



Response to chemical substance management

GRI 306-2

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.¹ 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 Evaluation of

Chemical Substances and Regulation of Manufacture, etc (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 & Production Engineering 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



Education on new chemical substances (Advanced Technology Research Laboratory)



Education on new chemical substances (Oita Plant)

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.

Compliance with REACH

REACH^{*2} 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.

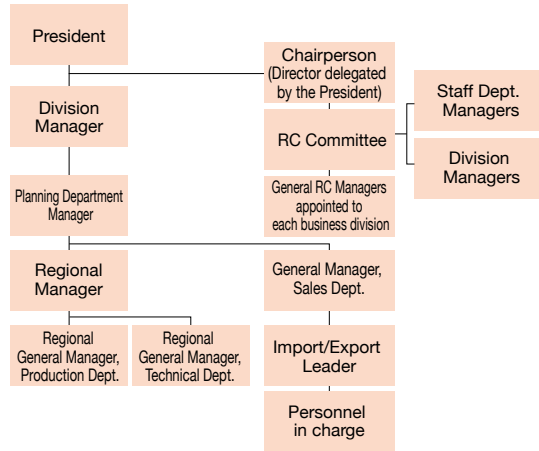
*1 Abbreviation for Globally Harmonized System of Classification and Labelling of Chemicals, which classifies the hazardous properties of chemicals according to certain globally standardized criteria and displays them in an easy-to-understand manner using pictorial labels and other means.

*2 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.

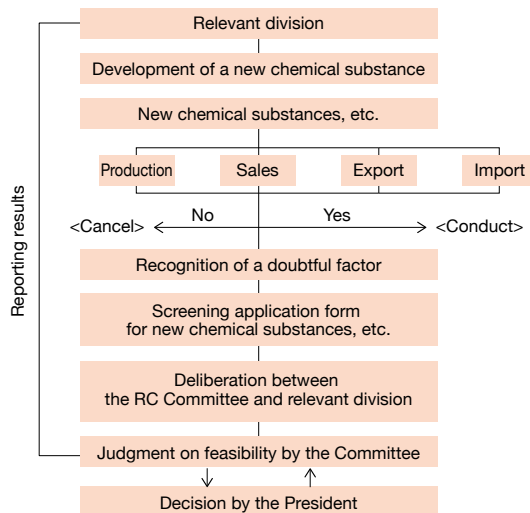


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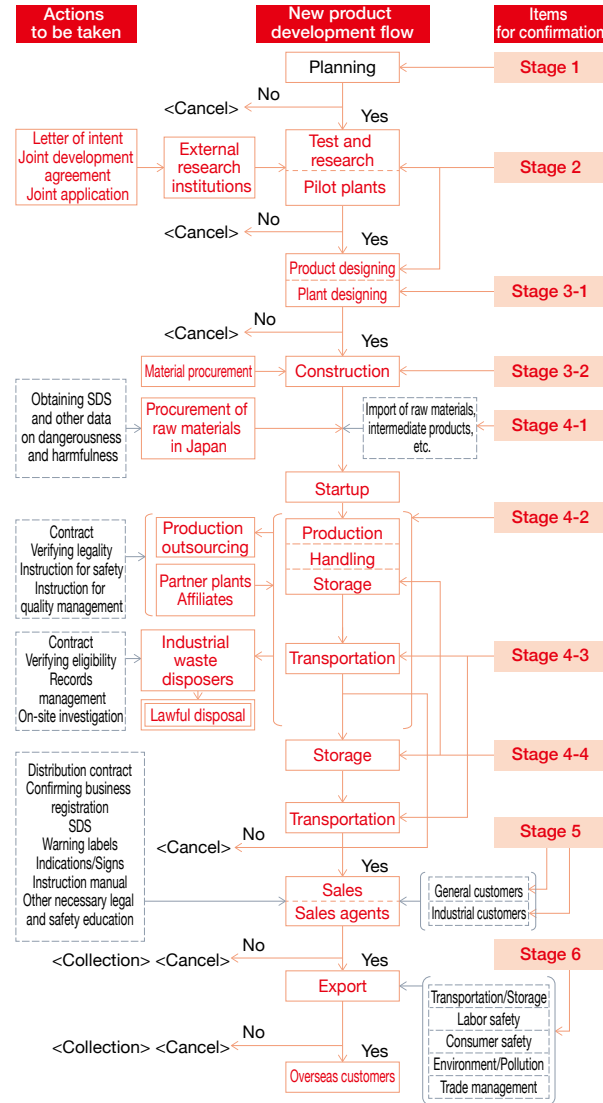
System diagram of sales, production, export, and import of new chemical substances, etc.



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, measures against 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) Vibration Regulation Law, (12) Offensive Odor Control Law, (13) Waste Management and Public Cleansing Act, (14) Act on Prevention of Marine Pollution, (15) Building Standards Act, (16) Poisonous and Deleterious Substances Control Act, (17) Act on Securing Quality, Efficacy and Safety of Products Including Pharmaceuticals and Medical Devices, (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) Building 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 on 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)



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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 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 unit to reflect changes in the laws and regulations of major countries. We plan to further upgrade the version to quickly respond to the revision of the PRTR Act from fiscal 2023 and the revised Industrial Safety and Health Act from fiscal 2024.



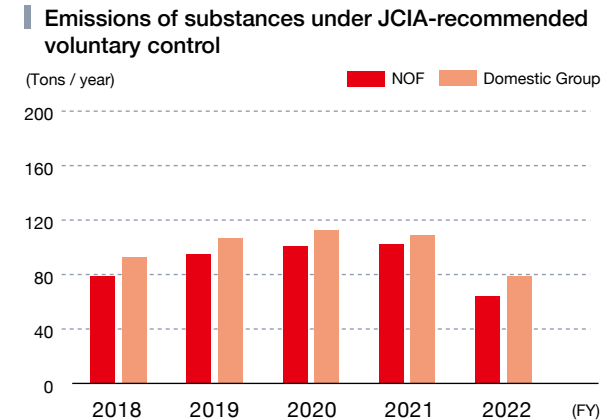
Initiatives to reduce emissions of chemical substances

Each member-company of the Domestic Group is making efforts to reduce emissions of chemical

substances by assessing and making notifications of PRTR Act-controlled substances.

Substances under JCIA-recommended voluntary control

The Domestic Group is also engaged in initiatives to assess and reduce emissions of substances recommended by the Japan Chemical Industry Association (JCIA). The total quantity of such substances emitted in fiscal 2022 was 79 tons, a decrease of about 28% from the previous year's quantity of 109 tons.



* 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.