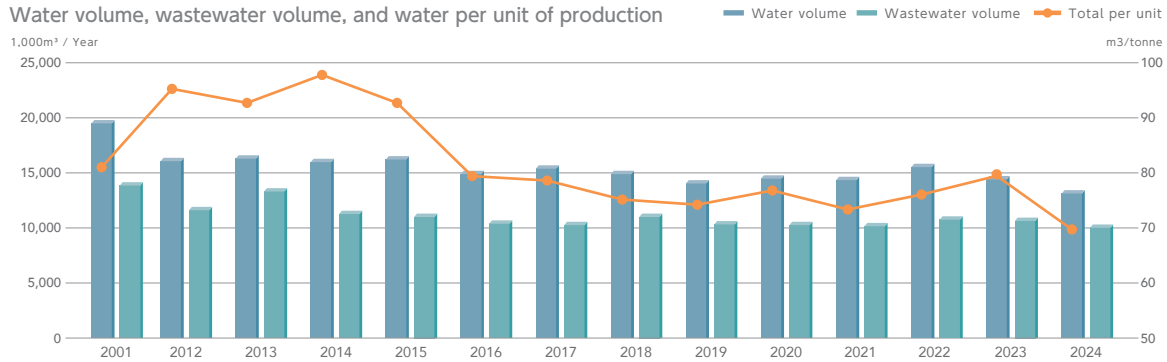
We have significantly reduced carbon dioxide emissions and emissions intensity through fuel conversion in boilers and stable operation of equipment. Both emissions and emissions intensity were reduced by 22% compared to the previous year.

			2016	2017	2018	2019	2020	2021	2022	2023	2024
Generated electricity	Gwh	Power procurement	212,907	207,607	205,066	195,646	191,178	201,005	210,533	190,929	181,545
		Solar power	4,062	4,104	4,025	4,081	4,053	4,054	3,995	4,093	4,058
CO_2 emissions	1,000tonne	Power procurement	106	97	94	86	80	79	91	80	74
Reduced CO_2 emissions	1,000tonne	Solar power	2.4	2.4	2.1	2.0	1.9	1.8	1.8	1.8	1.7
		RPF use	16.2	15.0	14.6	14.1	14.3	12.1	10.9	11.6	12.3
		Recycle board use	—	—	3.0	3.0	3.0	3.5	3.6	3.5	3.7

We continue to reduce CO_2 emissions by using RPF, which emits less CO_2 than solar power generation or fossil fuels.
We also contribute to CO_2 emission reduction through the recycling of used pallets and dunnage boards.

Water Resource Conservation

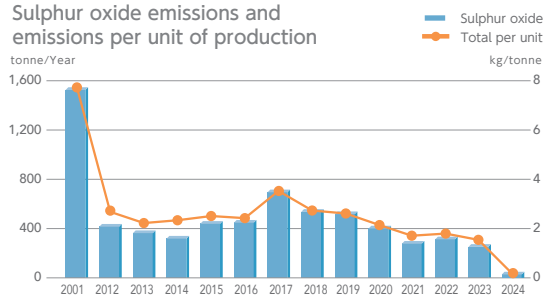
Water volume, wastewater volume, and water per unit of production



At the Ogaki Plant, which accounts for the majority of water usage, water consumption decreased, enabling a 33% reduction compared to fiscal year 2001. Company-wide production volume saw a slight decrease compared to the previous year, allowing water consumption per unit of production to improve by 13% year-on-year.

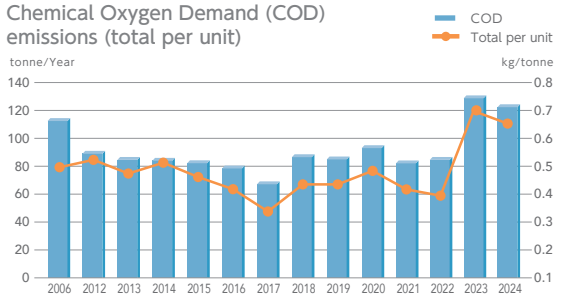
Prevention of Environmental Pollution

Sulphur oxide emissions and emissions per unit of production



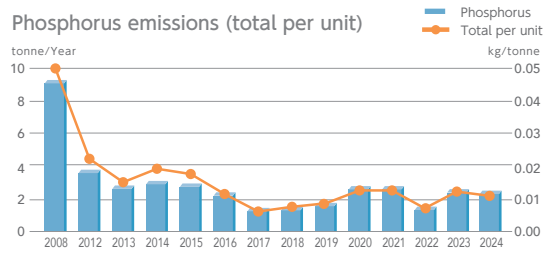
By switching the fuel for our coal-fired boilers, we were able to reduce sulphur oxide emissions by 89% compared to the previous year.

Chemical Oxygen Demand (COD) emissions (total per unit)

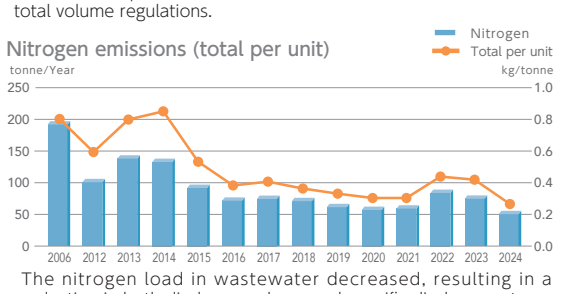


Although COD emissions have increased over the past two years, we have complied with both the emission concentration and total volume regulations.

Phosphorus emissions (total per unit)



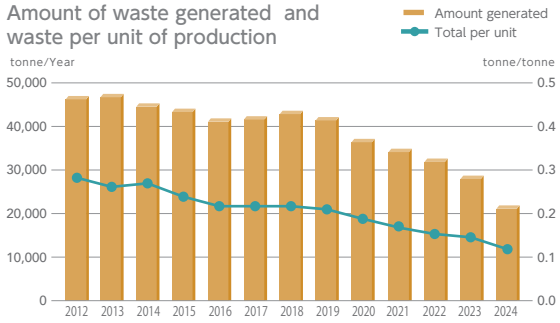
Nitrogen emissions (total per unit)



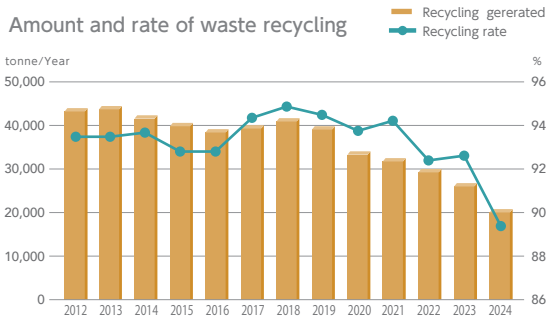
The nitrogen load in wastewater decreased, resulting in a reduction in both discharge volume and specific discharge rate.

Reducing waste through resource recycling

Amount of waste generated and waste per unit of production



Amount and rate of waste recycling



The switch to alternative fuels eliminated the generation of coal ash that had previously been recycled, resulting in a reduction in both waste generation and recycling volume.

Recovery and reuse of packaging materials (backing boards)

		2018	2019	2020	2021	2022	2023	2024
Backing Board recovery	tonne	2,045	2,064	2,096	2,450	2,474	2,389	2,535
Resource recycling rate	%	58.6	62.1	62.4	68.0	65.4	71.2	70.9

Recovery amount of waste plastic, etc. and CO_2 reduction amount

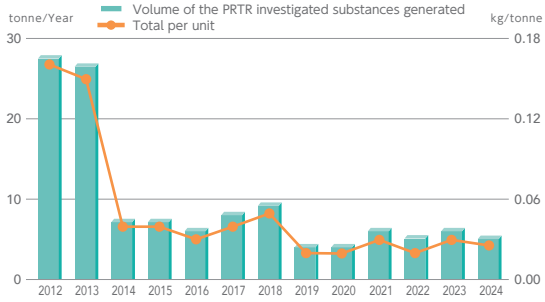
		2016	2017	2018	2019	2020	2021	2022	2023	2024
RPF raw materials	tonne	2,086	2,052	2,410	2,512	2,349	2,640	2,274	1,377	423
CO_2 Emissions Reduction	tonne	3.7	3.7	4.3	4.5	4.2	4.7	4.3	2.5	0.8

Compliance with the Plastic Resource Recycling Law

		2023	2024
Waste plastic	tonne	625	615
Recycling volume	%	17.8	19.1
Heat Recovery	%	80.0	79.8
Landfill	%	2.2	1.1

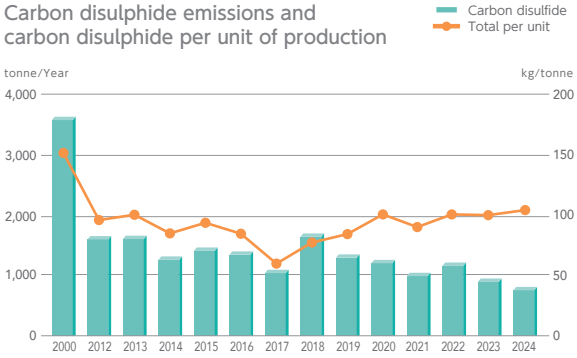
Reducing Chemical Substance

Volume of PRTR (Pollutant Release and Transfer Register) and PRTR per unit of production



Emissions and transport volumes remained stable due to the stable operation of production and exhaust gas treatment facilities.

Carbon disulphide emissions and carbon disulphide per unit of production



The production of cellulose products decreased, resulting in a reduction in carbon disulphide emissions.

Mid- to Long-Term Goals

item	Mid- to Long-Term Goals	Goals	Achievements	evaluation
Greenhouse gas reduction	Using the fiscal year 2020 as a benchmark, carbon dioxide emissions will be reduced by 5% by fiscal year 2025.	Achieve 4% reduction from FY 2020	34.5% reduction compared to 2020	○
Water Resources	Reduce water usage by 5% by fiscal year 2025, based on the fiscal year 2020.	Achieve 4% reduction from FY 2020	10.7% reduction compared to 2020	○
Chemical Substance Management	Carbon disulphide emissions will be reduced by 5% by fiscal year 2025, based on the fiscal year 2020.	Achieve 4% reduction from FY 2020	35% reduction compared to 2020	○
Waste	Maintain a recycling rate of 93% or more.	Recycling rate of at least 93%	89.3%	×

Social Contribution (Domestic)

Exhibition Participation

We actively participate in trade shows to introduce and promote the features and applications of our products to customers and consumers. By having junior employees participate in product presentations at these events, we also utilise them as training opportunities to enhance their PR skills and product knowledge.



Sustainable Material Expo 2024



Inter Aqua 2025



COSME Tech 2025

Donations to Food Banks

We actively donate emergency food supplies from our disaster preparedness stockpiles when they reach their renewal date. In fiscal year 2024, donations were made to local food banks at three locations: our headquarters, the Tahara Development Center, and the Tochigi Office.







Utilising Private Placement Bonds



Through Nagoya Bank Co., Ltd.'s donation-type private placement bond product, "Bonds for the Future," we contribute to the local community by donating goods or funds to educational institutions and other organisations within Aichi Prefecture designated by the company, using a portion of the corporate bond issuance fees.

Plant tour for local children



We invite elementary and junior high school students from the vicinity of the Nagoya Plant to tour the facility and participate in workplace experience programs. Some employees at the Nagoya Plant are former students who participated in these workplace experience programs.

Cleaning Activities



Each business location voluntarily conducts cleaning activities on roads and other areas surrounding the premises, contributing to the beautification of the local community.

Social Contribution (Overseas)

Exhibiting at Trade Shows

We also actively participate in trade shows overseas.



MALAYSIA INTERNATIONAL FOOD&BEVERAGE 2024



China Beauty Expo 2024



PROPAK Philippines 2025

Overseas Charity Activities

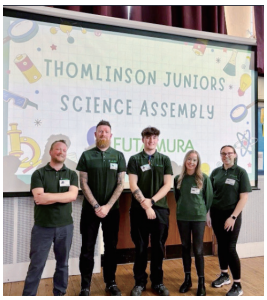
We provide support and conduct visits to local schools, sports organisations, non-profit groups, and similar entities.



Our own employee Hayley Ray is the coach.



Wigton Hockey Club wearing the new tops with our logo on.



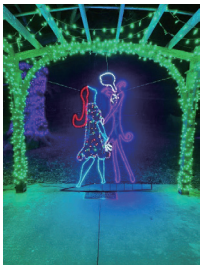
Our R&I team showing the junior school children the wonders of Science.



Aspatria Hornets rugby team– raising money for MND – Andrew Wilson in Finishing was involved.

Futamura UK

We visit local elementary schools to conduct outreach lectures, assist with the construction and repair of playground equipment for children, and support the activities of sports organizations and other groups.





family-friendly holiday event held each winter at the Topeka Zoo



United Way Christmas Bureau





One Can One Kid

Futamura USA

We participate in and support events held by local zoos and organisations. We also participate in beverage can collection activities, and all proceeds generated through recycling are donated to organisations promoting activities that enrich the lives of children and families.

Relationship with Employees

Standing by our principle to enhance the daily lives of our employees ,we offer a number of events and programs in the hope of creating an Engaging work environment.

Futamura UK and Futamura USA Employees Visit Japan

We also foster interaction with overseas employees.
Last year, we held an executive meeting in Japan for the first time in about seven years to deepen our connections.




Sports Festival and Social Gathering

We hold sports tournaments not only to improve employee fitness and maintain health, but also as a venue for interaction between different offices. Additionally, we host social gathering within each office, which also serve as opportunities for cross-departmental networking.




Lectures on workplace hygiene

To promote employee health awareness, we regularly hold hygiene lectures conducted by external instructors.



Disaster Preparedness Drill

Each facility conducts fire evacuation drills and communication drills using disaster prevention radios to ensure employees can take appropriate actions to protect themselves in emergencies. Furthermore, through joint drills with local fire departments, we have maintained and improved our skills while confirming our cooperative framework with firefighting agencies.




Work-life balance

We are implementing company-wide work-style reforms. We are fostering an environment where employees feel comfortable taking paid leave and have established a weekly “No Overtime Day,” aiming to create a workplace where employees can refresh both mind and body and work healthily. Additionally, we have established and are operating systems such as childcare and nursing care leave, reduced working hours for childcare and nursing care, and special leave for long-serving employees.

Average monthly overtime hours

2020	2021	2022	2023	2024
8hour	7hour	7hour	6hour	6hour

Childcare leave recipients

	2020	2021	2022	2023	2024
woman	13	6	10	21	6
man	1	4	5	6	7
	4%	12%	18%	29%	26%

Number of paid holidays taken per year

2020	2021	2022	2023	2024
10day	13day	15day	16day	15day
52%	70%	79%	86%	80%

Those taking special leave due to their wife's childbirth

2020	2021	2022	2023	2024
23	29	28	21	27
82%	85%	100%	100%	100%

Human Resource Development

Under our management philosophy that “the growth of our people equals the growth of our company,” we place great emphasis on human resource development. Our in-house training programs are centered on on-the-job training and tiered education, encompassing a wide range of educational initiatives.

On-Site Training

We actively promote QC circle activities. To facilitate smooth circle operations, we conduct basic QC training and advanced QC skill enhancement training covering developmental skills and analytical methods. Additionally, we provide skills training at each plant to equip employees with essential knowledge and skills regarding safety, health, and environmental matters.






Tiered Training

Our tiered training programs do not end on the training day itself; we always conduct follow-up training. By conducting follow-up training, we ensure that knowledge and know-how are firmly retained.





New employee training	We offer a variety of training programs, including basic etiquette training, on-site factory training, QC training, business simulation communication training, and manufacturing training. The manufacturing training program is a simulated experience of general management through the creation and sale of model houses.
Supervisor Training	Participants will learn coaching and logical thinking, practice these skills for five months while submitting monthly reports, and then undergo follow-up training.
Executive Candidate Training	After attending the initial training or public seminars, participants are assigned similar training exercises as homework, followed by follow-up training sessions.

English Education



We provide employees who use English in their work with access to TOEIC L&R preparation courses and business English courses. Through six months of continuous learning, we have achieved measurable results, such as TOEIC scores rising from 500 to 700 points.

Introductory course to film



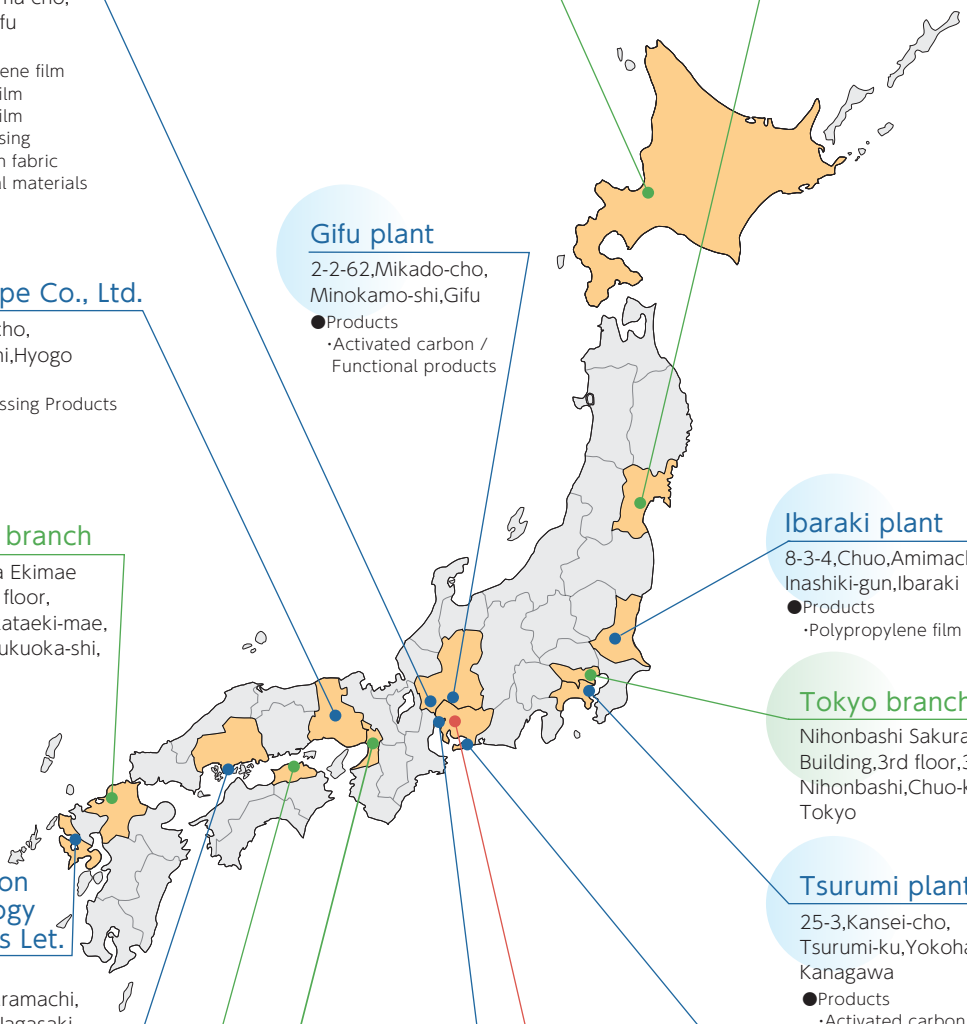
This program began with the aim of enabling in-house training on the fundamentals of film packaging. Primarily targeting young employees, it seeks to foster an understanding of the role, purpose, and significance of packaging materials, and to recognize their contribution to society.

Human Skills Education



We aim to prevent injuries by fostering workers' awareness of their individual behavioral characteristics and promoting close information sharing among colleagues, thereby enhancing their situational awareness and communication skills.

Domestic bases



Sapporo branch
Keiwa Odori Buildig 38,
4th floor,5-1-1,
Odorinishi,Chuo-ku,
Sapporo-shi,Hokkaido

Sendai branch
Sendai KY Building,
6th floor,3-10-19,
Chuo,Aoba-ku,
Sendai-shi,Miyagi

Ogaki plant
1800,Motoima-cho,
Ogaki-shi,Gifu
●Products
・Polypropylene film
・Polyester film
・Cellulose film
・Fibrous casing
・Non-woven fabric
・Agricultural materials

Gifu plant
2-2-62,Mikado-cho,
Minokamo-shi,Gifu
●Products
・Activated carbon /
Functional products

Taiko Tape Co., Ltd.
688,Wada-cho,
Nishiwaki-shi,Hyogo
●Products
・Film Processing Products

Fukuoka branch
NMF Hakata Ekimae
Building,5th floor,
1-15-20,Hakataeki-mae,
Hakata-ku,Fukuoka-shi,
Fukuoka

Ibaraki plant
8-3-4,Chuo,Amimachi,
Inashiki-gun,Ibaraki
●Products
・Polypropylene film

Tokyo branch
Nihonbashi Sakuradori
Building,3rd floor,3-8-4,
Nihonbashi,Chuo-ku,
Tokyo

Tsurumi plant
25-3,Kansei-cho,
Tsurumi-ku,Yokohama-shi,
Kanagawa
●Products
・Activated carbon

Adsorption Technology Industries Let.
1767-34,
Masuragaharamachi,
Omura-shi,Nagasaki
●Products
・PSA equipment

Head office
2-29-16,Meieki,
Nakamura-ku,
Nagoya-shi,Aichi

Tahara Development Center
4-1-41,Midorigahama,
Tahara-shi,Aichi
●Products
・Starch products

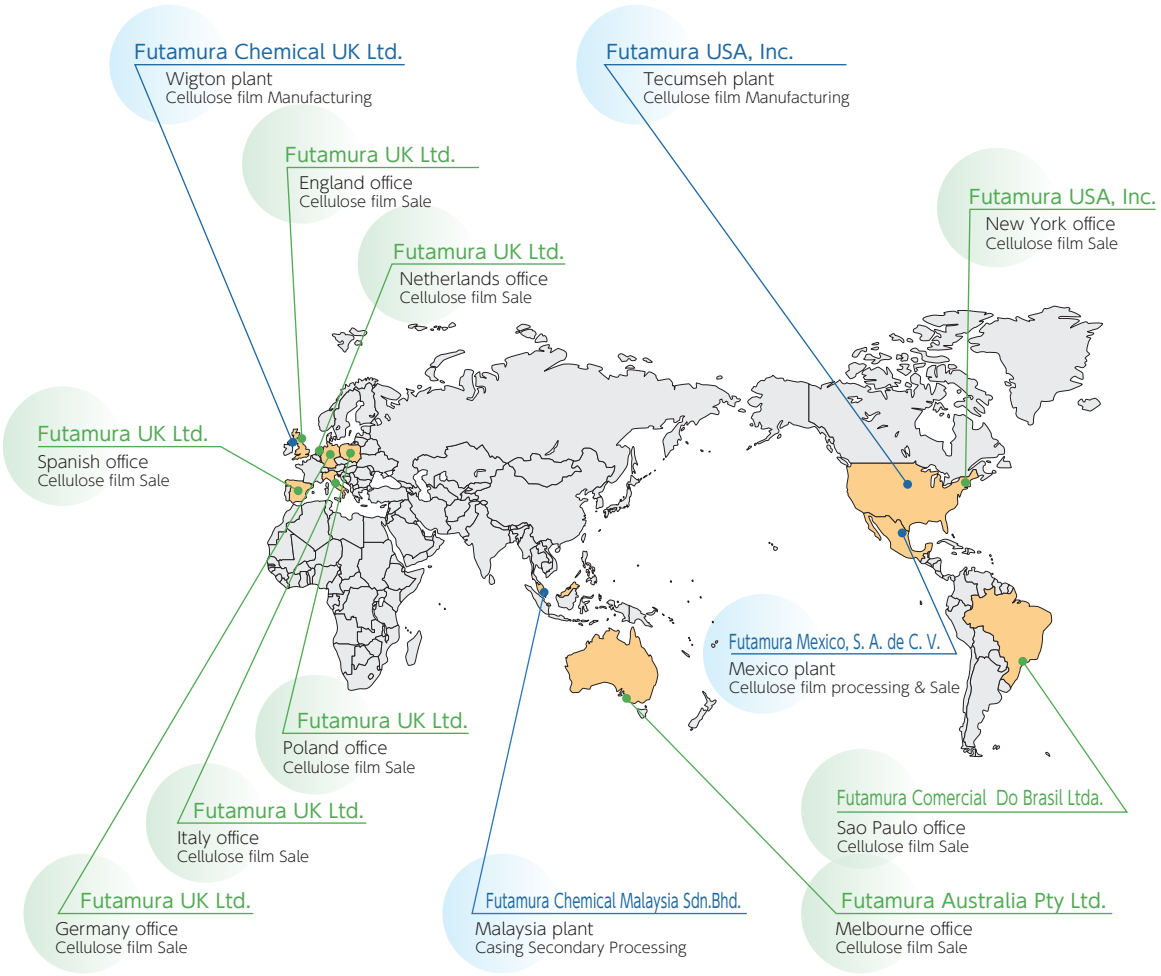
Hiroshima plant
2-1-2,Hirotagaya,
Kure-shi,Hiroshima
●Products
・Activated carbon

Nagoya plant
1-1,Nishijo-Kasamidachi,
Oharu-cho,Ama-gun,Aichi
●Products
・Polypropylene film
・Linear low density polyethylene film
・Phenolic laminated sheets

Takamatsu branch
Tomei Building, 6th floor,
3-1,Furujin-machi,
Takamatsu-shi,Kagawa

Osaka branch
Honmachi Center Building,
9th floor,2-6-10,Honmachi,
Chuo-ku,Osaka-shi,Osaka

Overseas



Company Profile

Company name	FUTAMURA CHEMICAL CO., LTD.
Location of Head Office	2-29-16,Meieki,Nakamura-ku, Nagoya-shi 450-0002 JAPAN
Establishment	October 25, 1950
Representative	Yasuo Nagae
Director Capital	0.5 billion yen
Sales	94 billion yen (Non-consolidated) 118 billion yen (Consolidated)
Sales distribution ratio (Non-consolidated)	Film Business : 89.9% Activated Carbon Business : 7.8% Other Business : 2.3%
Number of employees	1,395 (Non-consolidated) 1,986 (Consolidated)
Average age	41 years old (Non-consolidated)

Business items

Polypropylene film
Linear low density polyethylene film
Polyester film
Cellulose film
Fibrous casing
Non-woven fabric
Actibated carbon / Functional products
Phenolic laminated sheets
Starch products
Agricultural materials



To earn the trust of our customers, we have summarized Futamura Chemical's business activities and the status of our environmental initiatives in this report.
Reporting scope: Unless otherwise specified, the report targets Futamura Chemical's 6 major plants with large environmental impact (Nagoya, Ogaki, Gifu, Ibaraki, Hiroshima, and Tsurumi) and the Tahara Development Center, making a total of 7 business sites.
Reference Guidelines: We prepared this report in line with the Environmental Reporting Guidelines 2018 (Ministry of the Environment).