

FUTAMURA CSR REPORT

2020 Edition April 2020 - March 2021



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フタムラ化学株式会社
FUTAMURA CHEMICAL CO., LTD.

As Futamura Chemical is mainly engaged in the industrial materials business, many consumers may not recognize the company. However, a wide range of industries use Futamura Chemical products, including those concerned with food, everyday goods, pharmaceuticals, electrical products, and automobiles. We hope to play a “supporting role” in the lives of many by providing a stable supply of products of high quality that customers can use with confidence.

In response to the increasing awareness of worldwide environmental issues, Futamura Chemical is developing products to comply with various environmental issues, such as the reduction of CO₂ emissions, countermeasures against microplastics, and the realization of a recycling-oriented society.

Based on the policy of “putting our employees’ lives first”, Futamura Chemical commits to achieving stable growth in its business to ensure employees can work with peace of mind while maintaining workplace safety and employee health, and striving to coexist with the local community.

Bringing Peace of Mind to
Lives and the Environment
AROUND the
World



About FUTAMURA CHEMICAL

Futamura Chemical was established with the hope of rebuilding the nation after the end of World War II. In this section, we would like to introduce the history and philosophy of Futamura Chemical, which inherits the founder's belief that "a company is a public institution of society, rather than a private property", and continues to contribute to the stability and development of society while believing that "a company exists to protect the lives and security of its employees".



Our History

Founded to manufacture activated carbon in 1950, Futamura Chemical has since expanded its business scope to include cellulose, plastic film, phenolic laminated sheets, starch, and gas separation equipment, based on its corporate motto: "Serving the nation and society through our products".

In our main plastic film business, we have invested in Malaysian companies to establish a factory capable of producing Japanese-quality products. In our cellulose business, we have factories in the United Kingdom and the United States to establish a stable global supply system of film.

In the activated carbon business, while increasing the ratio of high-value-added products, such as activated carbon filters and pharmaceuticals, we concurrently entered the equipment field, including the development of biomass energy systems.

At Futamura Chemical, we do not believe the company belongs to the shareholders but that it exists to protect the stability of the lives of our employees who work here. We have a culture of thinking about company stability from a long-term perspective, rather than being driven by the immediate expansion of sales and profits.

About 70 years ago, the founder of Futamura Chemical reflected on the scorched earth of Nagoya after the war and decided he would do his best to rebuild his country by manufacturing products. We believe that a company is a vessel for transmitting the spirit of its founder to the future, and that this is the significance of its existence.

We are not a company that only pursues profit by all means, but a company that contributes to the community and the happiness of its employees through manufacturing. Our mission is to create a stable and prosperous life for our employees.

These ideas are immutable, and we will continue to contribute to society through manufacturing and to provide a place where our employees can work with peace of mind.

History of Futamura Chemical

- 1950** Head office (Activated carbon plant)
- 1952** Gifu plant (Activated carbon)
- 1955** Ogaki plant (Cellulose film)
- 1960** Taiko Tape Co., Ltd.
- 1967** Nagoya plant (Polypropylene film)
- 1975** Tsurumi Coal
- 1976** Nagoya plant (Phenolic laminated sheets)
- 1980** Ibaraki plant (Polypropylene film)
- 1986** Hiroshima plant (Activated carbon)
- 1987** Ogaki plant (Polyester film)
- 1998** Ogaki plant (Polypropylene film)
- 2008** Tahara Development Center
- 2012** Tochigi branch
- 2014** Scientific Packaging Film Co., Ltd.
- 2016 Mar.** Ogaki plant obtained Tradable Green Certificates (updated every year thereafter)
- 2016 Jun.** Futamura Chemical UK Ltd. and Futamura USA Inc.
- 2017** Adsorption Technology Industries Co., Ltd.
- 2017 May.** Received the 3rd Social Value / Capital Creation M & A Awards Grand Prize
- 2017 Dec.** Selected for the Companies Driving Regional Growth
- 2018 Jan.** Moisture-proof cellophane is certified as a product that conforms to the biomass mark identification label.
- 2018 Apr.** Obtained Development Bank of Japan (DBJ) disaster prevention rating
- 2018 Jun.** Received a special award for the 19th Logistics Environment Award from the Japan Logistics Association
- 2018 Jul.** Participated in United Nations Global Compact
- 2018 Dec.** Joined the Clean Ocean Material Alliance
- 2019 Jan.** Participated in Plastics Smart
- 2019 Mar.** Participated in the Global Commitment by Ellen MacArthur Foundation
- 2019 May.** Participated in the Minister of Environment's opinion exchange meeting for G20
- 2020 Jun.** Selected for the Global Niche Top 100
- 2020 Jul.** Obtained Development Bank of Japan (DBJ) environmental rating
- 2021 Apr.** Registered as a member of the Food Contact Material Safety Center
- 2021 Jul.** Obtained International Sustainability and Carbon Certification

Our Businesses

Futamura Chemical is engaged in the following seven businesses to provide products and develop technologies that help improve people's lives.



Cellulose Business

We manufacture cellulose products from plant materials, such as pulp and hemp. Cellophane and NatureFlex™ films are mainly used as packaging materials for pharmaceuticals, food products and labels.

Products

Cellulose film, Fibrous casing, Non-woven fabric



Starch Business

We produce starch products from natural starch using Futamura Chemical's proprietary technology. By imparting unique physical properties to the product, we can use it in fields where its application was previously difficult.

Application

Food additives, Edible and water soluble film

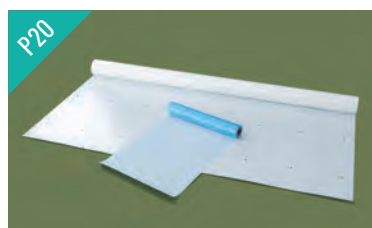


Activated Carbon Business

We process activated carbon, manufactured from wood or coconut shells, into various shapes to suit the application. It is widely used in processes that aim to decolorize and deodorize, such as decolorization and refinement in the food and medical industries, and water treatment in water purification plants.

Products / Application

Activated carbon (powder, granulated), Functional products, Gas separation and concentration equipment



Agricultural Business

Our agricultural products are designed to help improve the quality of products while saving energy. It is one of the ways Futamura Chemical supports people's lives through food.

Products

Reflective sheet, Heat retaining sheet

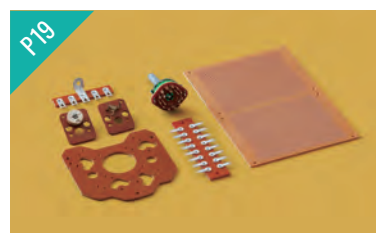


Plastic Film Business

Our core product is packaging film, which is an essential material for modern logistics systems. Its purpose is the individual and external packaging of everything from food products to everyday items.

Products

Polypropylene film, Polyethylene film, Polyester film

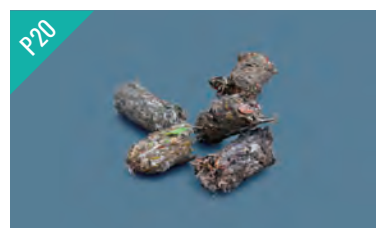


Phenolic Laminated Sheets Business

We manufacture laminated sheets from paper or fabric as a base material and phenolic resin as a binding material.

Application

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



RPF Business

RPF is a solid fuel made from paper, fiber, wood and plastic waste. When solid fuels are used as an alternative to fossil fuels, they can help reduce CO₂ emissions.

President's Message



President

**YASUO
NAGAE**

Futamura Chemical Co., Ltd. was established in October 1950 and celebrated its 70th anniversary in 2020.

We started by producing activated carbon for caramel decolorization. We have since expanded our business domain to include cellulose products, such as Cellophane and NatureFlex™, which are transparent papers made from wood, plastic film used for food packaging, phenolic laminated sheets used in electrical products, starch products used in a variety of foods, and agricultural materials used in fruit cultivation.

As a supplier of mainly industrial materials, consumers rarely see our name. However, our products have a wide range of applications and play a role in the infrastructure that creates a society where people can lead healthy and comfortable lives. For this reason, our mission is to provide a stable supply of products of high quality that customers can use with confidence, and we are constantly working on improvements to realize this at a higher level.

Recently, there has been growing social awareness of the environment and sustainability, as exemplified by the SDGs. We are continuously working towards achieving the SDGs by building solar power plants, producing recycled fuel from the plastic refuses generated by our business partners, reusing distribution materials, and reducing carbon dioxide emissions by reviewing our transportation methods.

In the plastic film business, we are working on the use of non-petroleum-derived raw materials through mass balance methods and developing films suitable for recycling into mono-materials. In the cellulose business, we are developing NatureFlex™, a plant-derived, compostable product. In the activated carbon business, we are developing an efficient storage system for biomethane and a hydrogen concentrator for the effective use of hydrogen. In each of our businesses, we focus on the production and development of products that can contribute to the SDGs.

We ask for your support as we continue our efforts to provide a stable supply of materials as infrastructure to support a healthy and comfortable life for everyone, and actively promote our efforts to achieve the SDGs.

長江 泰雄

Our Philosophy and Vision

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)

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

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

- 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.

- 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

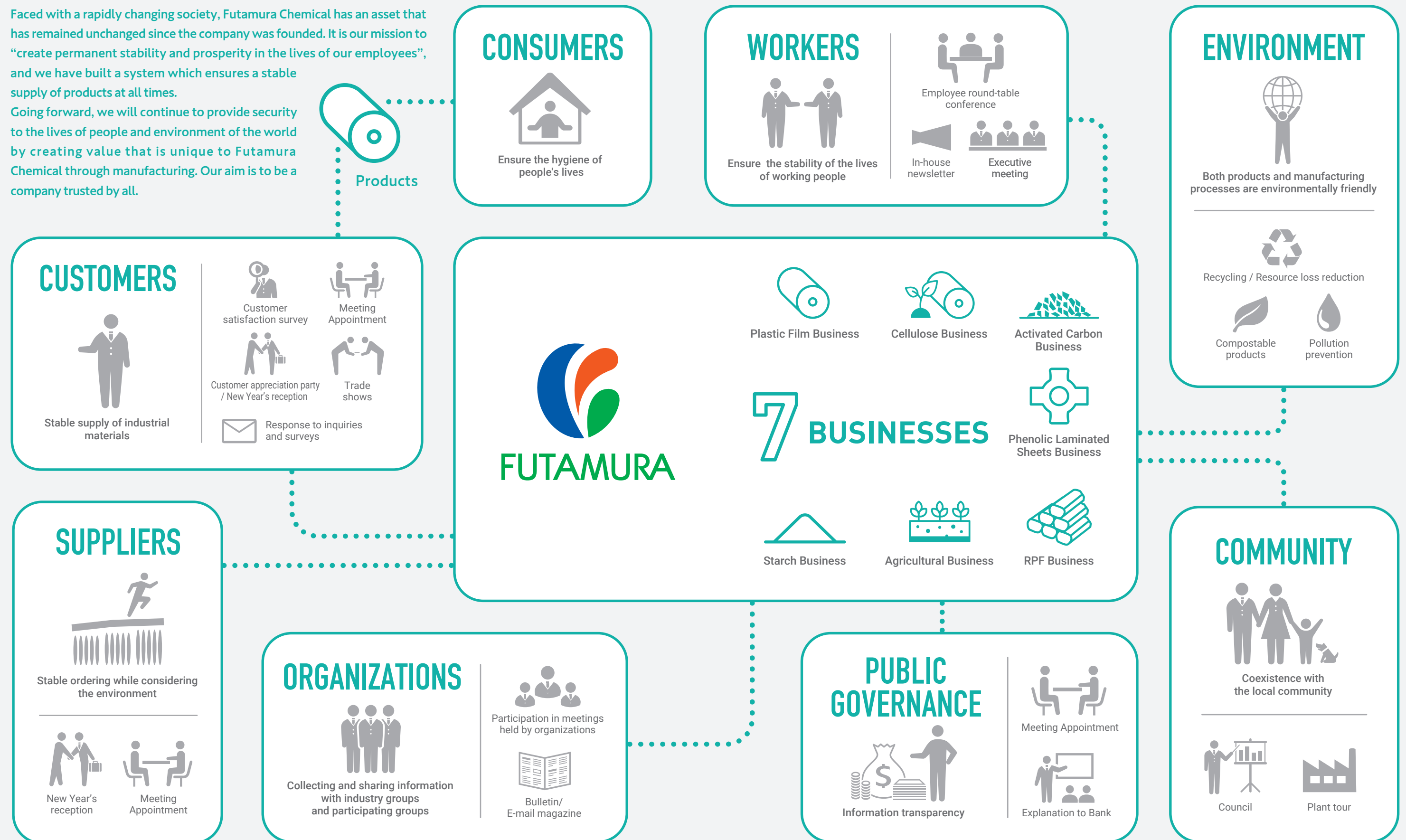
formats.

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.

Our Value Creation Model

Faced with a rapidly changing society, Futamura Chemical has an asset that has remained unchanged since the company was founded. It is our mission to “create permanent stability and prosperity in the lives of our employees”, and we have built a system which ensures a stable supply of products at all times.

Going forward, we will continue to provide security to the lives of people and environment of the world by creating value that is unique to Futamura Chemical through manufacturing. Our aim is to be a company trusted by all.



Our Businesses

From packaging film for food
and household goods to plant-based cellulose films
and activated carbon, Futamura Chemical seeks to deliver products
and new technologies to support people's lives through
our seven businesses.



Business Summary

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 cellulose, plastic films, phenolic laminated sheets, starch, and gas separation equipment as we continue to 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.

About the "Taiko" Brand

The Taiko brand products were born from our success in caramel-making during the period when many goods were in short supply. Nakamura Ward, Nagoya, is the hometown of Futamura Chemical, and is also known as the birthplace of the 16th-century, Taiko, Hideyoshi Toyotomi. To honour the feudal lord, Futamura Chemical has named its products "Taiko".

Efforts for SDGs

Sustainable Development Goals (SDGs) are a collection of 17 goals and 169 targets that aim to realize a sustainable future and the improvement of the quality of life (QOL) of people by tackling various global-scale issues, including social and environmental problems. Many businesses and initiatives at Futamura Chemical have helped to address SDGs. Our company-wide or business-level action items for achieving the SDGs total 232 projects, each of which contributes to 11 of the 17 goals.



TOTAL
232 SDGs Action



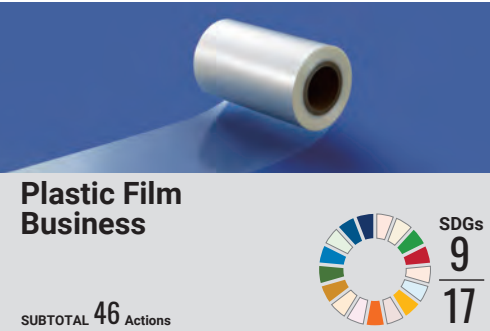
FUTAMURA TOTAL 232 SDGs Actions



SDGs 11
TOTAL 232 Contents



Head Office
SUBTOTAL 26 Actions
SDGs 8
17



Plastic Film Business
SUBTOTAL 46 Actions
SDGs 9
17



Cellulose Business
SUBTOTAL 48 Actions
SDGs 9
17



Activated Carbon Business
SUBTOTAL 42 Actions
SDGs 8
17



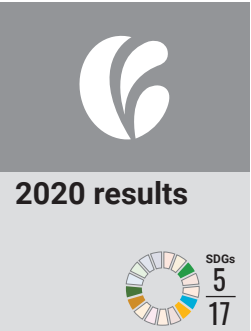
Phenolic Laminated Sheets Business
SUBTOTAL 32 Action
SDGs 8
17



Starch Business
SUBTOTAL 22 Action
SDGs 8
17



Agricultural Business
SUBTOTAL 16 Action
SDGs 6
17



2020 results
SDGs 5
17

Natural environment

Sanitation
Working environment measurement.

Renewable energy
Solar power.

Energy-saving
Introduction of hybrid vehicles. Use of LED lights.

Climate change measures
Introduction of hybrid vehicles. Paperless meeting held. Introduction of online meetings. Use of LED lights. Utilization of modal shift.

Partnership
United Nations Global Compact. Circular economy. CLOMA. PS.

Sanitation
Working environment measurement.

Air pollution countermeasures
Exhaust gas cleaning system operation. Fuel switching.

Renewable energy
Solar power.

Energy-saving
Installation of energy-saving motors. Installation of energy-saving boilers. Installation of high-efficiency chillers. Use of LED lights. Periodical maintenance. Fuel switching. Greenization.

Climate change measures
Installation of energy-saving pumps. Installation of energy-saving boilers. Installation of high-efficiency chillers. Use of LED lights. Periodical maintenance. Fuel switching. Greenization.

Marine debris
Installation of raw material pellet collection devices.

Partnership
Obtained ISCC.

Sanitation
Working environment measurement.

Air pollution countermeasures
Exhaust gas cleaning system operation. Fuel switching.

Renewable energy
Procurement of green electricity. Solar power.

Energy-saving
Introduction of energy-saving equipment. Condensate generators operation. Waste heat boiler operation. Use of recycled fuel. Use of LED lights. Periodical maintenance. Fuel switching. Greenization.

Climate change measures
Introduction of energy-saving equipment. Condensate generators operation. Waste heat boiler operation. Use of recycled fuel. Use of LED lights. Periodical maintenance. Fuel switching. Greenization.

Climate change measures
Signed Ogaki City environmental agreement.

Sanitation
Working environment measurement.

Air pollution countermeasures
Exhaust gas cleaning system operation. Fuel switching. Solvent catalytic combustion treatment system operation.

Energy-saving
Introduction of energy-saving equipment. Utilization of waste heat from firing furnace. Use of LED lights. Utilization of modal shift. Periodical maintenance.

Climate change measures
Introduction of energy-saving equipment. Utilization of waste heat from firing furnace. Use of LED lights. Utilization of modal shift. Periodical maintenance. Fuel switching. Greenization.

Sanitation
Working environment measurement.

Air pollution countermeasures
Combustion-type deodorizing furnace operation. Fuel switching.

Renewable energy
Solar power.

Energy-saving
Introduction of energy-saving equipment. Use of LED lights. Periodical maintenance. Fuel switching. Greenization.

Climate change measures
Introduction of energy-saving equipment. Use of LED lights. Periodical maintenance. Fuel switching. Greenization.

Sanitation
Working environment measurement.

Renewable energy
Procurement of green electricity. Solar power.

Energy-saving
Use of LED lights. Greenization.

Climate change measures
Use of LED lights. Greenization.

Sanitation
Sulfur oxides 74% reduction compared to 2001.

Renewable energy
Solar power generation 4,053,000 kwh / year.

Energy-saving
3% reduction annually in company-wide total energy consumption.

Climate change measures
7% reduction annually in CO₂ emissions.

People's lives

Environmental education
Safety and environment review session held.

Future City Initiative
Received the Grand Prize for Social Value. Capital Creation M & A Awards. Selected for the Global Niche Top 100. Selected for the Companies Driving Regional Growth.

Contribution to the community
Community cleaning around the head office.

Organizational governance
Enactment of compliance charter. Establishment of action guidelines for quality, safety, and the environment. Operation of the Safety and Environment Management Regulations. Obtained DBJ environmental rating

Environmental education
Training of the pollution control managers. Training of the ISO14001 auditors. Training of the Energy managers. Training of the Hazardous materials engineers. Participation in environmental training.

Contribution to the community
Community cleaning around the factories. Installation of soundproof walls.

Organizational governance
ISO14001 certification. ISO9001 certification. ISO22000 certification. Energy Conservation Committee management. Implementation of environmental patrols.

Environmental education
Training of the pollution control managers. Training of the ISO14001 auditors. Training of the Energy managers. Training of the Hazardous materials engineers. Participation in environmental training.

Water circulation
Reuse of cooling water.

Water resource protection
Water reduction.

Wastewater treatment
Wastewater treatment plants operation.

Contribution to the community
Community cleaning around the factories. River clean-up campaign.

Organizational governance
ISO14001 certification. ISO9001 certification. ISO22000 certification. FSSC22000 certification.

Environmental education
Training of the pollution control managers. Training of the ISO14001 auditors. Training of the Energy managers. Training of the Hazardous materials engineers. Participation in environmental training.

Water circulation
Reuse of wastewater from production process.

Water resource protection
Water saving.

Wastewater treatment
Wastewater treatment plants operation. Installation of final discharge monitoring / alarm system.

Contribution to the community
Community cleaning around the factories. River clean-up campaign.

Organizational governance
ISO14001 certification. ISO9001 certification.

Environmental education
Training of the pollution control managers. Training of the ISO14001 auditors. Training of the Energy managers. Training of the Hazardous materials engineers. Participation in environmental training.

Wastewater treatment
Wastewater treatment facilities operation. Installation of wastewater monitoring / alarm system. Installation of automatic drainage sluice gate.

Contribution to the community
Community cleaning around the factories.

Organizational governance
ISO14001 certification. ISO9001 certification. Energy Conservation Committee management. Implementation of environmental patrols.

Environmental education
Training of the pollution control managers. Training of the ISO14001 auditors. Training of the Hazardous materials engineers. Participation in environmental training.

Wastewater treatment
Wastewater treatment facilities operation.

Contribution to the community
Community cleaning around the factories. River clean-up campaign.

Organizational governance
ISO14001 certification. ISO9001 certification. ISO22000 certification.

Water resource protection
Industrial water usage: 25% reduction compared to 2001. Phosphorus: 69% reduction compared to 2006. Nitrogen: 72% reduction compared to 2008. COD: 18% reduction compared to 2006.

Products & manufacturing

Building a circular society / Waste reduction
Manufacture and sale of Refuse Paper and Plastic Fuel (RPF). Collection and reuse of plastic edge protectors. Collection of recyclable waste.

Chemical substance measures
Operation of raw material procurement SOP.

Innovation
Utilization of biomass resources. Compostable film.

Building a circular society / Waste reduction
Reuse of in-process loss. Diversion of in-process loss. Collection of recyclable waste. Thermal recycling center operation. Sludge incineration heat recovery.

Environmentally friendly products
Non-chlorine barrier film. Non-chlorine heat seal film. Food freshness preservation film. Water-based printing compatible film. Film for automotive coating protection. Mono-material film. Biomass film.

Chemical substance measures
Exhaust gas cleaning system operation.

Innovation
Development of cellulose by the ionic liquid method.

Building a circular society / Waste reduction
Reuse of in-process loss. Diversion of in-process loss. Collection of recyclable waste. Thermal recycling center operation. Sludge incineration heat recovery.

Environmentally friendly products
Utilization of plant-derived materials. Obtained biomass certification. Compostable moisture-proof film.

Chemical substance measures
Chemical recovery / Reuse. Abolition of moisture-proofing process. Exhaust gas cleaning system operation.

Innovation
System development from biogas to fuel cells. Development of polyfluoroalkyl substances (PFAs) analysis system.

Building a circular society / Waste reduction
Regeneration of activated carbon. Activated carbon production from Bipro. Collection of recyclable waste. Reuse of Packaging materials.

Environmentally friendly products
Activated carbon for water and air purification. Activated carbon filter. Oil purifier. Biogas concentrator. Activated carbon for PFAs.

Chemical substance measures
Exhaust gas treatment facilities operation. Solvent catalytic combustion treatment system operation.

Innovation
Antistatic laminated board.

Building a circular society / Waste reduction
Reuse of in-process loss. Diversion of in-process loss. Collection of recyclable waste.

Chemical substance measures
Combustion-type deodorizing furnace operation.

Environmentally friendly products
Agricultural materials.

Building a circular society / Waste reduction
Recovery rate of plastic edge protectors: 62.4% reduction. RPF production: 2,349t / year. Activated carbon regeneration: 1,428t / year. Annual waste: 12% reduction. Recycling rate: 93.8% reduction.

Chemical substance measures
39% reduction annually in PRTR substances.



Our Business Model

Business Strategy

- 1

To respond to client needs with our products, services and proposals, we are committed to strengthening our sales capabilities and providing elaborate services to our customers so we can become their trusted partner.
- 2

Furthermore, we are focusing on gathering information on potential sales opportunities, (including new orders, product updates and revisions), as well as enhancing our stable and prompt product supply capacity through working with our logistic control division to enable in-depth inventory management at our sales sites and warehouses.



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.

Business Strategy

- We understand the shifting needs of our customers' work environments and the required quality while responding to market expectations through the stable and prompt provision of high-quality products that help improve productivity and operations.
- In addressing environmental issues, including marine debris and CO₂ emissions, we undertake research on domestic and global trends, as well as the practices of our suppliers and clients, while investigating elemental technologies alongside our approach to intellectual property.
- Through close coordination between the production and development teams, we promptly respond to demand in areas where we can leverage our facilities and experiences, such as the adoption of non-petroleum-derived raw materials and monomaterialization.

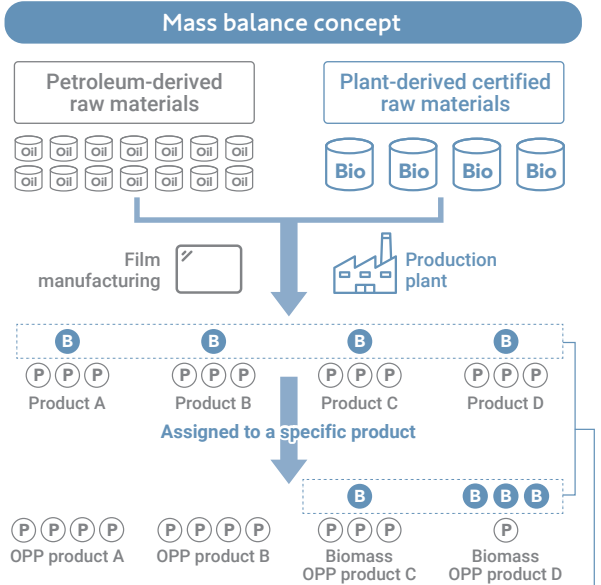
Our Products

- Biaxially Oriented Polypropylene Film (OPP)**
- Pearlized grade
 - Lamination grade
 - Release grade
 - Coated grade
 - Barrier grade
 - Ventilation grade
 - High quality grade
- Cast polypropylene film (CPP)**
- Single packaging grade
 - Retort grade
 - Lamination grade
 - Base Film for Vacuum Metalizing
- Linear low density polyethylene film (LL)**
- Ultra-low temperature heat sealable grade
 - Low temperature heat sealable grade
 - General heat sealable grade
 - Easy-cut grade
 - Heat-resistant grade
- Polyester film**
- General grade
 - Base Film for Vacuum Metalizing
 - Antistatic grade
 - Easy adhesion grade
 - Matt grade
 - Barrier grade
- Mono-axially Oriented**
- PE Grade
 - PP Grade



Our Activities and Achievements

Futamura Chemical adopted the mass balance concept and launched biomass plastic food packaging film using sustainable resources.



Flexible distribution of sustainable ingredients into one or more products is available

Cellulose Business

Earth-friendly material

The cellulose products are primarily 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.



Activated Carbon Business

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

Activated carbon comes in different forms – powdered, granulated or fibrous – 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.

At Futamura Chemical, we offer a range of active carbon products with various functions, including filters for liquid and gas purification.



Business Strategy

- We promote the market expansion of cellulose as a non-petroleum-derived, compostable material.
- To support our customers with the development of new sustainable products as an alternative material to plastic, we promote the benefits of Cellophane, a transparent 'paper' made from renewable woodpulp, as well as NatureFlex™, which is certified as compostable in both industrial and home environments.

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



Our Activities and Achievements

NatureFlex™

A compostable and flexible product packaging material, NatureFlex™ is an excellent example of a circular economy in practice.

Made from renewable, NatureFlex™ offers a compostable renewable alternative, derived from wood pulp and sourced exclusively from responsibly-managed plantations, all of our NatureFlex™ films meet global standards for home and industrial composting. Developed from natural sources, from start to finish, NatureFlex™ offers an environmentally-conscious alternative.

Circular Economy Action



NatureFlex™ - the Facts



Business Strategy

·Our key strength is our multi-material approach (in which two or more raw materials are mixed with the appropriate balance to achieve the desired properties), and we aim to develop high-quality products by exploring the best material balance to fit the product profile.

·In order to realize a carbon-free society, we continue to keep watch the energy industry trends and expand into high-potential fields, including energy storage and effective use of methane emissions.

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

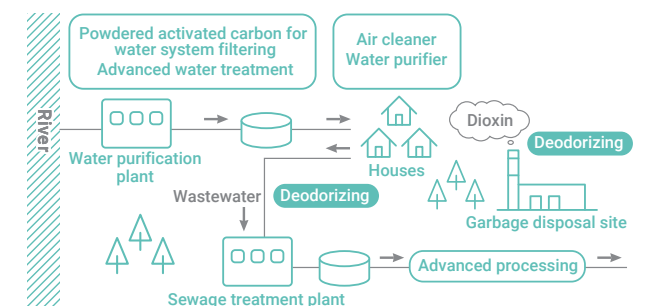
A granulated form of activated carbon made primarily from coconut shells or coal. The particle size of these products is larger than powdered activated carbon and is ideal for filtering liquid or gas, among various other uses.

Functional (activated carbon) products

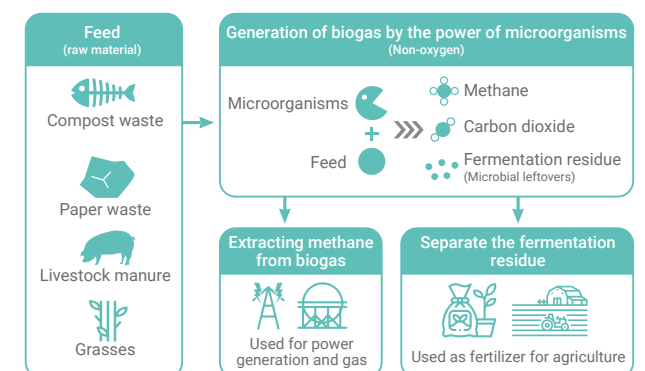
Taiko series®MOF®-C Taiko series®FE·CL
Taiko series®MOF®-M Taiko series®YJF®·DMF®
Taiko series®CRF® Water repellent adsorption sheet
Taiko series®KFF® Gas separation equipment
Taiko series®UF



Our Activities and Achievements



Widely used in the food, pharmaceutical, and chemical industries, as well as in public environmental programs. Also adopted for various items, including home filters and water purifiers.

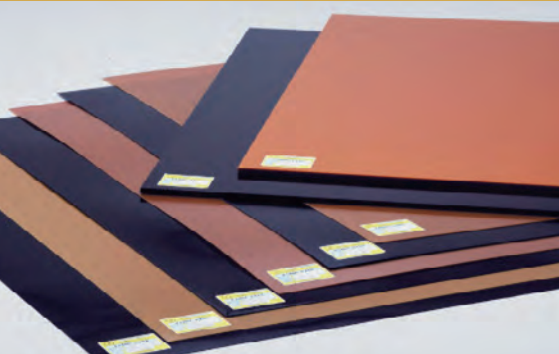
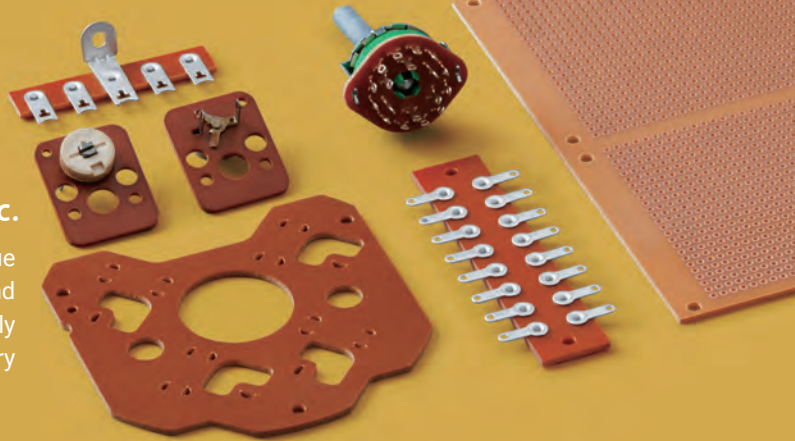


Plans are being developed to launch biogas-based fuel cell generation systems in developing countries where the electricity supply is unstable.

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

TAIKO LITE®
· Paper-based phenolic resin laminated sheet · Fabric-based phenolic resin laminated sheet

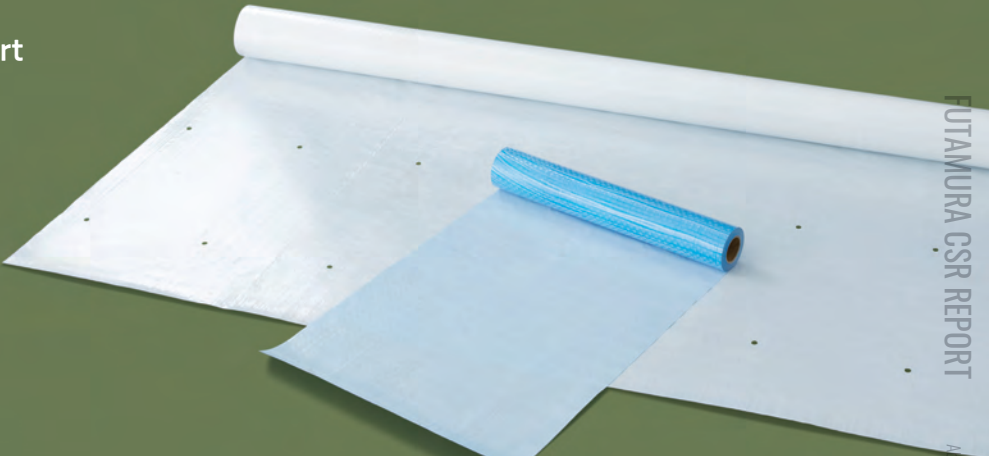
Main Application

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

Photosynthesis-promoting and reflective multisheet "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.

Fruit Protection Shades "Fruit Bouffant®"
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.

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

The product with unique characteristics and edible and water-soluble films for edible ink printing are other applications of our signature physical-processing technology.

RPF Business

Solid fuel made from paper, fiber, wood and plastic waste

RPF is short for "Refuse Paper and Plastic Fuel". This recycled fuel is designed to help mitigate global warming.



Our Products

While waste plastic recycling comes with a number of challenges, converting it into RPF offers an alternative solution, reducing waste that is otherwise burned or disposed of into landfill. Furthermore, RPF can also be used to replace coal, coke, or other fossil fuels, helping reduce CO₂ emissions and preventing global warming.

Our Environmental Report



At Futamura Chemical, we are committed to promoting activities to protect the natural environment through our product development as well as our production process.

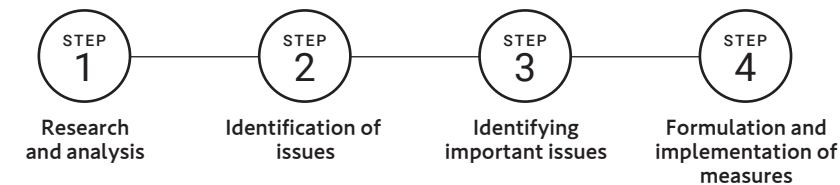
We will continue to make concrete efforts towards our goal to realize the circular society whether by reducing CO₂ emissions and chemical use, or through our initiatives to promote renewable energy, plastic recycling, biomass resources utilization and marketing of plant-based cellulose made from non-wood pulp resources.

Identification of important environmental issues and policies

As a part of our initiative to achieve SDGs, Futamura Chemical identified important issues related to environmental protection. Through our activities to reduce the environmental impact of our business, we endeavor to address social problems as we grow our operation.

Identification process

Process used for identifying important environmental issues



Rationale

Decisions are made based on the magnitude of the impact on sustainability

Scope of operation

From production to Shipment

Identified issues and progress

Theme	Medium-term goals	2020 results	Progress
Greenhouse gas emissions	Achieve 5% reduction from FY 2016	12% reduction compared to 2016	Achieved
Water use	Achieve 5% reduction from FY 2016	0.6% reduction compared to 2016	Not achieved
Chemical substance management	Reduce carbon disulfide use by 10% from 2016	11% reduction compared to 2016	Achieved
Waste management	Recycling rate of at least 92%	93.8%	Achieved
Workplace accidents	50% reduction annually	Increased by 4 cases	Not achieved

Initiative policy

Action guidelines on quality, safety and environment (Implemented in October 2006)

Basic Policy

Futamura Chemical shall contribute to society by manufacturing products based on our motto of "stable supply of products with safe quality in which our clients have trust." We regard the concepts of "quality, safety and sustainability" as one of our important missions and strive in earnest to achieve these objectives.

Code of Conduct

- (1) We give top priority to compliance with laws, regulations, agreements and contracts, priding ourselves on exceeding these standards in many cases.
- (2) Acknowledging that risk is inherent, each employee should take responsibility to prevent incidents, both for their own safety and for those around them.
- (3) We strive for ingenuity and to continually improve our products and technology.
- (4) We are committed to safety, quality and sustainability throughout the entire life cycle of our products.

(5) We ensure that we comply with ISO 9001 for high quality products and services.

(6) Ensuring the safety of our products, we adhere to the production management process based on pharmaceutical regulations (GMP and GQP) and all applicable regulations and standards pertaining to food safety and different diet practices.

(7) As part of being a community member, we continuously promote and address the improvement of environmental issues by adhering to ISO 14001 standards.

(8) We ensure a safe workplace through the development of our company-wide occupational health and safety activities, raising the awareness of each individual, and taking preventive measures to ensure "accident minimization".

(9) We take company-wide preventative measures against possible natural disasters such as earthquakes, storms, floods, and fire.

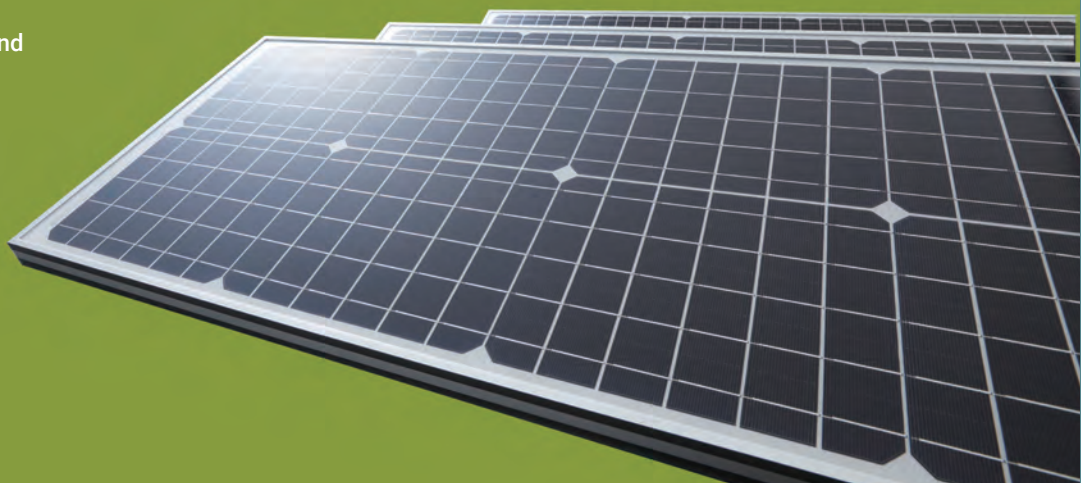
(10) We contribute to building a sustainable society through our business activities.

Environmental management system

- We are continuously working on improving the environment by adhering to ISO 14001 standards.
- In terms of internal environmental initiatives, we utilize the results of our safety and environment review meetings and internal audits, and progressively reflecting them in our measures.
- Of all our plants, five have been designated as Type 1 Energy Management Factories and two have received Type 2 Energy Management Factory designation. Each year, we develop and execute our energy-saving actions, with results reported to the national government.
- In order to develop an environment of legal compliance awareness and ensure the safe and sustainable operation of our plants, we support all employees to acquire national certifications and access regular post-certification training.

Climate Change Mitigation

We promote energy conservation and reduction of CO₂ emissions.



Conservation of Water Resources

In addition to controlling water use by limiting consumption and promoting water recycling during the production process, we ensure that wastewater from production is purified properly to meet regulatory standards.



Our Initiatives

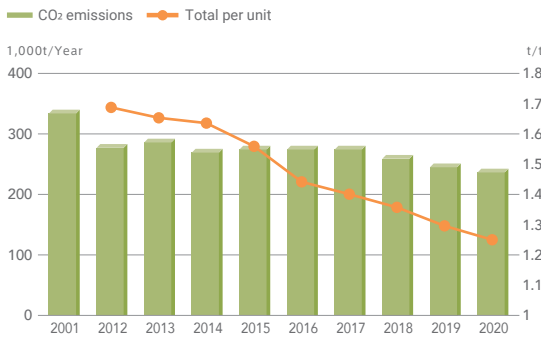
Facilities and Technologies

- Energy-saving motors
- Energy-saving boilers
- Energy-saving pumps
- Waste heat recovery from firing furnace
- High-efficiency chillers
- Other energy-saving equipment
- Use of recycled fuel
- Fuel switching
- Waste heat boiler
- Condensate generators operation
- Use of LED lights
- Solar power

Other activities

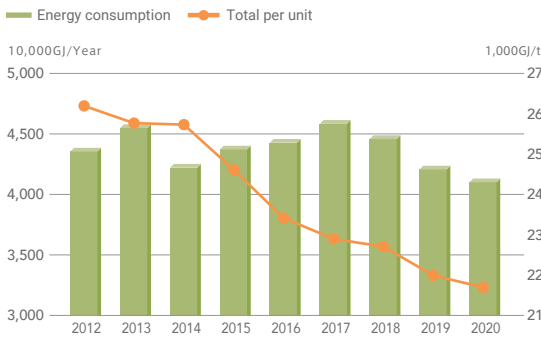
- Green power procurement
- Utilization of modal shift
- Periodical maintenance
- Introduction of hybrid vehicles
- Paperless meetings
- Online meetings
- Greenization

Carbon dioxide emissions and emissions per unit production



As a result of the energy-saving initiatives and energy conversions, the CO₂ emission was reduced by 29% from 2001.

Energy consumption and energy consumption per unit of production



The per unit energy consumption is seeing a reduction, showing a firm improvement.

Our Initiatives

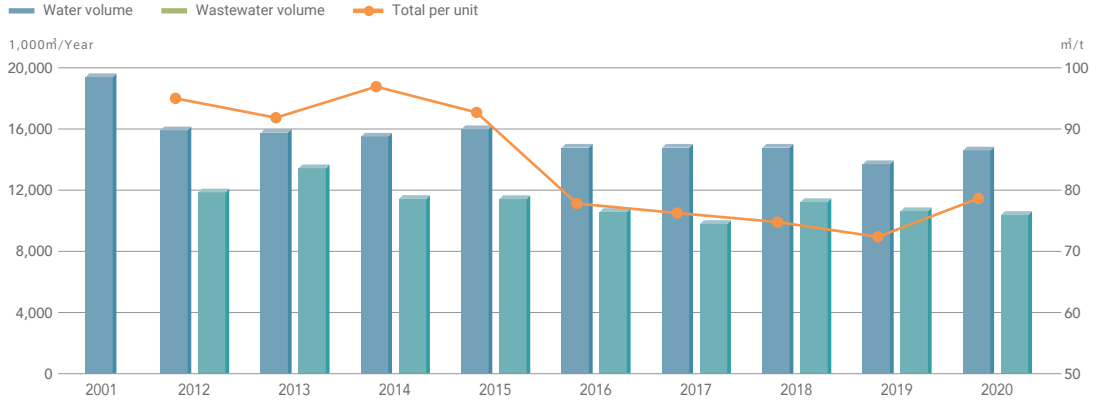
Production activities

- Reuse of wastewater
- Reuse of cooling water
- Water saving
- Optimization of water use

Wastewater management activities

- Wastewater treatment plants operation
- Installation of final discharge monitoring / alarm system
- Installation of automatic drainage sluice gate
- Installation of wastewater monitoring / alarm system

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



25% reduction compared to 2001. Although there are fluctuations depending on the production volume, we are seeing reductions in both water use and unit requirements.



Solar power stations



Thermal recycling centre

		2016	2017	2018	2019	2020
Generated electricity (1,000kwh)	Power procurement	212,907	207,607	205,066	195,646	191,178
	Solar power	4,062	4,104	4,025	4,081	4,053
CO ₂ emissions (1,000t)	Power procurement	106	97	94	86	80
	Solar power	2.4	2.4	2.1	2.0	1.9
Reduced CO ₂ emissions (1,000t)	RPF use	331	295	287	283	289
	Recycle palette use	-	-	0.20	0.22	0.15

With a release rate lower than solar power or fossil fuels, we promote the use of RPF as an effective method to reduce CO₂ emissions.



At the Ogaki and Gifu plants, wastewater is purified to the highest quality and meets the safety level to be discharged into the nearby rivers.

Reducing Waste Loss by Resource Recycling

We are proactively reducing waste by focusing on minimizing or recycling waste resources.
We recover reusable materials from our supply chain to effectively manage the overall volume of waste.



Our Initiatives

Production activities

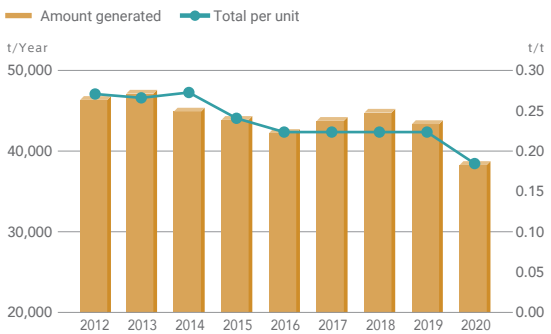
Regeneration of activated carbon
Activated carbon production from Bipropylene
Reuse of in-process loss

Diversion of in-process loss
Manufacture and sale of Refuse Paper and Plastic Fuel (RPF)

Other activities

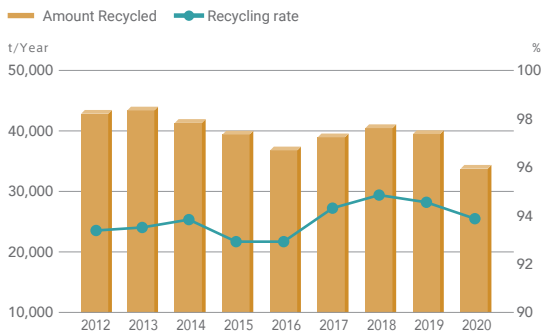
Sludge incineration heat recovery
Thermal recycling centers operation
Collection and reuse of plastic edge protectors
Separate collection of recyclable waste
Reuse of packaging materials

Amount of waste generated and waste per unit of production



Efforts to reduce and reuse waste are progressing, with our recycling rate reaching approximately 94%.

Amount and rate of waste recycling



Collection and reuse of plastic edge protectors (packaging supply)

	2018	2019	2020
Number of protectors collected	2,045,391	2,063,632	2,095,836
Resource recycling rate	58.6%	62.1%	62.4%

Recovery amount of waste plastic, etc. and CO₂ reduction amount

	2016	2017	2018	2019	2020
RPF raw material (recovery amount of waste plastic, etc.) (t)	2,086	2,052	2,410	2,512	2,349
CO ₂ emission reduction amount (t-CO ₂)	84.2	82.8	97.2	101.4	94.8



Cleaning device for plastic edge protectors



Product transport pallet-cleaning equipment



Reduction of Chemicals for the Environment

We are working on minimizing chemical waste through the proper management of chemical substances while promoting the recovery or removal of chemicals from exhaust gas collected within our factories.



Our Initiatives

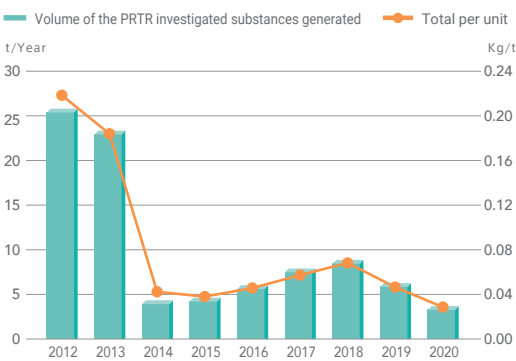
Facilities and Technologies

Exhaust gas treatment facilities operation
Combustion-type deodorizing furnace operation
Solvent catalytic combustion treatment system operation
Exhaust gas cleaning system operation
Chemical recovery / reuse

Other activities

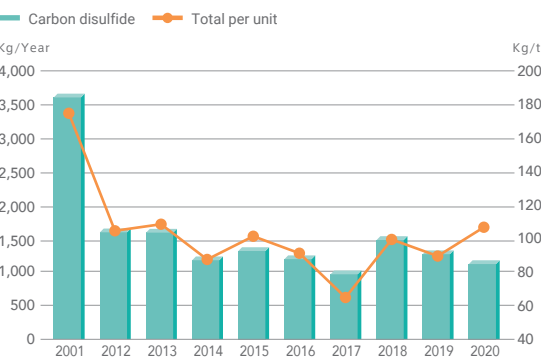
Fuel switching
Working environment measurement
Operation of raw material procurement SOP
Abolition of moisture-proofing process

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



The total volume of the PRTR investigated chemical substances (excluding carbon disulfide) has been reduced by 86% from the 2012 fiscal year.

Carbon disulfide emissions and carbon disulfide per unit of production



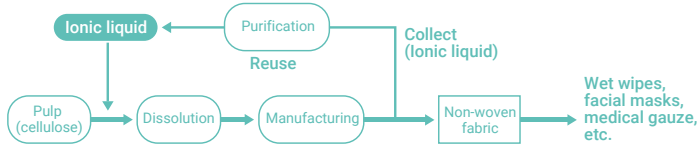
The total carbon disulfide emissions have been reduced by 66% from the 2000 fiscal year as a result of initiatives including the adoption of treatment facilities.

What is the Ogaki method?

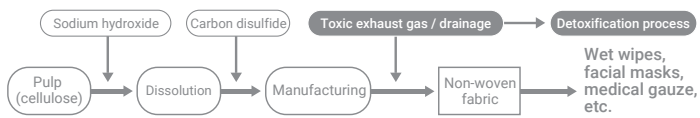
Futamura Chemical's Ogaki method is the world's first technology to achieve commercial scale production of wood pulp based non-woven fabrics without generating toxic chemical waste. With a new production line launched in FY2021, the Ogaki method's non-woven fabrics, named after the plant in which the sustainable manufacturing approach was conceived, are not only increasing their share in the market, where over 90% of products are made from petroleum-based plastic, but are also helping to accelerate plastic-free production.



The Ogaki method manufacturing



Conventional manufacturing method



Prevention of Environmental Pollution

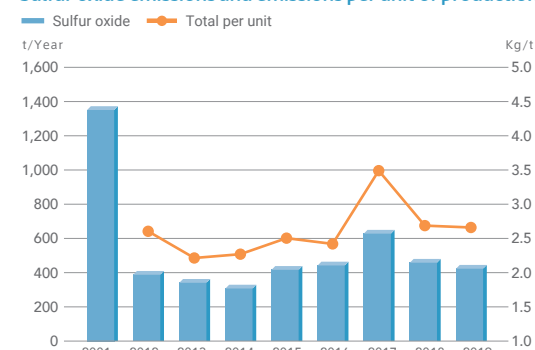
We are committed to the prevention of environmental pollution through implementing our own pollution control standards that go beyond regulatory requirements.

Our Initiatives

Facilities and Technologies

Exhaust gas treatment facilities operation
Wastewater treatment facilities operation
Solvent catalytic combustion treatment system operation
Installation of wastewater monitoring / alarm system
Installation of automatic drainage sluice gate
Combustion-type deodorizing furnace operation

Sulfur oxide emissions and emissions per unit of production



74% reduction compared to 2001.

The yearly sulfur oxides emissions have been controlled at around 500t in recent years, primarily due to the promotion of fuel switching in boilers and other facilities.



Total nitrogen automatic monitoring device



Wastewater screening device (for removal of suspended solids)



Wastewater sludge dehydrator

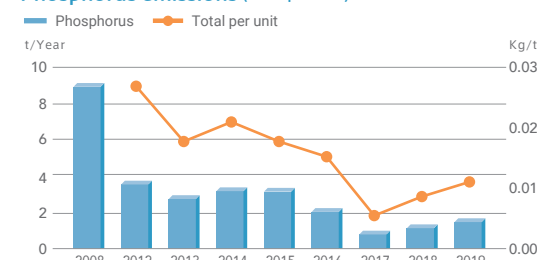


Soot and dust remover

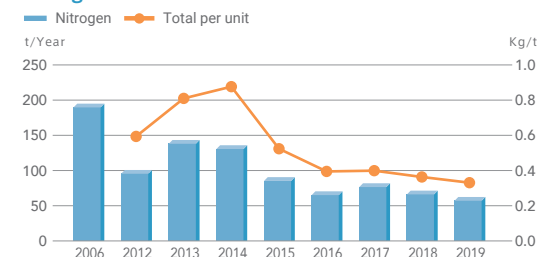
Other activities

Fuel switching
Safety and environment briefing session held
Training of the pollution control managers
Training of the ISO14001 auditors
Training of the Hazardous materials engineers

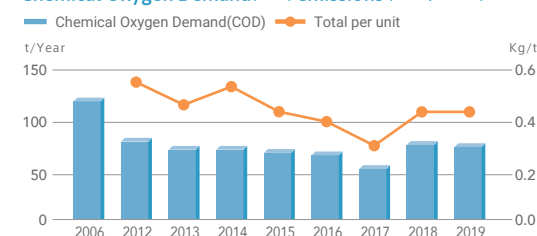
Phosphorus emissions (total per unit)



Nitrogen emissions (total per unit)



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



Emission levels of eutrophication substances are either reducing or being maintained.

Our Participation in International Initiatives and External Evaluations



Plastics Smart

The campaign, led by Japan's MoE, seeks to achieve a sustainable future through exploring smart solutions to address plastic waste issues. The Futamura Group is playing its part while promoting closed-loop recycling and the repurposing of plastics-based materials.



United Nations Global Compact (UNGC)

As a special initiative of the UN Secretary-General, the United Nations Global Compact is a call to companies everywhere to align their operations and strategies with Ten Principles in the areas of human rights, labour, environment and anti-corruption. At Futamura Group, we participate in this initiative by carrying out activities geared toward achieving the goal of ensuring sustainable consumption and production patterns.



Ellen MacArthur Foundation (Global Commitment)

A UK-based foundation working to accelerate the transformation to a circular economy around the world. Efforts are ongoing at the Futamura Chemical UK's cellulose films division with the goal of obtaining certified compostable status for all of their packaging films by 2025.



CLOMA (Japan Clean Ocean Material Alliance)

The alliance established to accelerate public-private innovative partnerships that tackle the plastic waste problem by promoting the 3R (reduce, reuse, and recycle) approach and transformation to alternative materials. The Futamura Group is joining the effort through our activities to build a system to support the 3Rs while focusing on the development and utilization of cellulose products.



DBJ Environmental Rating

Introduced by the Development Bank of Japan, the DBJ Environmentally Rated Loan program is the world's first financing menu to select outstanding companies by evaluating their environmental performance with the institution's unique rating method. Futamura Chemical has been offered a loan based on the DBJ rating.



ISO Standard

The Futamura Group has received ISO certifications for product quality (ISO9001), environmental management (ISO14001), and food safety (ISO22000).



ISCC

The international certification system with an objective to contribute to the implementation of sustainable production and traceable supply chains. As an ISCC PLUS certified company, Futamura Chemical is promoting the procurement of sustainable biomass resources by utilizing the certificate program.



Facilities of FUTAMURA CHEMICAL

As a chemical product manufacturer, water and energy use, as well as excessive waste created through our supply chain, remain critical industrial challenges. Acknowledging this, Futamura Chemical places importance on our responsibilities and, since early times, has been implementing various activities to protect our environment. Since the launch of our first wastewater treatment facility at the Gifu plant in 1969, we have installed a range of sustainable management systems at our plants throughout the group to minimize the environmental impact of our operations in line with the ISO14001 standards. For our cellulose films, we use life cycle assessment to understand the hot spots and target environmental improvements.

Nagoya plant



Solar power



Combustion-type deodorizing furnace



Soundproof wall

Hiroshima plant



Water filtration system



Exhaust gas treatment system

Ibaraki plant



Gas power generator

About thermal recycling

A method to recover and reuse the energy from plastic and other organic waste through incineration. By using the heat generated from the incineration of organic waste, such as waste plastic, as energy, we are contributing to the reduction and effective use of waste.



Solar power



Exhaust gas treatment system
(Microbial treatment)



Exhaust gas treatment system
(Activated carbon adsorption treatment)

Gifu plant



Aggregated stack



Soundproof wall

Tsurumi plant



Recycled water tanks



Exhaust gas treatment system

Ogaki plant



Thermal recycling centre

Our Social Report

Our commitment goes beyond delivering products and technologies that contribute to a better life. At Futamura Chemical, we place importance on activities to support the health and safety of our employees, as well as customer engagement and involvement in local communities.



Developing an Environment to Provide Healthy and Flexible Lives for Our 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.



Our Initiatives



Employee marathon



Baseball tournament



Table tennis tournament



Company trips



Fire drills



Lectures on workplace hygiene



Self-Defense Forces experience



Manufacturing training

	2016	2017	2018	2019	2020
Number of workplace accidents	13	20	13	14	18
Number of accidents leading to lost workdays (4 days or longer)	0	6	5	3	8
Lost time incident rate (LTIR)	0	2.3	2.8	1.4	2.7
Ratio of workers with disabilities to total employees	1.9	2.2	2.3	2.3	2.2
Ratio of post-retirement workers to total employees	100	100	91	100	100
Paid leave usage rate	—	63.0	65.8	75.3	52.4
Number of employees who used childcare leave	25	29	23	20	20

As part of the company-wide work-style reform, Futamura Chemical is promoting a healthy and supportive working culture by encouraging employees to take vacations and introducing a "go home on time" campaign. In addition, we are taking effective measures toward the prevention of workplace accidents, such as the utilization of our risk assessment program. Regarding the compliance consultation, one case was reported during FY2020, which we responded to in line with our compliance guidelines.



Creating Opportunities to Communicate with Our Customers

We strive to foster good relationships with our customers through trade show participation and customer satisfaction surveys, as well as other customer engagement programs.

Live and Work Together to Improve Community Lives

Neighborhood clean-up and factory tours are just two examples of what we do to help our community make a better and greener environment.

Our Initiatives

Trade shows



New Year's reception



Customer appreciation party



Customer satisfaction survey

● Our 14th customer satisfaction survey, conducted in the 2020 fiscal year, we received 274 responses from 162 companies. The response rate came to 100%, which is consistent with the 2018 and 2019 fiscal years, and responses from manufacturing managers also increased.

● In order to improve the level of satisfaction in the future, it is essential that we continue to improve the quality of our products and provide a stable supply of products that can be used with peace of mind. In addition to raising the quality through equipment and process control, we will strengthen cooperation with sales and logistics departments to supply products of value.

Number of customer inquiry responses

Year	2018	2019	2020
Reply	5,644	6,460	6,659



Our Initiatives

Opinion exchange session with high school students



Plant tour for elementary school students



Open lab day for elementary school students



Community cleaning around the factories



River clean-up campaign



Topics for the Fiscal Year, April 2020 - March 2021

Here is an overview of the activities conducted at our offices and plants in the 2020 fiscal year.



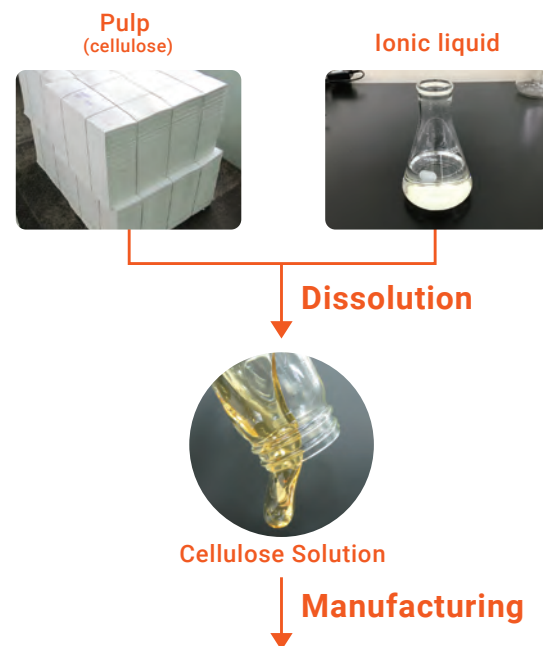
An advertisement has been placed on our shipping envelopes to share our environmental initiatives.



The wording, "100% natural pulp", was added to the packaging of relaunched body wipes that use Futamura Chemical's non-woven fabrics, to emphasize the product's environmental friendliness as well as its soft and refreshing touch.



Due to the aging of the employee dormitory "Taiko-ryo", "Setenta Inanishi" a new three-story corporate apartment with 30 studio rooms, was built.



The plant-derived material can be processed into a wide range of products



[e.g.] Salt (sodium chloride) melts around 800°C. Ionic liquid stays in its state, even at room temperature (see picture).

With the "Ogaki" method, ionic liquids are used for their energy-saving benefits and lower environmental impact. Futamura Chemical is seeking to lead the world by pioneering the commercial application of this next-generation manufacturing process that is designed to help realize a sustainable future.



The Hiroshima plant was featured in a program on NHK (the national TV network) for its application of the modal shift approach.



Futamura Chemical was selected for one of the Top 100 Global Niche companies.

Hosted by the Japanese Ministry of Economy, Trade and Industry, the program recognizes the outstanding performance of companies that hold an overwhelming share in the global market. Companies with a market scale of 10-100 billion yen who have secured a market share of 20 percent or larger (10%+ for mid to small size businesses) for at least a 12-month period during the last three years are evaluated based on criteria, including profitability, strategy, future potential, and product/service quality.



In January 2021, we started issuing privately-placed bonds with a guarantee by the Ogaki Kyoritsu Bank. These bonds are offered as the bank's program that is designed to give back to the local community. Through this program, part of the processing fee is used to purchase items for donation to local schools and organizations of our choice.



The Fsmash®, our specially processed starch product, developed at the Tahara development center, received recognition from the Aichi Police Department for its use in forensic investigation and its benefits to police operations.



We obtained a B ranking (second rank out of three) in the DBJ's environmental rating program.

The DBJ's environmental rating program assesses companies using criteria such as the environmental management system, delivery of sustainable products or services, measures for effective use of resources, and initiatives to address key environmental issues. Futamura Chemical's rating was awarded in accordance with our corporate mission, policies and guidelines for quality, safety and environmental management, as well as initiatives at our plants based on the ISO14001 standards.



We obtained the Tradable Green Certificates (TGCs). As part of its strategy to promote "locally sourced, locally consumed" energy, Ogaki City buys the portion of renewable energy generated by the solar power systems installed at local households based on the amount used at home. The purchased renewable energy is traded as TGCs that represent the environmental values of renewable energy generated (known as Green Power) and is sold to companies in the city. Futamura Chemical has been a consumer of TGCs since 2016. Currently, Ogaki City's TGCs are sold to five other companies in addition to us.



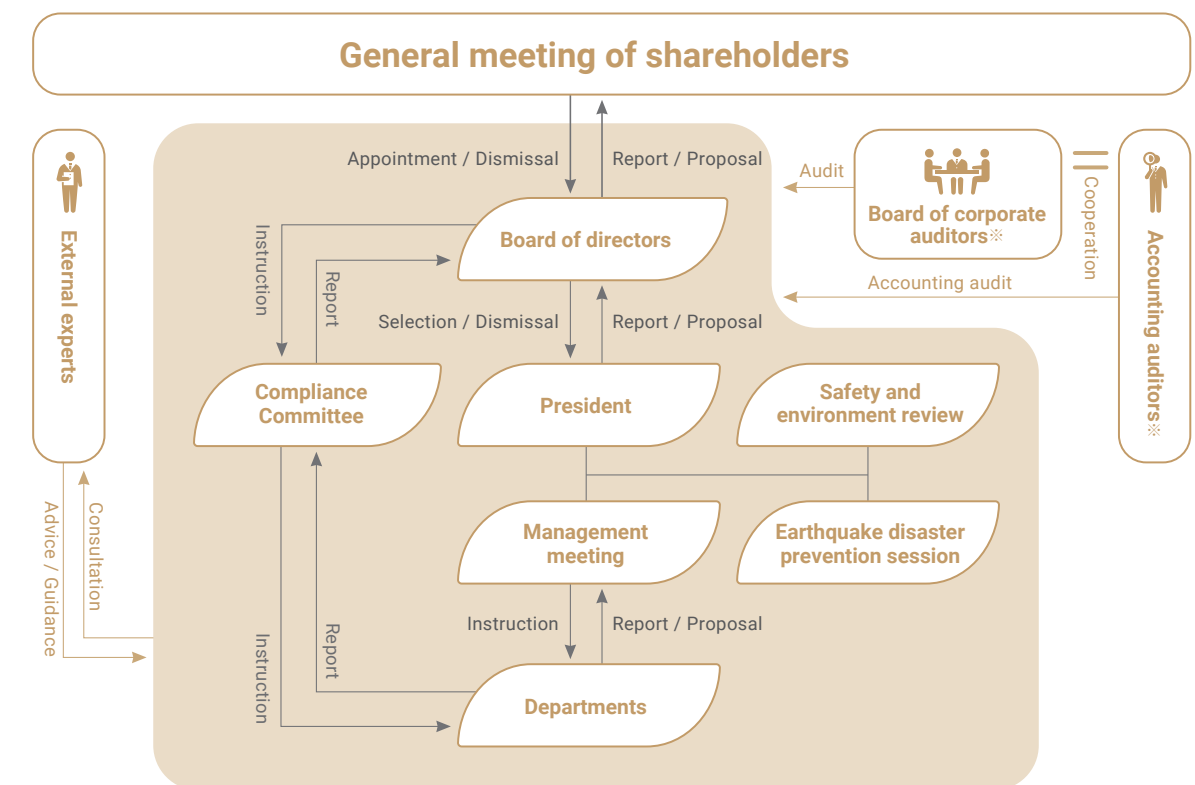
Following our pharmaceutical manufacturer's license approval, obtained on January 27, 2020, we received a second-class marketing license for pharmaceuticals on September 8 of the same year.

Our Corporate Governance

In order to sustainably advance our corporate value, Futamura Chemical is reinforcing the supervisory functions for our business execution and basic management policies, their compliance and risk management structure, and the internal structure for addressing key safety and environmental issues. We are working to reinforce and enhance governance in collaboration with various stakeholders.

Corporate governance structure

In order to conduct business activities in accordance with our action guideline 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.



※Appointment and dismissal at the general meeting of shareholders

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.

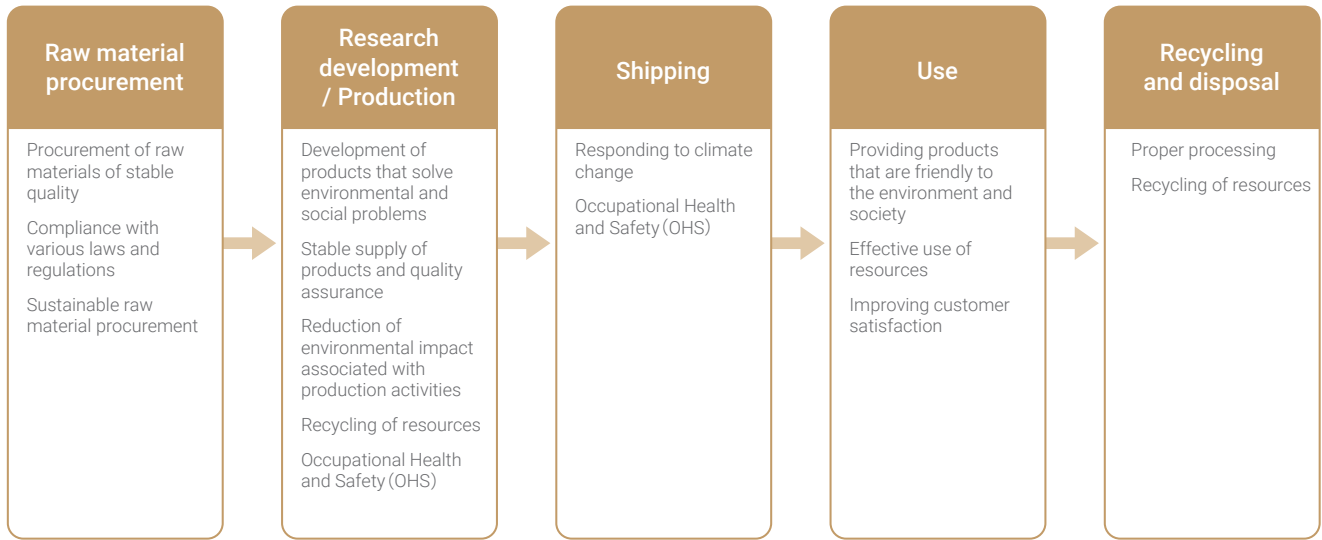
Roles

Board of directors	Basic management policies and important business operations are supervised and executed as soon as they are established.
Board of corporate auditors	The internal control structure and operation status are monitored, and through operational and financial audits, the daily activities of management, including directors, are regulated.
Management meeting	Decisions on important management matters are first deliberated and then made.
Compliance Committee	A compliance charter is established. The company appoints Compliance Committee members and Compliance Promotion Officers to promote compliance.
Safety and environment review Earthquake disaster prevention session	In the presence of directors and corporate auditors, the company continues to consistently address important issues related to safety, the environment, disaster prevention, and product safety.

Value chain management

The value chain management of Futamura Chemical delivers a reliable supply of products to our customers while being environmentally responsible in all processes, from the procurement of raw materials for manufacturing products to R&D, production, transportation, use, and disposal.

Value chain overview

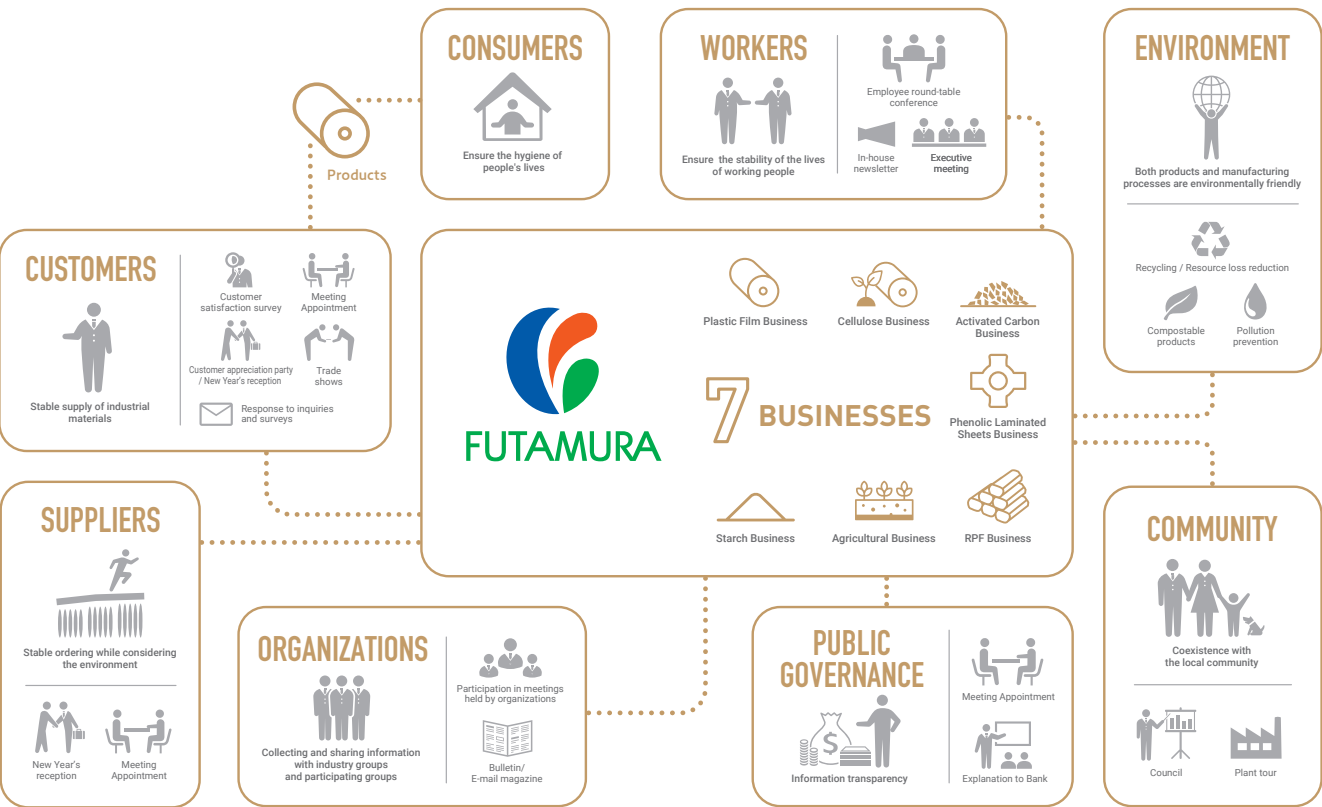


※We enacted sustainable procurement in our purchase management regulations, and procure raw materials in accordance with raw material procurement standards.

Stakeholder engagement

Futamura Chemical strives to disclose corporate information accurately and to communicate with clarity to society. It is our policy to issue CSR Reports annually, in order to report the yearly status of our environmental initiatives.

Overview of stakeholder engagement conducted



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 if such risks occur so we can continue our business, even in the face of unforeseen circumstances.

Risk identification, assessment and response methods / Company-wide positioning

- The Supervising Department identifies and evaluates risks and implements countermeasures based on evaluation results.
- The management committee or the board of directors deliberate and approve important matters.
- When a risk materializes, we establish a task force meeting, headed by the President, to deal with it.
- We report the results of the operation at performance briefings, task force meetings, etc.

List of risks related to safety and environment / Supervising departments			
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 Affairs / 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 of internal systems, unauthorized access, personal / internal information leakage	Information System Group	—
	Violence against business (threatening, kidnapping, robbery, etc.)	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 / Safety and Environment Division
Violation of laws and regulations in external orders	Violation of the Subcontract Act, fraudulent transactions with business partners	Procurement Department / General Affairs and Personnel Department	Materials Division / 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	Sales Representative Division	Production Division
	Exchange risk	Global Business Management Department / Finance Group	—
	Tax risks such as transfer pricing	Global Business Management Department	—

Specific efforts			
Risks	Coronavirus infection	Natural disasters	Climate change
Impacts	Operation shutdown	Damage to the plants	Serious damage to business bases
Measures	Infection control measures	Emergency stockpile, etc. / marginal inventory, storage distribution	Greenhouse gas reduction / fuel switching

Compliance charter

We aim for ongoing development by acting in accordance with our management philosophy and company policy and complying with relevant laws and regulations.

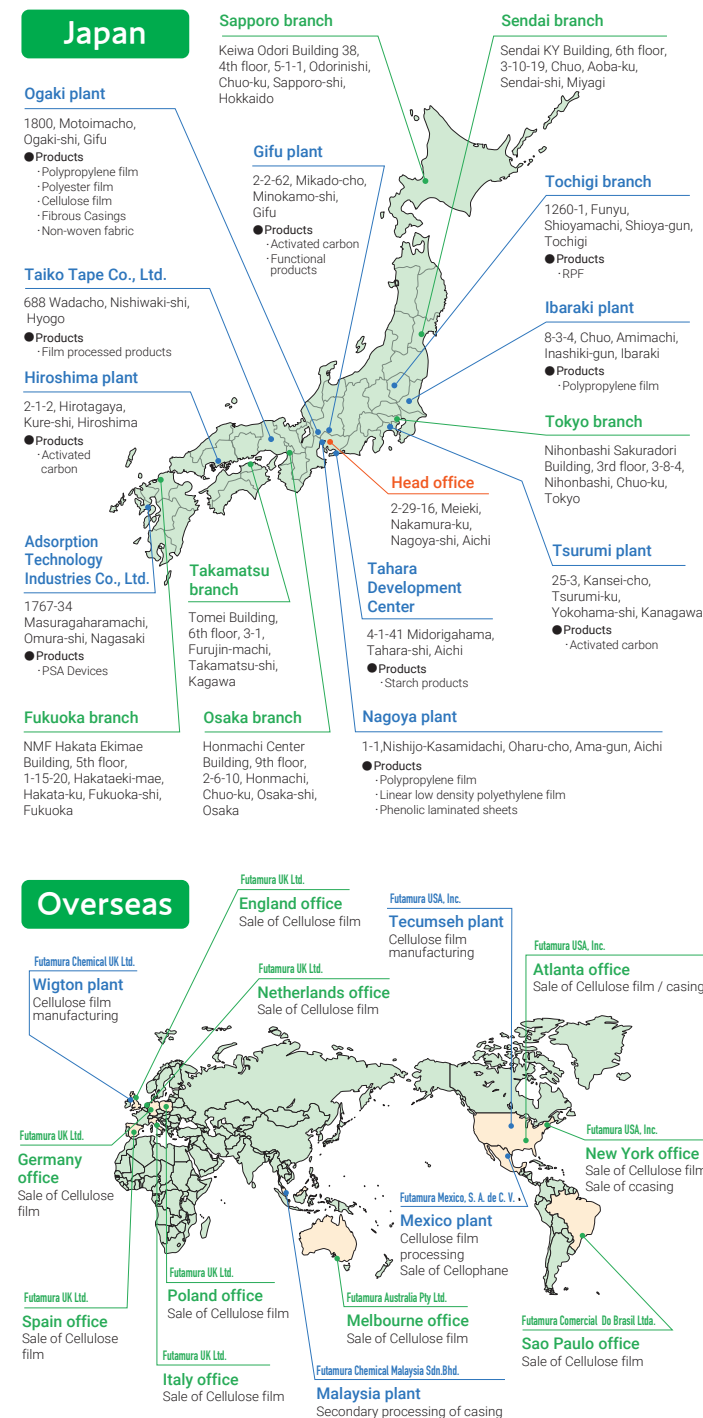
- 1. Legal compliance**
We will comply with domestic and international laws and regulations, abide by company rules, and act as a part of a healthy society.
- 2. Providing safe products**
We will provide a stable supply of products of safe quality that can be used with confidence.
- 3. Fair competition**
We will strive for free and fair competition and to work with integrity in our business activities, both domestic and international.
- 4. Moderate behavior**
We will strictly adhere to the "separation of public and private affairs" in conducting our business and will always maintain modest relationships, regardless of whether they are internal or external.
- 5. Provision of corporate information**
We will strive to disclose corporate information accurately and communicate with clarity to society.
- 6. Interaction with the local community**
As part of being a community member, we will deepen exchanges with the region and strive to contribute broadly to society by taking part in social activities.
- 7. Addressing environmental issues**
We will independently and proactively work to ensure safety and preserve local environments.
- 8. Respect for human rights**
We will respect civil liberties and create a healthy, bright, and comfortable workplace.
- 9. Management at overseas sites**
We will adhere to international laws and the statutes, regulations, and customs of each region of the world.
- 10. Appropriate information disclosure**
We recognize the value of intellectual property and personal information and will manage them appropriately.

Company Profile

Company profile

Company name	Futamura Chemical Co., Ltd.
Location of Head Office	2-29-16, Meieki, Nakamura-ku, Nagoya-shi, Aichi
Establishment	October 25, 1950
President	Yasuo Nagae
Capital	Five billion yen
Amount of sales	68.9 billion yen
Sales distribution ratio	Film Business : 87.2% Activated Carbon Business : 9.9% Other Business : 2.9%
Number of employees	1,302
Average age	40 years old
Business items	Polypropylene film Linear low density polyethylene film Polyester film Cellulose film Fibrous casing Non-woven fabric Activated carbon / Functional products Phenolic laminated sheets Starch products Agricultural materials RPF
Reporting period	April 1, 2020 - March 31, 2021 Some of the latest activities are included.
Subsequent events	On April 1, 2021, Tsurumi Plant was established upon merging with Tsurumi Coal.

Business sites



Celebrating our 70th Anniversary

Although the environmental surrounds and opinions regarding companies have changed drastically, we have maintained our founding policy of “putting the stability of our employees’ lives first”. We believe that a company is a public institution of society and, as such, our highest societal contribution and reason to exist is to provide a place where our employees can work with peace of mind.

The Futamura Group shares this policy, not only in Japan but also in the UK, USA, Mexico, and other countries, under the slogans “One Futamura” and “Futamura Family”.

The Futamura Group will continue to contribute to society, firmly maintaining our immutable belief in “putting the stability of our employees’ lives first” in the face of an ever-changing society.

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 six major plants with large environmental impact (Nagoya, Okagi, 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).

Issued: November 2021
 Planning and editing / Futamura Chemical Co.
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Editor’s note: We prepared this report to make it easier to read and understand, citing photographs, tables, figures, and illustrations as appropriate. Next issue: November 2022

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