kuraray
Possible starts here

Kuraray Corporate Profile 2023

For people and the planet—
to achieve what no one else can.

Corporate Statements

Our Mission

We are committed to developing new fields of business using pioneering technology that improves the environment and enhances the quality of life throughout the world.
"For people and the planet—to achieve what no one else can."

Our Values

Philosophy

Respect for individuals
Close cooperation to attain shared goals
Constant creation of new value

Guiding Principles

Safety is the cornerstone of everything we do
Customers' needs are our top priority
We act on ideas in the workplace

Our Commitment

- We will constantly develop and provide safe, high-quality products and services.
- We will maintain a sound relationship with society through good communication.
- We will strive to preserve and improve the global environment, and to secure safety and health in all our workplaces.
- We will value all members of the Kuraray community and respect their rights.
- We will always conduct businesses in a free, fair and transparent manner.
- We will honor all intellectual property and secure data and information in a proper manner.

CONTENTS

*Financial data (results) of Kuraray expressed in this report in billions of yen are rounded to the nearest hundred million yen.

kuraray

Possible starts here

Beyond impossible lies what's possible.
Waiting to be discovered by those with the courage
to challenge the norm and bring about change.

Nearly a century ago, one such pioneer made
it possible for a successful company to serve the
greater good and society at large.

While also rewarding and nurturing its employees
and stakeholders.

That company is Kuraray.

And today while we face new challenges;
The need to protect the environment.
The need to improve global health.
The need to create cleaner chemicals.

That founding belief in what's possible remains unchanged.

We still work for the benefit of all.
We still trust in our expertise in chemistry to go beyond and innovate.
And we still embrace the power of collaboration with others.

Knowing we're stronger and better, when working together
to change impossible into possible for everyone.

As we make our journey together towards a fairer, safer,
more sustainable future, a real possibility.

Possibility can change the world. And it starts here.

The Kuraray Group established a corporate tagline in 2022: "Possible starts here."
Since our founding, we have taken on the challenge of solving social issues and creating new value through our business activities.
We formulated the phrase "Possible starts here" to express our unwavering corporate attitude as well as our desire to co-create value with society for a better future—starting with the Kuraray Group.

Kuraray Group at a Glance (As of December 31, 2022)

Established

1926

Capital

¥89 billion

Employees (Consolidated)

11,703

(Ratio of overseas employees: 41.7%)

Bases

102 companies in **31** countries and regions around the world

(Production bases: 9 bases in Japan, 43 bases outside Japan)

Net sales (Consolidated)

¥756.4 billion

Operating income (Consolidated)

¥87.1 billion

(Operating income ratio 11.5%)

Overseas sales ratio

76%

Sales ratio of products having the world's highest market shares*

61%

*In-house survey

The DNA of the Kuraray Group and Its Strengths Gained through the Years

Developing Solutions to Social Issues and Contributing to Economic Development through Our Business Activities

Kuraray was founded in 1926 in Kurashiki City, Okayama Prefecture, for the purpose of commercializing synthetic rayon.

Our founder, Magosaburo Ohara, and second President, Soichiro Ohara, sought to build up the business through technological innovation while emphasizing the importance of fulfilling the Company's social responsibilities, such as the response to environmental issues, focusing on addressing social issues through the Company's business activities.

In 1950, shortly after World War II, Soichiro Ohara established the technology to manufacture PVA fiber and its raw material, PVOH resin. The commercialization of this synthetic fiber did not just benefit one company—it helped revitalize Japan's textile industry. This achievement arose out of management's unswerving conviction that "to produce high-quality products with stable profits, we needed to make a product from raw materials without relying on imports."

The pioneering spirit of the Company's management has been passed down as the foundational DNA of the Kuraray Group. Since the beginning, it has been important to Kuraray, even before the phrase "corporate social responsibility" became mainstream.

Magosaburo Ohara
First President

"All the wealth gained from society should be returned to society."

He established the Ohara Institute for Social Research, the Kurashiki Institute for the Science of Labour (now the Ohara Memorial Institute for Science of Labour) for the improvement and reformation of labor conditions, the Kurabo Central Hospital (now the Kurashiki Central Hospital), and the Ohara Museum of Art. These facilities contributed to the advancement of local medicine, welfare, education, culture, and people's standard of living.

Ohara Museum of Art

Kurashiki Central Hospital

Soichiro Ohara
Second President

"Any profit which a company might gain should be confined to those profits that come from technological innovation and from consideration of the social and economic benefits it brings to the entire nation."

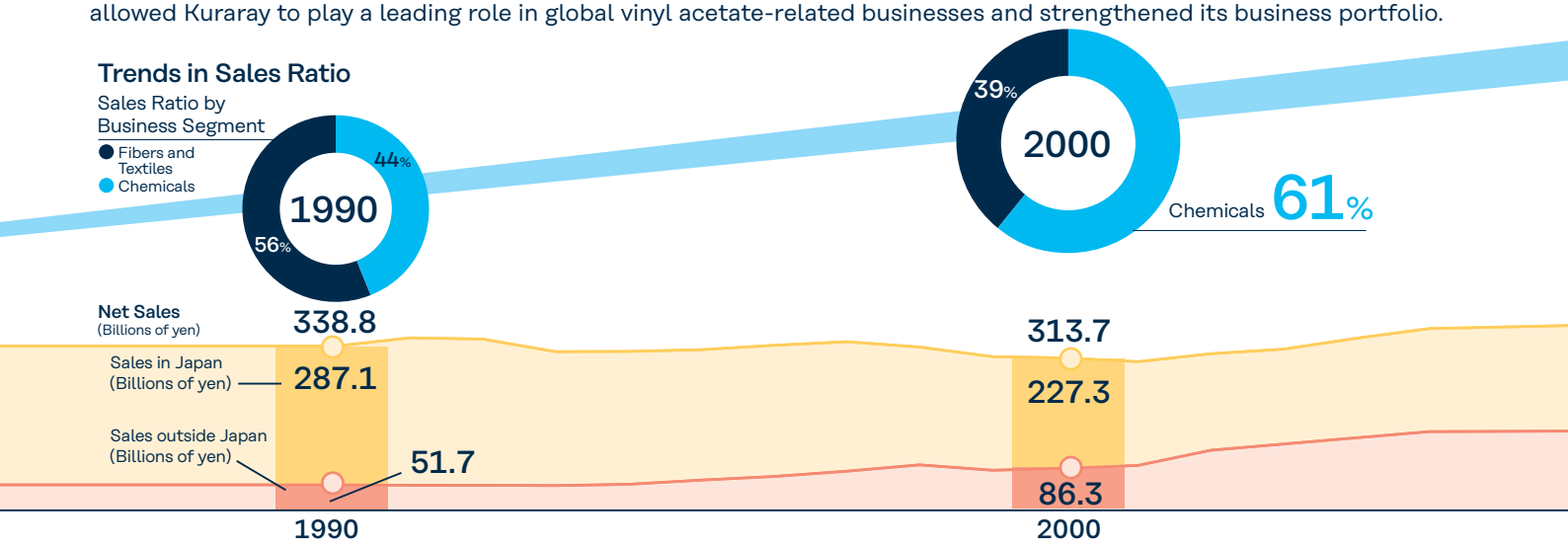
He was among the first to mention corporate responsibility for emissions at a time when the word "pollution" was still a rarity. In 1950, he pioneered the commercialization of KURALON™ PVA fiber, the first synthetic fiber made in Japan using proprietary technology. He continued to help address social issues and advance economic development through business activities, such as the development and commercialization of CLARINO™, the world's first man-made leather to replace natural leather.

The Kuraray Group's History

Details may be found here:
https://www.kuraray.com/company/history

Moving through Shifts in Our Business Structure to Become a Specialty Chemical Company

Kuraray was founded in 1926 for the purpose of commercializing synthetic rayon, which was cutting-edge technology at the time. The Company has continued to expand since then, keeping a focus on fibers and textiles. Following the eventual transition of fiber and textile production overseas and other changes to the business environment, Kuraray expanded to chemical products and drew on its accumulated base of unique technologies in polymer and synthetic chemistry. This move allowed Kuraray to play a leading role in global vinyl acetate-related businesses and strengthened its business portfolio.



1926-1980

Company founded with the aim of commercializing rayon, giving rise to Japan's first synthetic fiber, KURALON™ PVA fiber, and birth of a new business

Kuraray was founded in 1926 in Kurashiki City, Okayama Prefecture, to commercialize synthetic rayon. We went on to commercialize KURALON™ PVA fiber in 1950. Since then, we have launched a series of new businesses, including PVOH resin, CLARINO™ man-made leather, polyester, EVAL™ EVOH resin, and isoprene chemicals.

–1990

Creating highly functional synthetic fibers

Diversification of our business has yielded highly functional synthetic fibers ideal for clothing and more—developing the industrial materials KURALON™ PVA fiber and VECTRAN™ liquid crystal polymer fiber has opened the doors to other business areas.

–2000

Overseas expansion of the chemicals and resin businesses

In our chemicals and resin businesses, backed by strong product appeal, we increased sales overseas, expanded market share, and built a global production framework.

Major Changes in Major Businesses

Chemicals, resin and other products

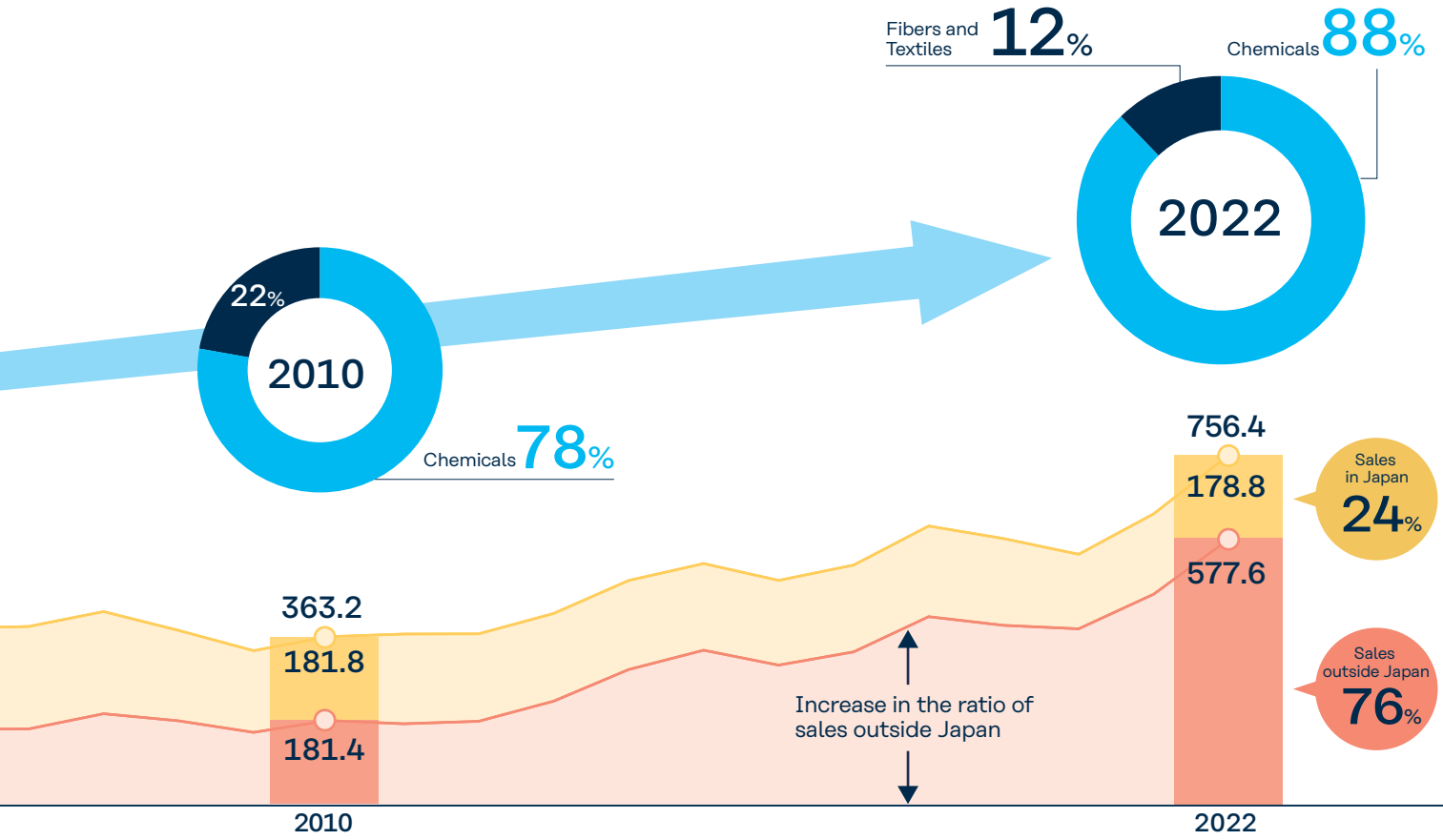
- 1958 Commercialized PVOH
- 1961 Commercialized PVOH film
- 1999 Began production of PVOH resin in Singapore
- 1960 Commercialized methacrylic resin
- 1965 Commercialized activated carbon
- 1972 Commercialized EVAL™ EVOH resin
- 1986 EVAL Company of America began production
- 1999 EVAL Europe N.V. began production
- 1972 Commercialized isoprene chemical
- 1990 Commercialized SEPTON™ thermoplastic elastomer
- 1999 Commercialized GENESTAR™ heat-resistant polyamide resin
- 1978 Commercialized dental materials
- 1996 Began production of VECSTAR™ liquid crystal polymer film

Fibers and textiles

- 1928 Commercialized rayon
- 1950 Commercialized KURALON™ PVA fiber
- 1983 Developed KURALON™ short fiber for reinforcing concrete
- 1998 Commercialized KURALON K-II™ PVA fiber
- 1960 Japan Velcro Co., Ltd. commercialized MAGIC TAPE™ hook-and-loop fastener
- 1964 Kuraray's Equity participation in Japan Velcro Co., Ltd.
- 1989 Commercialized MAGILOCK™ molded plastic hook fastener
- 1964 Commercialized CLARINO™ man-made leather
- 1969 Commercialized CLAVELLA™ polyester filament
- 1972 Began production of KURAFLEX™ nonwoven fabrics
- 1989 Began production of melt-blown nonwoven fabrics
- 1990 Commercialized VECTRAN™ liquid crystal polymer fiber

Changes in the portfolio

Shifting the Focus from Fibers and Textiles Business to Chemicals Business



–2010

Expansion of vinyl acetate-related business through acquisitions

Since 2001, Kuraray has been actively pursuing overseas mergers and acquisitions in the vinyl acetate-related business sector to strengthen the value chain and expand the scale of the businesses, reinforcing our business portfolio.

–2021

Expansion of businesses, products that contribute to the natural and living environments

Through ongoing overseas acquisitions and alliances, we achieved the global expansion of businesses and products that contribute to the natural and living environments, including activated carbon that aids in water and air purification, and PLANTIC™ biomass-derived gas barrier material that helps lower the logistical burden and reduce food loss.

2022–

Business portfolio emphasizing social and environmental value alongside economic value

Using the two axes of social and environmental value and economic value, we will assess businesses and products to identify priorities for resource allocation, seeking to enhance the business portfolio.

2001 Acquired the PVOH and PVB resin businesses of Clariant AG
2004 Acquired HT Troplast GmbH (PVB film)
2012 Acquired Monosol, LLC (water-soluble PVOH film)
2014 Acquired the VAM, PVOH, PVB resin, and film businesses of DuPont
2016 Began operation of new PVOH resin plant in the United States
2022 Completed new plant in Poland for water-soluble PVOH film

2005 Kuraray Methacrylate (Zhang Jia Gang) Co., Ltd. began production of methacrylate resin sheets

2005 Kuraray Chemical (Ningxia) Environmental Industry Co., Ltd. (KCNEI) began production of activated carbon
2017 Merged Kuraray Chemical Co., Ltd. (activated carbon)
2018 Acquired Calgon Carbon Corporation (activated carbon)
2019 KCNEI (activated carbon) suspended operations
2022 Belgian subsidiary of Calgon Carbon Corporation expanded reactivated carbon production capacity

2015 Acquired Plantic Technologies Limited (biomass-derived gas barrier materials)

2002 SEPTON Company of America began production
2023 New production site in Thailand went into operation to produce SEPTON™, GENESTAR™, and isoprene chemicals.

2012 Established Kuraray Noritake Dental Inc.

2001 Withdrew from the rayon business

2018 Began production of KURALON™ with new VIP production process

2004 Transferred fastening business to MAGICTAPE Co., Ltd. (the present Kuraray Fastening Co., Ltd.)

2005 Hexin Kuraray Micro Fiber Leather (Jianxing) Co., Ltd. began production of CLARINO™

2002 Transferred Apparel textile business to Kuraray Trading Co., Ltd.

2005 Transferred melt-blown nonwoven fabrics business to Kuraflex Co., Ltd. (the present Kuraray Kuraflex Co., Ltd.)
2020 Expanded production facility for melt-blown nonwoven fabrics

Product Lines

A Wide Array of Products Generated through Creativity

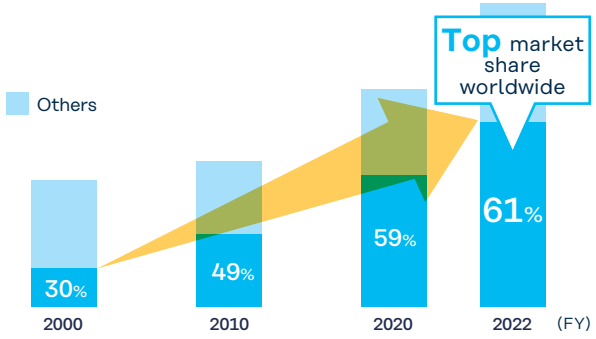
Details may be found here:
https://www.kuraray.com/products

At Kuraray, we use our unique technical strengths to create products that the world has never seen before. Starting with the world's first commercialization of PVA fiber, we moved on to produce PVOH resin which is raw material of PVA fiber; optical-use poval film, which is essential to liquid crystal displays; EVAL™ EVOH resin, which features excellent gas barrier properties; and a lineup of various commercialized chemical products that use the world's only synthetic isoprene monomers as materials.

Sales of products with the highest global market share* that we have created using our unique technologies accounted for 61% of the Kuraray Group's total sales in 2022.

* Based on in-house research

Proportion of sales of products with top market share worldwide



Vinyl Acetate

▶▶ P.08

We manufacture and sell a lineup of related products based on vinyl acetate monomer (VAM), ranging from PVOH resin offering properties such as water solubility and high adhesiveness; materials for LCD display applications; PVOH film used in soluble unit dose system for detergent and other products; PVB film used as an interlayer for safety glass; to EVAL™ EVOH resin that offers excellent gas barrier properties.

Isoprene

▶▶ P.09

We manufacture and sell isoprene chemical products made with a synthesizing method using the C4 fraction, a by-product of naphtha cracking, as its main raw material, as well as isoprene derivative SEPTON™ thermoplastic elastomer and GENESTAR™ heat-resistant polyamide resin developed in-house from raw material monomers. We also manufacture and sell KURARITY™ acrylic thermoplastic elastomer with excellent flexibility, transparency, and weatherability.

Functional Materials

▶▶ P.09

We manufacture and sell methacrylic resin with excellent transparency and weatherability, dental materials enabling restorations that closely resemble natural teeth, activated carbon used to purify air and water by adsorbing and removing specific substances, and high-performance hollow-fiber membrane modules that play an active role in the areas of water purification and wastewater treatment.

Fibers and Textiles

▶▶ P.10

We manufacture and sell KURALON™ PVA fiber, which is mainly used as a material in cement and a reinforcing material for automotive components; CLARINO™ man-made leather, which has a structure and functionality similar to natural leather; VECTRAN™ liquid crystal polymer fiber, mainly used as an industrial material due to characteristics such as high strength and low water absorption; KURAFLEX™ nonwoven fabrics which are used as household and industrial products; and MAGIC TAPE™ hook-and-loop fasteners.

New Businesses

▶▶ P.10

In addition to manufacturing and selling VECSTAR™ liquid crystal polymer film used in flexible printed circuit boards, we are pursuing technology development and developing markets for technologies such as semiconductor polishing pads (CMP pads) made from high-hardness polyurethane and KURANODE™ hard carbon for lithium-ion battery anodes.

kuraray

Vinyl Acetate

No.1* in the world

KURARAY POVAL™ / ELVANOL™
PVOH resin

EXCEVAL™
special modified PVOH resin

PVOH resin was industrialized as a raw material for PVA fiber. It has a number of characteristics: it is water soluble, emulsifiable, resistant to oil and chemicals, and easy to form into film. It is used in a wide range of applications such as paper processing agents, adhesives, and as a stabilizer for the polymerization of vinyl chloride resins.

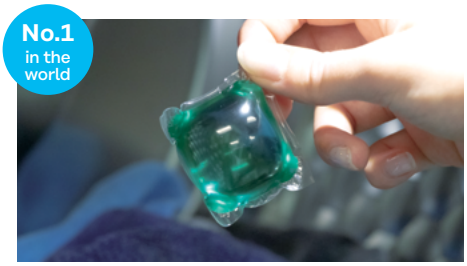
*Excluding China

No.1 in the world

Optical-use poval film

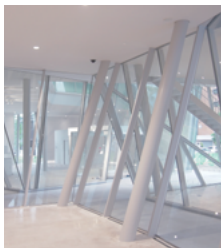
Optical-use poval film is used as a polarizing film, which is vital to LCD displays such as flat-panel TVs, PC monitors, tablets, and smartphones.

No.1 in the world



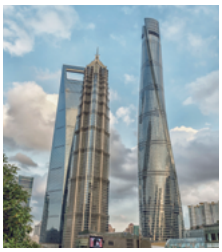
Water-soluble PVOH film

A soluble unit dose film for safe and convenient use with chemicals such as concentrated laundry and dishwasher detergents, personal care products, and agricultural chemicals. As a biodegradable film that dissolves completely in water, this environmentally friendly packaging material helps to reduce plastic waste and CO_2.



Trosifol™ PVB film

A film with excellent transparency, high adhesion to glass, and penetration resistance, Trosifol™ is mainly used as an interlayer for safety glass. Because the film can prevent glass from shattering when broken, the film is used in the construction and automobile industries where safety and security are required.



SentryGlas™ ionoplast interlayers

SentryGlas™ is an interlayer for safety glass that boasts five times the strength and 100 times the stiffness of conventional PVB films. Because of its excellent weatherability, the film can also be used without needing to cover the edge of the safety glass. This enables excellent design properties for glass buildings. As a result, SentryGlas™ is used in many famous buildings and structures, including in skyscrapers worldwide.

Mowital™ PVB resin

Made from PVOH resin as the main raw material, Mowital™ offers excellent adhesion to numerous substrates, such as glass and metals, dispersibility of various organic and inorganic substances, and transparency. As a result of these characteristics, Mowital™ is widely used in applications such as laminated ceramic capacitors, binders for paints and inks, dispersants, and adhesives.

No.1 in the world

EVAL™ EVOH resin

Because it has the highest level of gas barrier properties among plastics (blocking out oxygen and preventing the spoiling of contents), EVAL™ is used widely in food packaging materials. In recent years, it has also gained attention as a gas barrier material that meets recycling standards for packaging materials. Applications are expanding, such as for automobile plastic fuel tanks and vacuum insulation panels for large refrigerators.

PLANTIC™
biomass-derived gas barrier material

A biomass-derived gas barrier material developed through industry-academia collaborative research in Australia. Since the commercialization of PLANTIC™ film in 2003,* its use as an environmentally friendly material has been rising among major retailers and food manufacturers in Australia, Europe, and North America.

*Kuraray acquired Plantic Technologies Limited in 2015.

Isoprene

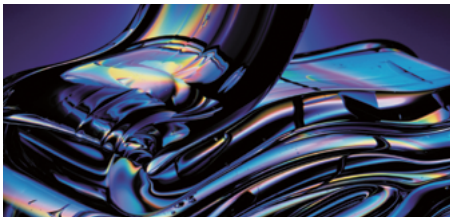
SEPTON™ thermoplastic elastomer

SEPTON™ is a styrenic thermoplastic elastomer that has excellent moldability and superior recyclability. Its areas of application are expanding in a wide range of fields with the need for higher performance in automobiles, home appliances, and household products.

Isoprene chemicals

We apply our unique synthesizing technologies to produce a cleaner MMB that is highly safe and easy to handle, as well as diols, aroma chemical and cosmetic ingredients, agrichemical intermediates, and more.

*One-of-a-kind products derived from synthetic isoprene (MMB, MPD, etc.)



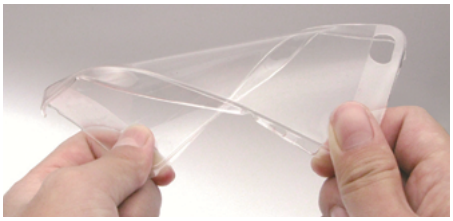
KURARAY LIQUID RUBBER

A low molecular weight liquid rubber made from such materials as isoprene and butadiene. Its use is spreading, mainly in such applications as processing aids for automobile tires, high-performance adhesives, and sealants.

GENESTAR™
heat-resistant polyamide resin

GENESTAR™ is a highly heat-resistant polyamide resin created with our proprietary technologies. It is used in electronic parts of smartphones, personal computers, and the like, and it is applied in backlights for LED liquid-crystal TV panels and in the automotive field as well.

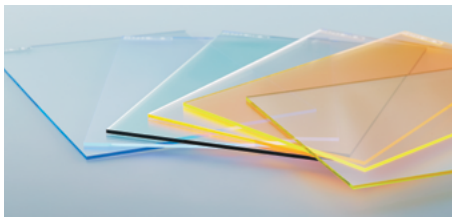
*The world's first industrialized PA9T resin



KURARITY™
acrylic thermoplastic elastomer

A unique material offering transparency, elasticity, and more. We were the first in the world to succeed in commercializing this material, using proprietary Kuraray technologies. The market rollout in the field of adhesion and molding materials utilizing these characteristics is very promising.

Functional Materials



Methacrylic resin

Taking advantage of features such as transparency, weather resistance, gloss, and abrasion resistance, methacrylic resin is widely used in parts for automobiles and home electrical appliances, and more. It has recently gained a large share of the market for LCD light-guide plates and other optical components.

Activated carbon

Activated carbon with a large specific surface area (500–2,500 m^2/g) is manufactured by combining coconut shells, bituminous coal, wood, and other raw materials with various activation methods to control the micropores (1–20 nm in diameter) and the meshwork structure inside the particles. We provide it according to the customer's application.

Dental fillings material (dental composite resins)

Dental prosthetics material (zirconia block)

Dental materials

Kuraray applies organic and inorganic materials and their composite materials to develop dental restorative materials. In recent years, leveraging our proprietary zirconia material, we have been promoting development that takes into consideration not only quality but also ease of use. This includes a system that can complete the production of dental prosthetics and the bonding to teeth in a short time, with the aim of contributing to the development of dental care.

*In dental composite resins including for abutment construction

High-performance hollow-fiber membrane module

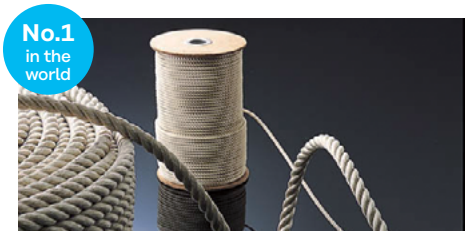
High-performance hollow-fiber membrane modules are used in various industries, such as in water supply and medical applications. They enable efficient filtration and save energy and space.

Fibers and Textiles

KURALON™ / KURALON K-II™
PVA fiber

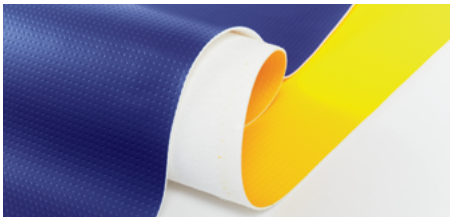
KURALON™ is a synthetic fiber based on polyvinyl alcohol (PVA) with several unique properties, including high tenacity, hydrophilicity, and resistance to chemicals. It is widely used in various industrial fields as a substitute for asbestos in cement reinforcement, as a separator for alkaline manganese batteries, and in automobile oil brake hoses. In addition, KURALON K-II™, created using a new production technology, is available in a water-soluble type and a high-strength type.

*Excluding China



VECTRAN™ liquid crystal polymer fiber

VECTRAN™ fiber has about seven times the tensile strength of steel by weight and provides excellent abrasion, flex fatigue and chemical resistance, among other physical properties. It is used in a range of applications including aerospace, various types of tension members, ropes, fishing nets, and protective safety materials.



CLARINO™ man-made leather

Offering high functionality, CLARINO™ man-made leather finds use in school bags, sports shoes, automobiles, household goods, and other products. We are working to lower the environmental impact of our raw materials and manufacturing processes for this material.

KURAFLEX™ nonwoven fabric

KURAFLEX™ is a nonwoven fabric with excellent absorbency, filterability, air permeability, and flexibility. It is used for various kinds of applications such as wipes, masks, and first aid adhesive bandages. FELIBENDY™ is a type of nonwoven fabric made using steam jet technology while VECRUS™ is a nonwoven fabric made from liquid crystal polymer. Their distinctive features make these materials suitable for medical bandages and electronic materials.

MAGIC TAPE™ hook-and-loop fastener

MAGIC TAPE™ fastens firmly with only a light press. It is used in a wide range of fields, from clothing, shoes, bags, and medical products to automotive parts, and other industrial materials.

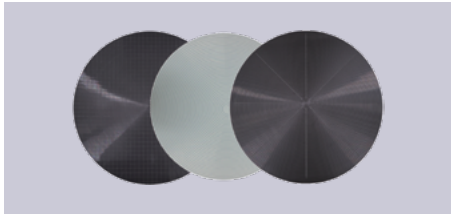
New Businesses

Polyester

Applying proprietary polymers and state-of-the-art technology, the Kuraray Group has been actively developing distinctive polyester fibers. Our fibers are used in clothing, daily necessities, functional materials, industrial materials, as a raw material for nonwoven fabrics, and other fields.

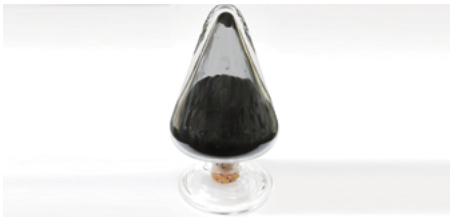
VECSTAR™ FCCL
liquid crystal polymer film-based Flexible Copper Clad Laminates

VECSTAR™ FCCL is a Flexible Copper Clad Laminate (FCCL) made of Kuraray's liquid crystal polymer (LCP) film, VECSTAR™, developed by Kuraray's proprietary technology. It shows excellent electrical properties suitable for high-speed transmission lines and high-frequency electric devices.



Semiconductor polishing pad
(CMP pad)

Polishing pads for semiconductors are made of high-hardness polyurethane, a new material developed by leveraging the polyurethane design and manufacturing technologies cultivated through the development of CLARINO™ man-made leather. Kuraray's CMP pads feature high hardness with excellent properties to polish and planarize devices, very low scratch formation despite their high hardness, and long hours of duration due to their excellent abrasion resistance.



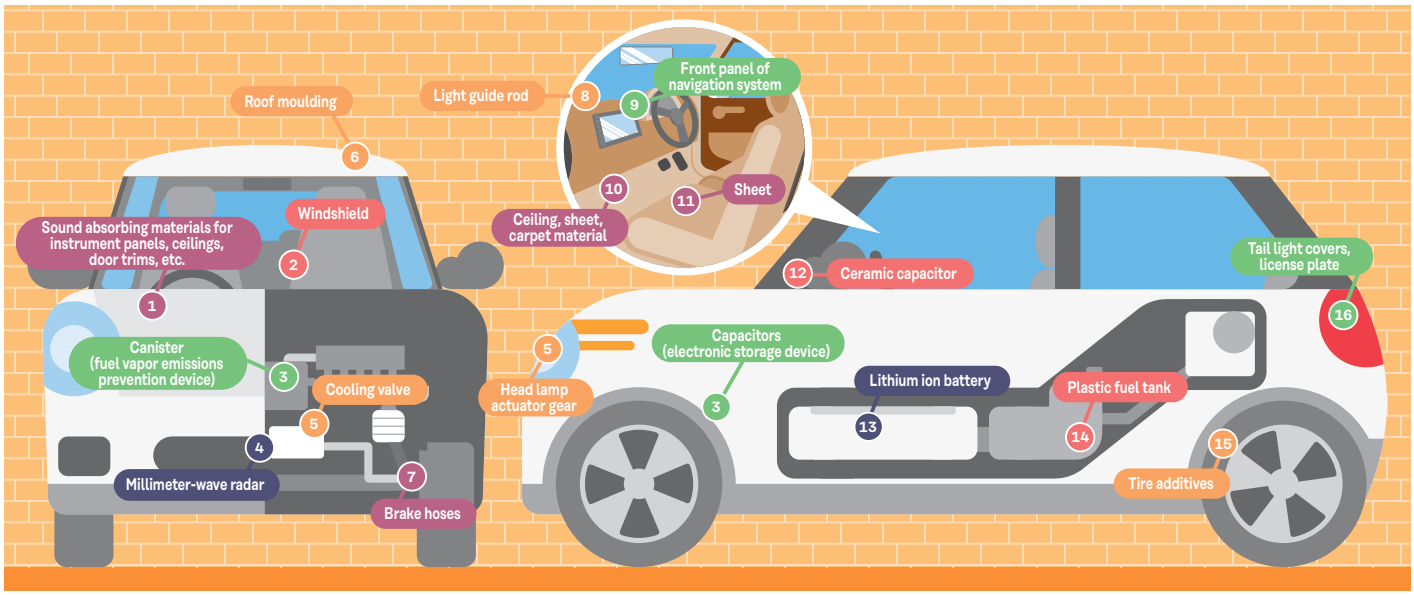
KURANODE™
hard carbon for lithium-ion battery anodes

This plant-based bio hard carbon (so-called "non-graphitizable carbon") is used as an anode material for lithium-ion batteries. In addition to good input/output performance, cyclability, and low-temperature performance, it has volume capacity equal to or greater than that of graphite.

Product Lines Kuraray's products in the World Around Us

Automobile

Vinyl Acetate Isoprene Functional Materials Fibers and Textiles New Businesses

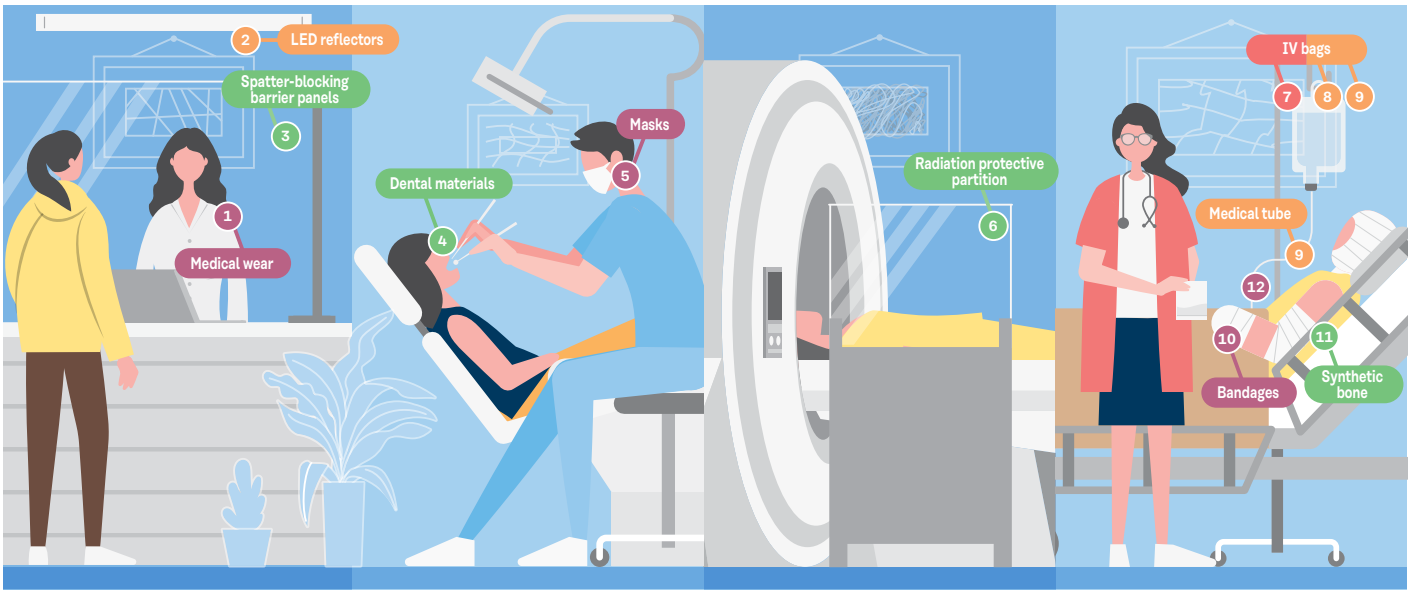


Kuraray's products

1. KURAFLEX™ nonwoven fabric
2. Trosifol™ PVB film
3. Activated carbon
4. VECSTAR™ liquid crystal polymer film
5. GENESTAR™ heat-resistant polyamide resin
6. SEPTON™ thermoplastic elastomer
7. KURALON™ PVA fiber
8. KURARITY™ acrylic thermoplastic elastomer
9. PARAMIGHTY™ (PMMA/PC) multilayer sheet
10. MAGILOCK™ molded hook fastener
11. CLARINO™ man-made leather
12. Mowital™ PVB resin
13. KURANODE™ hard carbon for lithium-ion battery anodes
14. EVAL™ EVOH resin
15. KURARAY LIQUID RUBBER
16. PARAPET™ methacrylic resin

Clinical Environment

Vinyl Acetate Isoprene Functional Materials Fibers and Textiles New Businesses



Kuraray's products

1. Polyester
2. GENESTAR™ heat-resistant polyamide resin
3. Methacrylic resin sheet
4. Dental materials
5. KURAFLEX™ nonwoven fabric
6. KYOWAGLAS-XA™ lead acrylic resin sheet
7. EVAL™ EVOH resin
8. SEPTON™ thermoplastic elastomer
9. HYBRAR™ thermoplastic elastomer
10. FELIBENDY™ nonwoven fabric
11. Synthetic bone substitute
12. FREEMAGIC™ hook-and-loop mixed fastener

Many of the Kuraray Group's products are used as materials in a variety of end products and applications found in the world around us.

These pages showcase just some of the many Kuraray's products that play an active part in our daily lives.

Kitchen

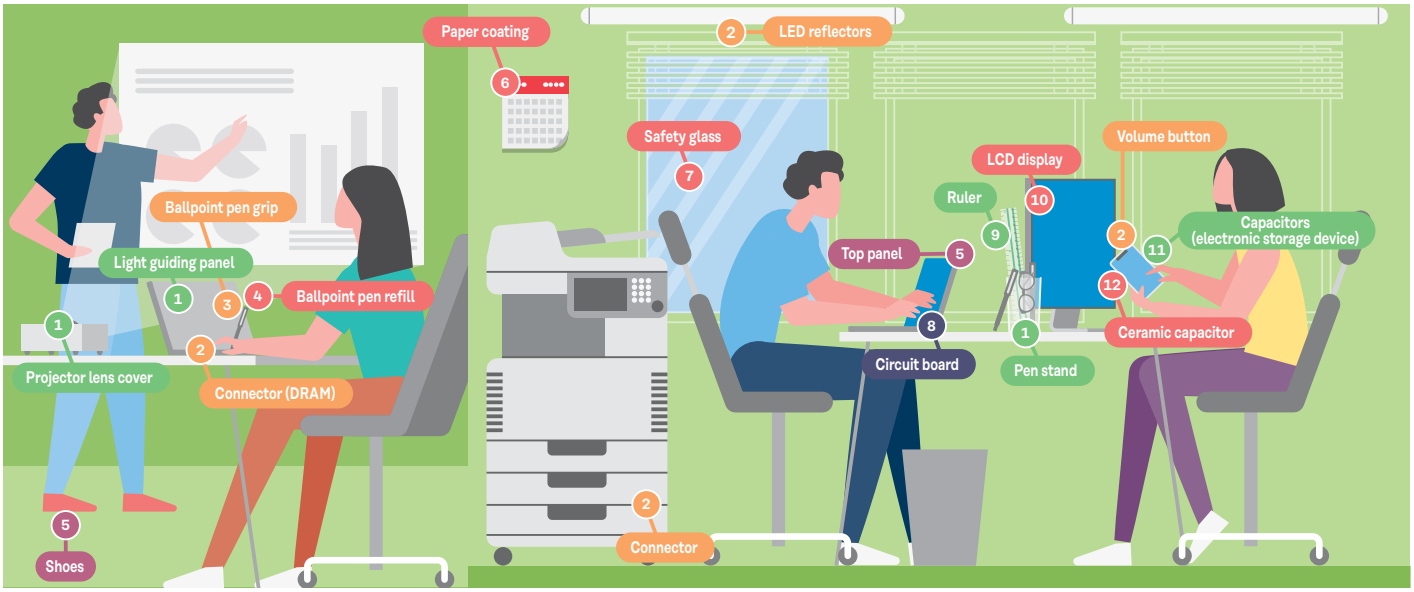
Vinyl Acetate Isoprene Functional Materials Fibers and Textiles New Businesses

Kuraray's products

1. PLANTIC™ biomass-derived barrier material
2. EXCEVAL™ special modified PVOH resin
3. EVAL™ EVOH resin
4. KURAFLEX™ nonwoven fabric
5. Water-soluble PVOH film
6. PARAPET™ methacrylic resin
7. KURAFILTER™ functional activated carbon
8. Citral
9. EVAL™ film EVOH film
10. Activated carbon
11. GENESTAR™ heat-resistant polyamide resin

Office

Vinyl Acetate Isoprene Functional Materials Fibers and Textiles New Businesses



Kuraray's products

1. PARAPET™ methacrylic resin
2. GENESTAR™ heat-resistant polyamide resin
3. SEPTON™ thermoplastic elastomer
4. EVAL™ EVOH resin
5. CLARINO™ man-made leather
6. KURARAY POVAL™ PVOH resin
7. Trosifol™ PVB film
8. VECSTAR™ liquid crystal polymer film
9. Methacrylic resin sheet
10. Optical-use poval film
11. Activated carbon
12. Mowital™ PVB resin

Sustainability in the Kuraray Group

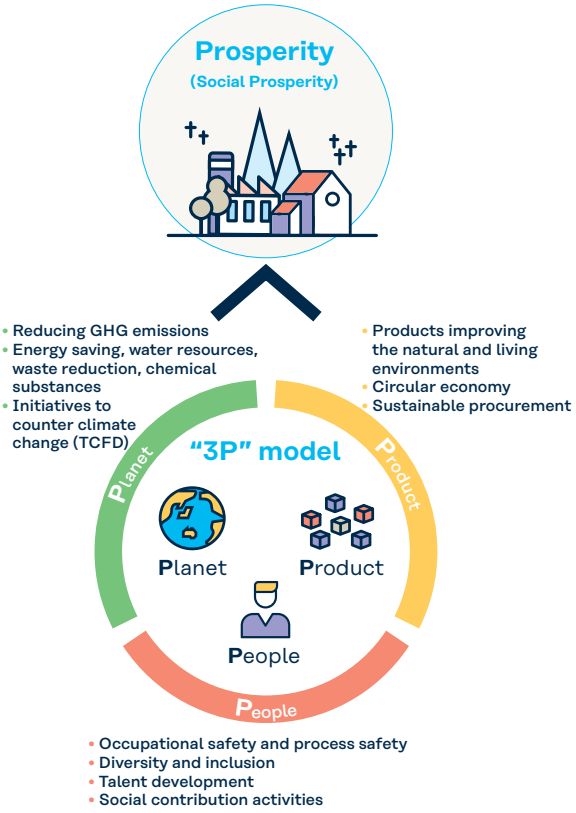
Details may be found here:
https://www.kuraray.com/csr

From our foundation, the Kuraray Group has been working to address social issues through our businesses, based on our founding philosophy that "the wealth gained from society must be returned to society." Many of our products are used as materials in a variety of end products and applications found in the world around us, and contribute to improving the environment and enhancing the quality of life.

In our Sustainability Long-Term Vision, we declared our commitment to continue seeking solutions to global issues. Guided by this vision, we launched the five-year Medium-Term Management Plan "PASSION 2026" in 2022. Under "PASSION 2026," sustainability-related measures are summarized and grouped into three Ps: Planet, Product, and People. By steadily moving forward with the various measures indicated under the "3P" model, we aim to achieve a fourth "P"—the Prosperity of society.

Sustainability Long-Term Vision

As a sustainability leader, Kuraray will develop innovative solutions with unique products and cleaner technologies to improve the natural environment and enhance quality of life for people everywhere.



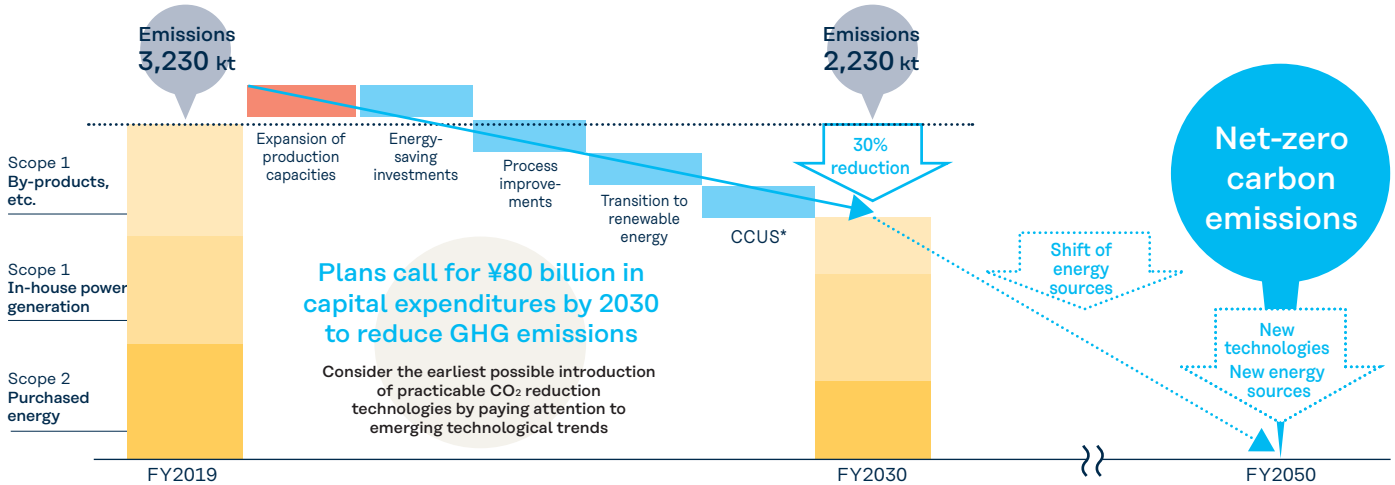
Planet

Details may be found here:
https://www.kuraray.com/csr/report2023/Scope1_2

Achieving Net-Zero Carbon Emissions in 2050

We believe that the Kuraray Group's mission is to manufacture basic and intermediate materials that will contribute to creating a low-carbon and environment-friendly society and minimize their environmental impact as much as possible. The long-term roadmap for achieving net-zero carbon emissions in 2050 sets a target of reducing Scope 1 and 2 GHG emissions by 30% in 2030 compared to 2019 and achieving net-zero emissions by 2050. To reach this goal, we are pursuing medium- to long-term technological development and capital investment. Investment in emissions reductions will center on a carbon dioxide capture, utilization, and storage (CCUS)* system and the shift to in-house produced power. At the same time, we will roll out practicable GHG reduction technologies as early as possible.

*Carbon dioxide Capture, Utilization, and Storage: An initiative to utilize or store CO_2 separated from exhaust gas from industrial facilities.



Product

Details may be found here:
https://www.kuraray.com/csr/report2023/psa_product

Products that Contribute to the Natural and Living Environments

The Kuraray Group believes that its unique products and cleaner technologies will help bring about a sustainable society, and we are working to expand the range of products that make positive contributions.

Under "PASSION 2026," in setting out targets to expand the lineup of products that contribute to the natural and living environments, we put in place the Kuraray Portfolio Sustainability Assessment (PSA) system* to ensure objectivity and transparency in our product screening. We designate products with high PSA scores as the Kuraray Group products that contribute to the natural and living environments. We aim to increase the sales ratio of such products from 46% in 2020 to 55% by 2024, and to 60% by 2026.

* A system based on PSA guidelines developed by the World Business Council for Sustainable Development (WBCSD)

Kuraray Group Products that Contribute to the Natural and Living Environments

Improving natural environment

Asbestos substitutes

- KURALON™ PVA fiber
  - Helps extend the life of cement materials
  - Fewer GHG emissions compared to competitive products

Biomass-derived or recycled raw materials

- Liquid rubber made from biomass-derived materials
- Environmentally friendly polyester fiber and textile products
- Recycled raw material-used CLARINO™ man-made leather

- Reduces Scope 3 GHG emissions

Water and air purification

- Activated carbon

- Easy to reactivate
- Suitable for environmental regulation

Lower logistical burden, food loss reduction

- EVAL™ EVOH resin
  - Recyclable (contributes to a circular economy)
  - Reduces food loss
- PLANTIC™ biomass-derived gas barrier material
  - Reduces Scope 3 GHG emissions
  - Reduces food loss

Improving living environment

Makes dentists' and patients' lives easier

- Dental materials
  - Shortens time of treatment
  - Long-lasting products reduce number of replacements

High-speed communication

- VECSTAR™ liquid crystal polymer film
  - Realizes high-speed communication

Lightweight EVs

- GENESTAR™ heat-resistant polyamide resin
  - Improves durability of end-product

People

Details may be found here:
https://www.kuraray.com/csr/report2023/occupational_safety_process_safety

Diversity and Inclusion Initiatives and Talent Development

The Kuraray Group has set the destination for its diversity and inclusion initiatives as becoming "a company where each employee in a diverse workforce works enthusiastically and tackles challenges without fear of failure, generating a succession of innovations while responding to change and continuing to grow." We will seek globally to assign and promote personnel best suited to each job position in a way that allows individuals to reach their full potential and help grow the business. We will foster an organizational culture in which each person respects diversity and tackles challenges without fear of failure.

With regard to talent development, the Kuraray Group respects the values and career aspirations of each individual and provides opportunities to develop the skills and abilities needed for employees and the Group to grow together. In addition to enhancing education on Kuraray's values and philosophy, we are working to expand the Global Talent Development Program started in 2007, with the aim of cultivating personnel who can take on more active roles globally.

Social Contribution Activities

We in the Kuraray Group consider the sound and sustainable advancement of society to be a precondition for corporate growth and prosperity, as well as the ultimate objective of corporate activities. The Group carries out activities with a priority on culture, science, the environment, and social welfare in accordance with its policy for social contribution activities. As part of these efforts, since 1992, our production sites in Japan have hosted "Chemistry Classes for Boys and Girls" targeting elementary school students, with the aim of letting children discover the joy of chemistry through chemical experiments. Moreover, since 2004, we have been steadily implementing a "Sending School Backpacks Across the Sea" campaign, which involves sending stationery and letters to children in Afghanistan. By fiscal 2022, 19 years since starting this activity, we had sent a total of about 150,000 backpacks overseas. We collected roughly 7,800 backpacks from all over Japan in fiscal 2023. Employee volunteers inspected, packed, and boxed up backpacks in April.

R&D in the Kuraray Group

Details may be found here:
https://www.kuraray.com/uploads/6475626febc64/kuraray_en2023_12.pdf

As the cornerstone of the Kuraray Group's R&D capabilities, the Research and Development Division works closely with in-house companies, business divisions, and Group companies to promote projects that contribute to Group-wide business expansion and profit growth under the respective missions of "creating new business," "strengthening and expanding existing businesses," and "establishing and deepening core technologies." Our Supporting Project has contributed to the sustained enhancement and expansion of existing businesses, while our New Business Creation Activities have broadened the scope of the business foundation by discovering promising new opportunities in areas peripheral to our businesses.

Under our Medium-Term Management Plan "PASSION 2026," we established the Innovation Networking Center (INC) in January 2022 as an organization to generate innovation by integrating internal and external resources. The Research and Development Division and INC work closely together to promote collaboration both within and outside the Company, such as in the areas of global marketing activities for items under development and the generation of new business ideas through the sharing of R&D seeds and unmet needs*. We are also looking ahead to the society and living standards we hope to see 20 to 30 years down the road from the perspective of consumers, and backcasting from there to set more challenging R&D themes. In this way, we intend to incorporate new foundational platforms and extend our reach into new fields, not limited to conventional R&D areas.

* Unsatisfied or unidentified potential demand or needs.

Kuraray's Approach to Creating Innovation

R&D and Production Technology Development

Aiming to become a Specialty Chemical Company achieving sustained growth, the Research and Development Division plays a core role in implementing R&D and new business activities as a corporate organization. The Research and Development Division manages the Kurashiki Research Center, Tsukuba Research Center, Intellectual Property Department, Planning and Administration Department.

Our research centers pursue the development of new businesses, products, and technologies using their core technologies, which include organic synthesis and synthetic polymer technologies, catalytic chemistry, polymer materials technology, environment and energy-related technologies, precision polymerization and polymer modification, compound materials, polymer processing, and computational science. Drawing on their sophisticated analytical capabilities and safety assessment techniques, the research centers also function as analysis hubs for Kuraray Group companies, and work to address technical problems across the Group. We also established the DX Promotion Group in 2023 and are actively working to incorporate digital R&D technologies to accelerate our R&D initiatives.

Each business division has an R&D department at its base plant. Including overseas bases, these plants engage in R&D activities while working closely with corporate and business divisions' research, development, and production bases.

The Technology Division, responsible for corporate production technology development, manages the Technology Development Center and the Technology and Maintenance Management Department. It promotes progress in production technology by partnering with the Production and Technology Management Division of each Group company and the Production and Technology Development Department of each plant. It has also begun collaborating with the Research and Development Division in the early stages of development to accelerate the evolution of new businesses and products. This division is also taking the lead in implementing digital strategies for Group-wide production technology R&D.


Kurashiki Research Center


Tsukuba Research Center


Technology Development Center

Digital Transformation in the Kuraray Group

Details may be found here:
https://www.kuraray.com/uploads/6475626febc64/kuraray_en2023_13.pdf

The Kuraray Group's DX Vision is: "Improve competitiveness, continuously evolve, and contribute to the world." Guided by this vision, we set four priority fields: customer experience (CX) reforms, operational process reforms, business model reforms, and R&D and production technology simulations. Group-wide digital transformation is a core strategy in our Medium-Term Management Plan "PASSION 2026." Our aim is to become "a digitally savvy company" that draws on competitive strengths to continue contributing to society, harnessing digital technology to change our processes and drawing on diversity to expand our thinking, bringing transformation to both people and the organization.

DX Vision

Improve competitiveness, continuously evolve, and contribute to the world as a digitally savvy company

Priority Fields

1

Customer experience (CX) reforms

We will carry out reforms in marketing and information systems in the area of customer contact.

- Understanding customers
- Customer contact points

2

Operational process reforms

We are working to improve performance through the digitalization of each business process.

- Process digitalization
- Higher capabilities and efficiency
- Performance management

3

Business model reforms

We will build a mechanism for creating new value by combining services with digital technology.

- Digitalization of businesses
- Novel businesses powered by digital technology
- Digitally driven globalization

4

R&D and production technology simulations

We are identifying what kind of R&D experiments to carry out in the future and exploring what can be reproduced in a digital environment.

- Simulation of chemical reactions
- Simulation of plant operations

Global Digital Transformation Office

Data-driven organization
"Think in data, decide by data."

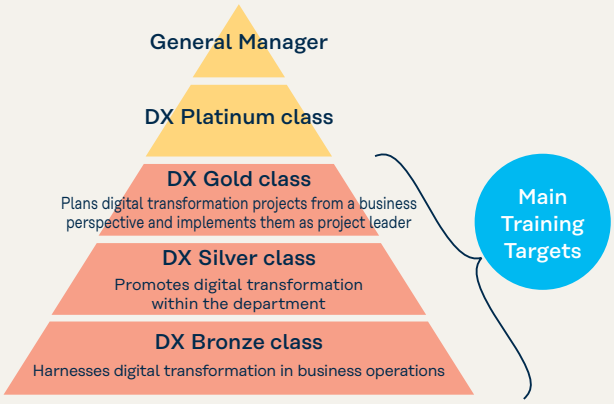
Higher digital literacy
Improve ratio of data analytics talents.

Developing DX Talent (starting in Japan)

The Kuraray Group believes it is vital to cultivate a culture and environment in which all employees can stay abreast of progress in digital technology, where learning is an ongoing process. We established three classes of digital literacy—Gold, Silver, and Bronze—and developed a training curriculum corresponding to each class. Our educational framework mandates that all employees acquire at least Bronze class certification.

We also train and deploy at least one person to each department to lead digital transformation efforts and spread technological knowledge throughout the department, and eventually to all parts of the Company. In 2023, we have started exploring the cultivation of data scientists and other highly specialized talent.

DX Talent Development Project



Corporate Data (As of December 31, 2022)

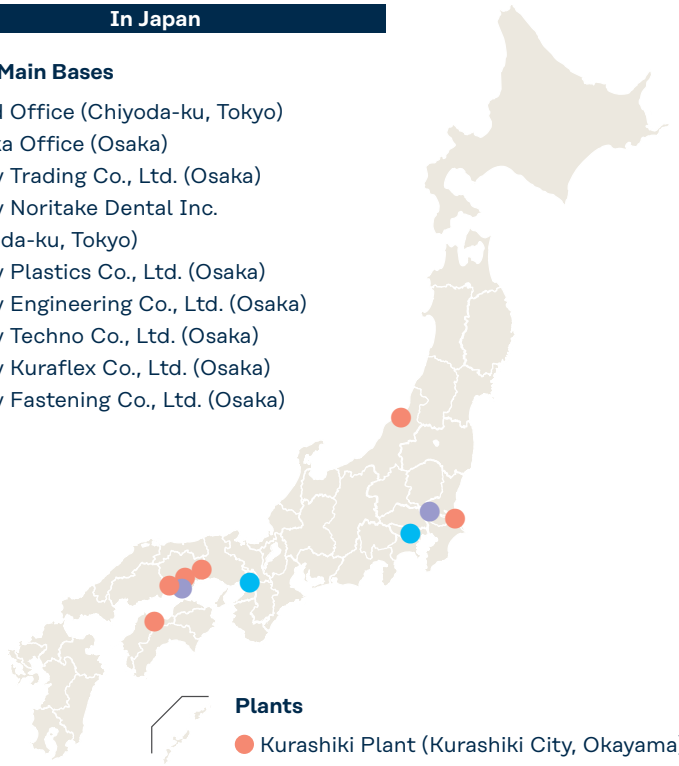
Kuraray Group Network

In Japan

Group Main Bases

- Head Office (Chiyoda-ku, Tokyo)
- Osaka Office (Osaka)

Kuraray Trading Co., Ltd. (Osaka)
Kuraray Noritake Dental Inc. (Chiyoda-ku, Tokyo)
Kuraray Plastics Co., Ltd. (Osaka)
Kuraray Engineering Co., Ltd. (Osaka)
Kuraray Techno Co., Ltd. (Osaka)
Kuraray Kuraflex Co., Ltd. (Osaka)
Kuraray Fastening Co., Ltd. (Osaka)

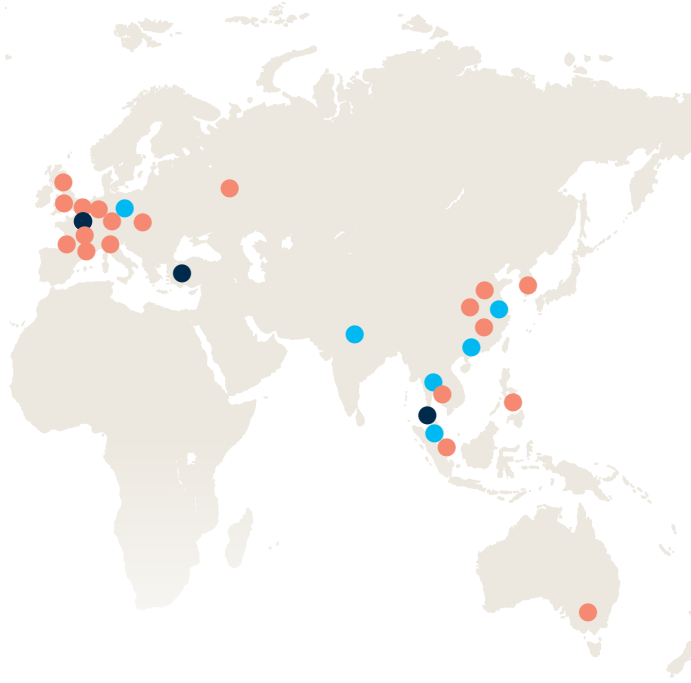


Plants

- Kurashiki Plant (Kurashiki City, Okayama)
- Saijo Plant (Saijo City, Ehime)
- Okayama Plant (Okayama City, Okayama)
- Niigata Plant (Tainai City, Niigata)
- Kashima Plant (Kamisu City, Ibaraki)
- Tsurumi Plant (Bizen City, Okayama)

Laboratories

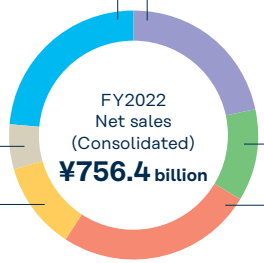
- Kurashiki Research Center (Kurashiki City, Okayama)
- Tsukuba Research Center (Tsukuba City, Ibaraki)



Japan
Net sales ¥178.8 billion
Sales ratio 23.6%

Others
Net sales ¥44.0 billion
Sales ratio 5.8%

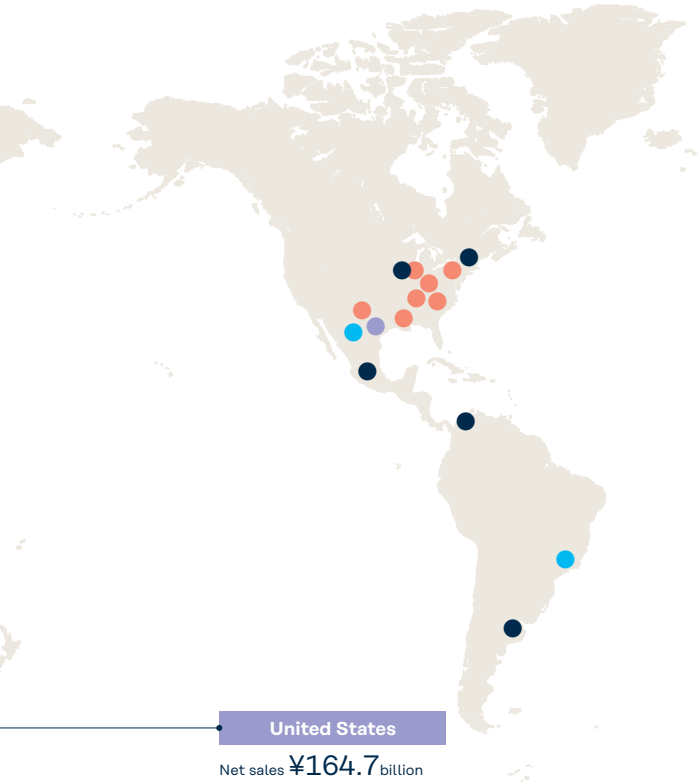
Asia
Net sales ¥85.0 billion
Sales ratio 11.2%



Corporate Overview

Company Name	Kuraray Co., Ltd.
President and Representative Director	Hitoshi Kawahara
Established	June 1926
Head Office	Tokiwabashi Tower, 2-6-4, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan
Group Companies	77 consolidated subsidiaries, two equity-method affiliates
Major Operations	United States, Germany, Belgium, China, Singapore
Domestic Stock Exchange Listing	Prime Market in Tokyo Stock Exchange
URL	https://www.kuraray.com

Details may be found here:
https://www.kuraray.com/company



United States
Net sales ¥164.7 billion
Sales ratio 21.8%

China
Net sales ¥90.0 billion
Sales ratio 11.9%

Europe
Net sales ¥193.9 billion
Sales ratio 25.7%

Outside Japan

Regional Headquarters

- Kuraray America, Inc. (Texas, U.S.A.)
- Kuraray Europe GmbH (Frankfurt, Germany)
- Kuraray Asia Pacific Pte. Ltd. (Singapore)
- Kuraray (Shanghai) Co., Ltd. (Shanghai, China)
- Kuraray Hong Kong Co., Ltd. (Hong Kong, China)
- Kuraray India Private Limited (Noida, India)*1
- Kuraray South America Ltda. (São Paulo, Brazil)
- Kuraray (Thailand) Co., Ltd. (Bangkok, Thailand)

Plants

- Kuraray America, Inc. (Texas, North Carolina, South Carolina, and West Virginia, U.S.A.)
- MonoSol, LLC (Indiana, U.S.A., Hartlebury, U.K.)
- Kuraray Europe GmbH (Frankfurt and Troisdorf, Germany)
- EVAL Europe N.V. (Antwerp, Belgium)
- Kuraray Europe Moravia s.r.o. (Czech Republic)
- OOO TROSIFOL (Nizhny Novgorod, Russia)
- Kuraray Asia Pacific Pte. Ltd. (Singapore)
- Kuraray GC Advanced Materials Co., Ltd. (Thailand)*2
- Kuraray Advanced Chemicals (Thailand) Co., Ltd. (Thailand)*2
- Kuraray Methacrylate (Zhang Jia Gang) Co., Ltd. (Zhang Jia Gang, China)
- Kuraray Korea Ltd. (Ulsan, South Korea)
- Plantic Technologies Limited (Victoria, Australia)
- Calgon Carbon Corporation (Pennsylvania, Kentucky, and Mississippi, U.S.A., U.K., France, Italy, and other countries)

Laboratory

- KAI Corporate R&D (Texas, U.S.A.)
- Major sales locations not included in the above list

*1 Moved from New Delhi to Noida in June 2023
*2 Started commercial operations in February 2023

Main Offices

Head Office

Osaka Office

Kuraray Europe GmbH

Kuraray America, Inc.

kuraray

Possible starts here

KURARAY CO., LTD.

Head Office

Tokiwabashi Tower, 2-6-4, Otemachi, Chiyoda-ku, Tokyo 100-0004, Japan

TEL: +81-3-6701-1000 FAX: +81-3-6701-1005

https://www.kuraray.com