



Chemical Safety

GRI 306-2/308-2

Policy (our fundamental view)

We have been deploying compliance and adaptation to relevant laws and regulations, management and handling of chemical substances, management and reduction of environmental impacts, and customer safety as elements of chemical safety in our Responsible Care (RC) activities.

We comply with relevant laws and regulations set forth in each country and region, and adapt to environmental laws and regulations by disclosing chemical substance risk information, participating in industry associations, and gathering information on regulatory trends.

In the management of chemical substances, we are also working to assess product safety risks, including new chemical substances, and enhance the functions of our management system to improve transparency and visibility. Moreover, to ensure the safety of our employees, we require the wearing of appropriate protective equipment and measure working environments based on chemical substance risk assessments.

We are also actively working to manage and reduce environmental impacts, and are managing PRTR Act-controlled substances, reducing emissions into the atmosphere, and controlling CFCs in accordance with the law.

Further, to ensure the safety of our customers, we provide information obtained from product safety risk assessments listed on product labels and safety data sheets (SDS), as well as ensuring

that Yellow Cards are carried for safety during transportation. Through RC activities utilizing the PDCA cycle, we are working to improve the level of chemical safety each year.

Management approach

In order to meet the needs of our customers now and in the future, the NOF Group promotes appropriate risk-based management of chemicals and conducts product safety risk assessments for all products, including new products.

Many countries and regions are now actively enacting or revising laws and regulations related to chemicals management. In cooperation with Group companies in Japan and overseas, NOF is strengthening its ability to gather information on regulatory trends and enhancing its functions using a comprehensive chemicals management

system in order to ensure compliance with the following items.

- We maintain a comprehensive understanding of the hazards, risks, and impacts of each product as they relate to all phases of the product's life cycle and intended use(s).
- We update the quality and quantity of information as necessary to ensure global consistency and to comply with local requirements for product information.
- We keep records of all necessary and requested product safety information to ensure that our products are useable throughout their entire life cycle.
- Standardized safety data sheets (SDS) are provided to customers at the time of initial delivery and upon request in local areas. We consistently maintain this critical information provision mechanism, and conduct distribution to all customers worldwide for all products, in compliance with local regulations and in the language requested by the customer.





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Initiatives by the NOF Group

The NOF Group believes that a sound understanding of its products' chemical properties, hazards, and impacts on people and the environment, as well as the management of risks associated with the handling of products, are fundamental to providing the market with a safe and competitive product portfolio in the future. The NOF Group works to ensure reliable operation of the mechanism for providing SDSs so that hazard information related to our products is easily available to our customers and employees, and we continuously provide updates on the latest information.

The NOF Group currently delivers over 5,000 products to markets in 82 countries around the world, and provides SDSs to these markets. We are also responsible for making revisions in response to changes in laws. We

provide customers with appropriate information and technical assistance to ensure thorough understanding of our products and safe usage and handling practices. Currently, we have already introduced a system to manage product information, and are gathering more information about product usage conditions to record and evaluate associated risks as laws and regulations evolve, reflecting such information in our SDSs.

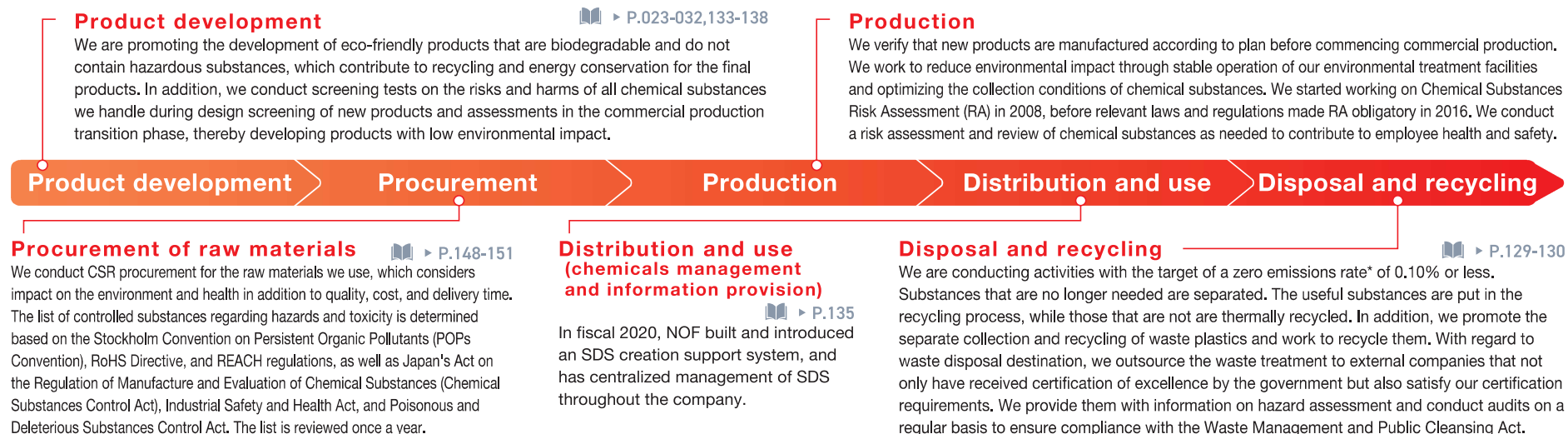
In addition, NOF has made a list of controlled substances specified in the POPs Convention, RoHS Directive, and the like, and promotes thorough management and volume reduction by ranking them as ① All chemicals prohibited to be handled, ② Chemicals for which we will consider alternatives and strive to reduce the amount handled, and ③ Chemicals to be handled

under appropriate management. We also comply with relevant regional and national chemical regulations, such as REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) in the European Union (EU), UK REACH in the United Kingdom, K-REACH in South Korea, and the Toxic Substances Control Act (TSCA) in the United States. NOF has a total of 43 EU-REACH registrations (as of the end of 2023).

Since the implementation of the EU's REACH system, no products have been subject to the system for substances of very high concern (SVHCs).

In addition, in Japan, the Group is promoting making lead-free products for pyrotechnic devices such as detonators, which contain lead that can affect water pollution.

Initiatives in the supply chain



*NOF's definition of zero emission: Volume of final disposal by landfill/volume of waste, etc. generated $\times 100 \leq 0.10$



Response to international chemical substance management

Chemical substances are being subject to stricter control on a global basis. At the World Summit on Sustainable Development (WSSD) held in 2002, a target was set as part of the international agenda to “use and produce chemicals in ways that minimize significant adverse effects on human health and the environment by 2020,” in an effort to realize sustainable development. Based on this agenda, countries around the world including emerging countries are being encouraged to adopt and firmly establish risk-based management of chemicals and implement GHS.* In terms of chemical substances, there is a rising trend requiring control of relevant risks from the standpoint of the entire supply chain, i.e. from manufacture to disposal, while also being required to disclose information on the risks caused by chemical substances and their control to the general public, including customers and consumers.

The NOF Group is implementing control of chemical substances in line with this trend to tighten controls over chemical substances by complying with the laws of each country and region. To this end, since fiscal 2020, NOF has introduced and built a company-wide SDS creation support system, and has begun centralized management of SDS throughout the company.

Meeting domestic requirements

In Japan, prior notification of new chemical substances is mandatory, pursuant to the Act on the Regulation of Manufacture and Evaluation of Chemical Substances (Chemical Substances Control Act) and the Industrial Safety and Health Act.

In order to make proper notifications, when beginning production of a new chemical substance, the Responsible Care & Plant Investment Department confirms compliance with laws, and such substances remain under strict control as internal audits are conducted to ensure that there are no excesses beyond the volume that has been authorized for manufacture or import. NOF also trains its responsible personnel regarding related regulatory matters in order to keep them up-to-date with the latest information.

In terms of reports on the actual quantity of general chemical substances manufactured, we practice appropriate control with the cooperation of our clients.

We also positively disclose information on the risks and other negative aspects of chemical substances through the Japan Initiative of Product Stewardship, which is the chemical industry’s institution for voluntary activities for the control of chemicals.

In addition, we participate in the Long-Range Research Initiative (LRI) implemented through the

Japan Chemical Industry Association (JCIA), support research that leads to safety and security from a viewpoint that a company should “meet the needs of society,” and work together to solve social issues.



Education on new chemical substances
(Advanced Technology Research Laboratory)



Education on new chemical substances (Oita Plant)

*Abbreviation for Globally Harmonized System of Classification and Labelling of Chemicals, which classifies the hazardous properties of chemicals according to certain globally standardized criteria and displays them in an easy-to-understand manner using pictorial labels and other means.



Compliance with REACH

REACH* is a comprehensive system of registration, evaluation, authorization, and restriction of chemical substances within the EU. REACH aims to protect human health and the environment, and to maintain and enhance competitiveness of the EU chemicals industry, among others, and includes almost all chemical substances exported to the EU within its jurisdiction.

The NOF Group engages in active exports to the EU region and complies with REACH in accordance with the export volume of the chemical substance involved. We practice appropriate compliance by obtaining the latest information from industrial associations and related authorities.

Other countries and regions

There has been increasing legislation of late for stricter controls over chemical substances not only in the US but also in Asian countries and regions such as South Korea, China, and Taiwan, and we are gathering the latest information regarding exports to such countries, and practicing appropriate compliance, when the situation arises.

Proper management of polychlorinated biphenyl (PCB)

The NOF Group properly stores and manages polychlorinated biphenyl (PCB) waste in accordance with the Law Concerning Special Measures Against PCB Waste, and disposes of such waste by commissioning disposal operators as prescribed by laws and regulations.

All treatment of high-concentration PCBs has been completed as of the end of March 2023, the final deadline for treatment. As for low-concentration PCBs, we have completed the survey of all equipment containing PCBs, including PCB components contained in paint coatings, and are systematically replacing the equipment and changing the coatings to meet the treatment deadline of the end of March 2027.

Compliance status to acts related to the environment

There was no violation of acts related to the environment.

*Acronym for "Registration, Evaluation, Authorization, and Restriction of Chemicals". REACH represents the EU's quality control regulations on chemicals and is applied to the registration, evaluation, authorization, and restriction of chemicals.



Joint Article Management Promotion-consortium (JAMP)

JAMP* was formed in 2006 for the purpose of establishing and promoting specific structures for facilitating the disclosure and communication of information over the whole supply chain by appropriately managing and disclosing information on chemical substances. The NOF Group utilizes the chemSHERPA tool for sharing information recommended by JAMP to supply downstream users with information on chemical substances.

Construction and operation of NOF's company-wide SDS creation support system

GHS is a kind of criteria for the classification of health, environmental, physical and chemical hazards of chemical substances and mixtures according to a given set of standards. This information must be reflected in the SDS and GHS labels to reflect the latest information, and all parties involved in handling chemical substances, including users, distributors, and transporters, must be alerted to the need for safe handling.

To this end, in fiscal 2020, NOF introduced and built a company-wide SDS creation support system, and has centralized management of SDS throughout the company. This system enables us to manage all chemical substances used in our

products on a company-wide server, and to provide our customers with the latest information on chemical substances in our products through timely updating of SDS and GHS labels issued by each business division to reflect changes in the laws and regulations of major countries. We have completed our response to the revision of the Chemical Management Act from fiscal 2023. To improve transparency and visibility, we are also working to expand our system capabilities to track and manage important information such as chemical substance usage conditions and handling history.



Transportation safety

The NOF Group is promoting the reduction of the environmental load in transportation, while at the same time engaging in activities to ensure the



Forklift training session, NICHYU LOGISTICS CO., LTD.

Yellow Card

Should an accident occur during the transportation of chemical substances, it could have dire consequences on human life, the neighboring area, the cargo, and the road. The Yellow Card states the measures transport operators, the fire brigade, and the police should take as well as contact and notification information, in the event of such an accident. The NOF Group strictly requires that such cards should be provided to transport operators involved, who are also required to carry the card with the corresponding product while in transportation.

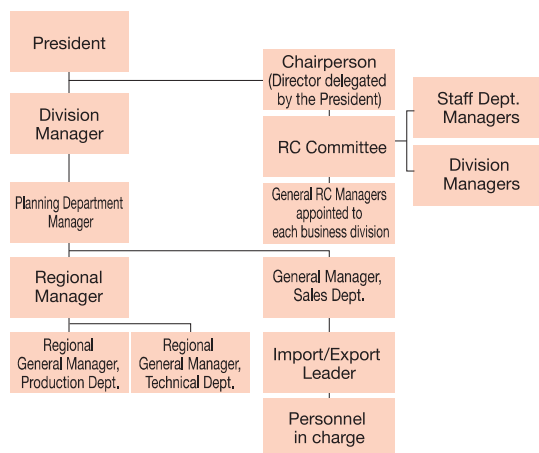


Yellow Card

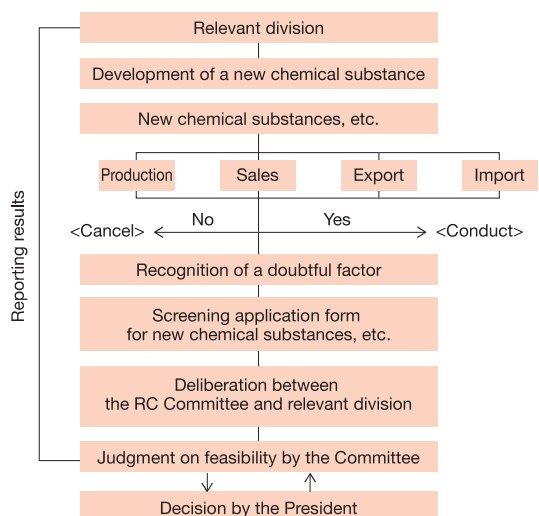
*Acronym for "Joint Article Management Promotion-consortium". JAMP was inaugurated in September 2006 by 17 companies subscribing to the underlying idea as a cross-sectorial body to promote safety activities.



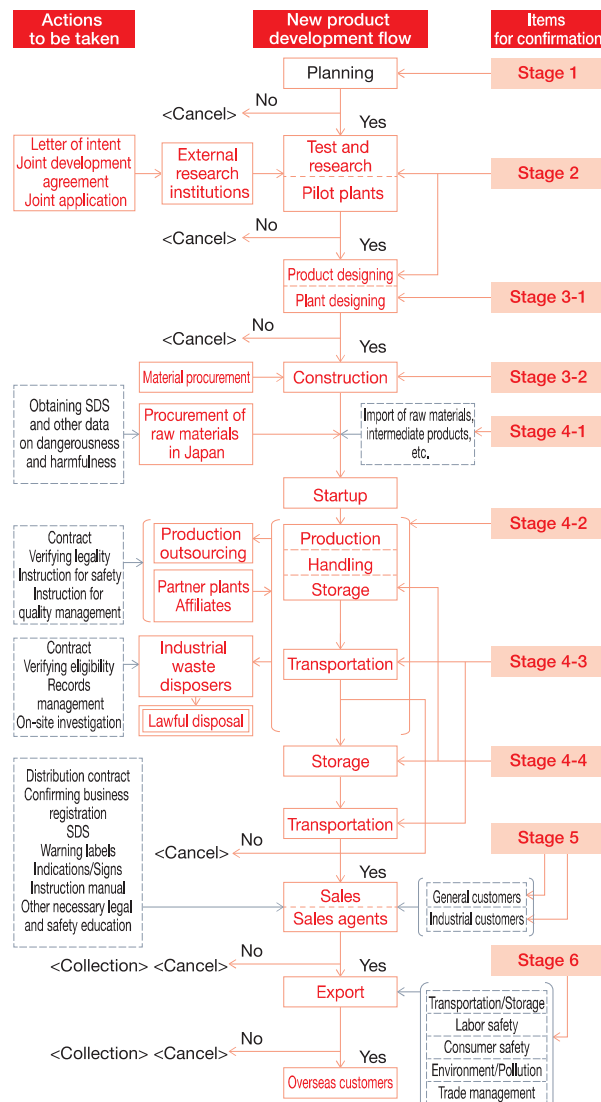
System diagram of sales, production, export, and import of new chemical substances, etc.



Management flow of new chemical substances, etc.



Management flow chart of new chemical substances, etc.



Items for confirmation in management flow of new chemical substances, etc.

Stage	Principal items for confirmation
1	(1) Quality planning (terms of use and impact on the environment, quality of competitors' products, performance demanded by customers, selling points), (2) Trademark/Patent, Response plan to laws and regulations in Japan and overseas, (3) Development plan (system, schedule, R&D expenses, safety test expenses, etc.), (4) Production plan (production processes, facilities for research and trial experiments), (5) Sales and export plan, (6) Budget
2	(1) Confirmation of the details of marketability and salability (functions, safety, container/package, transportation method, industrial wastes, expenses for production and selling, sales prices, energy saving issues, etc.), (2) Establishment of production processes and analysis/inspection method, (3) Research for the necessity of GLP and GMP (4) Research for specific value, reactivity, and explosiveness, (5) Confirmation of safety test expenses, etc., (6) Application of new chemical substances (Act on the Regulation of Manufacture and Evaluation of Chemical Substances and Industrial Safety and Health Act), (7) Research for CAS, TSCA, HCS, CEPA, WHMIS, EINECS, FD&C Act, etc., (8) Confirmation of SDS, warning labels, indications and signs, instruction manual, information on each type of toxicity, (9) Sales manual, (10) Contract details, (11) Application for patent and trademark, (12) Retention of documents and records
3-1	(1) Evaluation of cleaner production (reduction of wastes and prevention of generation), (2) SA on safety and disaster prevention for equipment, processes, and operations (including health problems), (3) Judgment on the effectiveness of the investment
3-2	(1) Industrial Safety and Health Act, (2) High Pressure Gas Safety Law, (3) Fire Service Act, (4) Explosives Control Act, (5) Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities, (6) Air Pollution Control Act, (7) Ozone Layer Protection Act, (8) Energy Saving Law, (9) Water Pollution Prevention Act, (10) Noise Regulation Law, (11) Offensive Odor Control Law, (12) Waste Management and Public Cleansing Act, (13) Act on Prevention of Marine Pollution, (14) Building Standards Act, (15) Poisonous and Deleterious Substances Control Act, (16) Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices, (17) Food Sanitation Act, (18) Act on the Regulation of Manufacture and Evaluation of Chemical Substances, (19) Agricultural Chemicals Regulation Act, (20) Act on Prevention of Radiation Hazards due to Radioisotopes, etc., (21) Act on Port Regulations, (22) Civil Aeronautics Act, (23) Road Transportation Act, (24) Factory Location Act, (25) Municipal ordinances on prevention of fire, pollution, etc.
4-1	(1) Prior confirmation of the presence of dangerous and harmful substance, (2) Examination of laws and regulations for the relevant substance, (3) Securing sufficient labor for SDS, warning labels, indications and signs, instruction manual, and others
4-2	(1) Bulk Standards Act, (2) Fire Service Act, (3) Act on the Regulation of Manufacture and Evaluation of Chemical Substances, (4) Explosives Control Act, (5) High Pressure Gas Safety Law, (6) Act on the Prevention of Disaster in Petroleum Industrial Complexes and Other Petroleum Facilities, (7) Act on the Rational Use of Energy, (8) Electricity Business Act, Gas Business Act, (9) JIS, (10) Law for the Promotion of Effective Utilization of Resources (11) Waste Management and Public Cleansing Act, (12) Act on the Regulation of Manufacture and Evaluation of Chemical Substances, (13) Industrial Safety and Health Act (Article 57-4 Ordinance on Prevention of Organic Solvent Poisoning, Ordinance on Prevention of Dangers Due to Specified Chemical Substances, Ordinance on Prevention of Tetraalkyl Lead Poisoning, Ordinance on Prevention of Lead Poisoning, Ordinance on Prevention of Dangers Due to Dust, Ordinance of Prevention of Ionizing Radiation Dangers), (14) Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices, (15) Poisonous and Deleterious Substances Control Act, (16) Food Sanitation Act, (17) Agricultural Chemicals Regulation Act, (18) Act on Prevention of Radiation Hazards due to Radioisotopes, etc., (19) Implementation of SA, SOP and measures for health problems, (20) PM system, QA (ISO 9000 series and JIS Z9900 series), and the completion of SDS, warning labels, indications and signs, instruction manual, etc.
4-3	(1) Explosives Control Act, (2) High Pressure Gas Safety Law, (3) Poisonous and Deleterious Substances Control Act, (4) Fire Service Act, (5) Act on Prevention of Radiation Hazards due to Radioisotopes, etc., (6) Railway Operation Act, (7) Road Transport Vehicle Act, (8) Road Act (underwater tunnel), (9) Ship Safety Act, (10) Act on Port Regulations, (11) Act on Prevention of Marine Pollution, (12) Maritime Traffic Safety Act, (13) Civil Aeronautics Act, (14) Postal Act, (15) Others (carrying documents, qualification, vehicle, container, loading standards, and indications and signs)
4-4	(1) Confirmation of precautions for indication/sign, (2) Confirmation of precautions for storage
5	(1) General and industrial customers: distribution of warning labels, indications and signs, and instruction manual, (2) Industrial customers: SDS, quality warranty card, contract, confirmation of business registration
6	<ul style="list-style-type: none"> ○ Transportation/Storage (1) UN, IMO (each code of IMDG - IBC - BC), ICAO, IATA (2) Europe: ADR, RID, EC Directives, (3) The US: 49CFR, CHEMTREC, NFPA, HCS, etc. ○ Labor safety (4) HCS, SDS, warning labels, indications and signs, instruction manual, etc. ○ Consumer safety (5) In addition to items presented in (4) above, product liability insurance and warranty card (limitation of warranty) ○ Environment/Pollution (6) The US: CAA, CWA, RCRA, CERCLA, SARA, TSCA, HCS (7) Canada: CEPA, WHMIS, (8) Europe: The Sixth and Seventh EEC Directives for Amendment, etc. ○ Trade management (9) Materials for chemical weapons, (10) Materials for narcotic drugs, (11) Harmful chemical substances, (12) Strategic materials (management and operation standards for strategic materials)



Initiatives to improve information accuracy in chemical substance management

The NOF Group focuses on sustainable chemical substance management and is working to improve the accuracy of information on the following points.

NOF works to ensure reliable operation of the system for providing safety data sheets (SDSs) through introduction of a chemical substance management system, enabling hazard information related to our products to be easily available to our customers and employees. Furthermore, by fiscal 2025, we plan to establish a company-wide chemical substance database and enhance the functions of our chemical substance management system.

First, the chemical substance management processes will be digitized to ensure accuracy and rapid access to information. This ensures strict management of data related to the handling of chemical substances and supports efficient decision-making.

In addition, we are also working to expand the functions of the system to track and manage important information such as usage and handling history of chemical substances, in order to improve transparency and visibility. This allows us to more accurately assess the risks of chemical substances and their impact on the environment, and to help formulate sustainable management strategies.

Furthermore, strengthening partnerships is another important initiative. While building cooperative relationships with suppliers and customers, the

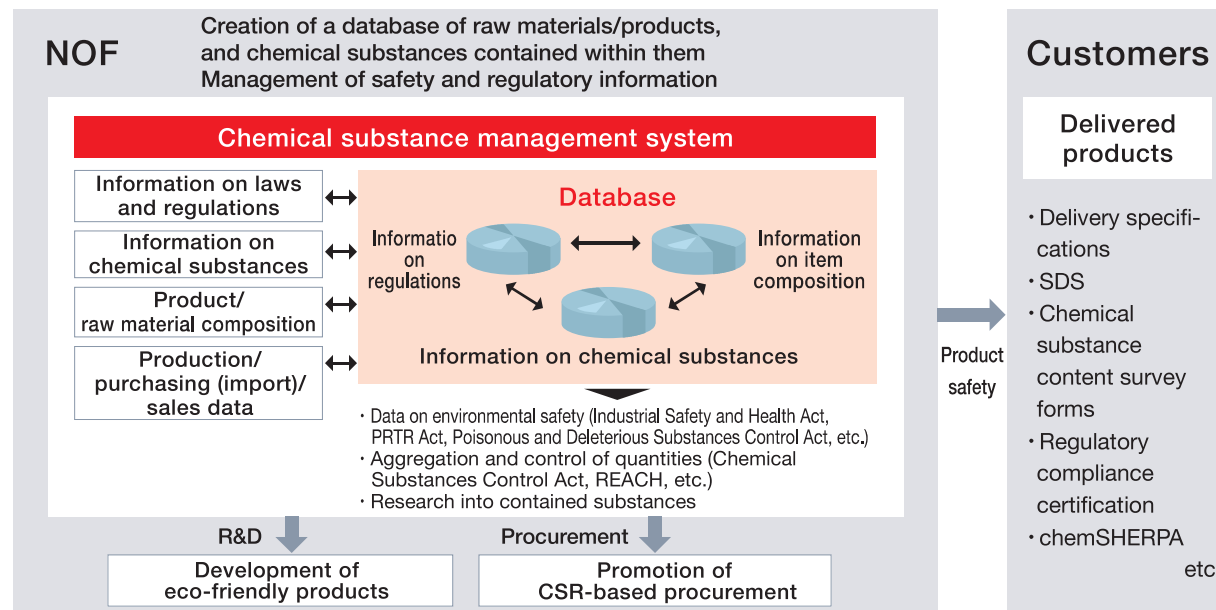
NOF Group strives to improve its products through continuous dialogue with customers in order to provide appropriate products in terms of chemical substance management. We are also coordinating with industry groups and regulatory bodies to share information and know-how. In this way, we aim to contribute to raising the level of chemical substance management throughout the industry and to achieve further development.

Finally, our sustainability initiatives include the promotion of research and development. The NOF Group is focusing on the development of more

eco-friendly chemical substances. We aim to provide high-performance products while minimizing negative environmental impact. In this way, we are working to achieve a sustainable business model while meeting the needs of our customers.

The above are the main points on which the NOF Group is working to improve the accuracy of information on chemical substance management. The NOF Group aims to maintain the trust of its customers and provide valuable returns to all stakeholders while pursuing sustainable management.

Overview of chemical substance management system





Chemical Safety | Management and Handling of Chemical Substances

GRI 403-2

Chemical substances risk assessment

The NOF Group strives to reduce all risks of occupational accidents and to prevent their occurrence. Among them, in order to ensure compliance with the Ordinance on Industrial Safety and Health, which was revised and came into effect on April 1, 2023 to prevent occupational accidents caused by chemical substances, we have set this risk assessment as one of the implementation items related to occupational safety in the RC activity targets for fiscal 2024, and are checking the implementation status during regularly conducted RC audits. Chemical substance risk assessment is one of these, and we have established a system to ensure that we do not omit anything in responding to the increasing number of substances subject to assessment each year.

before, and has established a management system in line with the revised law.

Wearing protective equipment

Following this revision, not only is it mandatory to appoint a chemical substance control whose duty is to autonomously manage chemical substances, but it is also mandatory for employees who handle chemical substances to wear protective equipment and for a person in charge of protective equipment to select appropriate protective equipment and manage its use. The NOF Group is once again working to ensure the wearing of protective equipment, which it required from

**PRTR Act-controlled substances***

The emissions volume of PRTR Act-controlled substances by the Domestic Group in fiscal 2023 was 167.0 tons, an increase by about 17% from 143.3 tons in the previous fiscal year. As a result, 38% reduction of emissions volume was achieved from the 269 tons in fiscal 2010, the reference year of the Mid-term Target.

PRTR Act-controlled substances with an emission volume of 10 tons or more in fiscal 2023 are indicated in the table.

Substances high in volume (10 tons or more) discharged into the environment
Domestic Group

Cabinet order No.	Name	Emission volume (tons / year)
300	Toluene	42.8
186	Dichloromethane	38.3
128	Chloromethane	19.8
392	n-hexane	15.5
83	Cumene	15.0
Total emission volume		167.0

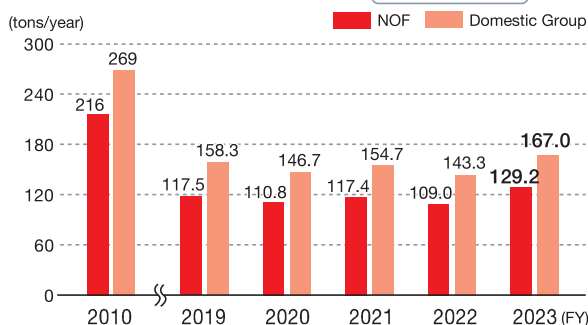
Measures to reduce emissions of PRTR Act-controlled substances

NOF has set a KPI of reducing emissions of PRTR Act-controlled substances to 170 tons or less each year. In particular, we are examining manufacturing methods in which PRTR Act-controlled substances

are not used in order to reduce the amount of substances with high environmental emissions. We aim to reduce emissions through the adoption of alternative substances and environmentally friendly manufacturing methods.

In addition, the operating conditions of recovery equipment are optimized to improve the recovery rate of emissions. Regular maintenance and proper operation and management ensure effective recovery and lead to reduced emissions.

NOF will continue its efforts to reduce emissions of PRTR Act-controlled substances and promote more environmentally friendly manufacturing activities. In this way, we will contribute to the achievement of a sustainable society and work to protect the global environment.

Changes in emissions of PRTR**Act-controlled substances** Domestic Group**Reducing emissions of chlorofluorocarbons (CFCs)**

In accordance with the Act on Rational Use and Appropriate Management of Fluorocarbons (Act on Fluorocarbons Emissions Control), which covers the entire life cycle of CRCs from production to disposal, we have been carrying out simple and periodic inspections according to plan, as required by the law.

In fiscal year 2023, we estimated leakage of CFCs amounted to 392 tons of CO₂e at the Oita Plant, 341 tons of CO₂e at the Kawasaki Works, and 305 tons of CO₂e at the Aichi Works, bringing the total for our company to 1,097 tons of CO₂e.

We will continue to strengthen inspections and maintenance, and ensure proper disposal of equipment. We will also promote the replacement of existing systems with ones that use refrigerants with lower global warming and ozone depletion potentials and further reduce CFCs emissions.

Calculated leak of CFCs in FY2023

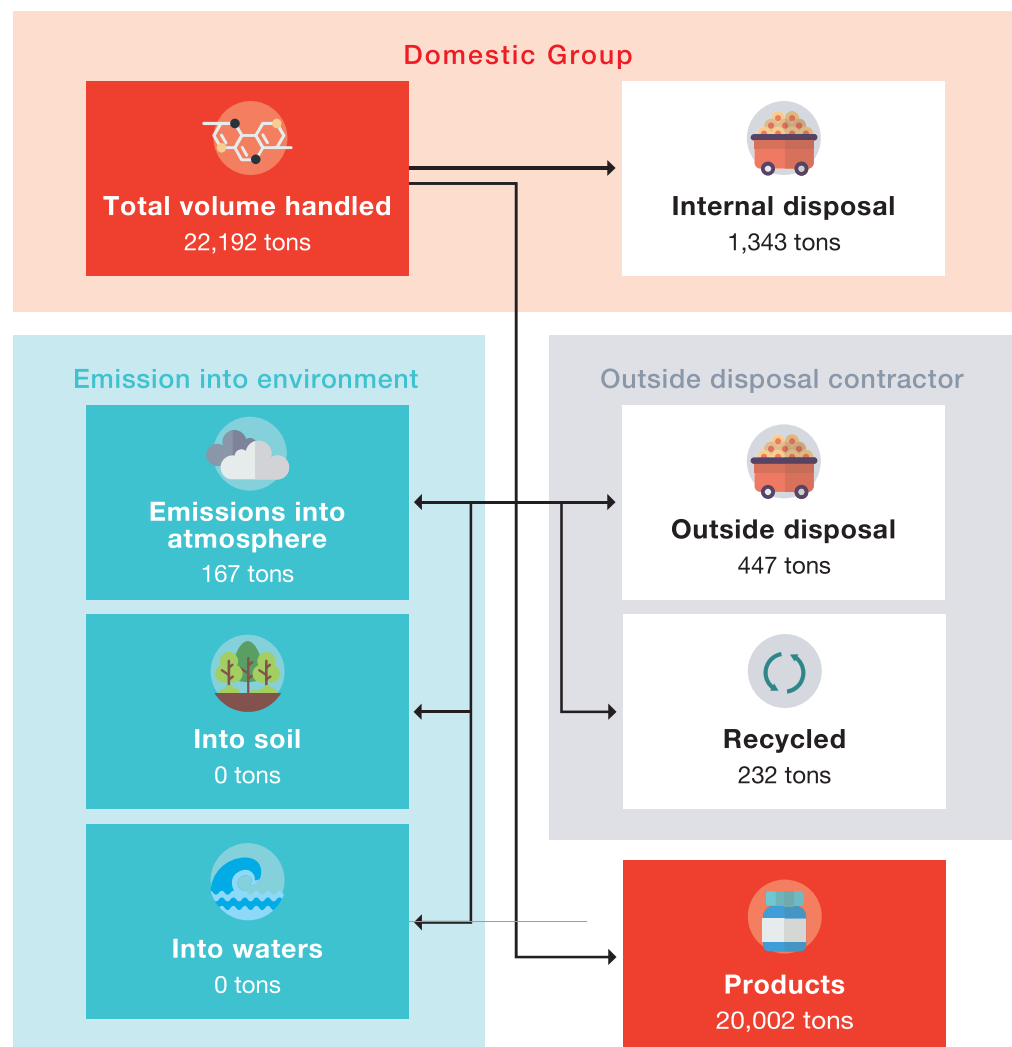
Works/Plants	Emissions (tons-CO ₂ e)
Amagasaki Plant	60
Aichi Works	305
Kawasaki Works	341
Oita Plant	392
Total	1,097

* Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. In this report, the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof is referred to as the PRTR Act.



Balance of emissions of PRTR Act-controlled substances in fiscal 2023

Domestic Group



Substances under JCIA-recommended voluntary control

The Domestic Group is also engaged in initiatives to assess and reduce emissions of VOC substances recommended by the Japan Chemical Industry Association (JCIA). The total quantity of such substances emitted in fiscal 2023 was 58 tons, a decrease of about 27% from the previous fiscal year's quantity of 79 tons.

Changes in emissions of VOC substances under JCIA-recommended voluntary control

Domestic Group

