

HOKKO REPORT 2024



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■ Editorial Policy

Since 2018, the Hokko Chemical Industry Group has published the Hokko Report as a communication tool to provide stakeholders with an overview of the Hokko Group and its efforts to enhance long-term corporate value and realize a sustainable society.

The Report for FY 2024 describes our management policies, business activities, management plans, Environmental, Social and Governance (ESG) initiatives, financial data and other information.

■ Reporting Scope

Reporting period:
FY 2023 (Dec. 1, 2022–Nov. 30, 2023)
Some of the reported information includes activities conducted after December 2023.

Reporting scope:
Hokko Chemical Industry Group. However, some data cover Hokko Chemical Industry Co., Ltd. (non-consolidated) or the main production and research facilities of Hokko Chemical Industry Co., Ltd. (the Hokkaido Factory, the Niigata Factory, and the Okayama Factory, and the Central Research Laboratories and the Fine Chemicals Research Laboratories).

Referenced guidelines:
Environmental Reporting Guidelines 2018,
Japanese Ministry of the Environment

Published:
August 2024 (next release scheduled in August 2025)

* Responsible Care Activities: In the chemical industry, companies that handle chemical substances voluntarily secure “environment, safety and health” in all processes from chemical substance development, manufacturing, distribution, use, final consumption, and recycling through to disposal, publicly release the results of those activities, develop the activities and communicate with society. These initiatives are called Responsible Care activities, and Responsible Care is sometimes abbreviated as RC in this report.



Origin of the company emblem
symbolizing good harvests in Japan

Our company emblem is made of a “seed leaf” designed from the character for “north” (北) used in the corporate name of Hokko. The round shape (○) symbolizes the world, the universe, or perfection, and the seed leaf (Y) suggests fledgling plants.

The seed leaf symbolizes our power to grow in the world like agricultural products that grow large with crop protection products and water.

Message from the President



Ken-ichi Sano
President

Starting the 2nd Stage 3-Year Management Plan for
Achieving Our Goals for 2029

Hokko Chemical Industry was founded on February 27, 1950, as a chemical manufacturer. We began with the manufacture and sales of crop protection products made by the Grignard reaction, which is an organic synthetic reaction technology, as our main business, and advanced into the Fine Chemicals Business using the same reaction technology. The Fine Chemicals Business has developed into another of our leading businesses, providing society with high quality fine chemical products such as raw materials for electronics components and resin raw materials, etc. With the tandem of the Crop Protection Products Business, which supports a stable supply of agricultural products, and the Fine Chemicals Business, which supports a broad range of industrial activities, Hokko Chemical Industry has achieved steady growth.

From FY 2021, the Hokko Group launched its existing ten-year long-term management plan and five-year medium-term management plan. In the last three years, the company’s performance has grown steadily. In addition, the business environment around us has changed enormously, such as the normalization of societal activities since the COVID-19 pandemic.

Based on the above, we have advanced the timeframe for achieving the targets in our long-term plan by one year, upwardly revising the performance targets for FY 2029 which is the final fiscal year of the plan to 52 billion yen for sales and 6 billion yen for ordinary income. We have also changed our medium-term plan to three years, as it was prior to the COVID-19 pandemic, and made our growth strategies more concrete and clear.

In our 2nd Stage 3-Year Management Plan (FY 2024–2026), the “HOKKO Value Up Plan 2029 2nd Stage”, we have identified the growth drivers centered on investment in growth and formulated a new growth strategy that includes initiatives for improving sustainability.

Hokko is promoting capital investment in growth areas, as well as investments and loans, that mainly focus on increasing production capacity in the growth-driving Fine Chemicals Business, improving sustainability, and creating domains of growth for the next generation. At the same time, we are accelerating research and development, such as the development of new technologies, and expanded investment in human capital.

Furthermore, to achieve a virtuous cycle that will realize a sustainable society and sustainable increases in corporate value, we are further strengthening sustainability improvement initiatives and are moving forward in addressing SDGs, climate change, carbon neutrality and energy savings, CSR procurement, and the management of human capital.

By concretizing and implementing these growth strategies, we aim to further evolve management with the tandem of the Crop Protection Products Business and the Fine Chemicals Business and to create a strong and prosperous Hokko.

We hope that through this report, our stakeholders are able to deepen their understanding of the Hokko Group. We welcome your candid feedback as we pursue our future activities.

May 2024

■ Corporate Philosophy

With the goal of benefitting humankind and the management keywords of “social contributions,” “the environment” and “technology,” we offer safe and reliable crop protection products that contribute to food security, and fine chemical products that broadly support industrial activities.

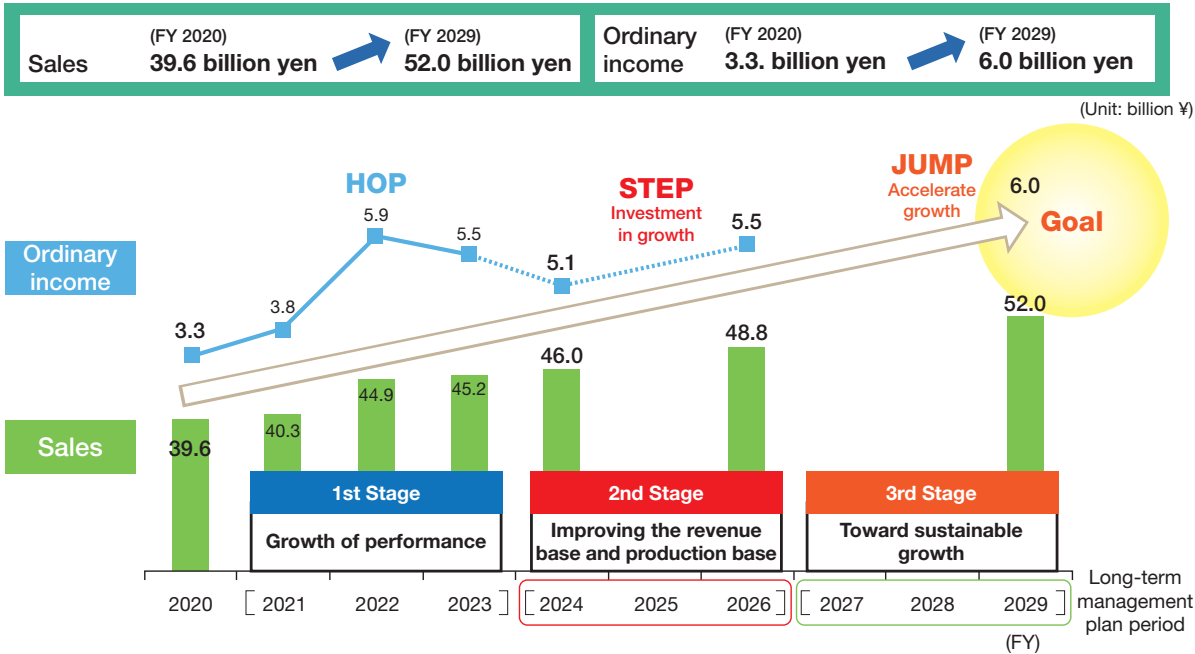
■ Basic Management Policy

Steadily implement our business plan to realize our Corporate Philosophy so as to achieve sustainable and stable growth, contribute to the development of domestic and overseas industries, and create a more affluent society. Under self-regulation from management led by our Board of Directors, we aim to improve our mid- to long-term corporate value and continue to be a company trusted by society.

Management Plan

Under the long-term management plan “HOKKO Value Up Plan 2029,” which is set to end in FY 2029, the Hokko Group will achieve sustainable growth on its way to its future vision, and work to improve sustainability, to make management more sophisticated and to promote the use of smart technology.

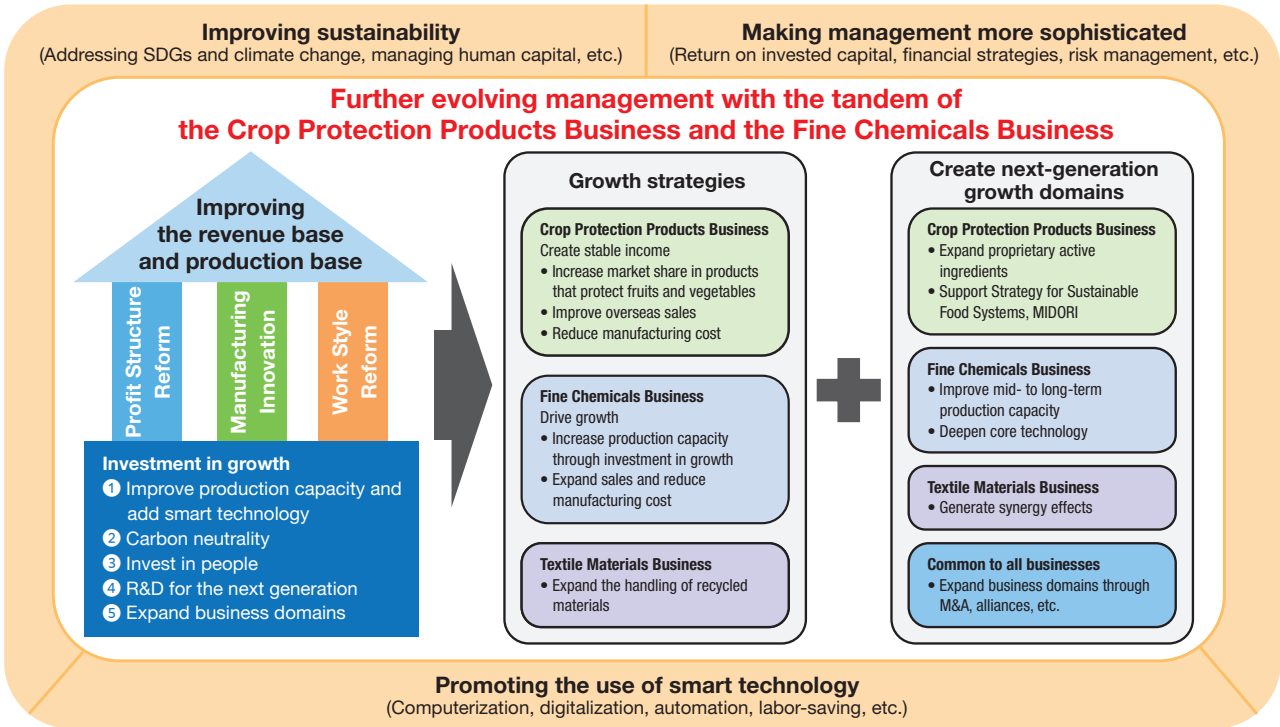
Long-Term Management Plan: “HOKKO Value Up Plan 2029”
We Can Create the Future—Hokko, Becoming Strong and Prosperous



Overview of the 2nd Stage 3-Year Management Plan
“HOKKO Value Up Plan 2029 2nd Stage” (FY 2024–2026)

1. Big Picture of the Plan

Based on investment in growth, such as improving production capacity, we will improve our revenue base and production base with the focus on the three reforms—“Profit Structure Reform,” “Manufacturing Innovation” and “Work Style Reform”—that we have continued to work on since the previous plan.



2. Business Targets

In the 2nd Stage 3-Year Management Plan, we aim to reach the FY 2026 business targets while working to focus on investment in growth.

(Unit: million ¥)

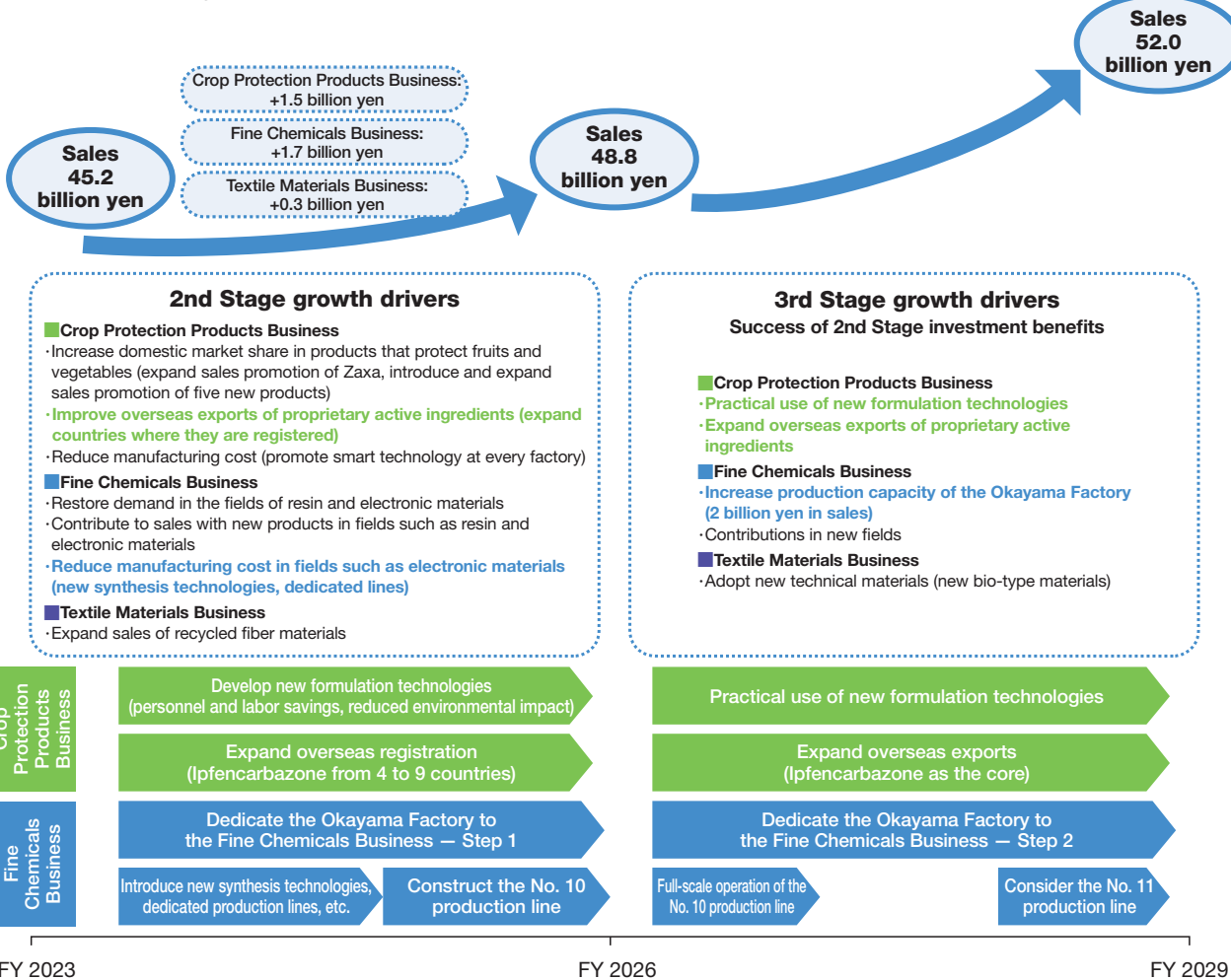
		1st Stage (FY 2021–2023)	2nd Stage (FY 2024–2026)	
		FY 2023 results	FY 2024 forecast	FY 2026 target
Performance	Sales	45,227	46,000	48,800
	Ordinary income	5,474	5,100	5,500
Return on invested capital	ROE	8.8%	—	At least 8%
	ROIC	5.8%	—	At least 6%
Financial soundness	Capital adequacy ratio	69.3%	—	Maintain at least 60%

3. Growth Strategies

① Investment in growth

- We are promoting capital investment in growth areas, as well as investments and loans, that mainly focus on increasing production capacity in the growth-driving Fine Chemicals Business (fields such as resin and electronic materials), improving sustainability, and creating domains of growth for the next generation.
 - To invest in growth, establish a 10 billion yen in strategic capital expenditures and investment line of credit
 - Accelerate consideration of the use of M&As and alliances for the expansion of business domains and flexibly increase the investment line of credit
- At the same time, we are accelerating expanded investment in research and development as well as in human capital, for the reassessment of crop protection, the development of new formulation technologies, and the development of new technologies.

② Roadmap to our goal (FY 2029)



4. Business Strategies by Segment

Crop Protection Products Business	Business strategy	Main initiatives
	Improve domestic sales	<ul style="list-style-type: none">Strengthen lineup and expand sales of the high-spread formulation, Rakuryu (launched 3 formulations at end of FY 2023, plan to launch 3 formulations by the end of FY 2026)Increase market share in products that protect fruits and vegetablesLaunch and expand sales of new herbicides
	Improve initiatives related to overseas markets	<ul style="list-style-type: none">Expand countries where Ipfen carbazone is registered and improve sales (registered in 4 countries at end of FY 2023, register in 5 countries in plan period)Work to smoothly procure active ingredients and expand sales promotion of proprietary active ingredients
	Reduce manufacturing cost	<ul style="list-style-type: none">Promote automation and labor-saving (introduce smart technology at factories)Promote centralization of factory sites
	Improve research and development	<ul style="list-style-type: none">Conduct research into new products and technologies and develop and introduce agricultural active ingredientsDevelop new formulations to follow RakuryuDevelop products with reduced environmental impact and develop and promote products derived from nature

Creation of next-generation growth domains	Main initiatives
Expand proprietary active ingredients	Use AI to speed up creative research, introduce active ingredients and products through joint development
Establish new formulation technologies	Smart agriculture (drone spraying), products that allow reduced use of chemical crop protection products
Support the Strategy for Sustainable Food Systems, MIDORI	Develop biostimulant materials, biological pesticide, and products derived from nature

Fine Chemicals Business	Business strategy	Main initiatives
	Build sustainable production systems	<ul style="list-style-type: none">Effectively configure facilities at the Okayama FactoryBuild a stable supply chainStable operation of the Okayama Factory (supports the BCP)
	Maintain and improve high profitability	<ul style="list-style-type: none">Reduce cost in the field of electronic materials through flow synthesis reactionsImprove production efficiency with dedicated and automated production lines (growth lineup)Effective use of waste oil in the production process (reduce manufacturing cost, labor-saving)
Sustainable growth		<ul style="list-style-type: none">Expand sales by increasing production capacity (construct the No. 10 production line)Expand sales by launching new products (shorten development time)Optimize the Group's sales methods (channels), including overseas subsidiariesStrengthen the promotion of new technology development

Creation of next-generation growth domains	Main initiatives
Improve mid- to long-term production capacity	Complete construction of the No. 10 production line, consider construction of the No. 11 production line, promote reorganization of the Okayama Factory
Deepen core technology, develop new core technology	Expand sales by launching new products, open up new fields (strengthen and promote pioneering in new technology)

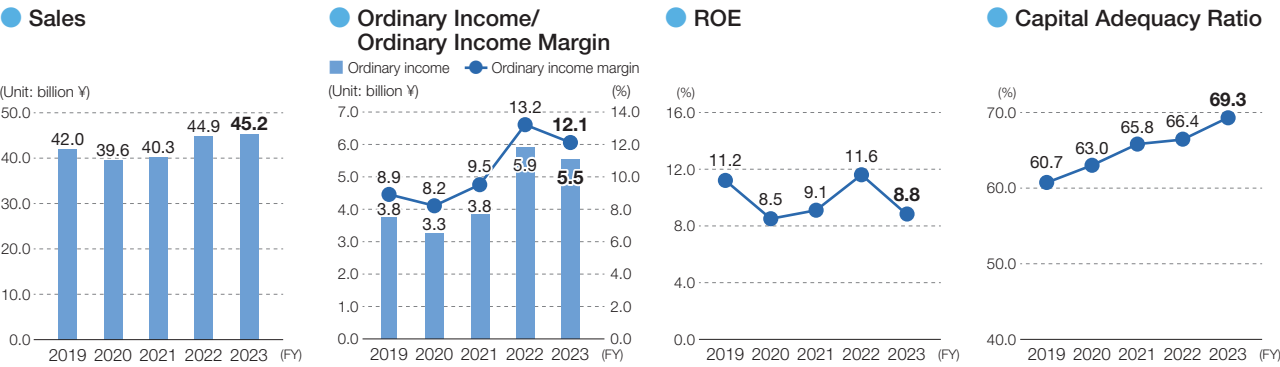
Textile Materials Business	Business strategy	Main initiatives
	Clarify growth strategies and input management resources into growth fields	<ul style="list-style-type: none">Improve the handling of recycled fiber materialsClarify targetsExpand business domains, handle new technical materials (new bio-type materials)Generate synergy effects with the parent company (develop new products leveraging the chemical synthesis technologies of the parent company)
	Improve governance and organizational systems	<ul style="list-style-type: none">Improve the compliance system and the risk management systemStrengthen investment in human capitalRevise the structure of the Sales Department and the Management Department (expand the use of parent company functions and improve cooperation systems)
Improve sustainability and promote the use of smart technology		<ul style="list-style-type: none">Improve initiatives for achieving carbon neutrality (expand the handling of recycled fiber materials)Build a CSR procurement system in cooperation with the parent companyPromote computerization and digitalization (use parent company systems)

Creation of next-generation growth domains	Main initiatives
Generate synergy effects with Group companies	Develop new products leveraging chemical synthesis technologies
Reform the product portfolio	Expand the handling of recycled fiber materials, adopt new bio-type materials

Initiatives for FY 2023 (1st Stage Management Plan)

In FY 2023, we proceeded with initiatives aimed at achieving our targets, with the focus on the three reforms—"Profit Structure Reform," "Manufacturing Innovation" and "Work Style Reform."

Basic Policies		Main Results of the FY 2023 Initiatives
Profit Structure Reform	Growth and reinforcement of financial foundations Secure stable sales and profits.	<p>Crop Protection Products Business</p> <ul style="list-style-type: none">Expand sales of the high-spread formulation, RakuryuImprove the share of products that protect fruits and vegetables by expanding sales of new productsExpand countries where Ipfen carbazone is registered and expand sales <p>Fine Chemicals Business</p> <ul style="list-style-type: none">Strengthen activities in proposal-based contract manufacturing service (measures aimed at increasing the number of launches)Price corrections through reassessment of product value <p>Textile Materials Business</p> <ul style="list-style-type: none">Begin full-scale supply of recycled fiber materials
		<p>Crop Protection Products Business</p> <ul style="list-style-type: none">Full-scale stable operation of new granule herbicide factoryImprove lineup of the high-spread formulation Rakuryu <p>Fine Chemicals Business</p> <ul style="list-style-type: none">Implement increased production of leading products in the field of electronic materialsPromote initiatives in each theme of projects pioneering new technologyDevelop and begin implementation of specifics of plan to dedicate the Okayama Factory to fine chemicals <p>Common to all businesses</p> <ul style="list-style-type: none">Concretize matters falling under the mid- to long-term capital investment plan and reflect them in the new management planFormulate initiatives and policies for carbon neutrality
Manufacturing Innovation	Higher efficiency, labor savings, and environmental measures Provide the market with high-quality, high value-added products.	
Work Style Reform	Raising operational efficiency and developing human resources All employees can fully demonstrate their individuality and abilities.	<p>Common to all businesses</p> <ul style="list-style-type: none">Enhance and strengthen education and training (management training, training for factory workers, etc.)Build a new HR salary systemPromote initiatives for improving IT governance



Sustainability Improvement Initiatives

To achieve a virtuous cycle that will realize a sustainable society and sustainable increases in corporate value, we are strengthening sustainability improvement initiatives even further and are promoting initiatives related to SDGs, climate change, the management of human capital, and so on.

Action Policy

Based on our corporate philosophy, the Hokko Group will develop and offer new products and new technologies that leverage the strengths in each of our businesses as value propositions to society.

As a social contribution initiative, while conducting our business activities, we will both address the risks and opportunities associated with climate change and promote carbon neutrality and energy savings initiatives in order to reduce the amount of greenhouse gas emissions. We are also working to promote CSR procurement.

As the infrastructure to support our businesses, we will put into place and implement human resource development policies and internal environmental maintenance policies, and we will promote the management of human capital.

Through these initiatives, we aim to realize a sustainable society and increase the corporate value of the Hokko Group.

Sustainability-Related Structures

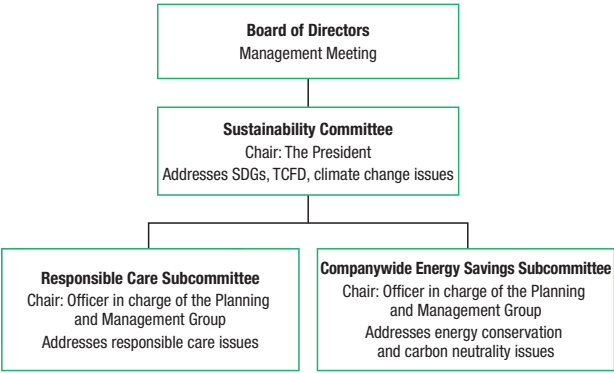
We have established the Sustainability Committee to

comprehensively and effectively promote the Hokko Group's sustainability-related initiatives.

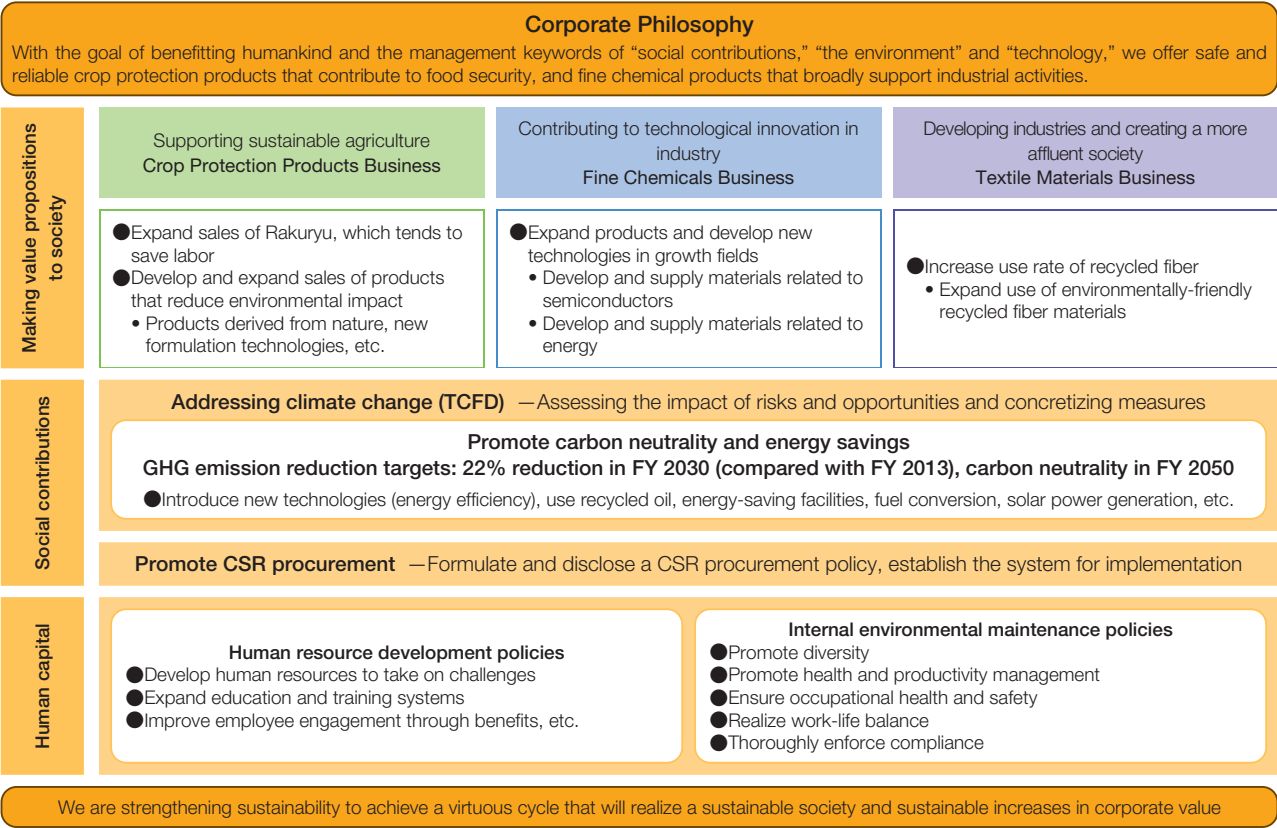
The Sustainability Committee is chaired by the President. The Committee discusses the progress and issues of sustainability-related initiatives and reports on them to the Management Meeting and the Board of Directors.

We have also established the Responsible Care Subcommittee and the Companywide Energy Savings Subcommittee as bodies under the Sustainability Committee to review specific initiatives.

Sustainability-Related Structures



Sustainability Improvement Initiatives



Addressing Climate Change

At Hokko Chemical Industry, we identify climate change-related risks and opportunities based on the 1.5°C or 2°C scenario, in which the world achieves the transition to a decarbonized society, and the 4°C scenario, in which climate change progresses. Going forward, we will review the specific countermeasures for the identified risks and opportunities.

Main Climate Change-Related Risks and Opportunities

Type		Item	Impact
Risk	Transition	Promotion of national policies on decarbonization	Moderate
		Delays in low carbonization of proprietary products	Large
		Increased investment in facilities and technology for low carbonization	Moderate
		Rising costs of raw materials and energy	Large
		Impact on chemical pesticides due to increased demand for environmental considerations	Large
Physical		Increased severity and frequency of flood damage	Moderate
		Changes to the agricultural environment associated with temperature and amount of rainfall	Large
Opportunity	Transition	Improved competitiveness and reputation associated with the launch of low-carbon products on the market	Large
		Increased demand for products related to electrical energy	Moderate
		Increased demand for naturally-sourced crop protection products and labor-saving formulations due to demand for environmental considerations	Large
		Higher efficiency of production and shipping	Moderate
		Increased demand for solutions to changes in the agricultural environment	Large
	Physical	Increased demand for products due to increased crop yield	Large

Carbon Neutrality and Energy Savings

For the government's stated goal of achieving carbon neutrality by 2050, Hokko Chemical Industry has set the Scope 1 and Scope 2 emissions (non-consolidated) targets of a 22% reduction in FY 2030 (compared with FY 2013) and carbon neutrality in FY 2050.

To further reduce greenhouse gases, we will promote the introduction of new technologies, the use of recycled oil, energy-saving facilities, fuel conversion, solar power generation, etc.

Management of Human Capital

Based on the belief that the resources supporting our business are our employees, we position developing human resources to take on challenges in new fields and creating workplaces where employees can demonstrate their talents as important issues in terms of human resources.

Hokko Chemical Industry has established our human resource development policies and internal environmental

maintenance policies as policies for promoting the development of the human resources the company needs, ensuring the diversity of our human resources, and maintaining an environment in which they can grow.

Human Resource Development Policies

For the purpose of developing human resources to take on challenges, in addition to on-the-job training, we maintain a system of various educational programs including rank-based training and training based on professional abilities.

Initiatives

Rank-based training, leadership/management skills development, training and development based on professional abilities, personal development programs, acquisition of qualifications and distance learning, OJT system

Internal Environmental Maintenance Policies

In addition to providing a healthy and safe environment in which employees can work comfortably and a work style that supports their life stages, as well as maintaining a system in which diverse human resources can demonstrate their talents, we also promote initiatives for diversity, work-life balance, health management, occupational health and safety, and compliance.

Initiatives

- Promoting diversity management
 - Promoting women's empowerment, recruiting and promoting diverse human resources, hiring senior citizens, hiring disabled people
- Work-life balance
 - Providing child care and family care leave or planned paid leave, telework, support for digitalization
- Promoting health management
 - Preventing lifestyle-related diseases, addressing mental health and smoking, preventing infectious diseases
- Ensuring industrial safety and health
 - Various types of health and safety education beginning at hiring
- Compliance
 - Compliance education

FY 2023 Results of Initiatives for Human Capital (Non-consolidated)

Item		Rate
Percentage of female employees in management positions		2.7%
Rate of male employees taking child care leave		25.0%
Wage disparity of male and female employees (ratio of wages of women to wages of men)	All employees	65.3%
	Regular employees	73.2%
	Part-time and fixed-term employees	69.1%

Business Description

Crop Protection Products Business

Hokko's products ensure crop protection from seed treatment to harvesting

In our Crop Protection Products Business, we have manufactured and sold safe and effective agricultural chemicals since our founding with the motto “Hokko's products ensure crop protection from seed treatment to harvesting.”

Agricultural Chemicals R&D

Crop protection products defend crops from diseases, pests, and weeds to supporting the richness and safety of our diets by making a stable supply of agricultural products possible. They also offer other benefits such as reducing agricultural labor and are indispensable to agriculture.

Developing crop protection products involves not only trials of agricultural chemicals' efficacy and phytotoxicity, but also many studies related to safety. For this reason, it can take more than 10 years and tens of billions of yen to develop a new agricultural chemical. Of all the new chemical compounds, it is said that only 1 in 160,000 can be registered as an agricultural chemical.

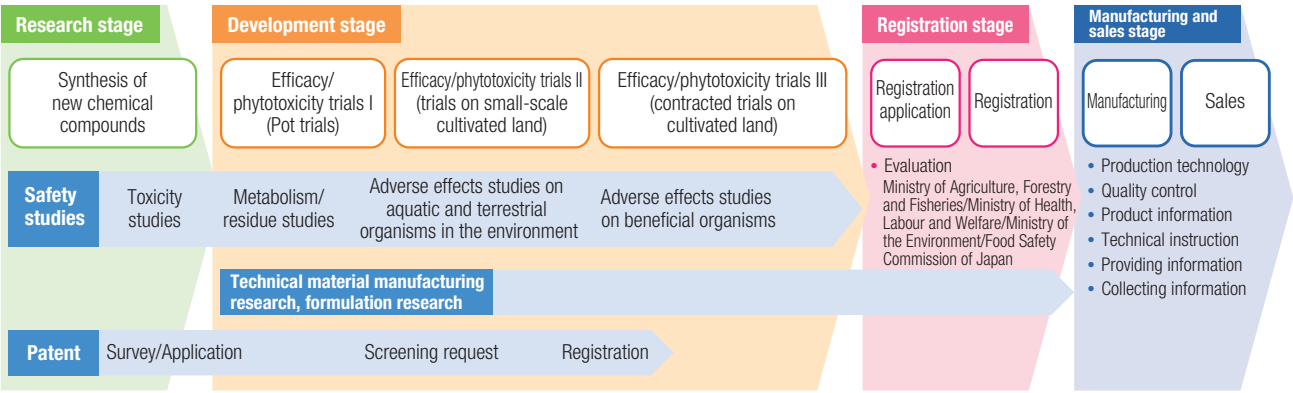
Starting with Kasugamycin, a fungicide and bactericide for paddy rice and horticulture, which is highly effective at controlling the fungus that causes rice blast, a destructive disease found in cultivated rice, we have successfully developed new active ingredients. The latest is Ipencarbazone (a paddy rice herbicide), which provides excellent efficacy against the paddy field weed *Echinochloa* spp, keeping paddy rice safe from phytotoxicity at a high level. We have earned a reputation

for our expertise in chemical formulations that greatly contribute to improving the workability of pesticide application and labor savings. In 2021, we developed Rakuryu, a new spread type formulation utilizing our existing proprietary technologies that can significantly reduce the labor and time involved in spraying. Rakuryu is a spread type formulation that can be applied without entering even a 1 ha paddy, and that at 250g per 10 a, also saves labor. In addition to conventional application methods, it can be applied from one-side of levee, from water inlets and via unmanned aerial vehicles. We will continue to support sustainable agriculture through research and development of agricultural chemicals.



The mirror-like surface of a rice paddy after application of Rakuryu

Manufacturing and Sales Process Flow from R&D



Production Structure

We operate three factories in Japan that are equipped with the latest facilities and technologies to produce high quality products. We give due consideration to both the surrounding environment and working conditions in our production operations and take all possible measures to prevent water, air, and other forms of pollution.

We also contract the manufacture of formulated products including some insecticides, fungicides, and herbicides as well as repacking.

Business in Japan

Diverse product lineup and support structure

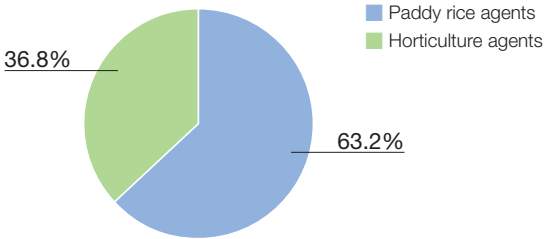
We sell more than 200 products including insecticides, fungicides, and herbicides for paddy rice, vegetable crops, and fruit orchards through JA branches nationwide in Japan. We have six branches that serve as sales offices in Japan and sales representatives stationed in every prefecture to provide service at the local level.

We offer detailed information to distribution organizations such as JA, experimental farms, agricultural extension centers and other instructional organizations, and to the farmers who use our products to ensure that our crop protection products are used safely and effectively.

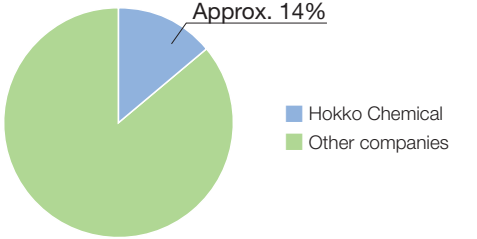


Leading products

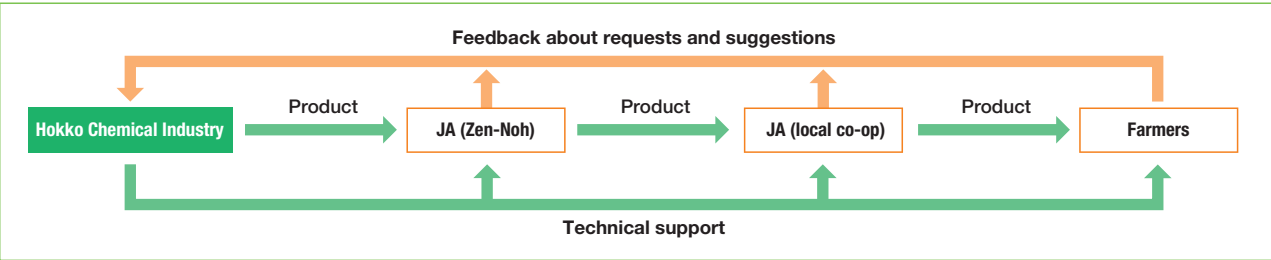
Breakdown by Field of the Company's Crop Protection Product Sales



The Company's Share of Domestic Paddy Rice Agent Shipments (Estimated)



Support System



Global Business

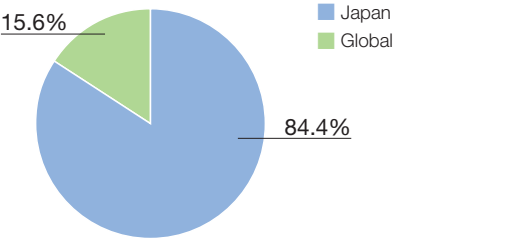
Operating business mainly in Asia and the Americas

We are selling original technical materials* such as Kasugamycin, a fungicide and bactericide for paddy rice and horticulture, and Ipencarbazone, a paddy rice herbicide primarily in Asia and the Americas. For the North, Central, and South American markets in particular, we are working with subsidiary HOKKO Chemical America Corporation in North Carolina, USA, to expand sales.

For Kasugamycin, we also have a dedicated manufacturing plant (Niigata Factory Branch Plant), and have built a stable supply system for export expansion. At the Vietnam Experimental Farm, we are conducting trials on the efficacy and phytotoxicity of Ipencarbazone for the purpose of developing crop protection products suited to tropical regions.

* Technical materials: Industrial products used as the active ingredients in crop protection products

Japan and Global Sales Mix



Leading products sold globally

Kasugamycin for the USA

Note: All graphs on p.10 are based on non-consolidated data from FY 2023 actual results.

Fine Chemicals Business

Contributions to the development of industry and society by building upon original technologies

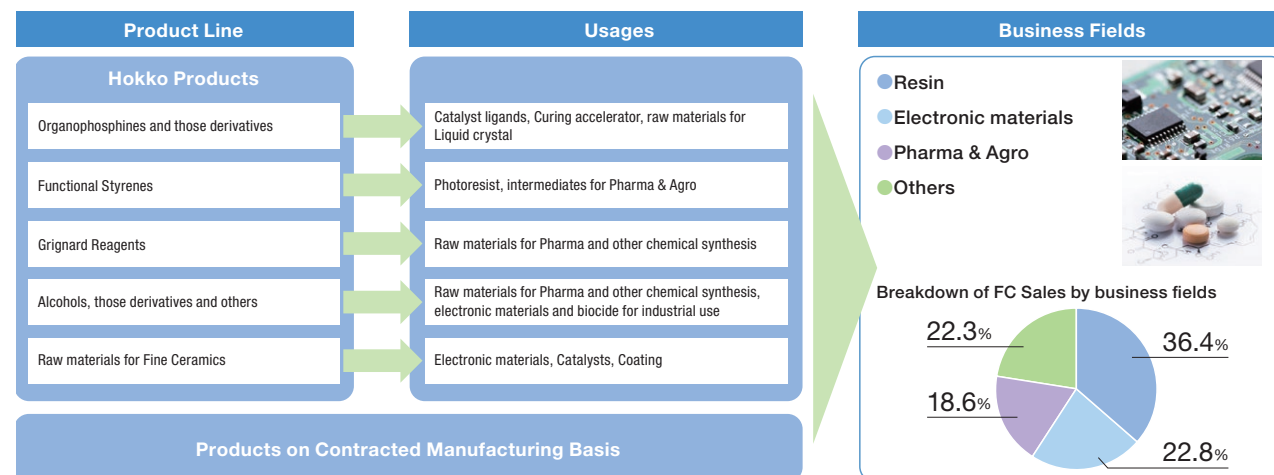
Our Fine Chemicals Business supplies a wide range of business fields with products made using its core technology represented by Grignard reaction.

Hokko Fine Chemicals Products

We use the generic name of “fine chemicals” for high value-added chemicals produced in small quantities versus mass-produced chemical products. To meet the needs of society and markets, our Fine Chemicals Business Unit supplies high purity, high performance, and high value-added products made using our original

manufacturing technology based on the Grignard reaction. These products are used in resins, electronics components, pharmaceuticals & agrochemicals, and other fields to support the development of industry and affluent living.

Business Description



Hokko Technology Grignard Reaction

The Grignard reaction was developed in 1900 by the French chemist Victor Grignard. It is the generic name for reactions involving an organomagnesium halide compound (Grignard reagent). Grignard reagents are widely used in industry, but reaction temperature control

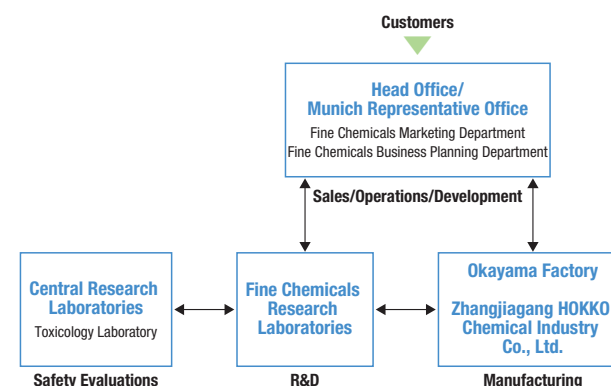
during reagent synthesis is challenging, and few companies conduct large-scale synthesis of Grignard reagents. We meet a wide range of customer needs using our world-leading technologies and production scale.

Fine Chemicals R&D, Manufacturing, and Sales System

We conduct integrated research and development through the coordinated efforts of our Fine Chemicals Marketing Department and Fine Chemicals Business Planning Department at the Head Office and the Fine Chemicals Research Laboratories.

Our Okayama Factory engages in efficient production with a total of nine production lines, including clean rooms able to produce pharmaceutical raw materials and raw materials for electronic materials. We are also developing our international operations, with our subsidiary Zhangjiagang HOKKO Chemical Industry Co., Ltd. in China the second fine chemicals production site after the Okayama Factory.

Fine Chemicals Product Research, Development, and Manufacturing Processes

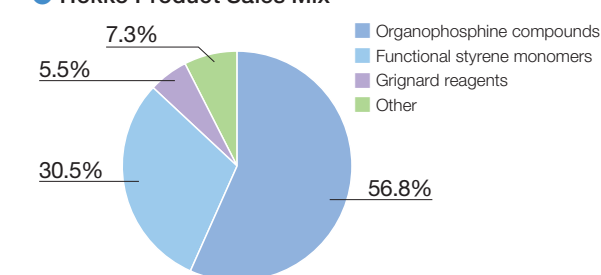


Manufacture and Sale of Hokko Products and Contracted Manufacturing

Hokko Products

Based on our synthesis technologies and experience in organometallic compounds built up since our founding, we have developed numerous products using the Grignard reaction as the key technology. Those fine chemical products include resin raw materials, electronic materials such as photoresist monomers and curing accelerators for epoxy molding compounds, organic catalysts, and pharmaceutical raw materials.

Hokko Product Sales Mix



Leading Products

Organophosphine compounds

TPP... $(\text{C}_6\text{H}_5)_3\text{P}$
 TTBP... $(\text{tert-C}_4\text{H}_9)_3\text{P}$
 TPPO... $(\text{C}_6\text{H}_5)_3\text{P}=\text{O}$
 TPP-PB... $(\text{C}_6\text{H}_5)_4\text{P}^+\text{Br}^-$
 DPPE... $(\text{C}_6\text{H}_5)_2\text{PCH}_2\text{CH}_2\text{P}(\text{C}_6\text{H}_5)_2$
 Crophos... $(\text{tert-C}_4\text{H}_9)_2\text{PCH}_2\text{CH}=\text{CHCH}_3$
 m-Crophos... $(\text{tert-C}_4\text{H}_9)_2\text{PCH}_2\text{CH}=\text{C}(\text{CH}_3)_2$
 Xantphos, DPEphos, Amphos, DPPF

Functional styrene monomers

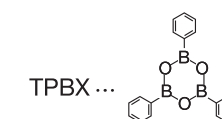
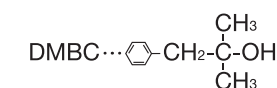
PCST... $\text{Cl}-\text{C}_6\text{H}_4-\text{CH}=\text{CH}_2$
 PTBST... $\text{CH}_3-\text{C}(\text{CH}_3)_2-\text{O}-\text{C}_6\text{H}_4-\text{CH}=\text{CH}_2$
 PVBA... $\text{HOOC}-\text{C}_6\text{H}_4-\text{CH}=\text{CH}_2$

Grignard reagents

Grignard reagents... RMgX

Alcohols, derivatives, others

4P1OL... $\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{CH}_2\text{OH}$
 3B1OL... $\text{CH}_2=\text{CHCH}_2\text{CH}_2\text{OH}$



Hokstar, Hokcide
 ...Organonitro sulfur compounds

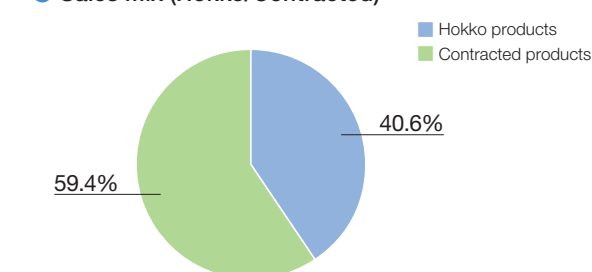
Raw materials for fine ceramics

HZ-NB... $(\text{n-C}_4\text{H}_9\text{O})_4\text{Zr}$
 HZ-TB... $(\text{t-C}_4\text{H}_9\text{O})_4\text{Zr}$
 $(\text{C}_2\text{H}_5\text{O})_5\text{Nb}$
 $\text{La}_{0.8}\text{Sr}_{0.2}\text{MnOxide}$

Contracted Manufacturing

In addition to our own products, we also contract manufacturing based on proposals using Hokko technologies and Hokko raw materials. Leveraging our advanced technologies and know-how built up over many years, we meet customers' detailed needs and requirements using our production system consisting of multipurpose manufacturing units of various sizes equipped with the latest facilities.

Sales Mix (Hokko/Contracted)



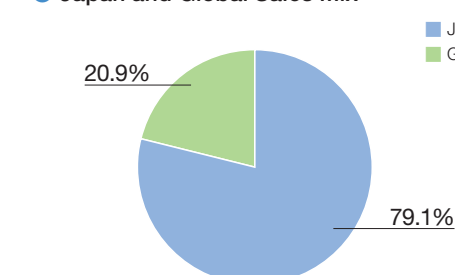
Global Marketing

We opened Munich Representative Office to serve as a marketing base in Europe. Through this office, we are able to more quickly respond to our customers in Europe and aim to capture new demand.



Munich Representative Office (building housing the office)

Japan and Global Sales Mix



Note: All graphs on pp.11-12 are based on non-consolidated data from FY 2023 actual results.

Textile Materials Business

Creation of new value for provision to society

In the Textile Materials Business, C. Murata & Co., Ltd. provides optimal textile materials to a wide range of fields in society.

Providing Environmentally-Friendly Products

By working to develop environmentally-friendly recycled fiber materials, we encourage the effective use of resources and contribute to reductions in waste. In addition, we aim to provide products that minimize environmental impact by developing new

environmentally-friendly materials that combine recycled raw materials and bio raw materials. Providing textile materials enables us to contribute to the development of industries and the creation of a more affluent society.

● Features

Our Private Brand: MU-TECH ECO

Our original multi-use material is available in a variety of colors under our private brand MU-TECH, pursuing high functionality and fashionability and responding to customer needs through lotless support. We sell MU-TECH ECO as a brand that uses environmentally-friendly materials using recycled fibers while pursuing functionality. We use recycled polyester and recycled nylon, with recovered PET bottles as the raw material.

● Main Markets Handled

Industrial Raw Materials

We actively advocate for the use of recycled fiber materials for industrial raw materials, such as those used in automobiles, aircraft, railway vehicles, and ships, while also working together with suppliers and manufacturers to address needs by developing new recycled fiber materials.

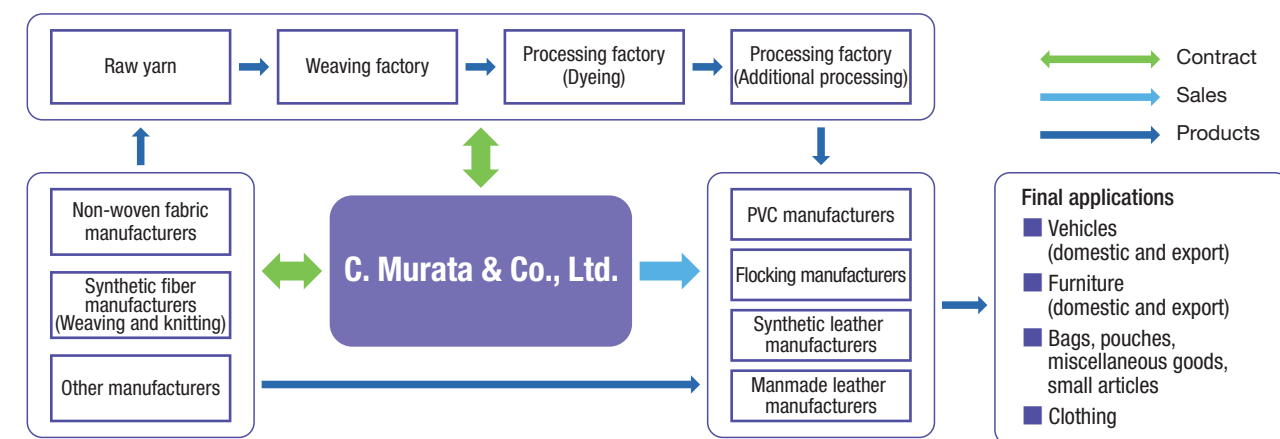
Materials in Everyday Life

For materials in everyday life, such as furniture and interior accessories, bags, shoes, and items from the caregiving and health fields, we promote the replacement of existing goods with environmentally-friendly goods that use environmentally-friendly recycled fiber materials.

Apparel Materials

With the call to be environmentally friendly, we will suggest changes in additional processing and develop and propose new MU-TECH ECO brand products while addressing the need for fashion related apparel materials with lot-less support.

● Main Value Creation Process



Research & Development

At our Central Research Laboratories and Fine Chemicals Research Laboratories, we are working on the development of new products based on the concepts of “compact,” “high quality,” and “connected.”

Central Research Laboratories (Crop Protection Products Business)

The Central Research Laboratories opened in 1966 after relocating laboratories from Ofuna, Kamakura City, Kanagawa Prefecture. It is involved in creation of new active ingredients for crop protection products, developing new crop protection products, and providing technical support for sales. In 2016, it obtained certification of compliance with standards for proper testing of toxicity and residues of agricultural chemicals (Good Laboratory Practice [GLP] for Agricultural Chemicals).

● Location: Atsugi City, Kanagawa ● Site area: 21,000 m²*

● No. of employees: 125* (as of Nov. 30, 2023)

* Includes the Fine Chemicals Research Laboratories



Central Research Laboratories and Fine Chemicals Research Laboratories

Experimental Farms

Conducts experiments to develop crop protection products meeting local needs, mainly using cultivated land designated for experiments. The Atsugi Experimental Farm is attached to the Central Research Laboratories.

Hokkaido Experimental Farm

● Location: Yubari-gun, Hokkaido
● Site area: 19,700 m²
● Established: 1985



Shizuoka Experimental Farm

● Location: Makinohara City, Shizuoka
● Site area: 23,800 m²
● Established: 1982



Vietnam Experimental Farm

● Location: Long An Province, Vietnam
● Site area: 10,000 m²
● Established: 2019



Fine Chemicals Research Laboratories (Fine Chemicals Business)

The Fine Chemicals Research Laboratories was established in 1989 on the grounds of the Central Research Laboratories to augment the R&D team at our Atsugi research facilities in conjunction with expansion of our Fine Chemicals Business. It conducts research and development on fine chemicals, raw materials for fine ceramics, and antifungal agents.



Manufacturing

We are adding to our production facilities and increasing efficiency at our factories, building a robust production structure.

Hokkaido Factory (Crop Protection Products Business)

- Location: Takikawa City, Hokkaido
- Site area: 53,000 m²
- No. of employees: 61 (as of Nov. 30, 2023)

Our Rubeshibe Factory, located in Rubeshibe, Hokkaido, where we first got our start, was not located near the main rice-producing region of Hokkaido. We relocated the Hokkaido Factory to the major rice-producing region of Takikawa and completed the factory in 1970. The Hokkaido Factory is our leading crop protection product manufacturing facility in Hokkaido. A new factory for granule herbicides was added in 2022.



Niigata Factory (Crop Protection Products Business)

- Location: Shibata City, Niigata
- Site area: 128,000 m²
- No. of employees: 91 (as of Nov. 30, 2023)

We established the Niigata Factory in 1961 in one of the leading grain-growing regions in Japan as the first crop protection product factory located along the Japan Sea. We also have the Niigata Factory Branch Plant, which manufactures Kasugamycin, our original technical material. We are promoting greening of the factory grounds, and in 2007 received the METI Minister's Award under the National Award for Factory Greening.



Okayama Factory

(Crop Protection Products Business/Fine Chemicals Business)

- Location: Tamano City, Okayama
- Site area: 187,000 m²
- No. of employees: 226 (as of Nov. 30, 2023)

As the first factory attracted by Okayama Prefecture, the Okayama Factory was constructed in 1953 for the purpose of integrated production of crop protection products starting from synthesis of agricultural chemical technical materials. In addition to crop protection products, the factory currently produces raw materials for electronics components and fine chemical products including pharmaceutical intermediates.



Zhangjiagang HOKKO Chemical Industry Co., Ltd. (Fine Chemicals Business)

- Location: Zhangjiagang City, Jiangsu Province, China
- Site area: 114,000 m²
- No. of employees: 89 (as of Nov. 30, 2023)

We established the wholly owned subsidiary Zhangjiagang HOKKO Chemical Industry in 2002 as a manufacturing facility exclusively for fine chemical products. A new plant was added in 2009. In cooperation with the Okayama Factory, Zhangjiagang HOKKO Chemical Industry is part of our global production structure.



Group Companies

Overviews of the business of each Group company and descriptions of their roles within the Group.

HOKKO Sangyo Co., Ltd.

- Head Office: 1-5-4 Nihonbashi-Honcho, Chuo-ku, Tokyo, Japan (Sumitomo Fudosan Nihonbashi Building)
- URL: <http://www.hokkosan.co.jp/>

HOKKO Sangyo Co., Ltd. was established in 1963 as Hokko Vardal Co., Ltd., a subsidiary that trades the products of Hokko Chemical Industry Co., Ltd. The name was changed to HOKKO Sangyo Co., Ltd. in 1976. It sells antimicrobial and antifungal agents, fine chemicals products, and chemicals for golf courses, non-crop areas, and mushroom cultivation.

Zhangjiagang HOKKO Chemical Industry Co., Ltd.

- Head Office: No.29, Donghai Road, (Jingang Town, Zhangjiagang City) Yangtze River International Chemical Industry Park, Jiangsu Province, China
- URL: <https://www.hokkochem.com.cn/>

Zhangjiagang HOKKO Chemical Industry Co., Ltd. was established as a Chinese subsidiary in 2002 to produce fine chemicals products with a focus on TPP and other products. The company currently conducts sales in China and manufactures TPP derivatives and other products.

Biei Hakudo Industry Co., Ltd.

- Head Office: 1-5-4 Nihonbashi-Honcho, Chuo-ku, Tokyo, Japan (Sumitomo Fudosan Nihonbashi Building)
- Biei Factory: Biei Kyowa, Biei-cho Aza Misawa, Kamikawa-gun, Hokkaido, Japan
- URL: <http://www.bieihakudo.co.jp/>

Biei Hakudo Industry Co., Ltd. was established in 1967 to manufacture and sell agricultural chemical bulking agents. Today, it manufactures and sells inorganic copper compounds and hollow glass microspheres (taisetsu balloons).

HOKKO Chemical America Corporation

- Head Office: c/o Towerview Office Suites, 150 Preston Executive Dr, Suite 201, Cary, NC, U.S.A.

HOKKO Chemical America Corporation is a local subsidiary established in the United States in 2016. Its main business consists of gathering the latest information and expanding sales in North, Central, and South America. It also develops, registers, and promotes crop protection products.

HOKKO Pax Co., Ltd.

- Head Office: 1-5-4 Nihonbashi-Honcho, Chuo-ku, Tokyo, Japan (Sumitomo Fudosan Nihonbashi Building)
- Okayama Office: 402 Muneage, Tamano-shi, Okayama, Japan

HOKKO Pax Co., Ltd. was established in 1991 as a joint venture of Hokko Chemical Industry Co., Ltd. and HOKKO Sangyo Co., Ltd. to perform packaging of crop protection products. It currently sells petroleum products and other products and administers employee benefits programs for the Hokko Chemical Industry Group.

C. Murata & Co., Ltd.

- Head Office: 2-1-8 Bingo-machi, Chuo-ku, Osaka-shi, Osaka, Japan (Bingo-machi Nomura Building)
- Tokyo Branch: 1-5-4 Nihonbashi-Honcho, Chuo-ku, Tokyo, Japan (Sumitomo Fudosan Nihonbashi Building)
- Shanghai Office: Room 916, Guanghua Dasha, Beilou, No. 868, Maotai Road, Shanghai, China
- URL: <http://muratacho.com/index.html>

C. Murata & Co., Ltd. is a long-standing company that was established in 1885 as a textile company that handled kimono and silk products. In more recent years, it has transitioned its business model to that of a specialized textile materials trading company, and it currently sells textile materials for industry, bags and shoes, and apparel. It became a group company of Hokko Chemical Industry Co., Ltd. in 2019.

Corporate Governance

At Hokko Group, we are taking steps to further improve corporate governance with the aim of achieving sustained growth and improving our corporate value.

Basic Approach

Through implementation of our corporate philosophy and basic management policy, we are pursuing the best model of corporate governance for our company to achieve sustained growth and improved mid- to long-term corporate value.

We are taking steps to improve our corporate governance based on our understanding that working together with stakeholders and maintaining a strong awareness of compliance are vital to achieving sustained growth and improving our corporate value in the mid- to long term.

Overview of Corporate Governance Structure

We adopt the form of a company with corporate auditors. The Board of Directors supervises the execution of duties of directors, and corporate auditors conduct audits. We adopt a corporate officer system for the execution of operations. Corporate officers are tasked with this execution under the supervision of the Board of Directors. In addition to outside corporate auditors with a high level of expertise appointed to conduct audits, we work to strengthen our audit function through the integrated efforts of corporate auditors, an internal audit team independent of divisions in charge of execution of operations, and accounting auditors.

Compliance

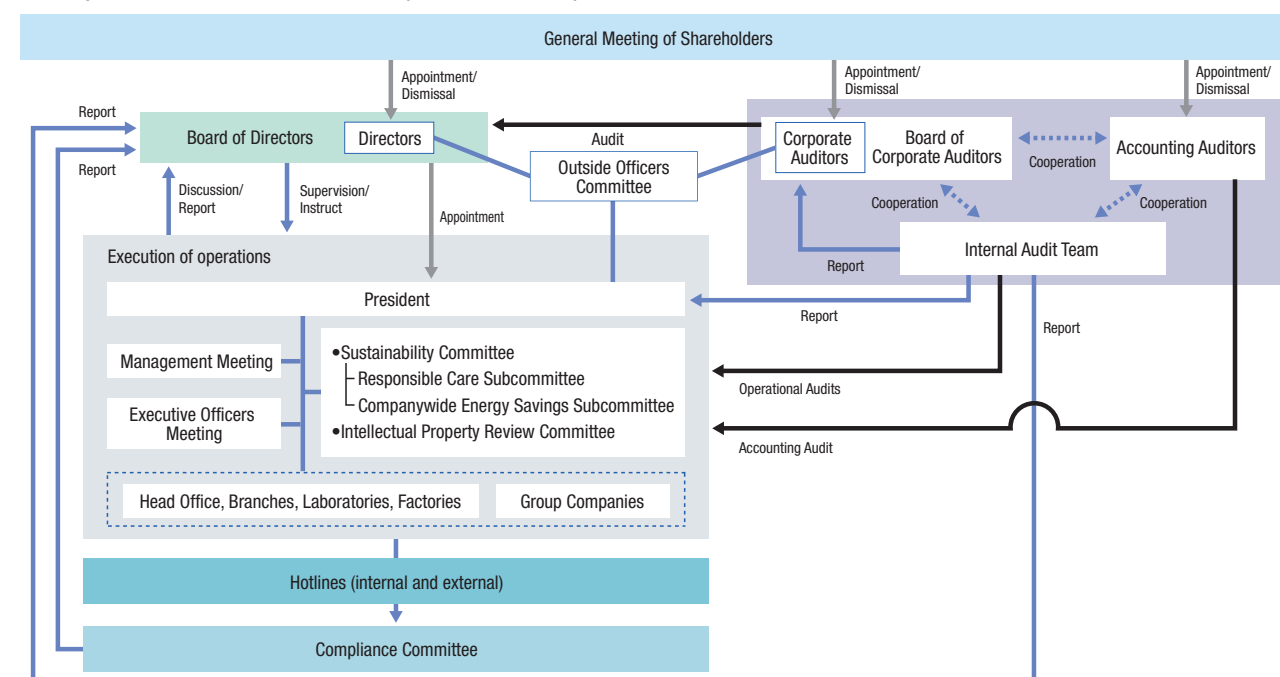
We position compliance as a management issue of the highest priority. To ensure that operations are conducted both fairly and efficiently, we have established our Basic Compliance Policy, the Hokko Chemical Industry Group Code of Conduct, and our Basic Regulations on Legal Compliance. Executives and staff base their conduct on laws and regulations as well as on common sense and propriety.

The Compliance Committee, which is made up of a chairperson and members appointed by the president, oversees deliberations on basic policy on compliance and plans and investigations of compliance violations. Corporate auditors and the internal audit team conduct audits of compliance by business divisions and Group companies.

The Hokko Group has established internal and external hotlines and created systems that enable anonymous reporting and consultation. We strictly protect the privacy and prohibit any detrimental treatment of persons who make reports in accordance with internal rules and are working to increase effectiveness. The Compliance Committee investigates the relevant facts, etc. regarding such reports and consultations, and takes any measures necessary to correct the situation and prevent a recurrence.

We have set the month of September as Compliance Month and hold training in business divisions and departments. We also use our intranet system to disseminate compliance knowledge and information.

Corporate Governance Structure (as of Dec. 2023)



Basic Compliance Policy

Compliance with Laws and Regulations

We conduct our activities in compliance with Japanese and international laws, regulations, and rules as well as with our internal regulations, and with strong ethical values and social propriety.

Respect for Diversity

We respect the human rights, character, and individuality of all people irrespective of nationality, gender, age, or belief system, and strive to prevent harassment and other unfair treatment in the workplace.

Fair Company Activities

We conduct business under fair, transparent, and free competition based on reasonable conditions.

Proper Handling of Information

We appropriately manage information including that received from our business partners, and release information to our stakeholders and investors as appropriate.

Exclusion of antisocial and criminal elements

We have no relationships with anti-social forces with the resolve to eliminate their influence in society.

Protection of the Global Environment

We strive to prevent environmental pollution to protect the global environment and reduce environmental impacts.

Prevention of Misconduct

We enhance the effectiveness of systems to prevent misconduct in order to prevent damage to our corporate value.

Integrity in Responding to Misconduct

When misconduct does occur, we conduct an investigation, identify the causes, and take the appropriate action.

Business Continuity Plan

As a part of our risk management programs, we drafted a business continuity plan (BCP) in order to be prepared for a natural disaster, such as an earthquake occurring directly under the Tokyo region, an outbreak of infectious disease, or a fire occurring in a factory, for the purpose of minimizing the damage to our business assets, continuing our core business operations, and quickly recovering from the disaster.

This BCP defines the necessary policy, the structure, and other basic matters for sustaining a stable product supply, and aims to fulfill our supply responsibility as a manufacturer by continuing our business operations even in the event of a major disaster.

In addition, to ensure the effectiveness of our BCP, every year we conduct education and drills, and make revisions where issues are identified to enhance the content of our BCP and review new potential issues.

We also introduced a safety confirmation system to quickly confirm the safety of all of our employees in the event of a major earthquake or other disaster. We conduct regular tests of this system and make other preparations for unforeseen events to foster an awareness of crisis management among employees on an ongoing basis.

Complaint Response Team

We seek to improve our quality management system in manufacturing divisions to prevent the occurrence of product complaints. We believe that in the event of a product complaint, responding promptly, accurately, and with integrity and striving to prevent recurrences is of utmost importance to remain a company that is trusted by society.

We define complaints as the spectrum of expressions of dissatisfaction with our company, from complaints about our products to dissatisfaction with our sales, technologies, and other services, complaints related to our factories and laboratories, and other complaints from our stakeholders. We have put in place a response team to deal with complaints.

We use the PDCA cycle to investigate the causes, process complaints, and devise prevention measures. A robust system to deal with complaints facilitates improvements in our business activities, quality, and operations as well as improvements in our service to our customers and all other stakeholders.


Responsible Care Management

As a company that handles chemical substances, internally we prioritize ensuring safety, health and the protection of the environment from product development through to product disposal, publicly releasing the results of these efforts, and deepening understanding through mutual dialogue.

Basic Policy on the Environment, Safety and Health

We conduct Responsible Care (RC) activities, a voluntary management initiative of the chemical industry to protect the environment and ensure safety and health, based on our Basic Policy on the Environment, Safety and Health and our Responsible Care Activity Policy. These activities encompass the areas of environmental protection, occupational health and safety, process safety and disaster prevention, distribution safety, chemical products safety, and communication with the public.

Basic Policy for the Environment, Safety and Health



Revision date: August 1, 2012
(Established in September 1996)

We are committed to giving the highest priority to the following initiatives for environment protection, safety and health throughout our business activities, including R&D, manufacturing and sales.

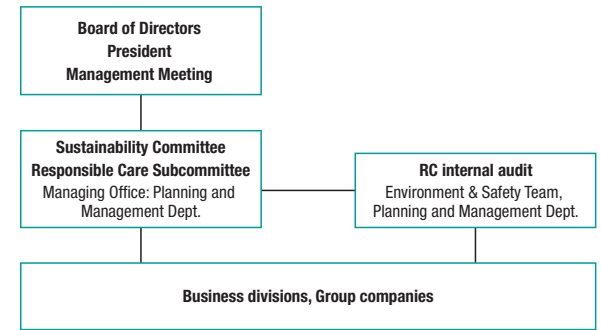
1. We ensure the safety of local communities and of our employees by keeping our operations free of occupational incidents and accidents.
2. We ensure the safety and health of our stakeholders, including our customers, general consumers, our logistics partners and our employees, through our gathering and organizing of the latest safety information on chemical substances and products, and by providing it to the parties concerned.
3. We provide products that can be used by our customers with satisfaction and assurance.
4. We strive to reduce our environmental impact throughout the product life cycle, from development to disposal.

The personnel at all of our divisions recognize the importance of our basic policy and strive to make improvements in a continuous way, as well as complying with laws and regulations.

Ken-ichi Sano
President
HOKKO CHEMICAL INDUSTRY CO., LTD.

Our factories have obtained certifications in quality management (ISO 9001), environmental management (ISO 14001) and occupational health and safety management (ISO 45001), and are utilizing them to work toward continuous improvement.

Responsible Care Promotion Structure



ISO 9001, ISO 14001, ISO 45001 Certifications

Location		Certification Date		
		ISO 9001	ISO 14001	ISO 45001
Hokko factories	Hokkaido Factory	Dec. 1995	Jan. 2000	Sep. 2020
	Niigata Factory	Jan. 1995	Mar. 1999	Feb. 2021
	Okayama Factory	Jan. 1995	Jan. 2000	Apr. 2020
Group companies	HOKKO Pax, Co., Ltd., Okayama Office	—	Jan. 2000	Apr. 2020
	Zhangjiagang HOKKO Chemical Industry Co., Ltd.	Nov. 2007	Dec. 2007	—

RC Internal Audits (Environment & Safety Audits)

The Environment & Safety Team in the Head Office Planning and Management Department regularly conducts RC internal audits of our factories, laboratories, and Group companies. In FY 2023, audits were conducted at three factories, two laboratories, and one domestic subsidiary. The locations carry out systematic improvements based on the guidance and instructions received in audits.

Responsible Care Promotion Structure

We have established the Responsible Care Subcommittee within the Sustainability Committee to oversee our companywide RC activities. The Responsible Care Subcommittee comprises the officer in charge of the Planning and Management Group, who serves as chair, along with subcommittee members consisting of officers in charge of our business groups and others. It is responsible for discussing basic policies, goals and plans for safety, health and environmental protection and reporting the results to the Management Meeting. Each business location and Group company is responsible for putting in place a structure compatible with its business and promoting RC activities.

Responsible Care Activity Initiatives and Results

We set targets for environment and safety issues and conduct an ongoing cycle of improvement activities. We also conduct and publicly release environmental accounting reports to evaluate the costs and benefits of our environmental protection measures.

FY 2023 Responsible Care Activity Results and FY 2024 Action Item

Category	Action Item	FY 2023 Result	Self-evaluation	FY 2024 Action Item
Environmental protection	Reduce greenhouse gas emissions Promote energy conservation activities	Unit energy consumption: average annual improvement of 3.4% (for 5 fiscal years) Set greenhouse gas emission reduction targets (pp. 8, 21)	○	Promoted measures to achieve targets Promote energy conservation activities
Occupational health and safety Process safety and disaster prevention	Eliminate occupational accidents and plant accidents	Lost time injuries: 5 (p. 23)	×	Posted and enforced safety measures and promoted safety training
Chemical product safety	Ensure the chemical product safety	Revised SDSs based on revised PRTR Law*1	○	Revised SDSs and labels based on ISHA*2 revisions
Social dialogue	Public release of information	Addressed TCFD*3 (identified risks and opportunities) (p. 8) Publishing Hokko Report 2023	○	Respond to the TCFD's recommendations Publish Hokko Report 2024
	Exchanges with local communities	Community exchanges at business locations (p. 26)		Promote communication through dialogue with local residents and local governments, etc., and through participation in local activities

*1 PRTR Law: Law concerning Pollutant Release and Transfer Register

*2 ISHA: Industrial Safety and Health Act

*3 TCFD: Task Force on Climate-related Financial Disclosures

Environmental Accounting

Environmental Conservation Cost

(Unit: million ¥)

Category		Key Activity and the Outcome	Investment Amount*4	Cost Amount*5
1	Environmental conservation costs to control environmental impacts that result from key business operations within the business area (business area costs)		161	361
	Breakdown	Pollution prevention costs	28	113
		Global environmental protection costs	121	0
		Resource circulation costs	12	248
2	Environmental conservation costs to control environmental impacts that result from key business operations upstream or downstream (upstream/downstream costs)	Collection and proper disposal of used products, distribution accident prevention measures, etc.	0	7
3	Environmental conservation costs stemming from administration activities (administration costs)	Implementation and maintenance of the environmental management system, disclosure of environmental information, monitoring of environmental impacts, environmental training of employees, greening measures, etc.	3	118
4	Environmental conservation costs stemming from R&D activities (R&D costs)	R&D to curtail environmental impacts, evaluation and testing expenses, etc.	0	30
5	Environmental conservation costs stemming from societal activities (societal activity cost)	Disclosure of information to local communities, etc.	0	0
6	Costs incurred for dealing with environmental degradation (environmental remediation costs)	—	0	0
Total			164	516

*4 Investment amount: Capital investment for environmental conservation

*5 Cost amount: Depreciation expenses, maintenance and administration expenses for environmental conservation

Environmental Conservation Benefit

Environmental Conservation Benefit Categories	Environmental Performance Indicators (Units)	FY 2022	FY 2023	YoY Change
Environmental Conservation Benefit Related to Resources Input into Business Activities	Total energy input (kL)	12,306	12,008	-298
	Amount of input water resources (clean water) (1,000 m³)	478	451	-27
	CO₂ emissions (t-CO₂)	31,647	31,195	-452
Environmental Conservation Benefit Related to Waste and Environmental Impacts Originating from Business Activities	COD emissions (t)	22.7	24.4	1.7
	Total amount of discharged waste, etc. (t)	6,084	5,850	-234
	Recycled amount (t)	4,542	4,167	-375
	Amount of final waste disposal (t)	399	511	112

Notes :

1. Calculated in conformance with the Environmental Accounting Guidelines 2005 published by the Japanese Ministry of the Environment and the Environmental Accounting Guidelines for Chemical Companies published by the Responsible Care Committee of the Japan Chemical Industry Association.
2. We have reviewed and revised the total amount of energy input and the CO₂ emissions for FY 2022.

Economic Benefit Associated with Environmental Conservation Activities

(Unit: million ¥)

Benefit Details	Amount
Sale of valuable articles	14

Environmental Protection

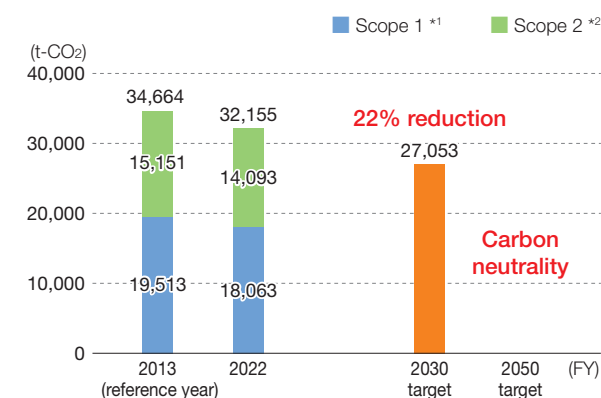
We calculate the amounts of energy and resources we use, product production volumes, and emissions of substances with environmental impact as part of our business activities, and we proactively work to protect the environment by reducing emissions of greenhouse gases and chemical substances, and properly managing waste.

Reduction of Greenhouse Gas Emissions

As measures to address global warming, Hokko Chemical Industry is working to reduce greenhouse gas emissions through the efficient use of energy and the introduction of renewable energy sources such as solar power generation.

For the government's stated goal of achieving carbon neutrality by 2050, Hokko Chemical Industry has set the Scope 1 and Scope 2 emissions (non-consolidated)

Greenhouse Gas Emissions (Non-consolidated)



*1 Scope 1: Direct emissions from the combustion of fuel and the like
 *2 Scope 2: Indirect emissions in conjunction with the use of electricity supplied by other companies

targets of a 22% reduction in FY 2030 (compared with FY 2013) and carbon neutrality in FY 2050.

The FY 2022 greenhouse gas emissions (non-consolidated) are 32,155t-CO₂ for Scope 1 and Scope 2, which is 93% of FY 2013. Furthermore, Scope 3 emissions are 251,039t-CO₂, with Category 1 accounting for 89% of all of Scope 3.

Going forward, we will work to further reduce greenhouse gas emissions in order to achieve our reduction targets.

Scope 3*3 (FY 2022, Non-consolidated)

Category	Emissions (t-CO ₂)
1 Purchased goods and services	222,214
2 Capital goods	12,269
3 Fuel- and energy-related activities not included in Scope 1 or Scope 2	4,317
4 Upstream transport and distribution	5,567
5 Waste generated in operations	4,573
6 Business travel	98
7 Employee commuting	1,179
9 Downstream transportation and distribution	635
12 End-of-life treatment of sold products	188
Total	251,039

Note: Categories other than the above are not covered by these calculations

*3 Scope 3: Indirect emissions other than Scope 1 and Scope 2

Hokko Chemical Industry Business Activities, Input, and Output (FY 2023 Main Production and Research Facilities)

INPUT		
Total materials input		Total amount of energy input (crude oil equivalent)
Crop Protection Products Business	9,677t	Electricity 6,594kL
Fine Chemicals Business	24,992t	Fuel 5,414kL
		Amount of input water resources
		Clean water 0.451 mil. m ³

OUTPUT		
Total products manufactured		Air
Crop protection products	8,094t	SOx emissions 6.8t
Fine chemicals products	2,863t	NOx emissions 12.9t
		Benzene emissions*4 0.28t
		Dichloromethane emissions*4 0.10t
Greenhouse gas emissions		Waste
CO ₂ emissions	31,195t-CO ₂	Total amount of discharged waste 5,850t
		Recycled amount 4,167t
		Amount of final waste disposal 511t
		Waters
		Total amount of discharged wastewater 2.642 mil. m ³
		COD emissions 24.4t
		Transportation
		CO ₂ emissions*5 1,251t-CO ₂

*4 Of the hazardous substances that contaminate the air (substances requiring priority action), only substances we emit in large amounts are listed.

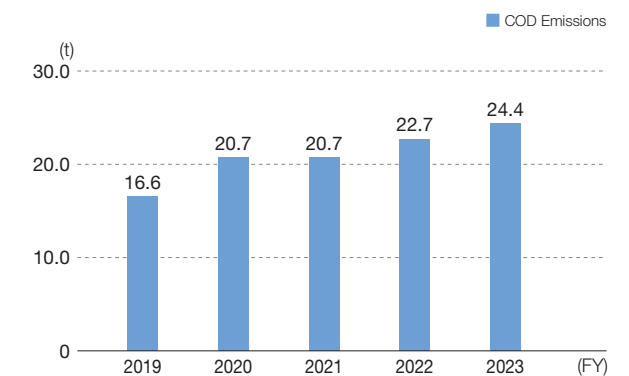
*5 In Hokko Report 2023, the amount of CO₂ emissions during shipping in FY 2022 was listed as 986t-CO₂, but this is revised to 1,253t-CO₂.

Preventing Air and Water Pollution

Exhaust gas and wastewater generated in the manufacturing process are discharged into the atmosphere, rivers and seas after removal of harmful air and water pollutants through exhaust gas treatment facilities (cleaning and activated carbon treatment) and wastewater treatment facilities (neutralization, activated sludge, flocculation, and precipitation treatment). When discharging, we properly monitor and measure the discharge in accordance with relevant laws and regulations.

Measures are taken to prevent groundwater contamination, including above-ground installation of various types of pipes.

COD*6 Emissions



*6 COD: Chemical Oxygen Demand

One measure of wastewater contamination by organic matter, with a higher number indicating higher organic matter pollution. COD emissions are calculated by multiplying average COD by annual wastewater emissions.

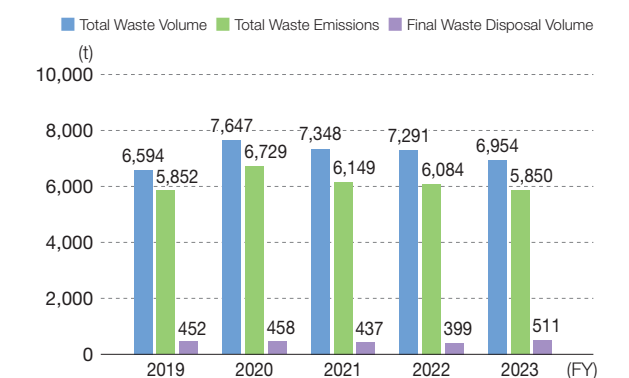
Appropriate Waste Management

We appropriately treat waste and promote the 3 R's (Reduce, Reuse, Recycle).

Of the waste that we generate, we incinerate waste able to be incinerated at our locations in accordance with disposal standards.

We contract treatment of waste that cannot be treated at our locations to treatment providers, and select reliable providers by conducting local inspections and other measures.

Total Waste*7 Volume/Total Emissions, Final Waste Disposal Volume



*7 Waste: Waste and secondary materials generated during product manufacturing (including materials with value such as waste paper and metal)

Data by Location

FY 2022 & FY 2023 Environmental Load Data by Location

Item	Hokkaido Factory		Niigata Factory		Okayama Factory		Central Research Laboratories/ Fine Chemicals Research Laboratories	
	2022	2023	2022	2023	2022	2023	2022	2023
Total energy input (crude oil equivalent) (kL)	209	561	956	973	10,506	9,869	635	605
Waterworks consumption (1,000 m ³)	3.8	8.4	14.1	12.4	451	424	8.8	6.8
CO ₂ emissions (t-CO ₂)	476	1,307	1,874	1,901	28,059	26,770	1,237	1,217
SOx emissions (t)	0.1	1.3	0.0	0.0	5.7	5.6	0.0	0.0
NOx emissions (t)	0.1	0.5	0.2	0.1	12.6	11.8	0.7	0.4
Total wastewater (1,000 m ³)	3.8	8.4	17.0	16.3	2,366	2,608	12.5	9.4
COD emissions (t)	0.01	0.18	0.09	0.10	22.6	24.1		
Total waste emissions (t)	76	242	524	411	5,288	5,029	79	57

Note: We have reviewed and revised the total energy input and the CO₂ emissions for FY 2022.

Occupational Health and Safety, Process Safety and Disaster Prevention

With safe operations and elimination of occupational accidents given highest priority, we conduct independent health and safety activities as part of our efforts to create workplace environments that are safe and easy to work in.

Occupational Health and Safety Initiatives

With safe operations and elimination of occupational accidents given highest priority, we have put in place a health and safety management system and conduct a range of activities related to health and safety including activities to predict risk (called “KY”) and 5S (translated as “Sort, Set in order, Shine, Standardize, Sustain”) activities. All of our factories have also obtained ISO45001 certification, an international standard for occupational health and safety management systems.

Education and Training

We provide education on the health and safety information employees need to know in operations, including our basic approach to safety and safe handling of chemical substances, and promote obtaining of qualifications required in operations. To prepare for emergency situations, we conduct disaster preparedness drills and education in the unlikely event of a fire, chemical substance leak, natural disaster, or other type of disaster. In addition to the health and safety education we have conducted to date, we also conduct trainings on sensing danger using simulations of actual dangers to improve employees' ability to perceive danger.



Emergency drills
(Hokkaido Factory)

Emergency drills
(Niigata Factory)

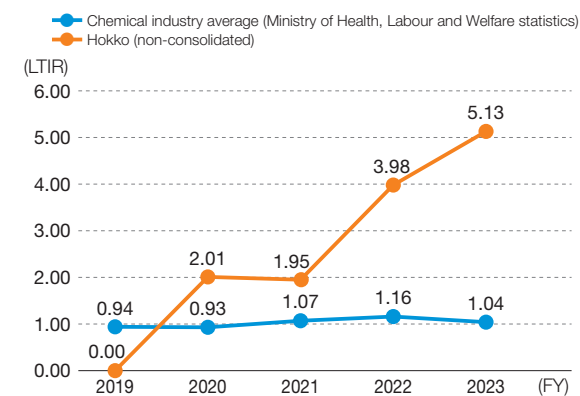


Emergency drills
(Okayama Factory)

Occurrence of Occupational Accidents

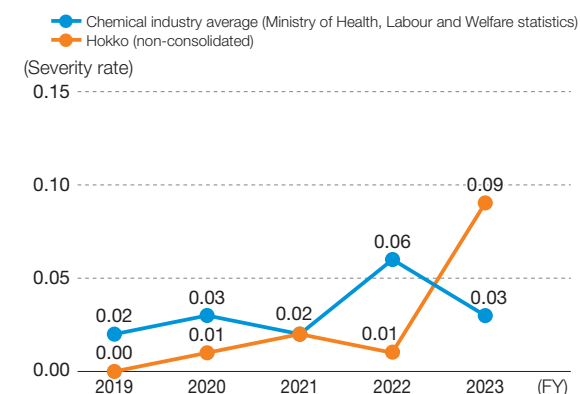
In FY 2023, there were five occupational accidents (including two incidents of falling on a frozen road surface) that resulted in lost work time. In response, we are taking measures to prevent reoccurrence including improving equipment and reviewing work techniques. The status and effectiveness of measures to prevent recurrence are verified through RC internal audits. Information on accidents is also shared throughout the Hokko Group in an effort to prevent the occurrence of similar accidents.

● Lost Time Injury Rate (LTIR)



LTIR: Indicator of the frequency of lost time injuries
(Number of lost time injuries) ÷ (Total working hours) × 1 million

● Severity Rate



Severity rate: Indicator of the severity of occupational accidents
(Number of work days lost) ÷ (Total working hours) × 1,000

Chemical Product Safety, Distribution Safety

Each business location takes measures to properly handle and manage chemical substances. We clearly specify the product properties and handling methods for the relevant parties and update information as necessary.

Chemical Substances Management

Chemical substances are useful and indispensable to our way of life, but their improper management can lead to environmental contamination and accidents, and carries the risk of adversely affecting human health and ecosystems.

We comply with laws and regulations in handling chemical substances. We also collect safety information, conduct safety tests and risk assessments, and implement appropriate management of chemical substances corresponding to the product stage (R&D, manufacturing, etc.).

Safety Data Sheets

We prepare Safety Data Sheets (SDSs), which list important information for the safe handling of chemical products, for all of our products, and use them when providing information to customers and conducting employee education. SDSs for our leading crop protection products can be found on our website. We are working to expand familiarity with changes to items included on labeling of agricultural chemicals in conjunction with the revised PRTR Law^{*1}, and have posted on our website a table comparing old and new



<https://www.hokkochem.co.jp/business/pesticide/product-sds>
(Only available in Japanese)



Safety Data Sheet (SDS)

labels in accordance with the revision of the PRTR cabinet ordinance.

In response to revisions to the Industrial Safety and Health Act, we are also making a series of revisions to our SDSs.

^{*1} PRTR Law: Law concerning Pollutant Release and Transfer Register

Distribution Safety

Our factories periodically hold consultations with shipping companies to mutually coordinate and implement environmental and safety initiatives in distribution. To prepare for the unlikely event of an accident while products are being shipped, drivers carry Yellow Cards^{*2} with them listing information such as who to contact and what measures to take in an emergency. To complement the Yellow Card system, we have introduced the Container Yellow Card (labelling system)^{*3}, which lists the guide number^{*4} and UN number^{*5} on cardboard boxes.



Yellow Card



Container Yellow Card
(example on cardboard box)

^{*2} Yellow Card (emergency contact card): Yellow paper printed with instructions for the driver, fire fighters, police, and other relevant parties to take in the event of an accident. The instructions are given the name “yellow card” because they are printed on yellow paper to make them easy to find in an emergency.

^{*3} Container Yellow Card (labelling system): To supplement the Yellow Card system, cardboard boxes and product labels list the guide number and UN number.

^{*4} Guide number: In the emergency response guidelines published by the Japan Chemical Industry Association, chemical substances are classified into 62 groups and assigned numbers based on their common hazards and emergency response measures. In an emergency, information about the emergency response measures to take can be obtained from the guide number.

^{*5} UN number: Four-digit numbers that identify hazardous materials, assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods and published in the Recommendations on the Transport of Dangerous Goods (Orange Book).

With Stakeholders

Our corporate activities would not be possible without the understanding and support of our stakeholders. Through various forms of engagement with stakeholders, we aim to build upon our trustworthy relations.

With Customers

We work to ensure safety and product quality in all the stages of research and development, manufacturing, logistics, and sales. We listen to feedback from customers and strive to improve our technologies and quality.

Quality Assurance Structure

To stably supply products of excellent quality able to satisfy customers, our factories have obtained ISO 9001 certification, the international standard for quality management systems. After rounds of examinations for maintenance and updates by the certifying body, we obtained the 2015 version of the certification in 2018. We conduct an internal quality audit once a year to confirm whether the management system at our factories is being appropriately and effectively implemented, and factory managers periodically make revisions to the system.

In the Fine Chemicals Business group, we have set up the Quality Inspection Team and the Quality Assurance Team independent from the Production Department to augment our quality assurance structure.

Communication with Customers

Sales staff in the Crop Protection Products Business group in Japan have obtained the JGAP* instructor qualification to better propose products that meet customer requests.

The Fine Chemicals Business group actively introduces our products and technologies through Web conferences with customers in Japan and overseas and other means.

* JGAP: Japan Good Agricultural Practice. An agricultural production management method for the purpose of ensuring the safety of agricultural crops.

With Shareholders and Investors

We established a disclosure policy, disclose information appropriately and in a timely manner, and strive to hold constructive dialogue with shareholders and investors.

General Meeting of Shareholders

We position the general meeting of shareholders as an important opportunity to engage in direct communication with all of our shareholders. At the general meeting of shareholders, we use visuals to supplement explanations of our business situation, business plans, and strategy. The notice of convocation of the general meeting of shareholders is released and sent at an early date. We also set up the “Hokko Now” corner, where we introduce our business performance as well as other topics of note as another way to expand our information sharing.

Management Plan and Financial Closing Briefings

We hold briefings for institutional investors and analysts to discuss our management plan and financial closing. We also aim to build good trustworthy relations with investors through regularly held IR meetings. We disclose a summary of the Q&A session from the briefing on our website. Since FY 2023, we have also held a briefing in the second-quarter settlement of accounts. Going forward, we will continue our efforts to enhance IR for shareholders and investors.

Expanding Our Website

We release timely and appropriate IR-related information, including about our management policy and strategy, business performance, and financial information, on our website to deepen understanding for the Hokko Group.

We launched the “Quick and Easy HOKKO” website (in Japanese) to promote understanding of our origins, the Crop Protection Products Business, and the Fine Chemicals Business using easy-to-understand graphics and photos. The “Hokko Chemical Industry and the SDGs” presents information on how our business activities are contributing to achieving the SDGs.

With Local Communities

Through offering tours and hands-on workshops and participating in volunteer activities, our business locations seek out opportunities for communication with local residents.

Offering Tours and Hands-On Workshops

Our locations give tours and hands-on workshops and seminars for students. Our factories provide briefings on product manufacturing processes, safety and health, and environmental conservation efforts. Our laboratories provide briefings on a range of tests to validate safety and efficacy that are required in the development of crop protection products.



Receiving interns (Hokkaido Factory)



Receiving junior high school students on work experience (Central Research Laboratories)

Social Contribution Activities, Communication with Communities

Our locations open their facilities such as baseball grounds to the community. We participate in cleanups around our business locations, collect waste materials from the community, and participate in various community events.

We also take part in blood drives, with a mobile blood drive visiting our factories each year.

Our laboratories have concluded memorandums with local governments to provide use of our sites as emergency shelters in the event of a disaster.



Participating in traffic safety event (Hokkaido Factory)



Community cleanup event (Niigata Factory)

With Employees

We are promoting initiatives related to human resource development, diversity, work-life balance, and health and productivity management based on our human resource development policies and our internal environmental maintenance policies.

Human Resource Development

To develop human resources who think for themselves and work with autonomy to tackle challenges in new fields, we implement various educational programs including rank-based trainings and practical workshops and sending employees to language schools. We also support employees to improve their skills by encouraging and subsidizing obtaining certifications (PhD, JGAP instructor, etc.) and distance learning directly and indirectly related to business.

Diversity

In corporate development, human resources with a wide variety of backgrounds must demonstrate their talents. We are undertaking various measures such as promoting women's empowerment, recruiting and promoting diverse human resources, maintaining a system for hiring senior citizens, and hiring disabled people.

Work-Life Balance

As part of realizing a work-life balance, we believe it is important to create well-ventilated workplaces where employees can feel comfortable working. We aim to realize work-life balance through various systems such as child care leave, family care leave, and planned paid leave. Promoting changes to how employees work from multiple angles will lead to increased productivity by individual employees, reductions in long working hours, and a higher rate of employees taking annual paid leave.

Health & Productivity Management

Through our Hokko Health and Productivity Management Declaration, we have proclaimed the entire organization's commitment to maintaining and promoting the health and well-being of its employees and their families, and we are developing activities aimed at achieving this goal. We are working to set out the prevention of lifestyle-related diseases, addressing mental health and smoking, and preventing infectious disease as our health promotion themes. Thanks to these efforts, we have been certified as a Health & Productivity Management Outstanding Organization.

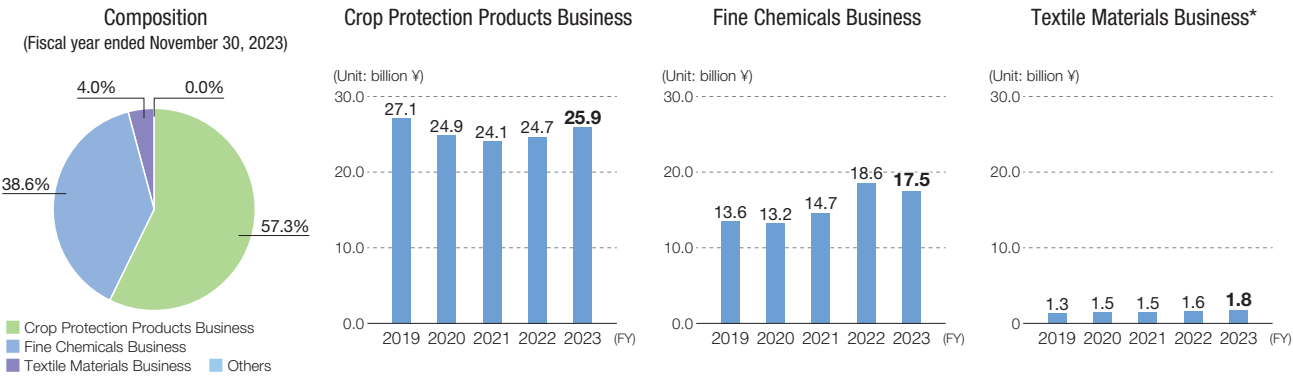
Financial Data

Consolidated Management Indicators

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023
Sales (million ¥)	41,986	39,641	40,287	44,864	45,227
Ordinary income (million ¥)	3,751	3,258	3,843	5,905	5,474
Current net income attributable to parent company shareholder (million ¥)	2,818	2,400	2,927	4,214	3,724
Comprehensive income (million ¥)	2,624	4,508	4,345	4,566	9,153
R&D expense (million ¥)	1,483	1,442	1,517	1,489	1,547
Depreciation cost (million ¥)	1,275	1,496	1,351	1,374	1,920
Capital investment (million ¥)	2,733	593	1,968	3,895	1,203
Net assets (million ¥)	26,356	30,363	34,220	38,240	46,770
Total assets (million ¥)	43,398	48,201	51,987	57,566	67,479
Net assets per share (¥)	973.17	1,121.13	1,263.58	1,412.06	1,727.05
Current net income per share (¥)	104.07	88.61	108.06	155.60	137.50
Diluted net income per share (¥)	—	—	—	—	—
Capital adequacy ratio (%)	60.7	63.0	65.8	66.4	69.3
Return on equity (ROE) (%)	11.2	8.5	9.1	11.6	8.8
Price-earnings ratio (ratio)	5.7	12.7	7.8	5.8	7.1
Cash flow from sales activity (million ¥)	3,923	4,590	2,940	3,869	4,834
Cash flow from investment activity (million ¥)	(2,235)	(1,885)	(1,689)	(2,809)	(1,980)
Cash flow from financial activity (million ¥)	(2,017)	361	(965)	(691)	(1,121)
Final balance of cash and cash equivalents (million ¥)	904	3,956	4,321	4,814	6,628
No. of employees [Average number of temporarily hired workers besides regular employees]	768 [147]	763 [138]	772 [131]	760 [123]	749 [118]

Notes :
1. Sales do not include consumption tax.
2. Diluted net income per share is not listed since there are no dilutive shares.

Sales by Segment



* The Textile Materials Business segment has been added from the second quarter of the FY 2019 consolidated cumulative period.
Due to it being the first year of consolidation, FY 2019 results cover the period from April to November.

Consolidated Balance Sheet

(Unit: million ¥)

	FY 2022 (November 30, 2022)	FY 2023 (November 30, 2023)		FY 2022 (November 30, 2022)	FY 2023 (November 30, 2023)
Assets			Liabilities		
Current assets			Current liabilities		
Cash and deposits	4,814	6,628	Bills and accounts payable	5,548	5,930
Notes and accounts receivable, contract assets	11,318	11,166	Short-term debts payable	97	—
Products and finished goods	11,908	13,402	Long-term debts payable within one year	1,400	—
Products in progress	392	477	Accounts payable	3,012	1,980
Raw materials and stored goods	5,281	5,454	Income taxes payable	988	678
Return assets	12	13	Consumption taxes payable	9	534
Other	934	585	Accrued expenses	3,303	3,253
Total of current assets	34,659	37,725	Refund liabilities	141	136
			Other	53	55
Fixed assets			Total of current liabilities	14,552	12,566
Tangible fixed assets			Fixed liabilities		
Buildings and structures (net)	5,516	5,403	Long-term debts	—	1,000
Machinery and vehicles (net)	4,597	4,169	Liabilities related to post-employment benefits	2,595	2,564
Land	962	962	Deferred tax liabilities	1,510	3,988
Construction work-in-progress	345	104	Refund liabilities	546	524
Other (net)	313	336	Other	123	66
Total of tangible fixed assets	11,733	10,974	Total of fixed liabilities	4,774	8,143
			Total of liabilities	19,325	20,709
Intangible fixed assets	615	665	Net assets		
Investments and other assets			Shareholder's equity		
Investment securities	9,790	17,020	Capital	3,214	3,214
Long-term loans	14	8	Capital surplus	2,608	2,608
Deferred tax assets	74	71	Earned surplus	26,977	30,078
Assets related to postemployment benefits	433	779	Treasury stock	(1,311)	(1,311)
Return assets	45	50	Total of shareholder's equity	31,488	34,589
Other	223	207	Accumulated other comprehensive income		
Allowance for doubtful accounts	(20)	(19)	Valuation difference on other available-for-sale securities	5,955	11,007
Total of investments and other assets	10,559	18,116	Foreign currency translation adjustment	401	631
Total of fixed assets	22,907	29,755	Accumulated adjustment related to post-employment benefits	397	543
			Total of accumulated other comprehensive income	6,752	12,181
Total of assets	57,566	67,479	Total of net assets	38,240	46,770
			Total of liabilities and net assets	57,566	67,479

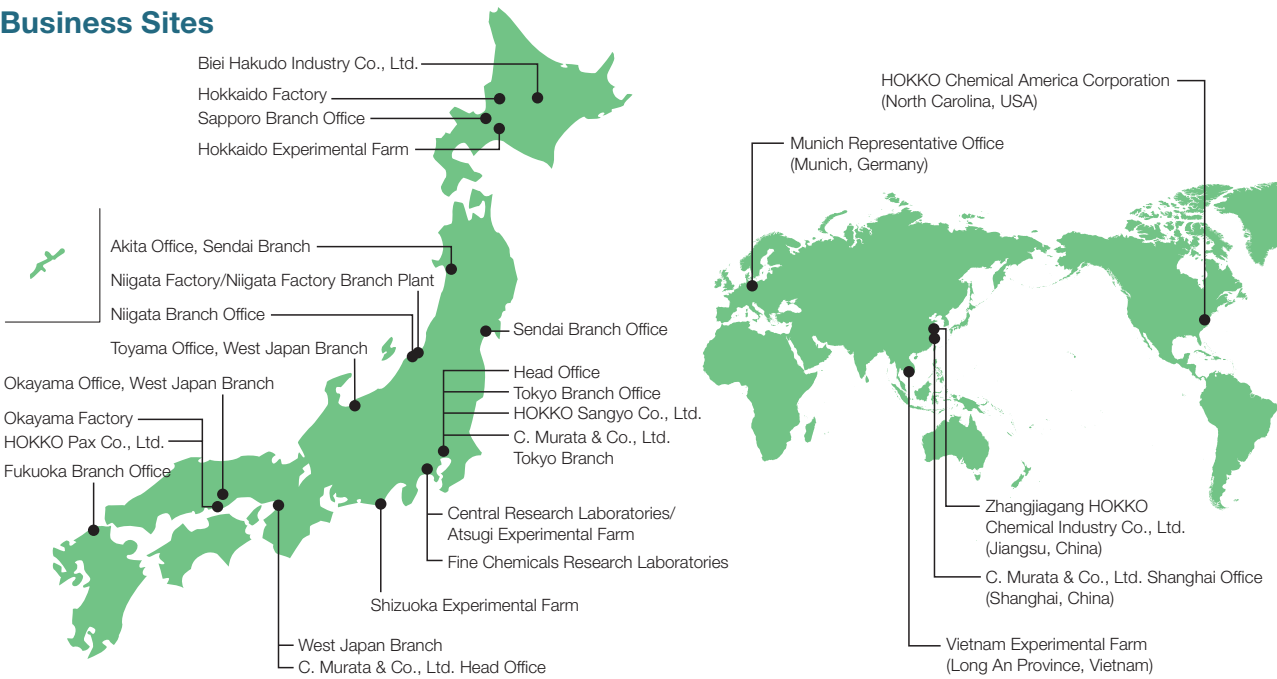
Company Overview

Corporate Profile

Corporate name: Hokko Chemical Industry Co., Ltd.
Head office: 1-5-4 Nihonbashi-Honcho, Chuo-ku, Tokyo 103-8341 Japan
Established: February 27, 1950
Capital: 3,214 million yen (as of Nov. 30, 2023)
Listed exchange: Standard Market of the Tokyo Stock Exchange
President: Ken-ichi Sano
No. of employees: Non-consolidated: 628
Consolidated: 749 (as of Nov. 30, 2023)

Business description:
Crop Protection Products Business
Manufacture and sale of insecticides, fungicides, herbicides, plant growth regulators, and related products
Fine Chemicals Business
Manufacture and sale of pharmaceutical and agrochemical intermediates, raw materials for electronics components, catalysts, raw materials for functional polymers, raw materials for fine ceramics, preservatives*, antifungal agents*, and related products*
* These products are sold only in Japan.

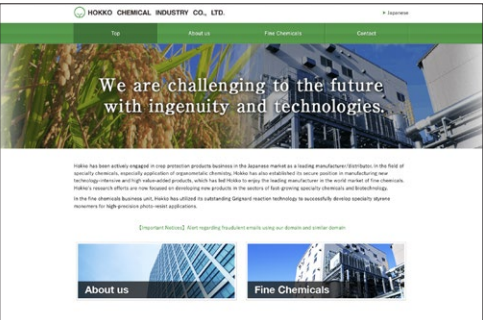
Business Sites



About Our Website

Hokko Chemical Industry’s website publishes a variety of information including our business description, information about our products, our history, and our social and environmental initiatives. We hope it will give you a deeper understanding of the Hokko Group.

URL : <https://www.hokkochem.co.jp/english>





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<https://www.hokkochem.co.jp/english>