

From the Biosphere to Outer Space



NOF CORPORATION

CSR Report

2017



CSR Report 2017

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Editorial Policy

In an effort to provide our broad range of stakeholders with a better understanding of the CSR activities carried out by the NOF Group, this Report presents the activities of the NOF Group for fiscal 2016.

Reporting Period

Fiscal 2016 (From April 1, 2016 to March 31, 2017)
*Activities conducted prior to and after this period have also been included when deemed to be important for deepening the understanding of the reader.

Scope of the Report

The Report covers the entire NOF Group. However, when necessary, the term "NOF Group" is used to refer to the whole Group, and the term "NOF" is used to refer to NOF CORPORATION alone.

Environmental data

Main items of environmental performance data are separately aggregated and stated with respect to domestic and overseas sources. In this Report, NOF and its 13 domestic consolidated subsidiaries are referred to as the "Domestic Group."

Social data

Social data primarily covers NOF and includes certain affiliates.

Financial data

Financial data covers NOF and its 25 consolidated subsidiaries.

Guidelines Referenced

Environmental Reporting Guidelines 2012, Ministry of the Environment of Japan
ISO26000: 2010 Guidance on Social Responsibility, Japanese Standards Association

Disclaimer

This Report contains forward-looking statements based on management plans and expectations at the time of publication, as well as past and present facts regarding the NOF Group. These forward-looking statements comprise assumptions and judgments based on currently available information, and thus the actual events and outcome of future business activities may differ from those predicted due to changes in various conditions.

Message from the President

We will contribute to mankind and society by creating and expanding new value in wide-ranging fields from the biosphere to outer space.



Thank you very much for your interest in the CSR Report 2017 of the NOF Group.

The NOF Group is engaged in multifaceted business developments with innovative products under the Corporate Philosophy of "Contributing to Mankind and Society through the Creation of New Value in Wide-ranging Fields from the Biosphere to Outer Space" in our three business fields of "life sciences," "electronics/IT," and "environment/energy."

The management policy of fiscal 2016, the final year of the three-year plan "2016 Mid-term Management Plan" that commenced from fiscal 2014, was "Toward further growth." Through this plan, the NOF Group worked to "expand innovative value" through implementation of various measures aimed at "the creation of new businesses," "the improvement of productivity" and "the expansion of corporate presence."

The NOF Group has formulated a new three-year plan, the "2019 Mid-term Management Plan," which commenced from fiscal 2017, and has begun implementing its measures.

In this plan, in an aim to make greater progress, we have put up the "creation and expansion of innovative value" as our basic policy and will work on each measure of "creating products and markets," "improving productivity," "enhancing Group management" and "promoting CSR activities."

This year marks the 80th anniversary of the founding of NOF. We plan to take this commemorative year to evolve as a functional materials manufacturer capable of supplying innovative products to Japan and overseas markets, continuing our efforts to be a trusted business group with a strong presence.



President and Chief Executive Officer
Akiharu Kobayashi

Strengthening CSR Activities

The impact of corporate activities on the environment and economy is expanding due to factors such as resource consumption and diversifying forms of employment. Consequently, companies are being called upon more than ever before to act in a socially responsible manner. As a member of society, the NOF Group strives to ensure legal compliance as well as to fulfill our corporate social responsibility (CSR), such as the preservation of the global environment and ensuring people's health, security and safety, in order to become "a trusted business group with a strong presence" for all of our stakeholders.

We will strengthen CSR activities, as well as thoroughly enforce corporate governance through the activities of the CSR Committee and each specialty committee. In light of the impact that our business activities have on the global environment and local communities, we will further promote activities that increase our management transparency and soundness based on the concepts of "corporate governance," "respect for individuals," "RC activities" and "coexistence and co-prosperity."

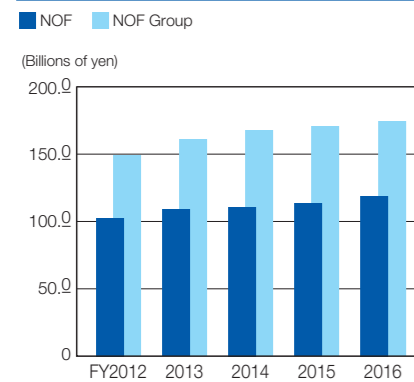
We, hereby, submit the CSR Report 2017. We hope that it provides you with a better understanding of the NOF Group's activities aimed at contributing to the environment and society, and we shall be grateful if you would give us your further support and candid opinions regarding this report.

Corporate Profile (As of March 31, 2017)

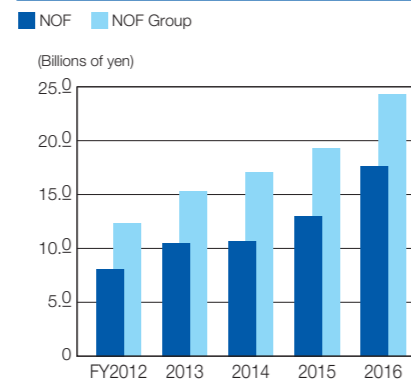
- **Name:** NOF CORPORATION
- **Established:** June 1, 1937
- **Incorporated:** July 1, 1949
- **President and Chief Executive Officer:** Akiharu Kobayashi
- **Head Office:** 20-3, Ebisu 4-chome, Shibuya-ku, Tokyo, Japan
- **Capital:** ¥17,742 million
- **Net Sales:** ¥174.0 billion (NOF Group)
¥119.0 billion (NOF)
- **Employees:** 3,712 (NOF Group)
1,658 (NOF)
- **Group Companies:** 25 consolidated subsidiaries

Management status

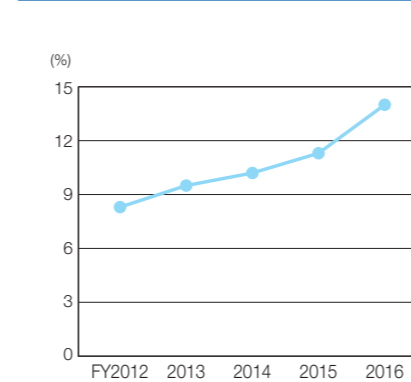
Net sales



Operating income



Operating income to net sales (NOF Group)



Main business locations of NOF CORPORATION

Business location	Address	Contact	ISO-14001	ISO-9000's
Head Office	20-3, Ebisu 4-chome, Shibuya-ku, Tokyo 150-6019, Japan	+81-3-5424-6670 (Responsible Care & Production Engineering Dept.)	—	—
Amagasaki Plant	56, Ohamacho 1-chome, Amagasaki, Hyogo 660-0095, Japan	+81-6-6419-7292 (Environmental Safety Administration Office)	BV 3056277-2A Renewed on Oct. 1, 2016	BV 3672449 Renewed on Oct. 21, 2016
Kawasaki Works (Chidori Plant) (Daishi Plant) (DDS Plant)	3-3, Chidori-cho, Kawasaki-ku, Kawasaki, Kanagawa 210-0865, Japan	+81-44-288-2153 (Environmental Safety Administration Office)	BV 3555631 Renewed on Apr. 28, 2016	(Chidori Plant) BV 3607007 Renewed on July 15, 2016 (Daishi Plant) HACCP SY-0010: Renewed on Oct. 17, 2013
Oita Plant	2, Oaza-Nakanosu, Oita, Oita 870-0111, Japan	+81-97-527-5201 (Environmental Safety Group)	BV 3308039: Renewed on Feb. 19, 2015	BV 3235489: Renewed on Oct. 24, 2014
Aichi Works (Kinuura Plant) (Taketojo Plant) (Display Materials Plant)	61-1, Aza-Kitakomatsudani, Taketojo-cho, Chita-gun, Aichi 470-2379, Japan	+81-569-72-1955 (Environmental Safety Administration Office)	BV 3735704 Renewed on Jan. 22, 2017	(Kinuura Plant, Display Materials Plant) BV 3625487 Renewed on June 25, 2016 (Taketojo Plant) JQA AS0183 Renewed on July 8, 2016

Business segments of NOF and its consolidated subsidiaries

Founded on businesses using “oils and fats,” materials that offer unlimited possibilities, the NOF Group has ceaselessly and boldly diversified into a variety of state-of-the-art fields. True to our slogan of being active “From the Biosphere to Outer Space,” we have been expanding our business reach into areas far beyond our original sphere as a chemicals producer. NOF’s current businesses include oleo & specialty chemicals, functional chemicals & polymers, explosives & propulsion systems, functional foods, life science products, DDS development, display materials, anti-corrosion, logistics and real estate. Leveraging our unique technologies and expertise in each of these fields in a wide range of industrial and life-style products, we have earned the high regard and trust of our customers.

The businesses of the NOF Group are classified into four broad segments: Functional Chemicals, Life Science, Explosives & Propulsion, and Others. The following diagram represents the relationship between the main products of each segment and the consolidated subsidiaries.



1 Roof (Solar cells)



NOF's organic peroxides are used to enhance the heat resistance and strength of the resins that attach the electricity generating components with the protector components of the solar cells (Functional Chemicals & Polymers).

2 Medical nutritional products



NOF provides foods formulated from medium-chain fatty acids for maximum digestion and absorption for patients with kidney diseases whose protein-intake has been restricted (Functional Foods).

3 Crime-prevention devices



The NET LAUNCHER®, which deploys a net towards intruders and the LIQUID LAUNCHER®, which sprays tear gas, both products of Nippon Koki Co., Ltd., are being used as groundbreaking crime-prevention devices by schools and other institutions (Explosives & Propulsion).

4 Headlamps



NOF's antifog agents are used to prevent fogging in the lenses of automotive headlamps (Functional Chemicals & Polymers).



5 Automotive components including bolts and nuts



GEOMET®, a completely chrome-free rust prevention coating developed by the Anti-Corrosion Coatings Group of the NOF Group that is environmentally-friendly and demonstrates high anti-corrosion functions, is used in automotive parts of numerous car manufacturers (Anti-Corrosion).

6 Industrial explosives



NOF's emulsion explosives with an automatic charging system ensures operational safety and has contributed to the improvement of infrastructures including the construction of tunnels for expressways and the Linear Shinkansen, as well as subterranean rock storage tanks for crude oil (Explosives & Propulsion).

7 Antifreezing agents, automatic spraying device



The antifreezing agent KAMAGU®, developed by HOKKAIDO NOF CORPORATION, which is sprayed onto road surfaces using an automatic spraying device, is contributing to the safety of winter roads. Since it contains no chloride it poses no fear of salt damages (Explosives & Propulsion).

8 Hand antiseptic agents



Hand antiseptics are a must for preventing hospital-acquired infections. Hand antiseptic agents formulated with NOF's moisturizing ingredient, "LIPIDURE®," solve the problem of chapped hands (Life Science Products).

9 Car seats



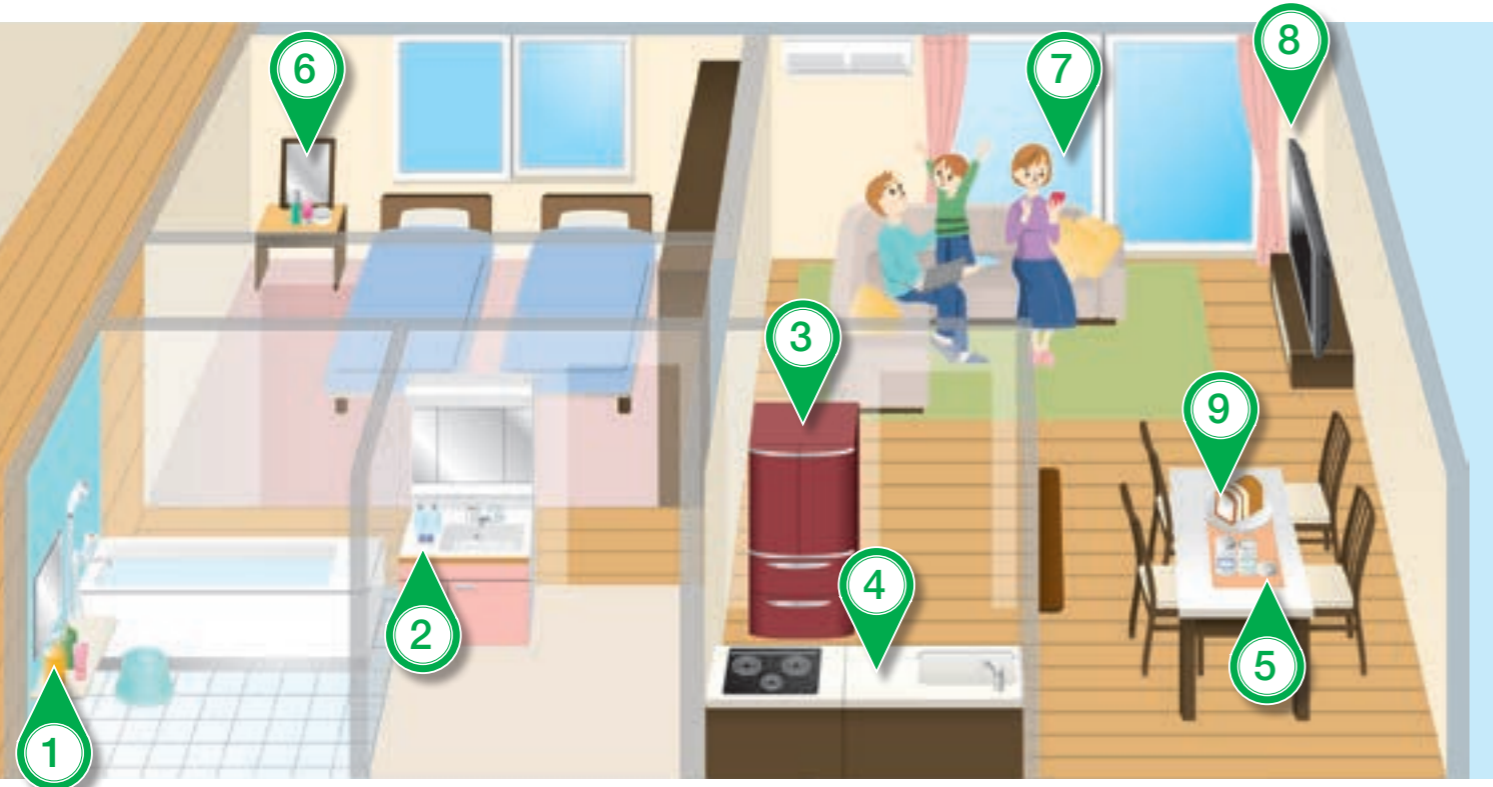
NOF's polyether, UNISAFE™, is used as a foam stabilizer to improve the formability of urethane used in the interiors of automobiles, such as car seats (Oleo & Specialty Chemicals).

10 Space rockets

The functional components of NIGK Corporation, which leverage the characteristics of explosives that generate immense energy with the use of a small amount, play a vital role in each stage of ignition of solid rocket boosters, satellite separation (See figure above*1), orbit launch and satellite retrieval. NOF, as the sole manufacturer of solid fuels for space rockets in Japan, produced the solid propellants for solid rocket boosters (See figure above*2) for the H-IIA and H-IIB rockets (Explosives & Propulsion).

11 Oceanographic Surveys

The "AES-3," NIGK Corporation's automatic marine elevator unit, which is capable of simultaneously measuring various information including water temperatures by water depth in chronological order, is playing a major role in the world's oceanographic surveys (Explosives & Propulsion).

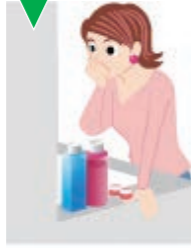


1 Shampoos and Body Soap



Anionic surfactants developed by NOF, which are known for their mildness and for their ability to form fine bubbles, are used in shampoos and body soaps (Oleo & Specialty Chemicals).

2 Contact lenses and contact lens care products



Contact lens materials and many contact lens care products contain NOF's multifunctional moisturizing ingredient, "LIPIDURE™" (Life Science Products).

3 Refrigerators and air conditioners



Esters developed by NOF are used in refrigerators and air conditioning units as lubricants that are eco-friendly and compatible with the new HCF refrigerants (Oleo & Specialty Chemicals).

4 Frozen foods



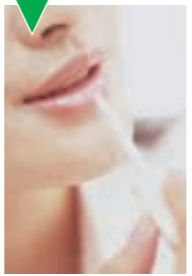
Cream-flavored and butter-flavored margarine developed by NOF with functions that are suitable for frozen foods such as deep-fried croquettes and rice pilaf are used (Functional Foods).

5 Health foods



Various health foods contain NOF's functional lipids (Functional Foods).

6 Cosmetics



NOF's various cosmetic ingredients, used in toning lotions, emulsion lotions, serums and beauty creams, have been highly regarded for their quality and functionality (Oleo & Specialty Chemical).

7 Smartphones



NOF's protection films and functional films are used in displays in order to enhance durability and image quality (Display Materials).

8 Television



NOF's functional films equipped with various functions including the anti-reflection function, the UV ray protective function, the anti-finger mark function and anti-static function are used in displays (Display Materials).

9 Bread



NOF's margarine with its soft and moist texture and aromatic butter flavor improve the quality of bread through enzyme action (Functional Foods).

NOF Group's Eco-friendly Products

Based on its technologies and experiences built up over the years, the NOF Group continues to develop eco-friendly products.

[What the NOF Group means by "eco-friendly products"]

- (1) Products that facilitate resource saving and recycling
- (2) Products reduced in environmental load
- (3) Products containing neither hazardous nor legally regulated substances

The products of the NOF Group are almost wholly supplied to corporate users. Some of the products of the NOF Group delivered to corporate users are exhausted as they are used as processed foods or explosives, but many of them are further processed into end products. In such cases, we deliver products that contribute to recycling and energy-saving of the end products and eco-friendly products that are biodegradable or that do not contain harmful substances in an effort to reduce environmental loads. Going forward we will strive to develop products and technologies that will contribute to reducing the environmental load from the standpoint of the entire life cycle from the procurement of materials to production, distribution, use, disposal and recycling.

Products that Facilitate Resource Saving and Recycling

Recycling of material resources is a vital key to the realization of a sustainable society. The NOF Group has proposed diverse resource saving and recycling techniques, which are now in practical use.

Deposit control agent (YUKA SANGYO CO., LTD.)

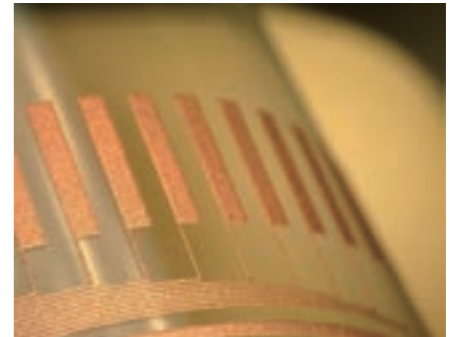
Recycled paper resources contain numerous impurities including sticky substances such as adhesives. These impurities lower the efficiency of the paper recycling process and impact the quality of the product. The pitch control agent MILLSPRAY®, SPANOL® and DETAC® and the removing agent BIOREX® have solved these problems and promote the recycling of waste paper.



These products demonstrate their superior performance in reducing impurities that generate in the paper-making process.

Copper paste for screen printing (NOF CORPORATION)

Etching is the standard method for forming copper wiring on electronic circuit boards. However, this method requires waste fluid processing because copper waste fluid is generated as most of copper foil is dissolved. The copper paste developed by NOF makes it possible to directly draw copper wire on the necessary areas through the screen printing method. For this reason, it is possible to form copper wiring that is not wasteful without generating waste fluid, which in turns makes it possible to use resources efficiently and contribute to environmental preservation.



Example of use in printing of copper paste by screen printing

Vulcanized rubber substitutes (Functional Chemicals & Polymers, NOF CORPORATION)

While large quantities of vulcanized rubber are used in auto parts and sealing materials, which have to be highly resistant to heat and oil, vulcanized rubber can never be molten once they are molded, and therefore refuse recycling. Unlike them, NOFALLOY® TZ series, which can be heated for re-melting as many times as wanted for recycling, are extensively utilized as substitutes for vulcanized rubber.



Products made recyclable by the use of NOFALLOY® TZ series

Products Reduced in Environmental Load

We in the NOF Group, always asking ourselves "To reduce our environmental loads to the possible minimum, how can we utilize our technology", are earnestly meeting many different requests from diverse fields.

Low-VOC*1 curing agents (Functional Chemicals & Polymers, NOF CORPORATION)

Bath tubs are manufactured by thermally curing unsaturated polyester resin. PERHEXYL® A is a curing agent that can shorten the molding cycle and moreover significantly reduce the VOC, an environmental load that remains in the molded product.

Antifog agents for automotive headlamps (Functional Chemicals & Polymers, NOF CORPORATION)

Today, LED lamps are in accelerated use for automotive headlamps by virtue of their reduced power consumption, extended service life, contributions to fuel efficiency of cars and less CO₂ emissions. However, as they do not make the lamp inside as hot as in conventional halogen lamps, LED headlamps involve the problem of susceptibility to fogging by dew drips. The MODIPER® H series are used for preventing such fogging within lamps and for keeping their front lenses clear.



Antifog agents used for automotive headlamps

Eco-friendly refrigerating machine oil (Oleo & Specialty Chemicals, NOF CORPORATION)

HFC (Hydrofluorocarbon) refrigerants, which do not deplete the ozone layer, are increasingly used as refrigerants for air conditioners and refrigerators. Eco-friendly refrigerating machine oil enhance co-solubility with HFC (Hydrofluorocarbon) refrigerants and improve its thermal stability, electrical insulation performance and other factors. Moreover, its low viscosity contributes to saving energy consumption. In recent years, the refrigerants having a smaller global-warming potential compared with previous products are required, and NOF is now supplying refrigerating machine oil for refrigerants having a low global-warming potential.

Anti-sticking agents (Oleo & Specialty Chemicals, NOF CORPORATION)

In road construction, asphalt mixtures often stick to the cargo beds and hoppers used within plant facilities, and to prevent this trouble, petroleum-derived adhesion preventers have been used. However, conventional adhesion preventers are not friendly to the environment; they contaminate soil and/or water. ASPHASOL® and ASPHARAB®, made from natural oil, contribute to environmental conservation as a highly biodegradable product.

*1 Volatile Organic Compounds

"How ASPHASOL® N-02" proves effective



Where ASPHASOL® is used

Where it is not used

Eco-friendly



Oil readily biodegradable in the environment (Biodegradability 60% or more in 28 days) (Under OECD 301C tests)

Eco Mark Certification Number 09110001
Name of utilizing contractor: NOF CORPORATION

Product: ASPHASOL® N-02, N-03

Eco Mark Certification Number 12110001
Name of utilizing contractor: NOF CORPORATION

Product: ASPHARAB® CE-R, LF

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© Received the fiscal 2011 Kinki Chemical Society Japan Environmental Technology Award (ASPHASOL®)

Biodegradable hydraulic fluid (Oleo & Specialty Chemicals, NOF CORPORATION)

Leaking of hydraulic fluid (mineral oil) used in construction machinery for outdoor use or dam gates in accidental troubles or natural disasters and the resulting contamination of the environment is posing a problem. In view of this circumstance, NOF has developed hydraulic fluid MILLUBE® that is decomposed by natural bacteria (biodegradable) and is urging replacement of conventional hydraulic oils with this new product.

Eco-friendly



Oil readily biodegradable in the environment (Biodegradability 60% or more in 28 days) (Under OECD 301C tests)

Eco Mark Certification Number 08110006
Name of utilizing contractor: NOF CORPORATION

Product: MILLUBE® E-22A, E-32A, E-46A, E-56

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© Received the fiscal 2010 Kinki Chemical Society Japan Environmental Technology Award

pCO₂ meters (NiGK Corporation)

pCO₂ meters are drifting observation buoys used to study the effects of global warming. They drift on the ocean's surface for a year, observing carbon dioxide partial pressure of ocean surface and relaying the data together with positioning data.



Vapor pressure crushing agent, "GANSIZER®" (Nippon Koki Co., Ltd.)

As GANSIZER® uses high vapor pressure that is generated during the thermolysis of the agent to crush bedrock, stone, and concrete structures with low vibration and low noise in a manner that does not instantly cause shock waves, it has gained a strong reputation as a crushing agent not containing explosives that is friendly towards the surrounding environment. It has been confirmed that the impact at the time of crushing does not have an effect on fish and other living creatures during the underwater crushing of breakwaters that were destroyed in the Great East Japan Earthquake and tunnel construction near rivers, etc.



Antifreezing agents (HOKKAIDO NOF CORPORATION)

Antifreezing agents such as sodium chloride conventionally used on road surfaces in cold areas have posed the problem of "salt damages." NOF's antifreezing agent KAMAGU®, an acetic acid-derived chemical containing no chloride, poses no fear of salt damages. AUTOKAMAGU® JET, an automatic antifreezing agent spraying device, is a sensor-based system that automatically sprays KAMAGU®, an environmentally-friendly acetic acid antifreezing agent, onto snowy or frozen roads. It is able to work 100% on natural energy using solar energy and it can also perform advanced road surface management via remote monitoring and control. AUTOKAMAGU® JET contributes to environmental conservation and road safety together.



KAMAGU®, together with AUTOKAMAGU® JET, is proving highly effective against the freezing of road surfaces.

Products Containing neither Hazardous nor Legally Regulated Substances

As a group of chemical companies manufacturing chemicals and supplying them to society, the NOF Group attaches foremost importance to the safety of products themselves.

Chrome-free anti-corrosion coatings (NOF METAL COATINGS ASIA PACIFIC CO., LTD.)

GEOMET® is a water-based anti-corrosion coating which contains no chrome compound. Satisfying the requirements of Europe's ELV and RoHS directives, GEOMET® Treatment Parts are used by automakers across the world.



Parts treated with GEOMET®

Cement capsule (NiGK Corporation)

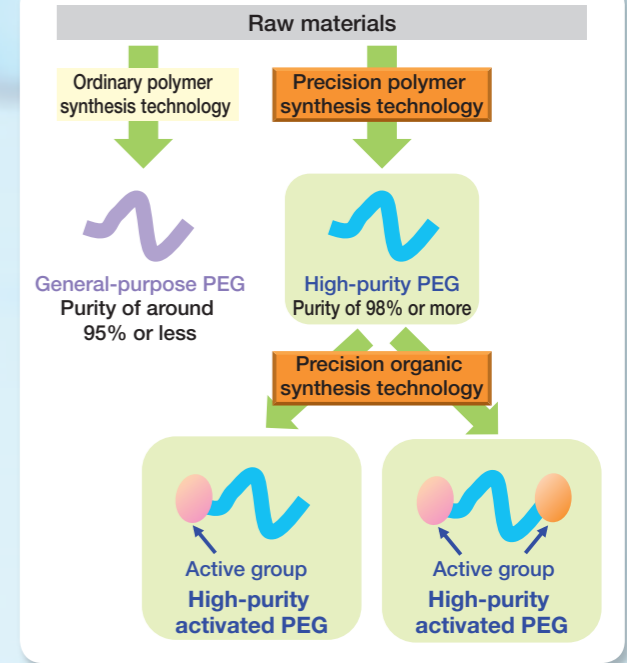
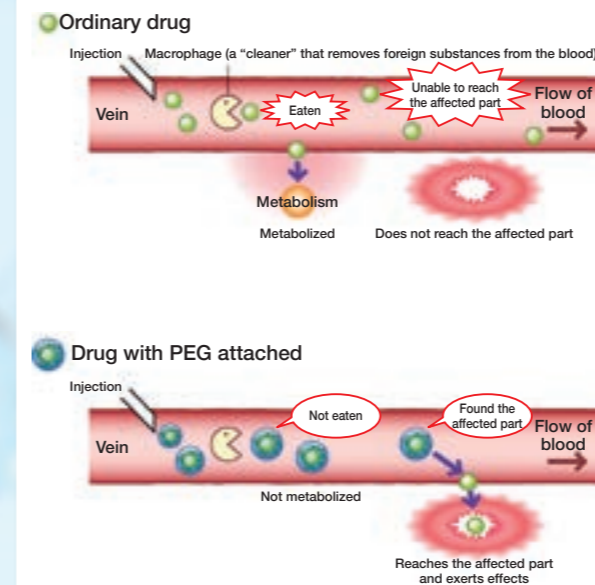
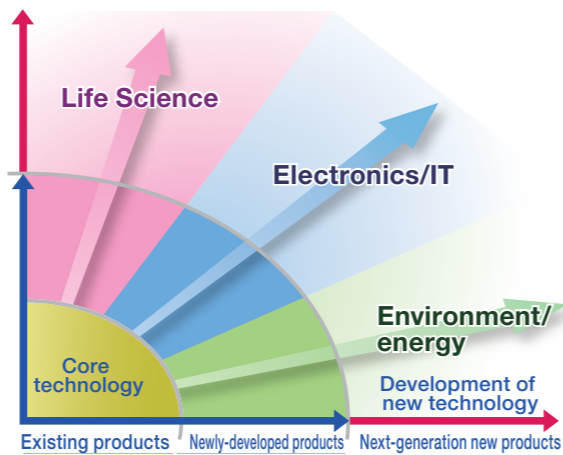
Cement capsule is an (inorganic) adhesive-based capsule anchor for post-installed application intended for typical use in anti-earthquake reinforcement work. This product is more resistant to fire than resin products, and excels in safety as it contains no harmful chemicals, which might invite sick house syndrome, or endocrine disrupter.



Example of use in an actual project (anti-earthquake reinforcement of Shinkansen bridge piers)

The NOF Group has set its target in the three business fields of “life sciences,” “electronics/IT,” and “environment/energy” with great growth potential in Japan and overseas, and is actively developing new products in these fields. This topic presents one representative product in each of these prioritized fields and the developed technologies they feature.

Prioritized business fields of the NOF Group



Life Science Product

Case 1

Drug Formulation Materials

What is the Drug Delivery System?

When a patient receives an injection, the drug is delivered via the veins to its target part and exerts its effect. However, some drugs may also act in undesired parts of the body, causing adverse health effects (side effects), or may be rendered less effective due to metabolism (break-down of the drug's active ingredients).

The **Drug Delivery System (DDS)** enables to deliver the required amount of a drug, for the duration needed, to the target part.



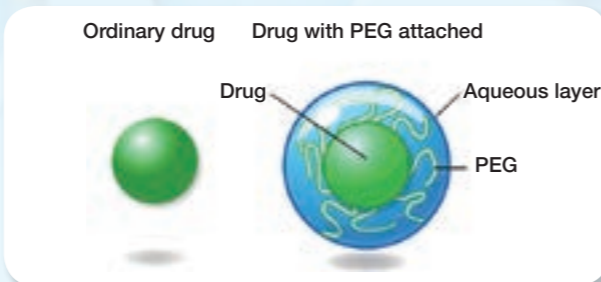
Role of polyethylene glycol (PEG)

Polyethylene glycol (PEG) is often used in DDS. PEG is not readily identified as a foreign substance by the immune system and is not eliminated by the body, and is thus attached to a drug, thereby:

- (1) protecting the active ingredients in the drug and deliver them to the target part (reducing side effects), and
- (2) extending the duration of the drug's travel in the blood without being metabolized (producing a longer-lasting effect)

to help the drug achieve its intended effect. DDS is a patient-friendly technology which enables a reduced dosage and frequency of administration, in addition to reducing side effects.

The key to DDS is PEGs that can be attached to drugs. NOF is the global leader in PEG production and the first company in the world to successfully commercialize PEGs.



Development of PEGs with active groups

PEGs are widely manufactured for use in common industrial products, but there are two challenges involved in using PEGs for DDS.

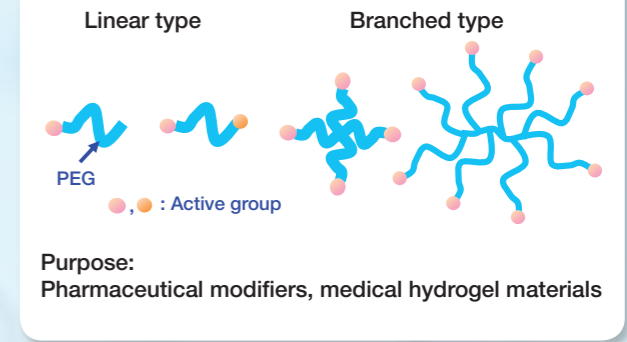
The first is the purity of PEG. The purity of general-purpose PEGs is around 95% or less. A greater level of purity is needed to use it as a pharmaceutical material.

The second is how to bind PEG to the drug. PEGs cannot be stably bound to the drug as-is, so it needs to have a structure (an active group) that binds to the drug.

In order to overcome these challenges, NOF has developed its “precision polymer synthesis technology” and “precision organic synthesis technology.”

- Precision polymer synthesis technology is a new technology that has been developed based on polymer synthesis technology to manufacture general-purpose PEGs for use in surfactants and other applications. While the purity of general-purpose PEGs is around 95% or less, NOF's PEGs are 98% pure or greater.
- Precision organic synthesis technology is used to introduce into high-purity PEGs various active groups that bind PEGs to drugs or antibodies.
- Recently, in addition to high-purity PEGs with one (or two) active groups, we are working on the development of more effective high-purity PEGs made of multiple branched PEG strands with multiple active groups.

NOF's high-purity activated PEGs, which are highly purified for pharmaceuticals and contain active groups



optimized for individual drugs, are currently used by drug manufacturers worldwide as materials for new DDS pharmaceuticals.

Future of high-purity activated PEGs

DDS pharmaceuticals can reduce the burden on patients by increasing the effectiveness of drugs, thereby reducing the dosage and frequency of administration. NOF strives to contribute to a greater quality of life (QOL) for patients by supplying PEGs with high-purity active groups, a key to DDS pharmaceuticals. We will play a part in protecting peoples' health by supplying materials for ever-advancing pharmaceuticals and medical products.

Environment/Energy Product

Case 2

Functional Polymers

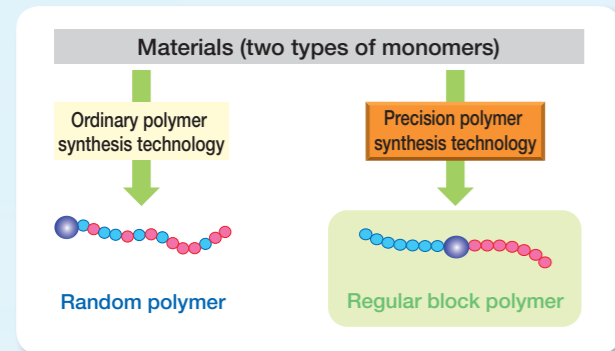
Polymers are the main components in objects such as plastic bags, bathtubs, and paints. Polymers consist of chains of small fundamental units known as monomers. Different types of monomers will produce polymers with various properties.



Regular block polymers

When two different types of monomers are used to produce polymers via ordinary polymer synthesis technology, the polymers will have random sequences of two monomers.

NOF's "precision polymer synthesis technology," however, produces "regular block polymers," in which the two monomers are lined up in order, by monomer type.



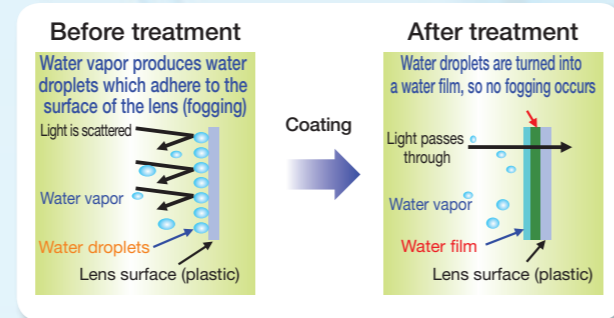
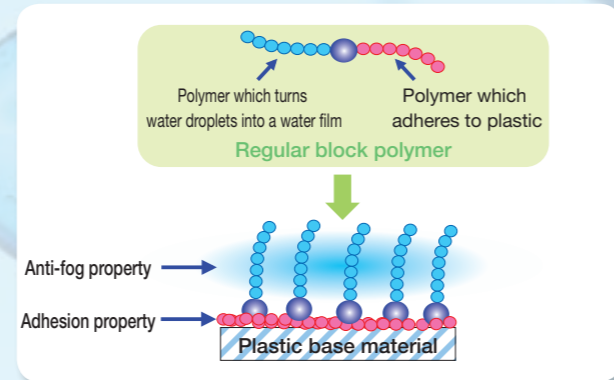
High-function anti-fog agents

Regular block polymers are able to more efficiently exhibit the functions of polymers with different properties which comprise them compared to random polymers. One example is NOF's high-function anti-fog agents.

Using precision polymer synthesis technology, NOF has developed a regular block polymer made up of a polymer segment which turns water droplets into a water film and a polymer segment which adheres to plastic. When applied to a plastic material such as a lens, the polymer segments which adhere to plastic are arranged across the surface, and the other polymer segments which turn water droplets into a water film cover the plastic. This forms an anti-fog layer which prevents the lens from fogging.

Normally, the plastic on a lens surface repels water,

causing water vapor to adhere in the form of tiny water droplets. These tiny water droplets scatter light, producing fog. However, when an anti-fog layer is formed, the droplets of water vapor form a film across the surface of the lens, so fogging does not occur.



Future of functional polymers

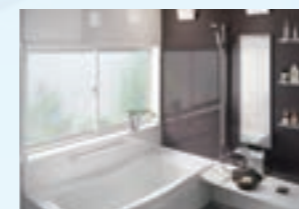
High-function anti-fog agent is just one example of the tremendous application potential of technology utilizing regular block polymers, which can change the properties of base material surfaces. For instance, block polymers consisting of the polymer segments which repel oil and the other polymer segments which stay on resin could be used to create bathtub surfaces which keep clean and are easy to maintain. There are myriad needs for technologies which can change the properties of base material surfaces. NOF is developing products to meet these needs on an individual basis.

Anti-fog agents



Headlamp cover

Anti-pollution agents



Bathtub

Electronics/IT Product

Case 3

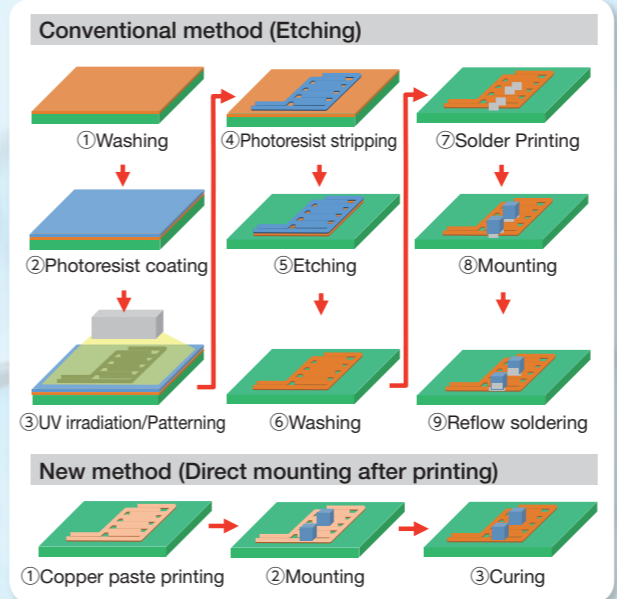
Copper Paste Ink

Printed electronics

Electronic devices such as televisions and mobile phones contain electronic circuits comprising conductive wires and electronic components. Printed electronics is gaining attention as a new technology for manufacturing electronic circuits with greater ease and at lower cost.



This new technology employs a commonly-used printing method to create conductive wiring and electronic components by printing on substrates with special ink. This has a potential to greatly reduce the number of processes and materials required to manufacture electronic circuits compared to conventional methods.



Challenge of using copper as conductive ink

High-cost materials are needed in the use of functional ink for printed electronics. For example, pricey silver and conductive resin are used as ingredients in conductive ink. This has prevented the technology from becoming more widespread. General electronic circuit manufacturers use inexpensive high-performance copper in electronic circuit wiring, so there has been a strong demand for conductive ink made from copper. However, as copper is easily oxidized through

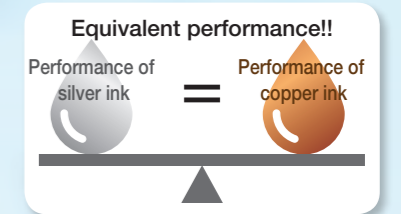


atmospheric exposure, it cannot provide the level of conductivity required for electronic circuit wiring. Therefore, the use of inexpensive copper has not been possible.

Development of conductive copper paste

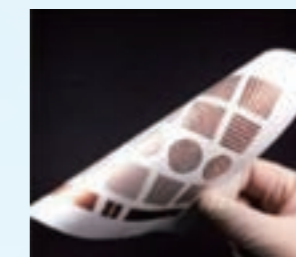
The smaller the particle size of copper the better it performs as ink, but the more easily it is oxidized, resulting in lower conductivity. NOF has solved this problem by developing a technology to inhibit oxidation on the surface of copper particles, increasing the oxidation resistance of the copper particles themselves. With this technology, NOF has developed a copper paste (copper ink in paste form) which enables high-precision screen printing, one of the most commonly-used methods.

NOF's copper paste not only offers a level of conductivity equal or superior to conventional silver paste, but it can also be used in fine line pattern printing, and provides a high level of adhesiveness to resin substrates and metals. For this reason, in addition to printed circuit boards for general home appliances, applications are being considered for various electronic components such as touch panels, sensors, switches, and antennas.

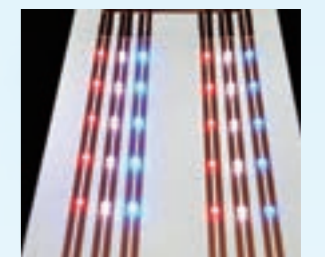


Future of copper paste

NOF's copper paste not only has a strong adhesiveness to metals, but also offers superb printing performance with regard to other materials such as paper or cloth. These properties can be used, for example, to print with copper paste on inexpensive paper substrates, creating new electronic circuits at lower cost than ever. Printed electronics is a technology for manufacturing electronic components in the printing processes. With its major advantages, such as lower costs, suitability for mass production, energy savings, and resource savings, it is expected to be utilized in a wide range of fields.



Pattern on a paper substrate



Light-emitting device using a new method and paper substrate



Innovative Materials, Advanced Technologies.

Create cutting-edge technologies by developing new innovative materials.

Today, the developments of IT and Information appliance are going to change our life style, and the technological innovations in the life science are trying to reach the essence of life.

In this "Time of remarkable technological innovation", there is a need for Chemical Materials that can adapt to "Change of technology".

Our R&D organization is comprised of the following nine Laboratories and the Corporate R&D division. Five laboratories are for supporting the core business units (Oleo & Speciality Chemicals, Functional Chemicals & Polymers, Explosives & Propulsion systems, Functional Foods, Display Materials). And, three laboratories are for the priority business areas (Life science, DDS) to specialize, and the remaining one is for Corporate R&D division that does not belong to any business units.

In order to correspond to "Time of remarkable technological innovation", NOF is continuing challenging to develop new technologies and new products by taking the social needs of near future at the R&D laboratories of each business unit.

Corporate R&D division is responsible for planning the Corporate R&D strategies, and adjusting the cooperation between each business unit.

In addition, this division is responsible for developing "fundamental technologies" of innovative materials and advanced technologies which have wide applicability and impact on performance and productivity in the future.

Corporate R&D division is searching new materials and new technologies world-widely, and challenging to develop innovative materials and advanced technologies for the new era through cooperating within and outside.



Advanced Technology Research Laboratory

The Advanced Technology Research Laboratory is engaged in development of "fundamental technologies" of innovative materials and advanced technologies which have wide applicability and impact on performance and productivity in the future.

This laboratory is developing the next generation technologies and products by combining our core technologies of each business unit and the innovative materials which are researched by the academy in the world.



Oleo & Speciality Chemicals Research Laboratory (Oleo & Speciality Chemicals Division):

Focusing on application researches mainly for oils and fats and their derivatives, surfactants, macromolecules, the Oleo & Speciality Chemicals Research Laboratory is approaching from various angles and developing speciality products in the fields including resource, environment, energy, healthcare, information and electronics.



Functional Chemicals & Polymers Research Lab. (Functional Chemicals & Polymers Division):

In this laboratory, novel high performance polymers and advanced materials are being developed with the technologies from synthesis, analysis, polymerization and evaluation of organic peroxides.



Research and Development Department (Explosives & Propulsion Systems Division):

The laboratory is now promoting R&D activities to gunpowder, explosives, and solid propellants, exploring new areas, and setting up international cooperation focusing on the future globalization. The Kamioka Test Center has a test facility built in the tunnel to secure safety of the surroundings.



Functional Foods Research Laboratory (Functional Foods Division):

Based on technologies regarding oil and fat processing, emulsification, nano-emulsification and micro-encapsulation, functional utilization of emulsifiers and enzymes among others, and functional lipids including DHA, the laboratory is endeavoring to develop "safer and more trustworthy" products including edible oil and fats, functional food and enteral nutritional products.



Life Science Research Lab. (Life Science Products Division):

Based on MPC polymer which is a core biocompatible material, this laboratory engages in research and development to apply its polymer for medical products regarding eye-care, skin-care, oral-care, medical devices, and diagnostics.



DDS Research Laboratory (DDS Development Division):

This laboratory engages in research and development to apply advanced technologies, as well as PEG derivatives, phospholipids and novel DDS materials, in the field of DDS.



Display Materials Research Lab. (Display Materials Division):

Developing display materials-related products embodying the foremost of NOF's technology.



Nippon Koki Co., Ltd., Shirakawa Plant, R&D Department:

This company has developed many types of gun ammunitions for defense use. The company is now emphasizing development of products such as industrial explosives and precision devices including automotive safety devices. Based on these high technology accumulated through years of experiences, the company is now concentrating on the product development of the new security field to cope with the crime prevention, which are expected from various areas.



NiGK Corporation R&D Department:

This company has developed many new products using its own technology based on wide range of expertise such as chemistry, electrical and mechanical engineering, control technique and machinery.



NOF METAL COATINGS ASIA PACIFIC CO., LTD. Technical Section:

This company has been developing anti-corrosion agents for automotive parts, etc. and has led other companies in marketing high quality chrome-free anti-corrosion agents.

Vision

Corporate Philosophy

The NOF Group is dedicated to contributing to mankind and society through the creation of new value "from the biosphere to outer space."

1. Satisfy customer needs by providing the highest quality products and services on a global basis.
2. Leverage the Group's collective strengths to develop cutting-edge technologies and superior products that open up new possibilities.
3. Work in harmony with the environment and ensure the safety of products and business activities.
4. Maintain suitable levels of earnings and reward stakeholders with fair return.
5. Encourage employees to take on new challenges, working to create a rewarding place to work and fulfilling lifestyles.

Basic CSR Policy

We will fulfill our corporate social responsibility and conduct sustainable business activities.

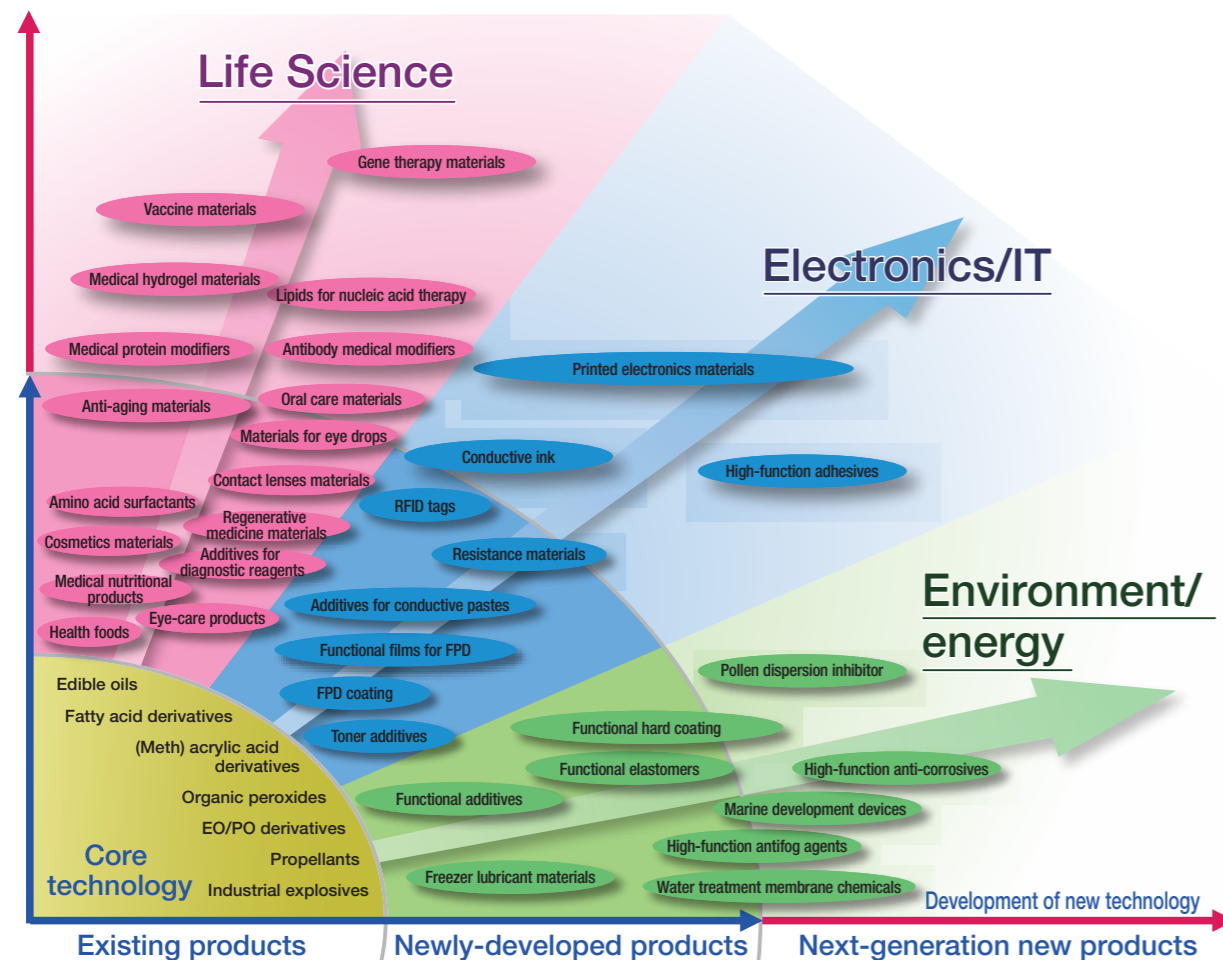
1. We will, each and all, act in accordance with the highest standards of corporate ethics.
2. We will respect human rights, and enable a diversity of personnel to demonstrate their abilities.
3. We will promote responsible care activities, based on the five kinds of safety.
4. We will consider the interests of all our stakeholders.
5. We will contribute to society in cooperation with local communities.

Code of Conduct and Code of Ethical Conduct are available on the Company's website. (<http://www.nof.co.jp/english/company/index.html>)

Corporate Vision

A corporate group that continuously supplies a vast array of products globally in the three business fields of "life sciences," "electronics/IT," and "environment/energy," in order to enrich people's lives.

Prioritized business fields of the NOF Group



Mid-term Management Plan

In order to realize our vision, the NOF Group formulates a three-year Mid-term Management Plan and conducts business operations accordingly.

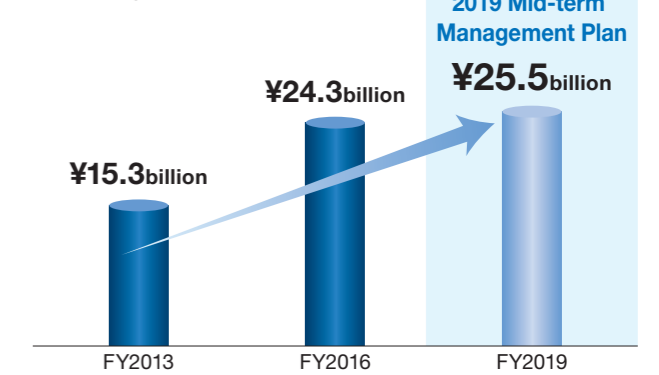
Basic policy of the 2019 Mid-term Management Plan

To strive for the "creation and expansion of innovative value," tying the "growth" achieved in the 2016 Mid-term Management Plan to "making greater progress"

Key Challenge



Operating income



Management Policy

In order to achieve the basic policy of the 2019 Mid-term Management Plan, "creation and expansion of innovative value," the NOF Group has established a management policy for fiscal 2017 of "Making greater progress," and intends to implement measures to "create products and markets," "improve productivity," "enhance Group management," and "promote CSR activity."

Promotion of CSR

CSR of the NOF Group

The NOF Group believes that its corporate philosophy of "contributing to mankind and society through the creation of new value in wide-ranging fields from the biosphere to outer space" represents the CSR that the Group aims to fulfill through its business activities. We will strive to maximize the values that we share with every stakeholder and with society.



Promotion of CSR

The CSR Committee, chaired by the President, has been established as an organization for CSR promotion to oversee and promote the various specialty committees.

CSR promotion framework



CSR Action Plan and Results

CSR activities are carried out by setting annual goals and by setting the PDCA cycle in motion. The CSR Action Plan and Results for fiscal 2016 and Action Plan for fiscal 2017 are as follows.

Category of CSR Activity	Plan for FY2016	Results for FY2016	Plan for FY2017	Listed page	
1. Governance	Compliance	Revise the Compliance Manual Promote compliance education Utilize the whistle-blowing system	Held legal seminars (total of 359 participants) Provided compliance manual education for all employees of Group companies	Develop country-specific Compliance Manuals Promote compliance education Utilize the whistle-blowing system	P.21
	Business continuity	Promote the business continuity plan	Revised manuals, conducted drills	Promote the business continuity plan	P.20
	RC management	Promote Group RC activities Audit the RC activities of overseas consolidated subsidiaries	Conducted RC audits Total of 23 times at NOF Group companies: 8 domestic companies 2 overseas companies	Promote Group RC activities Audit the RC activities of consolidated subsidiaries	P.28
2. Respect for Individuals	Work-life balance	Encourage employees to take their annual paid leave Support employees with child care or nursing care responsibilities	Annual paid leave usage rate: 66.1% (increased by 5 points y/y) Expanded the child care leave period	Encourage employees to take their annual paid leave Support employees with child care or nursing care responsibilities	P.22
	Better performance of human resources	Reemploy people who have retired Employ people with disabilities	Reemployment of people who have retired: 12 retirees Employment rate of people with disabilities: 2.13% (March 2016, statutory employment rate 2.0%)	Utilize the reemployment system Employ people with disabilities	P.24
	Talent development	Support employees' self-enlightenment efforts Promote training at the organizational level, and regarding specific issues Encourage employees to obtain official qualifications	Correspondence courses and e-learning courses: Participated by a total of 225 employees Training held during fiscal 2016: 25 times, participated by a total of 629 employees Public qualification acquirers: A total of 483 employees	Support employees' self-enlightenment efforts Promote training at the organizational level, and regarding specific issues Encourage employees to obtain official qualifications	P.26
	Safety education	Conduct RC and environmental safety education Conduct labor and plant safety education Conduct product safety education	Number of participants: A total of 17,000 employees Training hours: A total of 34,000 hours	Conduct RC education Conduct labor safety, environmental safety, plant safety and product safety education	P.27
	Environmental safety	Promote environmental safety Reduce greenhouse gas emissions Maintain Zero Emissions Reduce chemical emission volumes Promote biodiversity-friendly activities	NOF mid-term environmental targets with fiscal 2020 as the final target year Greenhouse gas emission reduction: Target achieved (reduced by 1% y/y) Zero Emissions: Target achieved Chemical emission Volumes reduction: Target achieved Ongoing participation in biodiversity private sector participation partnership	Promote activities aimed at achieving mid- to long-term environmental targets Reduce greenhouse gas emissions Maintain Zero Emissions Reduce chemical emission volumes Promote biodiversity-friendly activities	P.30
3. RC Activities	Labor safety	Reinforce efforts toward zero accidents	Lost workday accidents: 1 cases Total number of labor accidents: 4 cases (flat y/y)	Reinforce efforts toward zero accidents	P.37
	Plant safety	Ensure stable operation	No major plant disasters	Ensure stable operation	P.39
	Product safety	Promote proper management of chemicals	No major product complaints	Promote proper management of chemicals	P.40
	Transportation safety	Promote safe transportation	No major transportation accidents	Promote safe transportation	P.41
	Fair trade	Continue engaging in fair trade Promote CSR-based procurement	Continued to engage in fair trade Provided guidance to suppliers on basic concept towards CSR-based procurement, conducted supplier questionnaire	Continue engaging in fair trade Promote CSR-based procurement	P.42
4. Coexistence and Co-prosperity	Information disclosure	Continue performing timely and appropriate disclosure of fair, unbiased information Hold performance briefings Publish CSR reports	Continued to perform timely and appropriate disclosure of fair and unbiased information Held twice in May and November Issued CSR Report in July and posted on website	Continue performing timely and appropriate disclosure of fair, unbiased information Hold performance briefings Publish CSR reports	P.46
	Dialogue activities	Promote dialogue activities with the community	Plant tours, informal meetings with local residents, participation in RC local dialogue meetings	Promote dialogue activities with the community	P.43
	Socially beneficial activities	Promote social contribution activities	Local volunteer activities, cleaning activities, donation of ¥12 million	Promote social contribution activities	P.44

Outline of the organizational setup for corporate governance

With a view to architecting a management setup that can appropriately respond to changes in the business environment, NOF introduced the operating officer system in 2000; it was intended to strengthen the decision making function and the supervision function of the Board of Directors and at the same time to enhance the efficiency of the executive setup under authorization by the representative director by separating the decision making function and the business executing function of management. In addition, for the purpose of further strengthening the supervision function, two independently positioned outside directors are selected. The Board of Directors, consisting of ten members including outside directors, holds one regular meeting every month and extraordinary sessions are also convened as required; besides deciding on important matters set forth by the laws, regulations, the articles of incorporation and the rules of the Board of Directors, the Board supervises the state of business execution. Any important matter to be referred to the Board of Directors goes through preliminary deliberation, intended to ensure more appropriate decision making, by the Executive Committee from time to time attended by directors, standing corporate auditors and heads of the organizational unit or units concerned or the weekly Strategic Meeting as a rule attended by the directors authorized to execute business. To supplement these meetings, NOF from time to time receives advice from such experts as lawyers and certified public accountants regarding business management and daily execution of business for reference in making judgment on business affairs.

Development of internal control system and risk management setup

Each NOF Group company has developed an internal control system for ensuring adherence to laws and regulations, the articles of incorporation and various internal rules of the Company and appropriateness of business operations. Regarding observance of social norms and laws and regulations, the Company's code of conduct is formally spelled out as the NOF Code Ethical Conduct, based on the NOF Basic CSR Policy, and an Ethics Committee is established to ensure thorough adherence to the code. Further to secure safety in production sectors in the five aspects, including environ-

ment, product, plant, transportation and labor, the Responsible Care (RC) rules are instituted, with the RC Committee checking conduct in actual scenes of production and performing internal auditing. Management risks are analyzed and countermeasures are discussed by the Ethics Committee, RC Committee, Information Security Management Committee, Credit Management Committee and Security Trade Control Committee, and the results are reported to the CSR Committee, chaired by the President. The CSR Committee aggregates and evaluates various management risks such as compliance, information management, and environment and safety.

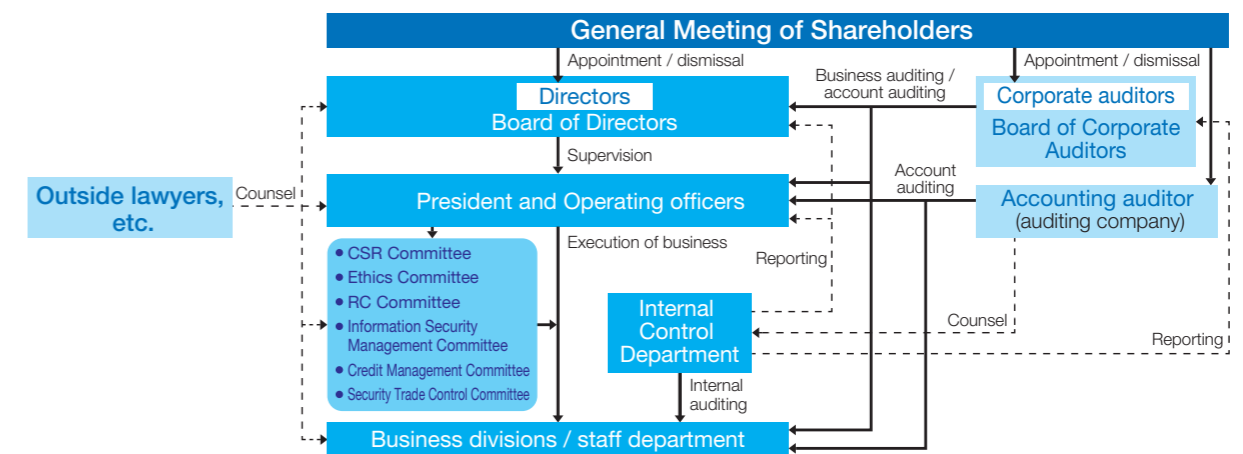
Group companies engage in business activities based on a policy formulated in accordance with the annual policy formulated by NOF. NOF manages and monitors its Group companies in accordance with the rules on the management of group companies, and offers advice, as necessary; while any important matters that are deemed to materially impact the subsidiary's assets or profit and loss are approved by the NOF Board of Directors or the Executive Committee.

Internal audits and corporate auditor's audits

Internal audits are performed by the Internal Control Department, which is an independent organization reporting directly to the President.

Corporate auditor's audits are primarily performed by the standing corporate auditors as part of the framework of oversight over the directors' execution of business by attending every meeting of the Board of Directors and the Executive Committee, as well as proactive participation in various other meetings. The corporate auditors coordinate closely with the accounting auditor by convening periodic meetings and other initiatives, and exchange various information on such matters as audit plans and audit reports.

Corporate auditors including outside corporate auditors receive periodic reports from the Internal Control Department regarding internal controls, while at the same time engage in exchanges of opinions, as necessary. Corporate auditors also engage in appropriate coordination with the relevant organs by attending the meetings of the competent committees on CSR and risk management, sitting in on internal audits conducted by the internal auditing organs of each committee and receiving and exchanging opinions on the audit result reports of the internal audit organs of each committee.



Organization Chart of Corporate Governance

Promotion of the Business Continuity Plan (BCP)*1

NOF has formulated a BCP, to enable its core business to be continued or, if damaged, to be restored quickly while minimizing the loss of business assets in an emergency such as a natural disaster. NOF's activities to promote the BCP primarily focuses on the formulation of the BCP manual which sets forth the responses to be implemented in normal times and in emergencies, in addition to the preparation and yearly renewal of information on the estimated damages to the plant and various government-, infrastructure- and supply chain- related information, which will be required when resuming operations. Additionally, NOF performs annual internal audits and training in an effort to firmly establish the BCP and to enhance its effectiveness.

Information security management

(1) Management of trade secrets and protection of personal information

Recognizing the importance of information as one of vital management resources to business activities and the indispensability of active strengthening of corporate competitiveness by active utilization of information and firm establishment of information security to steady business management, NOF has set forth the Information Security Policy as a basic principle for promoting effective utilization and protection of information. At the same time, recognizing protection of personal information as its obvious social responsibility, NOF has formulated and announced the Privacy Policy.

Under such policies, the Company has set forth specific measures for enhancing the levels of confidentiality, completeness and utility of information and specific ways of handling personal information in its internal rules including information security management rules, personal information protection rules and information system-related sets of provisions, a confidential information handling manual and an information equipment handling manual, and is ensuring their thorough understanding by the staff.

(2) Management setup

In the organizational aspect, the Information Security Management Committee is set up, and under its chairperson, who has overall supervising responsibility for information security management, persons responsible for document information security management, electronic information and information system security man-

agement, and addressing complaints regarding personal information, as well as a person responsible for management at each level of organizational unit, are appointed to administer the implementation of specific measures. Against illicit accesses from outside and other risk factors including loss, destruction and alteration, safety measures are taken at appropriate and rational levels. In addition, NOF continually reviews through internal auditing setups and measures pertaining to information security management and protection of personal information to improve them wherever necessary.

Seminars for officers

NOF holds lectures by outside instructors for directors, corporate auditors, and operating officers as necessary.

At the lecture for officers held on March 28, 2017, the Chairman, the President and 20 management personnel gained a deeper understanding of the latest information on mental health.



Seminars for employees

The NOF Group regularly holds legal seminars for employees. In fiscal 2016, a total of five legal seminars were held, attended by 359 participants.



*1: BCP (acronym for Business Continuity Plan) is a plan formulated by a company to set forth activities to be carried out in normal times and methods, means and so on for continuation of business in an emergency such as a natural disaster, conflagration or terrorist attack to enable the core business to be continued or, if damaged, to be restored quickly while minimizing the loss of business assets.

Compliance

The NOF Group instituted the Code of Ethical Conduct in April 2002 to ensure that each member-company and each employee always conform to social ethics and win society's trust. In this connection, the Group set up the Ethics Committee in an effort to strengthen its own responsibility to society and ensure the transparency of its business activities. Further, a consultation desk for NOF's employees is open at the secretariat of the Ethics Committee.

In order to instill a sense of compliance in its executives and employees, the NOF Group has prepared a Compliance Manual, which explains the Code of Ethical Conduct in detail and in easily understood terms.



Global Compliance Manual

The universal Global Compliance Manual has been published in eleven different languages.



Country-specific compliance manuals

The NOF Group is preparing country-specific compliance manuals based on the legal systems of each country. In fiscal 2016, we published versions for the U.S.A. and China where the Group has a large number of employees, and began utilizing them in Group companies.



Whistle-blowing system

Consultation desks in Japanese / English / Chinese (Simplified Chinese) have been set up at external third-party institutions as contact points for whistle-blowing / consultation, in the event that an employee becomes aware of acts in violation of compliance or acts suspected of being in violation of compliance.

Awareness-raising through internal newsletters

NOF utilizes its internal newsletters, which are published four times each year, to assist with improving the compliance awareness of employees. Easy-to-read explanatory articles with illustrated characters are used in ongoing awareness-raising activities.



Promotion of work-life balance

NOF is developing a work environment in which the staff can work well motivated while attaching due importance to the work-life balance between work and non-work activities including child care, nursing care, hobbies, studies, rest and community activities. In light of the impor-

tance NOF attaches to the work-life balance of its employees, it has adopted the following systems to provide specific support. The “○” symbols in the table below indicate NOF’s own systems or systems that go above and beyond the scope of law.

Systems that support diverse working styles

Pregnancy and childbirth	Childcare	Nursing care	Other
○ Limitations on and exemptions from overtime ¹ , limitations on night work ¹			○ Yearly paid holidays (up to 23 days)
○ Later or earlier work start or finish times ¹		○ Nursing care leave (can be taken 3 times, up to 365 days)	○ Yearly paid half work days
Limitations on work on holidays	○ Childcare leave (maximum of 2 years)	○ Nursing care leave (10 days per year) ³	○ Cumulative saved leave ²
Consideration to and reduction of workload	○ Career and childcare balance support program		○ Refresh leave
Commuting relaxation (route changes, etc.)	○ Child nursing leave ¹ (10 days per year) ³		○ Flex-time system
○ Hospital visit leave (may be paid)	○ Childcare hours (paid)		○ Discretionary work system (R&D position employees)
Prenatal and postnatal leave			○ Self-enlightenment support
			○ Sports and culture activities

*1: In the case of childcare, the systems apply for employees raising a child up to the third grade of elementary school.

*2: The cumulative saved leave is a system in which expired yearly paid holidays may be accumulated, and used for personal illness or injury, childcare, nursing of a family member, nursing care, self-enlightenment, or volunteer activities.

*3: Can be taken in half-day increments.

Recommending employees to take yearly paid holidays

NOF is developing a work environment in which the staff can work well motivated while attaching due importance to work-life balance. NOF encourages all employees to take their yearly paid holidays. Additionally, one such initiative is to encourage them to take yearly paid holidays in their respective birth months, and in this way an atmosphere that makes them easier to take yearly paid holidays is developed in the work environment.

In fiscal 2017, we will verify the status of yearly paid holidays taken by the employees and consider measures to further encourage employees to take their holidays

Employee-related data (NOF non-consolidated)

		FY2014	FY2015	FY2016
Number of employees utilizing childcare leave	Male	14	10	16
	Female	5	5	5
Utilization rate of yearly paid holidays		61.4%	62.7%	66.1%
Monthly average overtime work hours		13.0 hours	13.0 hours	12.9 hours

* Based on the data as of March 31 each year.

* The utilization rate of yearly paid holidays is calculated for the period from September 21 of the previous year to September 20 of the current year (12-month period to take yearly paid holidays at NOF).

Refresh leave system

NOF provides a system under which employees having worked with the Company for 10, 20 or 30 years are given seven consecutive paid holidays (which otherwise would be workdays) so that they can refresh themselves both mentally and physically away from everyday duties, and find opportunities to expand their fields of vision and to increase the flexibility of thinking.

Days on which employees are encouraged to leave work on time

NOF encourages efficient ways of working and sets a day on which employees are encouraged to leave work on time.

Introduction of childcare support program

A “career and childcare balance support program” was introduced at NOF from April 2016. Various forms of childcare support is provided under this program during periods of childcare leave, including the regular distribution via the Internet of useful information on childcare and information on events to refresh one’s spirit during the struggles of childcare and a contact point for childcare consultation. In addition, as the latest internal company information is regularly distributed and a wide range of contents for brushing up business skills are provided, this program supports a balance between childcare and work by supporting skill improvements during childcare leave and a smooth return to work. The program has been used by many employees, including male employees, and has a favorable reputation among people who have used the system.



Support for raising the next generation (Support for childcare and nursing care)

NOF provides a system that makes child-rearing / nursing care and working compatible with each other, and has proactively adopted support measures including raising the age limit for children subject to short hour work system and extending the duration of the nursing care leave and childcare leave. The requirements for utilizing the cumulative saved leave were expanded for nursing and nursing care from April 2016.

In June 2010, as its initiatives and records in the implementation of the action plan based on the Act on Advancement of Measures to Support Raising Next-Generation Children were appreciated, the Tokyo Labor Bu-

reau recognized NOF as an “enterprise active in supporting childrearing.” In our subsequent action plan, we have been promoting the utilization and implementation of childcare leave for our male employees as an initiative aimed at establishing an environment that facilitates a balance between work and childcare / nursing care.

In April 2017, NOF has prepared a handbook that summarized information such as basic knowledge of the Long-Term Care Insurance System, how to balance work and nursing care, and internal systems related to nursing care, to enable employees to continue working and take balance, when they face nursing care.



Experiences with childcare leave

Kazuhiro Oda AO Research 2G, Oleo & Speciality Chemicals Research Laboratory, Kawasaki Works

As my son was born in August 2016, I took childcare leave at the time of the year-end holiday. Although I usually leave childcare up to my wife, I was determined to handle it all on my own during the leave period. As it turns out, there was a lot that I couldn't do without my wife's help, and I strongly felt once again the greatness of my wife, and the difficulties of childrearing. When my son ate the baby food I struggled to make with a smile on his face, I was able to feel a sense of fulfillment of childrearing. In the future, I'm going to devote myself to work even more, but I'm also willing to actively take part in childrearing. Also, I'm very thankful for the understanding of my colleagues when I took the childcare leave.



Fumitaka Yoshikawa Oleo Derivatives Research G, Oleo & Speciality Chemicals Research Laboratory, Amagasaki Plant

I took childcare leave when my daughter was almost 11 months old, going on the first family trip with her to Kamakura. My wife had been wanting to visit Kamakura, seeing the temples, enjoying Japanese-style sweets at a café with courtyards, and strolling around enjoying the local food. My wife seemed to enjoy the relaxed atmosphere of Kamakura, casting off the fatigue accumulated while taking care of our daughter. For my part, I was able to interact with my daughter in a different environment from usual, taking pictures with her and my wife in a garden and pushing the baby carriage as we strolled down Komachi Street.

Childcare leave is different from normal holidays, in that you can concentrate on spending it with your family and taking care of your children. I am very glad to have taken childcare leave and struck out on such a long trip.



Recruitment

NOF, which began as a chemicals producer using natural fats, has today expanded its businesses into a wide range of fields from the biosphere to outer space. This is due in no small part to our ability to sincerely meet the ever-changing and diversifying needs of the market and our ceaseless spirit of challenge in taking on new fields.

In order to support and further expand its wide range of businesses, NOF engages in recruiting activities that respect the individualism and values of its diverse human resources.

"People" are what make up an entity, and it is important that diverse human resources of different specialties and expertise collaborate and lift each other up.

For this reason, NOF will proactively promote the recruitment of experienced workers and returnees from abroad, regardless of whether they are straight out of college or mid-career recruits, as well as foreign nationals, including exchange students.

In terms of recruitment and selection of students graduating with bachelor's and master's degrees to start in and after 2018, NOF is engaged in proper recruitment activities that "enforce fair and impartial recruiting, contribute to ensuring a normal academic learning and academic environment and respect the academic schedule of the universities," based on "Guidelines for Recruiting and Employing New Graduates" of the Japan Business Federation (*Keidanren*).

Approach to diversity

In order to fulfill the Corporate Philosophy to "Encourage employees to take on new challenges, working to create a rewarding place to work and fulfilling lifestyles," the NOF Group accepts and respects diversity in the forms of employment, working locations and working conditions including short hour work systems, as well as diversity in the attributes of its human resources such as nationality, gender, race and whether they are disabled or not. NOF aims to establish and is currently building an organization in which willing and capable employees are properly evaluated in every aspect including recruitment, treatment after recruitment and promotions, and are allowed to demonstrate their capabilities.

Promotion of international human resources

Recognizing the importance of securing superior human resources regardless of nationality, the NOF Group intends to secure appropriate human resources, including experienced workers, particularly for the expansion of its overseas businesses. Our overseas Group companies (overseas local subsidiaries) are continuing to step up their efforts to recruit local employees and promote them to management.

Fostering international human resources

The NOF Group conducts seminars for its overseas sales staff and staff scheduled for overseas assignments by dedicated outside and internal lecturers on the laws, culture and commercial practices of their host countries based on the staff's duties and roles, in order to facilitate overseas operations. In addition, in light of further overseas expansion in the future, the NOF Group has introduced the "Global Mind Seminar" as part of new employee training,

and is currently promoting the systematic fostering of global human resources.

Re-employment system (Re-employment of retirees)

NOF has introduced a reemployment system intended to provide age-limit retirees with opportunities to remain active in society and for self-realization to keep them well motivated to live on and work, and at the same time enable them to fully utilize the retirees' high-level professionalism, skills and experience in their extended careers. (12 retirees were reemployed in fiscal 2016.)

Employment of the disabled

In order for persons with disabilities to demonstrate their capabilities and work actively in their respective workplaces, NOF is promoting the employment of the disabled, upon developing a favorable working environment.

The proportion of the disabled employed in March 2017 was 2.13% (39 persons), surpassing the legally prescribed proportion (2.0%).

Going forward we will provide fair employment opportunities and step up our initiatives towards the employment of the disabled.

Active participation of women

The active participation of women is promoted at NOF. Among the 45 new graduate employees who joined the Company in April 2017, 18 were women. Going forward, NOF will actively promote the hiring of women while working to improve the workplace environment to allow the active participation of women.

Training to promote the active participation of women

At NOF, training aimed at promoting the active participation of women is conducted for all female employees and management-level male employees who serve as their superiors. In training for women, expected roles and future career design were discussed deeply. In training for management-level male employees, participants learned about gender bias and discussed in depth on key management points in order to promote the active participation of women. From fiscal 2017 onwards, training will be held in order to cultivate a greater focus on career development and greater motivation among female employees, and to improve the awareness of male employees in workplaces with female employees.



Action plans of general business operators based on the "Act on the Promotion of Women's Active Participation in Their Occupational Lives"

The following action plan has been established in order to develop an employment environment that enables the active participation of women.

1. **Plan period:** April 1, 2016 to March 31, 2018

2. **Issue at NOF:** The percentage of women among career-track employees is low.

3. **Target**
Achieve a percentage of women among career-track hires of 30% or higher

4. **Details of initiatives and implementation schedule**

Initiative 1: Further enhancement of recruitment activities

- From November 2016: Review and revision of school seminar materials
- From March 2017: Participation in school and joint seminars
- From July 2017: Tours of plants and research laboratories for prospective employees

Initiative 2: Promotion of work-life balance measures

- From April 2016: Explanation of systems for employees who are returning to work from child-care leave and their superiors
- From October 2016: Dissemination of information on nursing care systems through internal newsletters, etc.

Initiative 3: Training on fostering awareness aimed at career development

- From April 2016: Training for executives with female employees as subordinates
- From May 2016: Training for female employees, female temporary employees on clerical work, and female part-time employees

Employee-related data (NOF non-consolidated)

		FY2014	FY2015	FY2016
Number of employees	Male	1,522	1,508	1,494
	Female	149	149	164
Number of new employees	Male	27	35	30
	Female	4	6	18
Re-employment of retirees		11	11	12

Rewards for employee achievements

On July 1 of each year, NOF recognizes the accomplishments of employees who have contributed to the perpetual development of the Company's businesses.



Employee invention award

In April each year, NOF examines employee inventions and awards invention rewards to inventors.

Internal recruiting system

NOF has introduced an internal recruiting system that aims to foster independent human resource development by providing employees with opportunities to select work, etc. and assign motivated human resources to appropriate posts in order to improve employee morale and revitalize the organization.

Mental health initiatives

NOF is taking comprehensive initiatives for the prevention and alleviation of mental health troubles and supporting those suffering from such troubles until they have sufficiently recovered to return to work.

More specifically, these initiatives are taken in teamwork with industrial physicians specializing in mental

health to ensure early detection and proper solution of mental health problems by providing stress checks, setting up out-of-house counseling facilities and institutionalizing a "return-to-work support program" to support persons absent from work for a long time or on sick leave on account of mental health disorder in ensuring their smooth return to work after recuperation.

In fiscal 2016, mental health care education has been provided to all employees, and measures are also implemented to maintain and improve the mental health of employees through supervisors.



Addressing sexual harassment / power harassment problems

The NOF Group has declared its position to prevent and prohibit sexual harassment and power harassment in its Guidebook on the Code of Ethical Conduct, the Compliance Manual and other internal notifications, and is taking steps to make the code and other relevant norms extensively known and understood. For consultation desks regarding sexual harassment and power harassment, one each of male and female consultants is appointed to make the workplaces transparent and pleasant.

NOF promotes a multifaceted talent development system comprising a "selective" element, in which each employee is allowed to choose his/her own training menu, as well as an "elective" element, where participants are designated by the Company, and which is professionally-focused in order to enhance the employees' expertise in each field.

This system effectively promotes talent development suited to each individual and his/her work, while at the same time making work more rewarding, invigorating the organization, establishing a sustainable business foundation and enabling stable employment.

Support of self-enlightenment

NOF provides a wide range of self-enlightenment programs such as various correspondence courses and e-learning courses (e.g. business skills and languages) to support the spirit of challenge of the motivated employees and to encourage further skill development and the self-realization of each individual.

In fiscal 2016, a total of 225 employees took advantage of the various correspondence courses and e-learning courses.

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Pamphlet "Correspondence Course Guide"

Promoting training at the organizational level and regarding specific issues

In an effort to provide a more effective training program, NOF has set up an education system that combines training at the organizational level and training regarding specific issues.

The relatively junior employees mainly undergo training at the organizational level, while management-level employees undergo training regarding specific issues.

Each organizational unit and division also plan and carry out, as necessary, training suited to their respective business operations.

In fiscal 2016, a total of 629 employees took part in the training programs.

(Training at the organizational level)

Initial training for new career-track employees, follow-up training for new career-track employees, preparatory training for the study report conference for career-track employees, study report conference for career-track employees, follow-up training for the study report conference for career-track employees, training for mid-career employees, training for career-track employees promoted to manager, training for employees promoted to executive positions, mandatory training for promotion candidates (correspondence course for candidates for senior instructional level positions, candidates for manager positions and candidates for executive positions), etc.



(Training regarding specific issues)

Training for those performing personnel evaluations, business skill reinforcement training, training for new sales staff, sales practices training, business R&D training for R&D position employees, training for managerial candidates (strategic business leader training, financial training, participation in outside business schools, NOF Management School), short-term overseas language training, training prior to overseas assignments, etc.



Promotion for acquiring official qualifications

The NOF Group supports employees' attempts to acquire official qualifications in many aspects. In fiscal 2016, a total of 483 persons newly acquired 32 types of such qualifications at the Domestic Group out of about 100 different qualifications whose acquisition is recommended by the Company.

Type of qualification	Total number of persons who acquired qualifications
Pollution control	3
Sanitation control	7
Specified chemicals control	45
Organic solvents control	49
Flammable materials control	104
Pressured gas control	23
Explosive production control	9
Explosive handling control	42
Firefitting facility control	3
Pressured vessels handling	5
Breathing safety control	32
Forklift	18
Crane	26
Hooking	21
Boiler	6
Machine maintenance	7
Electric works	2
X-ray work	6
15 other types of qualifications	75
Total	483

Recognizing the importance of safety education, the NOF Group strives to enhance its occupational safety and health management system and reinforce its safety activities including safety education, in an effort to secure the safety and health of its employees.

RC Education of the NOF Group

To enable all the employees of the NOF Group to deepen their understanding of RC, emphatic efforts are put into RC education. In fiscal 2016, a total of 17,363 persons participated in and received RC-related education for a total of some 34,000 hours.

Field	Total number of participants	Total hours
RC and Environmental Safety	1,623	2,088
Labor and Plant Safety	13,984	30,803
Product Safety	1,707	1,445
Transportation Safety	49	67
Total	17,363	34,403



Safety education for new employees



Traffic safety lecture, Kawasaki Works



Work risk experience training, Aichi Works



Forklift safety training, Aichi Works

Management policy regarding RC

For a chemical company to live together with society as one of its vitally important members, it has to seek harmony with social environment and natural environment, and be recognized, appreciated and accepted by society. With this fundamental awareness in mind, NOF has set forth its Management Policy Regarding Responsible Care as a set of norms to be faithfully observed by every officer and employee of the Group companies with a view to winning even greater trust from society.

Management Policy Regarding Responsible Care

NOF is dedicated to protecting the safety and health of customers, the public and employees, as well as the environment, ecosystems and resources. For this purpose, based on the principles of Responsible Care, NOF, its group companies, and all executives and employees observe the following management policies on safety concerning the five areas of environment, products, plants, transportation, and labor.

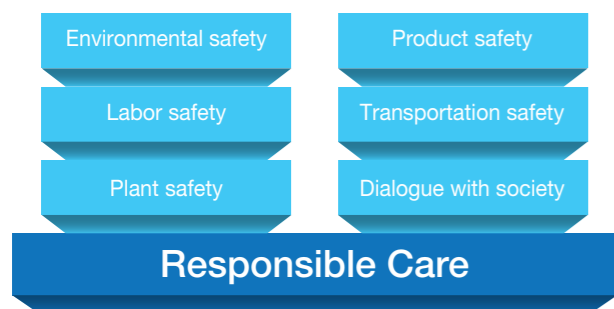
- (1) Retain an awareness concerning safety issues involving the social and natural environments.
- (2) Conduct activities based on appropriate self-management along with close collaboration with other business units.
- (3) Conduct highly reliable safety checks and adhere to all laws and regulations.
- (4) Everyone must work to minimize the impact of products on the environment, safety and health. This covers every aspect of products, from their development and manufacture through retail, use and disposal.

(Amended September 2001)

Furthermore, NOF became a signatory of the Responsible Care Global Charter in 2014, and declared its support of the Charter and its commitment to practice RC activities both in Japan and overseas.

The Five Components of Safety

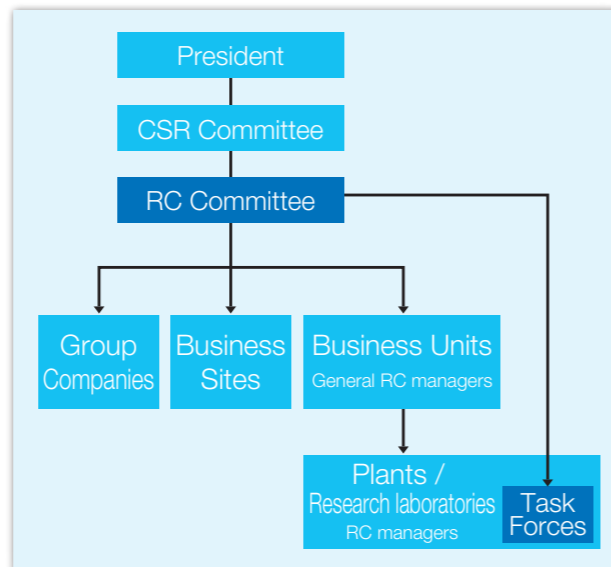
The NOF Group classifies its RC activities into "Five Core Components" including 1) environmental safety, 2) labor safety, 3) plant safety, 4) product safety and 5) transportation safety, and according to this classification each works sets priority items, which are practiced in specific activities. Since 2003, "dialogue with society" has been added to the Five Core Components as a theme of activities.



RC promoting organization

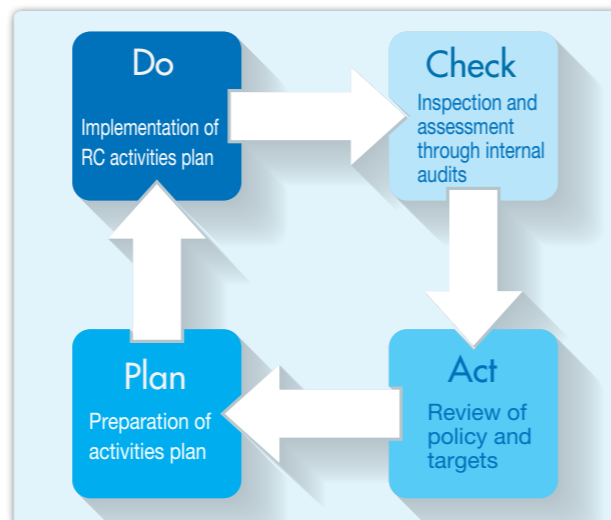
The RC Committee has 26 members (certain operating officers, works or plant general managers, the Planning Department manager of each business division and the general managers of Research Laboratories), chaired by the general manager of the Responsible Care & Production Engineering Department (concurrently director and executive operating officer).

The RC Committee, whose decision is immediately made thoroughly known as a policy of the NOF Group, has an executive function as a body to which authority is delegated by the President. A general RC manager is appointed to each business division, and an RC manager to each plant or research laboratory, to ensure concrete representation of environmental targets.



Flowchart of RC activities

RC activities are unfolded by keeping the cycle of CAPDo (Check-Act-Plan-Do) turning without interruption.



Where any improvements over the current status are required, the progress is assessed at the time of the next auditing, a half year afterwards, and completion is checked.

Management Systems

The NOF Group is promoting the acquisition of certification by competent outside bodies as a means of improving transparency and objectivity of RC activities.

Development status of EMS¹ (Environmental Management Systems)

Every works and plants of NOF with production sectors have acquired ISO14001 certification, and are implementing systematic environmental improvement activities, with the particulars of business and local characteristics taken into consideration. Seven of the companies affiliated with NOF have acquired ISO14001 certification, and



one more is seeking for new acquisition. Also, Nichiyu Logistics has obtained Green Management certification from the Foundation for Promoting Personal Mobility and Ecological Transportation.

Development status of OSHMS⁵ (Occupational Safety and Health Management System)

The NOF Group, under its labor safety and health policy, is undertaking buildup of the Occupational Safety and Health Management System. Referencing the guidelines of the International Labor Organization and the Ministry of Health, Labor and Welfare, we are building up our own system and promoting activities. The Risk Assessment program⁶, which started in fiscal 2008 at every works of NOF, is now adopted by domestic member-companies of the NOF Group as well.

Development status of QMS² (Quality Management Systems)

NOF is building up the optimal QMS for each product line. The Daishi Plant has acquired certificates under the Hazard Analysis Critical Control Point (HACCP) and the Good Manufacturing Practice (GMP) for dietary supplement systems³ in addition to ISO9001. The DDS Plant exercises control conforming to the GMP for pharmaceuticals. ISO9001 certificates have been acquired by 14 of the Group companies.

Showa Kinzoku Kogyo Co., Ltd. and NOF METAL COATINGS KOREA CO., LTD., active in the anticorrosion business, have also obtained ISO/TS16949⁴ certification.



GMP for dietary supplement systems (Daishi Plant)

¹: Acronym for Environmental Management System. A management system comprising a framework for an organization to formulate implement, review and maintain its environment policy; and encompassing planning activities, responsibilities, practices, processes and resources.
²: Acronym for Quality Management System. A system by which an organization formulates policies and sets targets in order to dictate and manage its quality, and achieve such targets.
³: Acronym for Good Manufacturing Practice. Standards with which operators must comply, relating to both tangible elements such as plants and production facilities and intangible elements such as quality/manufacturing control, as means of quality assurance including the safety of pharmaceuticals, medical equipment, foods, etc.
⁴: International standards on quality management systems for the automobile industry.
⁵: Acronym for Occupational Safety and Health Management System. A management system that determines the organization, responsibilities, practices, processes and management resources required for an operator to continuously mitigate potential occupational safety and health risks.
⁶: Method of identifying, eliminating and reducing potential risks or hazards in the workplace.

Implementation status of internal auditing

How much we can improve the effectiveness of internal auditing is an important point of RC activities.

Status of internal auditing

For the auditing of RC in fiscal 2016, regular audits (twice a year for the Company's own eight plants and once a year for domestic and overseas group members having production sectors) were held by field checking in the presence of the Company's auditors or paper screening with the RC Committee Chairman as auditing leader. Priority items in recent years are listed on the right.

Internal auditing of overseas Group companies

For domestic group members having production sectors, an informal RC meeting (for exchange of views) started in fiscal 2001 as a preliminary step, and RC auditing as such has been implemented since fiscal 2005 so that the NOF Group could promote RC activities in a desirable way of group management by strengthening autonomous inspecting activities.

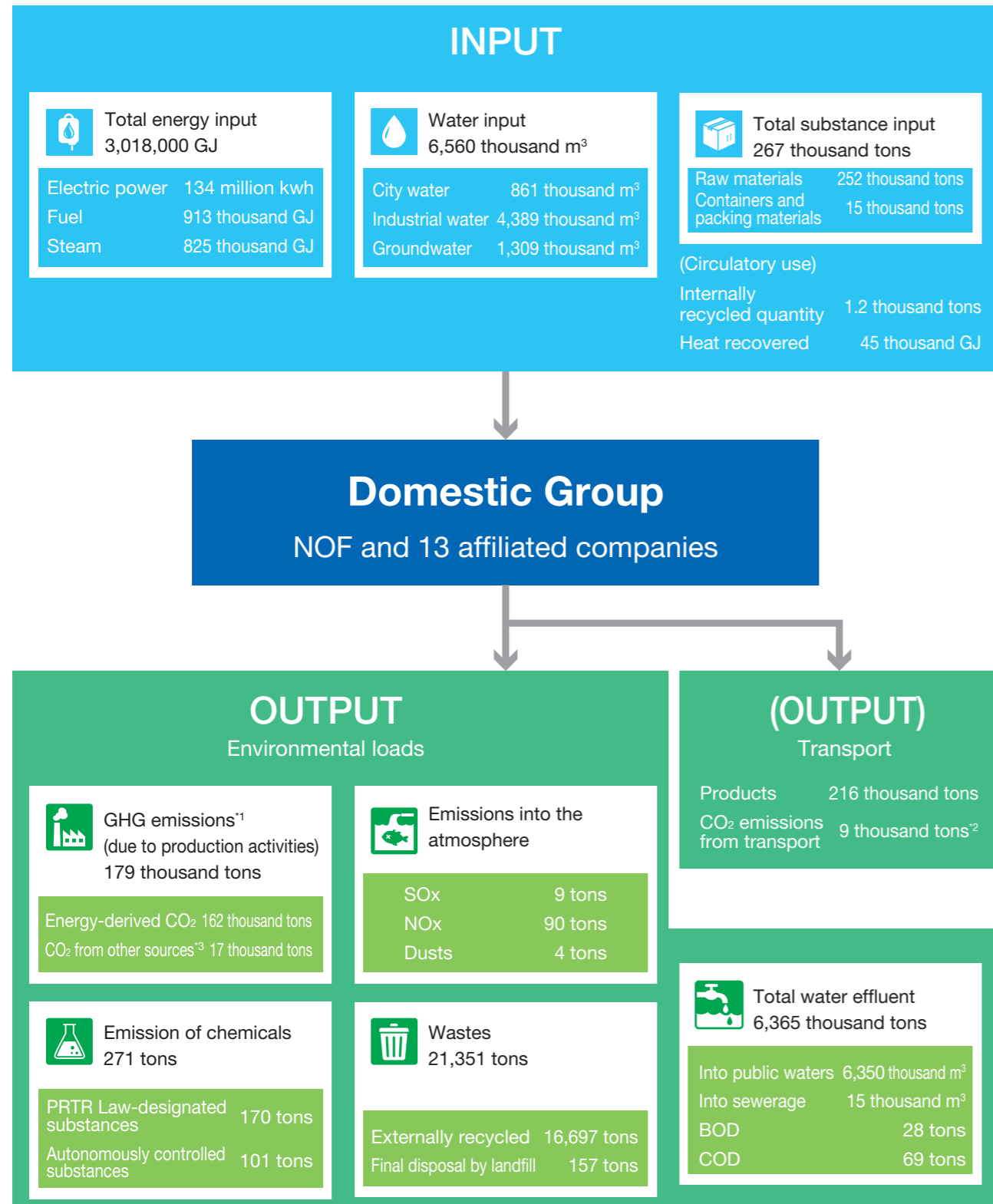
Since fiscal 2010, RC auditing of Changshu NOF Chemical Co., Ltd. in China and PT. NOF MAS CHEMICAL INDUSTRIES (NMC) in Indonesia has been conducted with an eye to further improvement of RC activities by the NOF Group.

Term	Priority theme in audit
1st half, FY2012	Progress of five safety drives (actual records for 2011 and planned levels for 2012) and meeting the requirements of Revised Water pollution control Law
2nd half, FY2012	Progress of labor safety measures
1st half, FY2013	Progress of labor safety actions (actual records for 2012, and planned levels for 2013)
2nd half, FY2013	Progress of five safety drives
1st half, FY2014	Confirmation of compliance status relating to environmental safety
2nd half, FY2014	Confirmation of the status of action to prevent labor accidents
1st half, FY2015	Confirmation of prevention measures for being caught and entangled
2nd half, FY2015	Confirmation of the status of revitalization measures aimed at achieving "completely zero accidents"
1st half, FY2016	Confirmation of high-place work safety measures
2nd half, FY2016	Confirmation of compliance with environmental laws (Revised Act on Rational Use and Proper Management of Fluorocarbons, Waste Management and Public Cleaning Law)

Environmental Safety: Environmental Loads Ensuing from Business Activities

The standing of environmental loads ensuing from business activities by the Domestic Group in fiscal 2016 is shown below.

Main environmental performance factors (Domestic Group)



*1: The calculation period of GHG emission volumes is the fiscal year for other gases than chlorofluorocarbons (PFC, etc.) and the calendar year for chlorofluorocarbons (PFC, etc.).

*2: CO₂ counts involved in transportation do not include part of the carried volume attributable to JAPEX Corp.

*3: The 5.5 gas refers to the 6 types of greenhouse gas less 0.5 (types) for energy-derived CO₂.

The environmental accounting¹ of the Domestic Group in fiscal 2016 is stated below. The period covered is from April 1, 2016 through March 31, 2017.

Environmental expenses

		(in million yen)	
Category	Major activities	Investment	Expenses
(1)-1 Pollution prevention	Wastewater treatment/water pollution prevention	420	936
(1) Business area expenses	Energy conservation	56	60
(1)-2 Global environmental protection	Industrial waste treatment and recycling	12	798
(1)-3 Resource recycling	Reduction in containers and packaging materials	0	6
(2) Upstream/downstream expenses	Environmental audits/improvements/personnel	3	312
(3) Management activity expenses	R&D to curb environmental impact	0	484
(4) R&D expenses	Support for regional environmental activities	0	9
(5) Community activity expenses		0	0
(6) Environmental damage response expenses		0	0
Total²		491	2,605

Environmental benefits

Benefit item	Item	FY2016	vs FY2015
(1) Benefit from resources used in business activities	Total energy input (thousand GJ)	3,018	+2
	Total substance input (thousand tons)	267	▲4
	Water resource input (thousand m³)	6,560	+171
	Gas emissions (thousand tons of CO ₂)	188	+9
	Production activities: Energy-related	162	+6
	Production activities: Others	17	+3
	Transportation-related	9	0
(2) Benefit from environmental impact and waste materials of business sites	PRTR chemical releases (tons)	170	▲17
	Plant emission volumes (tons)	21,351	+522
	Final disposal of waste by landfill (tons)	157	+10
	Waste water volumes (thousand m³)	6,365	247
	COD emission volumes (tons)	69	▲9
	NOx emission volumes (tons)	90	+30
	SOx emission volumes (tons)	9	+2

Real economic effects

		(in million yen)	
Particulars of effects		Sum	
1) Profits	Business income from recycling of wastes from main business or recycling of used products, etc.	150	
	Other business income	0	
2) Costs saved	Reduction in energy cost by energy saving	33	
	Reduction in waste disposal ensuing from materials saving or recycling	7	
	Other reductions	0	
Total²		190	

Changes from the past

Category	Item	FY2013	FY2014	FY2015	FY2016
Environmental Expenses	Investment (million yen)	498	261	508	491
	Expenses (million yen)	2,504	2,460	2,375	2,605
Benefit from resources used in business activities	Total energy input (thousand GJ)	3,004	3,039	3,016	3,018
	Total substance input (thousand tons)	256	259	263	267
	Water resource input (thousand m³)	6,454	6,396	6,389	6,560
	Greenhouse gas emissions (thousand tons of CO ₂)	197	191	179	188
	Production activities: Energy-related	163	165	156	162
	Production activities: Others	23	17	14	17
	Transportation-related	9	9	9	9
Benefit from environmental impact and waste materials of business sites	PRTR chemical releases (tons)	233	232	187	170
	Plant emission volumes (tons)	19,465	19,966	20,834	21,351
	Waste sent to landfills (tons)	149	159	147	157
	Waste water volumes (thousand m³)	6,373	6,668	6,118	6,365
	COD emission volumes (tons)	71	61	78	69
	NOx emission volumes (tons)	86	87	60	90
	SOx emission volumes (tons)	13	6	7	9

*1: In business activities, Environmental Accounting is a procedure necessary for communicating quantitatively the results based on costs and effect for the environmental conservation activities by the monetary unit or material quantity, the purpose of which is to promote efficiently and effectively the environment conservation, keeping the good relationship with the society.

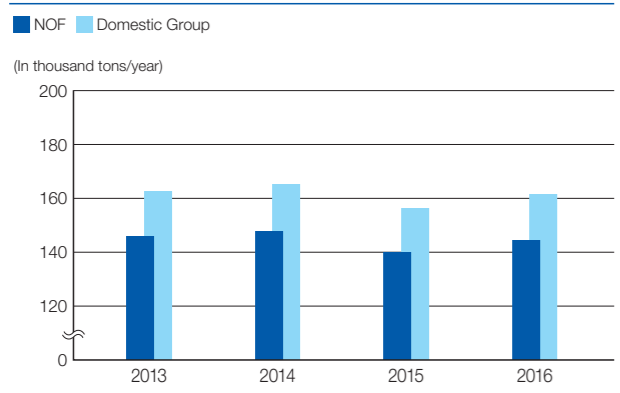
*2: Rounding of fractions may sometimes make the total inconsistent with individual figures.

Environmental Safety: Global Warming Prevention

Energy consumption and CO₂ emissions

Energy consumption for fiscal 2016 remained at the same level as the previous year for the Domestic Group, and decreased 1.2% from the previous year for NOF. The total volume of energy-derived CO₂ emissions increased 3.3% from the previous year for the Domestic Group and rose 3.1% for NOF. These were the result of increases in total production volume. However, energy intensity per product was 13.8 GJ/t for the Domestic Group and 13.6 GJ/t for NOF, decreases of 1.1% and 2.3% from the year before, respectively, indicating advances in production efficiency. NOF will continue to implement energy-saving measures to produce even greater results.

CO₂ emissions¹ by energy consumption



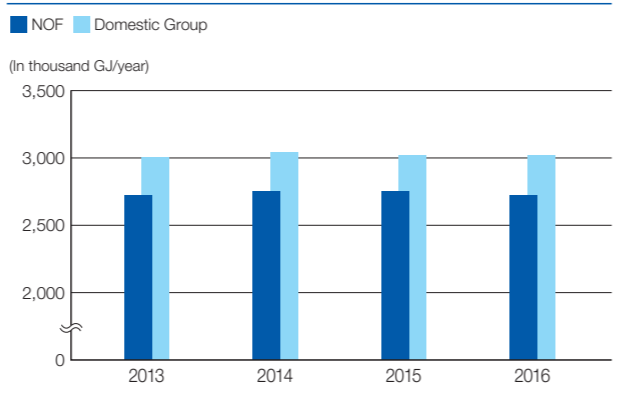
CO₂ emissions other than from energy consumption

NOF manufactures at its Aichi Works products for specific purposes using perfluorocarbon (PFC), which has a high global warming coefficient, as the diluent.

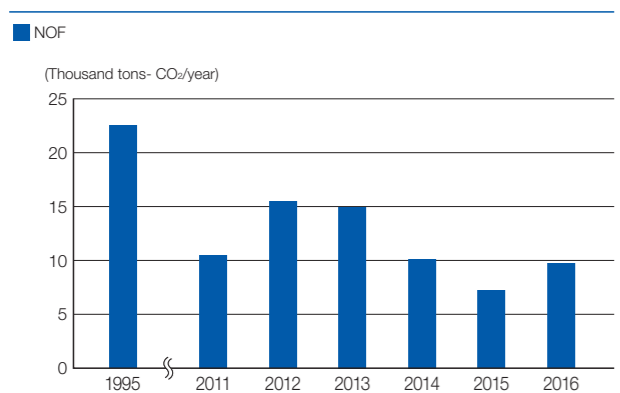
Efforts have been made to reduce PFC emission by improving the manufacturing equipment on numerous occasions. As a result, PFC emission has been reduced substantially in fiscal 2015 compared with that in 1995 (the reference year for PFCs). However, as PFC emission depends on the output of relevant products, emission has increased 35% in 2016 from the previous year, in conjunction with increased production.

Going forward, the Company will make further efforts for emission cutback while maintaining steady operation of recovery equipment and promoting the use of alternative diluent.

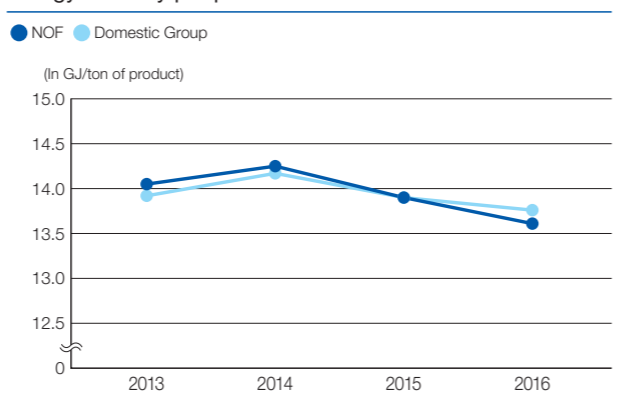
Energy consumption²



PFC emissions



Energy intensity per product



Future actions planned

NOF and the Domestic Group have set new mid- and long-term targets from fiscal 2016, and have begun implementing measures for achieving them. We will promote systematic energy-saving measures to further reduce CO₂ emissions.

*1: The coefficient used in converting the electricity consumption into CO₂ emissions is the emission coefficient used by electric power supply companies in the fiscal year.
*2: The energy consumption is estimated using 9.76 kJ/kWh as the coefficient when converting electric power consumption into the calorific value.

CO₂ emission per product by transportation

Starting the operation of an integrated delivery system in fiscal 2006, NOF has since been endeavoring for more efficient transportation. Additionally, NOF has also systematically engaged in modal shifting¹, rationalization of stock point locations and effective utilization of consolidated shipping.

In terms of promoting modal shifting from trucking to rail or marine transport, the percentage of rail or marine transport in the total volume of our product transport remained around 20%.

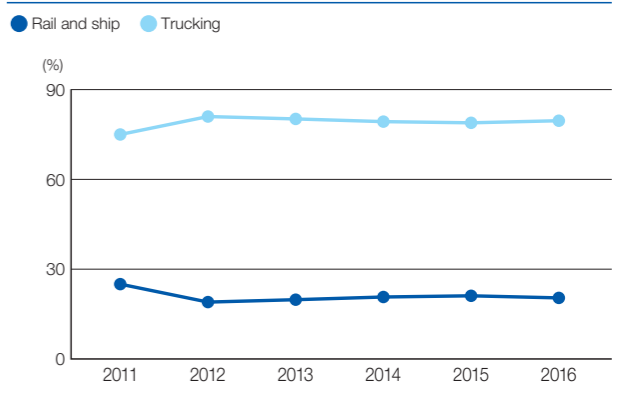
CO₂ emission per product by transportation was reduced from 100 in fiscal 2006 to 63 in fiscal 2016.

$$\text{CO}_2 \text{ emission per product by transportation} = \frac{\sum(\text{CO}_2 \text{ emitted by each means of transport})}{\text{Sales}}$$

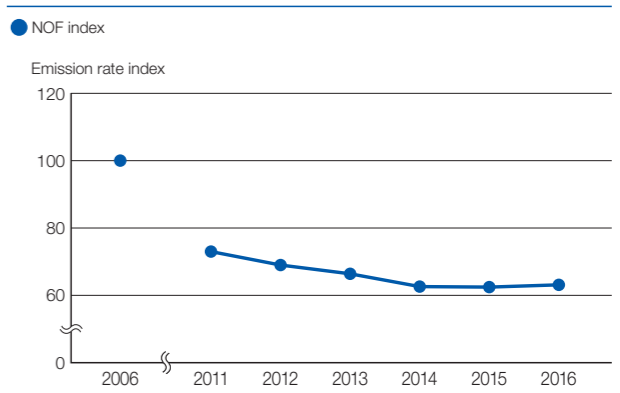


Modal shifting in Kawasaki

Transportation modal shifting (NOF)



CO₂ emission per product by transportation



Electricity measures (Domestic)

Since the Great East Japan Earthquake, NOF and its Group companies has continued to engage in measures to save electric power consumption in compliance with the government request to save electricity consumption. In particular in the service areas of power companies requesting power saving with numerical targets, we set such targets and implemented various power saving measures in a planned manner.

Going forward NOF will continue to promote electricity saving activities.

Green Curtain (Domestic)

The Green Curtain is a concept of greening the wall surfaces of buildings with creeping plants such as goya. Such curtains restrict indoor temperature rise due to intense direct sunshine in summertime, and at the same time transpiration by the plants is expected to cool the surroundings. They represent a promising approach to effective energy saving.

In the Domestic Group, every business establishment (plant) is actively committed to the Green Curtain scheme though on a relatively small scale.



Kawasaki Works



Oita Plant



Nippon Koki Co., Ltd.

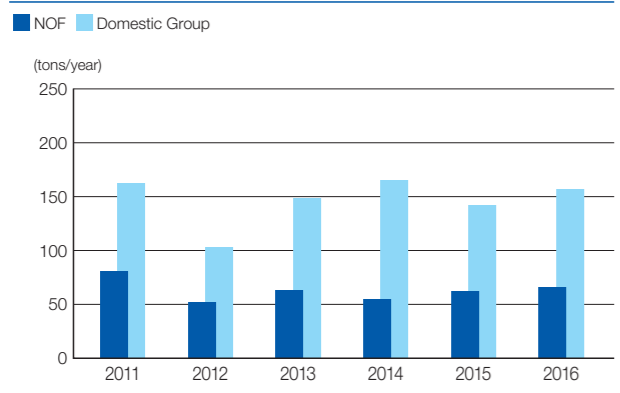
*1: Enhancing the efficiency of transport and at the same time reducing energy consumption and environmental loads by shifting the mode of transport to such large per-unit capacity means as cargo trains and ships.

Environmental Safety: Recycling of Resources

Promotion of drive toward Zero Emissions^{*1}

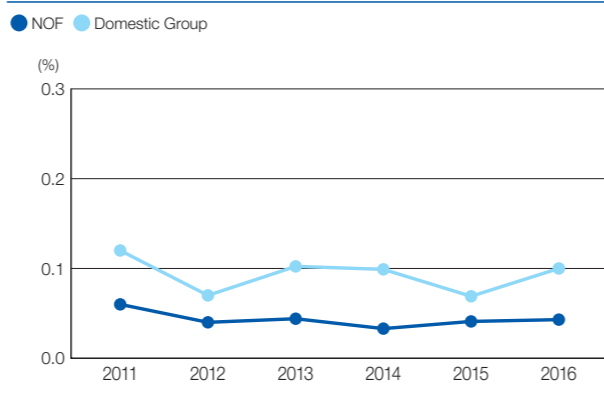
The volume of wastes discarded by the Domestic Group for final disposal by landfill was 157 tons, representing a Zero Emissions of 0.10% in fiscal 2016. We will make efforts to reduce the final landfill volume to maintain Zero Emissions.

Final disposal volume by landfill



Meanwhile NOF's final landfill volume was 66 tons, representing a Zero Emissions of 0.043%.
NOF achieved Zero Emissions again in fiscal 2016 at all its works. We will continue to strive to maintain a Zero Emissions of 0.1% or less as a Group.

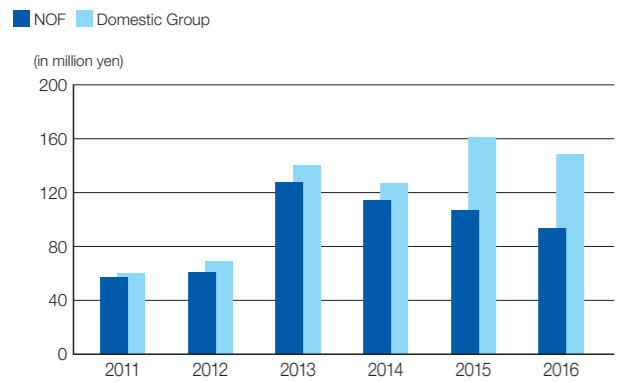
Zero Emissions rate



Recycling of valuables from wastes

In fiscal 2016, the sales of recycled waste matters of the Domestic Group earned approximately ¥150 million. We will continue our efforts to recycle valuables from waste matters.

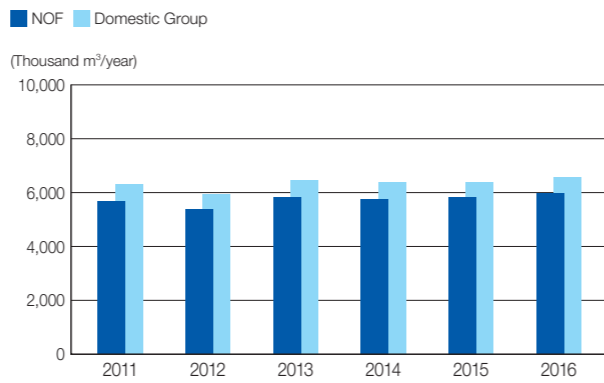
Sum of valuables sold



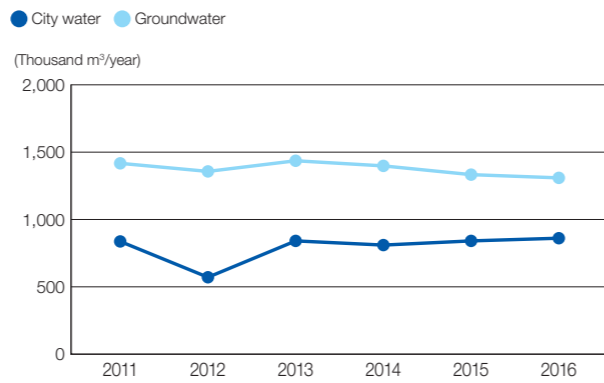
Consumption of water resources

NOF has been carrying out the efficient use of water resources by estimating the amount of the water consumption. The volume of water used by the Domestic Group in fiscal 2016 amounted to 6,560,000m³, of which 1,309,000m³ was groundwater and 861,000m³ was city water.

Water consumption



Volumes of city water and groundwater used



*1: Here, this means an endeavor to make the disposal quantity of industrial waste close to zero.
NOF's definition of zero emission: Volume of final disposal by landfill/volume of wastes, etc. generated × 100 ≤ 0.10

Environmental Safety: PRTR

Initiatives to Reduce Emissions of Chemical Substances

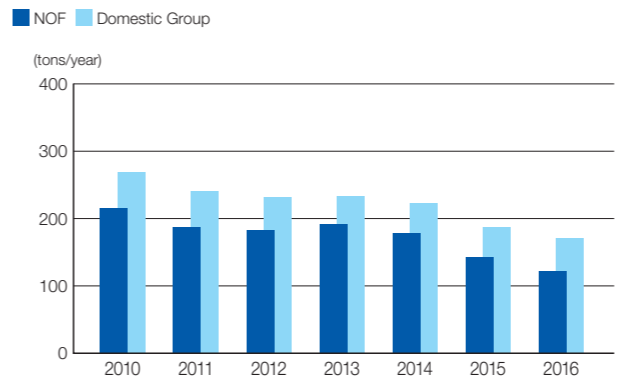
Each member-company of the Domestic Group is making efforts to reduce emissions of chemical substances by assessing and making notifications of PRTR Act^{*1}-controlled substances.

PRTR Act^{*2}-controlled substances

The emission volume of PRTR Act-controlled substances by the Domestic Group in fiscal 2016 was 170 tons, about 9% less than the 187 tons in fiscal 2015. This resulted in a 37% reduction from 269 tons in fiscal 2010, the reference year of the Mid-term Target. This was due to full-fledged operation of treatment facilities in individual plants, introduced since fiscal 2014.

10 tons or more of PRTR Act-controlled substances are indicated on the right.

Emissions of PRTR Act-controlled substances



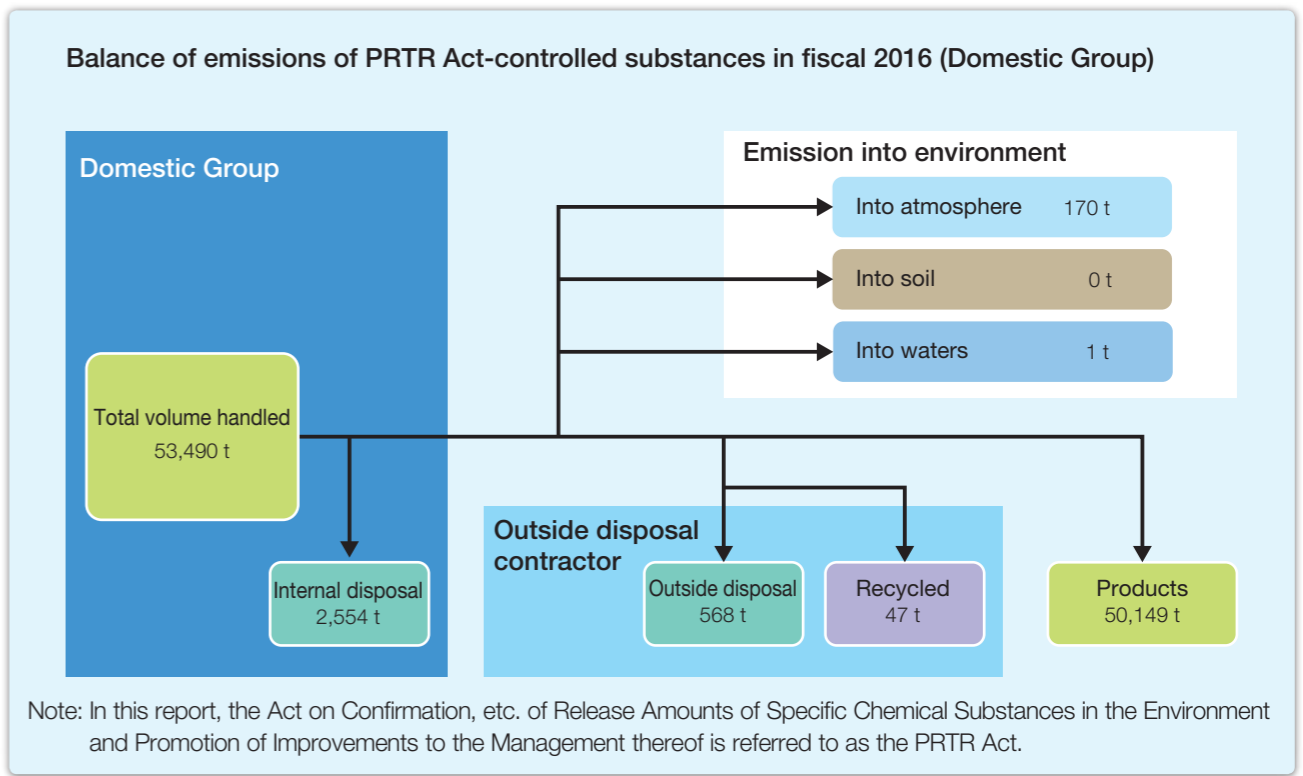
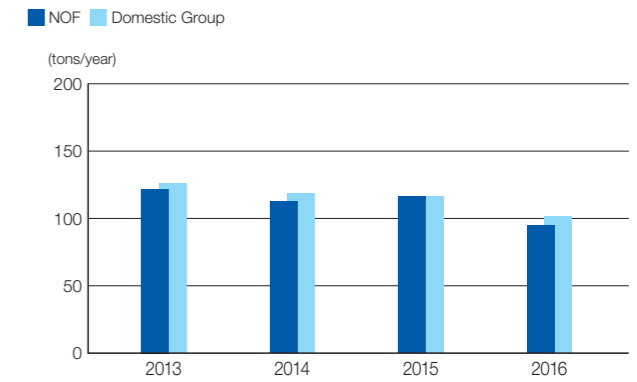
Substances high in volume (10t or more) discharged into the environment

Cabinet order No.	Name of substance	Emission volume (tons/year)
186	Methylene chloride	44.3
83	Cumene	28.6
300	Toluene	21.8
128	Chloromethane	18.0
392	Normal hexane	16.3
123	3-chloropropene	11.2
Total emission volume		170.2

Substances under JCIA-recommended autonomous 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 2016 was 101 tons, a decrease of 12% from the previous year of 116 tons.

Emissions of substances under JCIA-recommended autonomous control



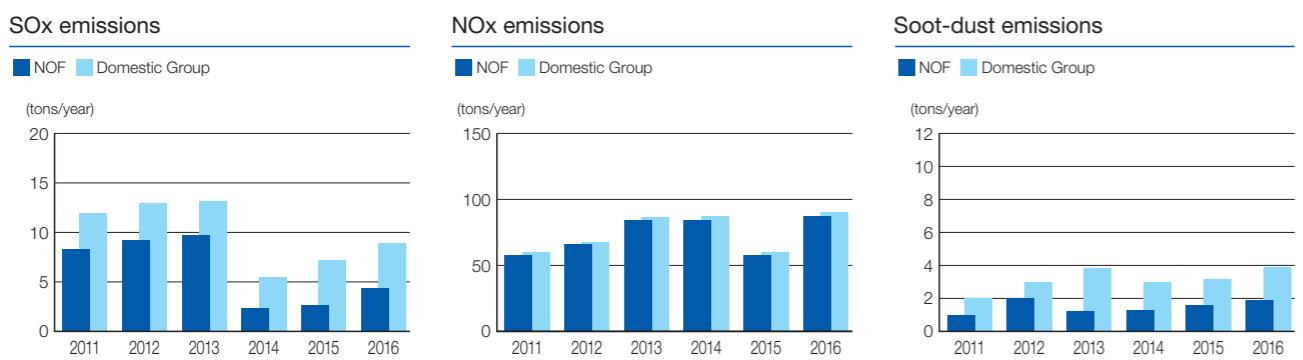
Note: In this report, the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management thereof is referred to as the PRTR Act.

*1: Pollutant Release and Transfer Register Act (PRTR Act, or PRTR). The Act is intended to promote and improves chemical substance control and prevents the occurrence of problems in environmental conservation in Japan.

*2: PRTR Act: Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management thereof

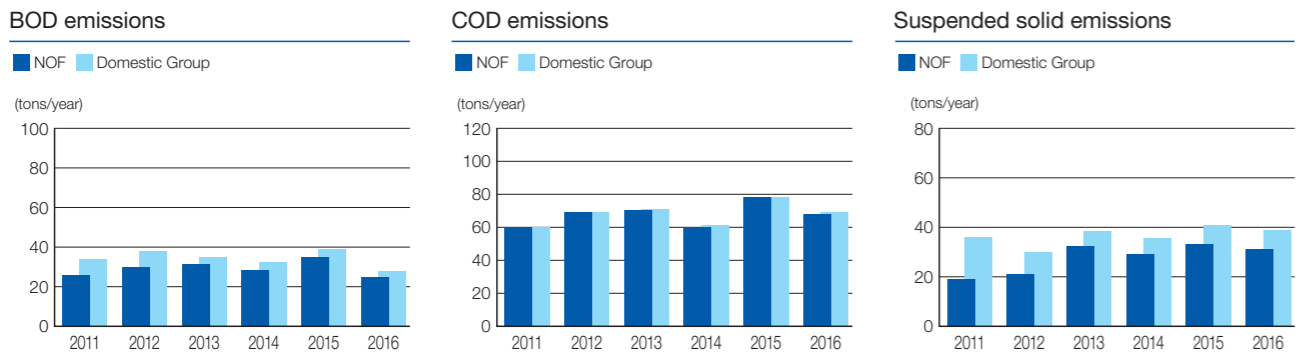
Eco-friendly action: Air

We regularly measure sulfur oxides (SOx), nitrogen oxides (NOx), soot and dust^{*1} among others contained in exhaust gas from boilers and other combustion equipment to conform our operation and management to prescribed limits. Levels rose in 2016 due to increased production volume.



Eco-friendly action: Water

Regular measurement of biochemical oxygen demand (BOD), chemical oxygen demand (COD) and suspended solids^{*2} among others contained in drainage discharged in connection with production activities is another aspect of our dedication to operation and management conforming to prescribed limits.



Actions for biodiversity conservation

Through such actions as the prevention of global warming, proper management of chemical substances and cutbacks on emissions, the NOF Group has long been committed to the conservation of the environment from preserving the immediate environment to addressing environmental problems on a global scale, as well as the conservation of ecosystem and natural resources. From fiscal 2010, the NOF Group took up "Promoting conservation of biodiversity" as one of the targets of its RC activities, and began actions to help conserve biodiversity and promote the sustainable use of resources.

In October 2012, NOF joined the Round-table on Sustainable Palm Oil (RSPO)^{*3} as "Palm Oil Processors and Traders" to contribute to the healthy development of the palm oil industry. In 2014, the NOF Group endorsed the Action Policy of and joined the Japan Business and Biodiversity Partnership, which promotes initiatives towards biodiversity by business operators.

Proper management of polychlorinated biphenyl (PCB)

PCB is properly stored and managed in accordance with the Law Concerning Special Measures Against PCB Waste, and disposed of by commissioning disposal operators as prescribed by laws and regulations.

Registered with Japan Environmental Safety Corporation, NOF disposes of its high-concentration polychlorinated biphenyl (PCB) wastes sequentially. NOF also disposes of its low-concentration PCB wastes systematically upon confirming the disposal operators.

Compliance status to Acts related to the environment

There was no violation of environmental protection law.

*1: Out of particulate substances arising from operations in plants and other business establishments, those generated in conjunction with the combustion of fuel or any other substance.
 *2: Particulate substances of 2 mm or less in diameter floating or suspended in water; one of the indicators of water quality.
 *3: RSPO is an acronym for the Roundtable on Sustainable Palm Oil, established in 2004 with an eye to promoting sustainable production and profitability of palm oil through the formulation of globally creditable authentication standards and participation of stakeholders. RSPO is headquartered in Zurich, Switzerland.

Occupational Safety and Health Policy

The whole NOF Group, including the staffs of cooperating companies assigned to NOF's works, is making all-out efforts to eradicate occupational accidents. In order to clearly express the Group's determination to make its workplaces secure and safe for all the workers involved in its activities and to realize this ideal, NOF set forth its labor safety and health policy in April 2006.

Under this policy, an occupational safety and health management system is organized, under which required management and improvement are pursued.

Occupational Safety and Health Policy

<Fundamental idea>
 We, as a group of chemical companies, shall endeavor to secure the "safety" and "health" of our employees and local communities in the belief that "no business can be viable without safety." All the officers and employees shall be committed to the buildup of "workplaces where we can work safely and securely" in close teamwork consistent with responsible care activities, and positively promote activities for occupational safety and health.

<Fundamental principles>

- (1) We shall organize an appropriate self-management system regarding occupational safety and health, and continue necessary management and improvement.
- (2) Our target shall be the eradication of labor accidents by improving the working environment, making the equipment intrinsically safe and carrying out risk reducing activities in anticipation of future changes in the working environment.
- (3) We shall faithfully observe relevant laws and regulations and our own rules and standards.
- (4) We shall endeavor for the creation of a pleasant working environment and support efforts for keeping and promoting health.
- (5) We shall make the Labor Safety and Health Policy thoroughly known to all the employees, and review it every year or as necessary. These principles shall be broadly disclosed to the public.

(Revised in March 2013)

Results of activities in fiscal 2016

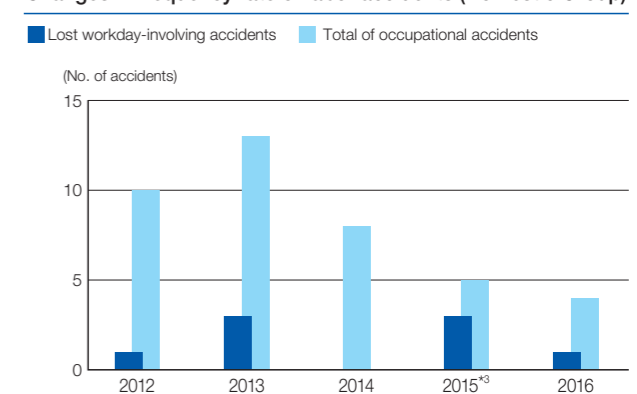
In fiscal 2016, the Group targeted "completely zero accidents,"^{*1} and under the slogan of "elimination of unsafe actions and unsafe conditions," worked towards reinforcing its safety activities including the identification of risk factors and raising the awareness of safety. However, we were unable to achieve the goal of "completely zero accidents."

Occurrence of labor accidents in fiscal 2016

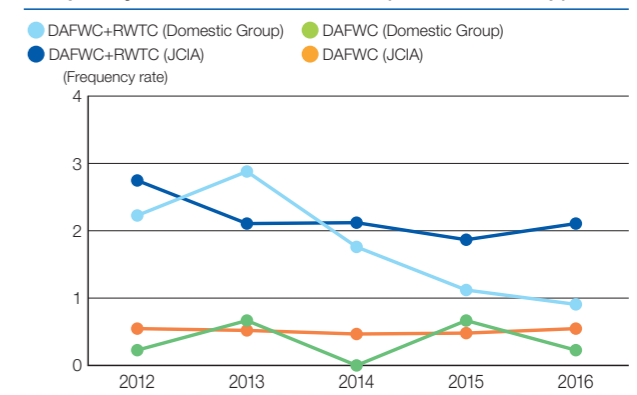
The Domestic Group in fiscal 2016 suffered one lost workday accident, a major improvement from the three such accidents in the year before, and the number of labor accidents including those not involving lost workdays was four, one less than in the previous year's five.

To compare the frequency rate of labor accidents^{*2} (DAFWC+RWTC) in the Domestic Group and that of the member companies of the Japan Chemical Industry Association (JCIA), the former was 0.68 in fiscal 2016, down from the previous year's 0.84 and was lower than the industry's average for the third consecutive year.

Changes in frequency rate of labor accidents (Domestic Group)



Frequency rate of labor accidents (Domestic Group)



*1: The Group's own target to achieve zero lost workday accidents and zero accidents not involving lost workdays.
 *2: This is an indicator of the frequency of occurrence of occupational accidents, whether involving absence from work or not. It is the rate of the number of workers suffering occupational accidents per million work-hours.
 *3: One accident not involving lost workdays that was overlooked when the fiscal 2016 CSR report was issued has been added.

Safety education by try-and-sense method

The NOF Group has introduced safety education by a try-and-sense method, which aims at labor accident prevention by having the trainees gain a simulated experience of danger with a view to making the employees more sensitive to potential danger and more conscious of safety. Additionally, the staff is also actively attending external training sessions.

Aichi Works, Try-and-sense education



Rotating parts risk experience training Electrical risk experience training



Barrier interior risk experience training Forklift risk experience training

Each individual's "safe practice declaration" activities (Domestic Group)

The need for enhanced safety awareness to eliminate labor accidents was recognized in fiscal 2011, as a result of the frequent occurrence of such accidents attributable to human factors including the lack of a sense of danger and carelessness. From fiscal 2012, we have decided to implement "each individual's 'safe practice declaration' activities," namely the setting of action targets for labor safety by each individual person and taking action to achieve the targets. This system is implemented in a way considered suitable for each location, such as safe practice declarations of individuals, including the personnel of cooperating companies at the site, being made open to everybody by posting on a bulletin board. Starting from fiscal 2014, the system has expanded to include the monthly confirmation of progress on the achievement of these targets in an effort to improve safety awareness.

Ongoing zero accident operation in facilities using high pressure gas and boilers has also led to the reception of several awards.



Exceptional Boiler Engineer Award, Amagasaki Plant

Safety campaign activities report meeting (Kawasaki Works)

The Kawasaki Works has three plants producing chemicals, foods and pharmaceutical materials, each carrying out its own safety campaign activities suited to its own situation. With a view to introducing unique activities among different workplaces and thereby helping activate safety approaches through mutual enlightenment, in August 2016, five workplaces reported on their respective activities carried out on a routine basis. Going forward, we will continue to promote mutual exchanges among the three plants and strive to foster a safety culture in the entire Kawasaki Works.



Activity plans for fiscal 2017

We have not yet achieved our target of "completely zero accidents," which we have been striving for since fiscal 2015. Causes of accidents in fiscal 2016 include insufficient risk prediction and non-compliance with the rules. Overall, appropriate safety activities are being implemented, but we need to further improve risk prediction levels and cultivate a stronger sense of tension.

In fiscal 2017, we will continue to work on enhancing existing measures in order to achieve "completely zero accidents."

Furthermore, in order to reduce the number of accidents during commutes, which occurred frequently during fiscal 2016, we will enhance our traffic safety measures by adding a new goal of "elimination of traffic accidents."

- 1) Enhancing the sensitivity towards danger and thoroughly enforcing safety actions
- 2) Reduction of disaster risks
- 3) Elimination of traffic accidents

The Domestic Group will continue to work to tighten its collaboration with cooperating companies, and aim to improve the overall safety level of the whole Group.

Investment in safety and physical prevention of accidents

In connection with measures for safety and accident prevention, NOF Group is carrying out a program of physical projects for prevention of accidents including explosion, fires and leaks, labor safety and working environment amelioration. Further to provide against anticipated heavy earthquakes, projects are under way to strengthen buildings.

Disaster prevention drill



Oita Plant



Head Office



Amagasaki Plant



Kawasaki Works



Tsukuba Research Center



Aichi Works



Joint disaster-fighting drill

Tightened collaboration with the local community

In providing against accidents that might happen, close collaboration with local disaster-fighting organizations is indispensable. The NOF Group is actively trying to create such opportunities and to enhance skills in this respect by engaging in joint drills with local organizations for damage prevention. Joint disaster-fighting drills and emergency support drills with neighboring companies are increasingly adapted to practical needs year after year. Large-scale drills have become frequent with the participation of local fire and police stations.

The Kawasaki Works entered into an agreement with the municipal government of Kawasaki to offer itself as a refuge facility against tsunami, and would open its general office building to general citizens seeking help. Besides these drills, individual works also cooperate in safety education at the request of organizations they belong to.

Self-defense fire-fighting demonstration



Amagasaki Plant

Commendation for safety drives

Member-companies of the NOF Group are taking active parts in fire-fighting skill demonstrations that are held locally. The training sessions our employees regularly participate in have proved effective, and they are often given higher awards, which further motivate them.

The NOF Group's safety drives have also been recognized, and have been awarded the following commendations.

Works/Plants	Date awarded	Title of commendation
Amagasaki Plant	June 8, 2016	Japan Boiler Association, Exceptional Boiler Engineer Award (2 employees)
Amagasaki Plant	June 14, 2016	Excellent High Pressure Gas Control Officer, Chairman's Award
Amagasaki Plant	Oct. 25, 2016	54th Hyogo Prefecture High Pressure Gas Conference, Conference Committee Chairman's Award Safety Merit Award
Amagasaki Plant	Nov. 4, 2016	Amagasaki City Fire Prevention Association, Fire-Fighting Skill Demonstration Indoor Fire Plug Division: First Prize, Compact Power Pump Division: Merit Award
Amagasaki Plant	Nov. 25, 2016	Amagasaki City, "Amagasaki City 100 Year Company" Award
Amagasaki Plant	Jan. 8, 2017	Amagasaki City Fire Prevention Association, Fire Prevention Association Chairman's Award (Excellent Fire Prevention Promotion Organization)
Amagasaki Plant	Feb. 21, 2017	Oil and Fat Industry Paper, First Prize
Kawasaki Works	Jan. 7, 2017	Harbor Factory Fire Prevention Council Chairman's Award Hazardous Materials Security Superintendent Continuous Service Award: 15 Years of Service (2 employees), 10 Years of Service (4 employees)
Aichi Works	Oct. 3, 2016	Excellent Automobile Driver Award Japan Traffic Safety Association Chairman's Traffic Medal of Honor (1 employee), Aichi Prefectural Police Headquarters Chief's Award (2 employees) and others
Aichi Works	Oct. 13, 2016	35th Self-Defense Fire Brigade Firefighting Contest, 5th place in team competition, 3rd place in rescue and firefighting technique
Oita Plant	Apr. 1, 2016	Oita City Disaster Prevention Association, 2015 Fire Prevention and Safety Merit Award
Nippon Koki Co., Ltd.	May 27, 2016	Shirakawa District Association for Safety of Hazardous Materials, Excellent Handler of Hazardous Materials Award
Showa Kinzoku Kogyo Co., Ltd.	Feb. 16, 2017	Excellent Safe Driving Manager Award, Ibaraki Prefectural Police Headquarters Chief/Ibaraki Prefecture Safe Driving Management Association Joint Award
Nippo Kogyo Co., Ltd.	Oct. 7, 2016	Shizuoka Prefecture Labor Standards Association Federation, Industrial Safety Division, Excellent Worksite Award

Meeting international requirements for control of chemical substances

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 the 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 its control to the general public including our 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.

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 Their Manufacture, etc. and the Industrial Safety and Health Act.

In order to make proper notifications, when launching a new chemical substance on the market, a

third-party division within NOF 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 number 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 to participating in the Japan Challenge Program and releasing safety information on chemical substances.

Compliance with REACH

REACH*1 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 the Asian countries 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.



Traffic safety lecture, Kawasaki Works



Product safety education, Aichi Works



Education for new employees

Joint Article Management Promotion-consortium (JAMP)

JAMP*2, which 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 material safety data sheets plus (MSDS plus) recommended by JAMP to supply downstream users with information on chemical substances.

SDS

SDS is a document stating the necessary information on the nature of and the handling of chemical substances and is presented to the users, sales agents and other companies handling our products, including product transport businesses, in order to ensure safe handling of the chemical substances. In the product development process the NOF Group conducts safety assessment and related evaluation, classifies the planned product according to the Globally Harmonized System (GHS), and prepares the SDS.

GHS

GHS*3 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, representing an internationally harmonized system under which the results of such classifications reflected in GHS labels and SDS (Safety Data Sheets) are communicated for the prevention of accidents and the

protection of people's health and environment.

The NOF Group attaches GHS labels stating the toxicity and hazardous properties of applicable products on its containers. By doing so, the NOF Group is alerting its users, sales agents and other companies handling our products, including product transport businesses, in order to ensure safe handling.



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 safety of products in transport. The Group has always treated transportation safety with desirable care, as it handles a wide range of hazardous materials.



Product storage freezer operation education



Confirming loading method with a carrier

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.



*1: Acronym for Registration, Evaluation, Authorization & Restriction of Chemicals. REACH represents EU's quality control regulations on chemicals and is applied to the registration, evaluation, authorization and restriction of chemicals.
 *2: Acronym for Joint Article Management Promotion-consortium. JAMP was inaugurated in September 2006 by 17 companies subscribing to the underlying idea as promoters to serve as a cross-sectorial body to promote safety activities.
 *3: Acronym for Globally Harmonized System of Classification and Labelling of Chemicals. An internationally harmonized system for the classification and representation of chemicals. The GHS is reflected in SDS and the label of the container. The SDS and labels of hazardous products carry characteristic graphic displays.

Basic concept

In the procurement of its raw materials, also, NOF views the entire supply chain, and fulfills its social responsibility to respect human rights, comply with laws and regulations and give due consideration to the environment and safety. In order to realize the NOF Corporate Philosophy, the procurement divisions, based on the concept that all suppliers are important partners for NOF, is committed to deal sincerely with its suppliers and to engage in procurement activities guided by the following concepts.

- We will comply with Japanese and foreign laws and engage in fair transactions based on corporate ethics.
- We will engage in procurement that is responsible toward the environment, safety, health and quality and friendly to the global environment.
- In the selection of our suppliers, we will provide fair business opportunities to the entities of both Japan and overseas.
- We will select our suppliers by fair judgment, in an effort to build better partnerships.
- We will respond quickly to emergencies and engage in appropriate disclosure of information.

In the procurement unit, we provided our main suppliers with necessary explanations on NOF's basic concept concerning CSR procurement and commenced questionnaires on the status of CSR activities at our main suppliers. We will continue these activities in fiscal 2017.

In addition, as part of business continuity plan (BCP) development, the procurement divisions are gradually introducing the adoption of multiple purchasing for main raw materials and revisions of the supply chain in order to achieve stable procurement of raw materials even in the face of emergencies such as natural disasters, equipment abnormalities and logistics abnormalities.

Fair trade practices

The NOF Group is promoting fair trade practices by stipulating the compliance with the competition act (anti-monopoly act) and the subcontract act, as well as the prohibition of bribery, in the Global Compliance Manual and the Compliance Manual (Japan version) and carrying out ongoing employee education.

Legal seminars on the subcontract act were held during the fiscal year (total of 13 times, 220 participants) in an effort to allow employees to gain basic knowledge on the subcontract act and improve their knowledge.

In addition, in order to avoid the risk of violation of "prohibitions against payment delays" and "prohibitions against reductions" under the subcontract act for transactions (including transactions which may be but ultimately are not covered by the act), the NOF Group is standardizing its payment conditions to those that comply with the act in comprehensive and uniform manner in all Group companies in Japan.



Legal seminar for Group companies



To win the understanding of the members of the local community and in society at large regarding the corporate activities of the NOF Group, the Group is engaged in various dialogue activities.

In fiscal 2016, we welcomed a plant tour by local residents and held local dialogue meetings on RC, all with a view to smoother two-way communication.



Inviting high school students from the South Hanshin area to a plant tour, Amagasaki Plant



Inviting neighboring ward heads to a plant tour, Aichi Works



Aichi local dialogue meeting on RC, Aichi Works



Lecture at Shirakawa City Shinobu Daini Elementary School, Nippon Koki Co., Ltd.



Inviting representatives from local resident's association to a plant tour, NiGK Corporation



Inviting students from Tomakomai National College of Technology to a plant tour, HOKKAIDO NOF CORPORATION

Organizational unit	Date	Name of event	Activities
Amagasaki Plant	Nov. 16, 2016	RC dialogue meeting	We participated in regional dialogue meeting on responsible care.
	Dec. 16, 2016	Held a plant tour	We invited 34 high school students from the South Hanshin area to a plant tour.
Aichi Works	July 9, 2016	Held a works tour	We invited 13 heads of neighboring wards to a works tour and exchanged opinions.
	Jan. 27, 2017	Held a plant tour	We met and exchanged opinions with seven new and former mayors from neighboring wards.
	Feb. 17, 2017	Deepened cooperation with companies of the neighboring area	We exchanged information with safety managers in companies located in Taketoyo Town.
Oita Plant	Feb. 28, 2017	RC dialogue meeting	We participated as a host in an Aichi local dialogue meeting on RC and reported on RC activities.
	Nov. 8, 2016	Participation in school visit class	We dispatched two research lab members to a school visit class held at Oita City Takata Elementary School.
Tsukuba Research Center	Feb. 25, 2017	RC dialogue meeting	We held the 7th community RC mini-dialogue meeting for residents of the Tsurusaki and Misa regions. (Participated by 12 companies and around 80 local residents.)
	Jan. 26, 2017	Deepened cooperation with companies of the neighboring area	We participated in a chemical substance risk assessment seminar held by the Tsukuba City Industrial Park Corporate Liaison Council and exchanged opinions.
Nippon Koki Co., Ltd.	Feb. 8, 2017	Held a lecture	We held a lecture on Hayabusa 2 to 44 students from Shirakawa City Shinobu Daini Elementary School.
NiGK Corporation	Sep. 15, 2016	Held a plant tour	We invited five representatives from the residents' association of the neighboring area to participate in a briefing on the Company's overview and its environmental activities, a plant tour and a social gathering.
HOKKAIDO NOF CORPORATION	Jul. 13, 2016	Held a plant tour	We invited 44 students from the Tomakomai National College of Technology to a plant tour.
Showa Kinzoku Kogyo Co., Ltd.	Oct. 12, 2016	Held a plant tour	We held a company tour program for the Kasama Self-Defense Force Parent's Association.
	Feb. 10, 2017	Exchange with local residents	We paid a courtesy call to neighboring residents (landowners). (74th anniversary commemorative event)

Support for the Amagasaki Half Marathon

Forty-one employees of the Amagasaki Plant volunteered their support at the Amagasaki Half Marathon held on October 16, 2016 in commemoration of the 100th anniversary of the municipal foundation of Amagasaki City. Volunteers provided water and cheered for roughly 8,000 runners at the second water station, located near the plant, forging even closer ties with the community.



Blood drive

Kawasaki Works regularly holds a blood drive in cooperation with the Japanese Red Cross Society. Two drives were held during the fiscal year on October 14, 2016 and March 3, 2017. Although many employees were on shift work, they collaborated and adjusted their schedules to make time, and a total of 49 employees donated blood over the two days.



Cooperation in support program for Japanese students studying abroad

NOF was awarded the Medal with Dark Blue Ribbon in recognition of its donation in support of the "Tobitate! (Leap for Tomorrow) Young Ambassador Program – A Public-Private Partnership Encouraging Students Study Abroad," established by the Japan Student Services Organization. The award ceremony was held at Arcadia Ichigaya on March 13, 2017, and the Dark Blue Ribbon honorable mention was presented to NOF by Mr. Endo, President of the Japan Student Services Organization.



Collaboration in measures to fight child poverty

NOF supports the cause of the Children's Future Support National Campaign, launched in April 2015, and has donated to the Children's Future Support Fund each year since fiscal 2015. In recognition of this support, NOF received a letter of appreciation from the Cabinet Office on November 8, 2016.



Creation and distribution of leaf mold (NiGK Corporation)

NiGK Corporation strives to preserve as many natural trees as possible at its head office plant. It is also engaged in the ongoing activity of collecting the abundant foliage shed by these trees and reusing them in the form of leaf mold.

The leaf mold was offered to the community in fiscal 2016, at an event commemorating the 50th anniversary of the founding of the Kawagoe City United Residents' Association – Kasumigaseki Kita Branch. The giveaway was met with unexpected popularity, with all 200 bags of homemade leaf mold handed out within roughly the first hour of the event.



Model rocket-making class and rocket launch contest

NOF continued this year to co-sponsor the model rocket-making class and the rocket launch contest, "Ozora Cup," which was held on April 16, 2016, through the sponsorship of NPO Taketoyo. Employees of our Solid Rocket Development Department served as "rocket doctors" to introduce the attractiveness of rockets to the participating children.



Sponsoring of the "Japan Ground Self-Defense Force the 10th Band Fureai Concert"

Following the last year, the "Japan Ground Self-Defense Force the 10th Band Fureai Concert in Taketoyo," which was sponsored by Aichi Works, was held on August 3, 2016, at the Kagayaki Hall of the Yumetarou Plaza (Taketoyo Community Arts Center).



Various donations

[Donations aimed at raising the next generation]

- JCIA, Science Human Resources Development Program
- Children's Future Support National Campaign, Children's Future Support Fund
- Japan Association of Corporate Executives (Keizai Doyukai), IPPO IPPO NIPPON Project
- Hatachi Fund

[Donations aimed at protecting the global environment]

- Keidanren Nature Conservation Fund
- National Land Afforestation Promotion Organization, Green Fund
- World Wide Fund For Nature (WWF) Japan

[Support for disaster-affected areas]

* 2016 Kumamoto Earthquake Donations

Cleaning volunteer activities

The NOF Group is actively engaged in volunteer activities to clean the areas surrounding its plants.



Cleaning volunteer activities around Fuki Harbor (20 employees participated from Aichi Works on June 18, 2016)



Cleaning volunteer activities of public roads (Amagasaki-Takarazuka Line) (28 employees participated from Amagasaki Plant on July 28, 2016)



Cleaning volunteer activities around Kawasaki Works (An average of 15 employees participated from Kawasaki Works on the second and fourth Wednesdays of each month)



Cleaning volunteer activities around Sunagawa Park (26 employees participated from Aichi Works on Oct. 15, 2016)



Cleaning volunteer activities of public roads (Amagasaki-Takarazuka Line) (32 employees participated from Amagasaki Plant on February 24, 2017)

Other socially beneficial activities

<Aichi Works>

- Taketoyo Region Tree Planting Festival (supported 67 shares) (April 29, 2016)
- Miyuki Street Summer Festival (Offered plant premises) (July 23, 2016)
- New Year Feast at Tamafuku Inari Shrine (January 1, 2017)
- Supported Yumetaro Smile Marathon (January 29, 2017)
- Supported Taketoyo Town's "Hayabusa 2 Related Events" (March 25, 2017)

<HOKKAIDO NOF CORPORATION>

- Supported Bibai Sakura "Fireworks Festival" (April 11, 2016)
- 100 employees participated in Bibai City "Challenge Day" (May 12, 2016)

Information disclosure

In today's age of ceaseless globalization and advancement in information technology, disclosing of corporate information has become indispensable in order for an entity to fulfill its responsibility to society. Disclosure of corporate information is also becoming increasingly important for the NOF Group, as we strive to win the trust of society as an "open group" both inside and outside the Group. The NOF Group engages in timely disclosure of its corporate information including management information and business activities to its shareholders and the capital markets in accordance with relevant laws and regulations such as the Companies Act and the Financial Instruments and Exchange Act.

Business results briefings

The NOF Group conducts IR activities geared towards shareholders and investors that focus on the reliability and fairness of its investment information. NOF makes efforts to provide timely, appropriate and fair disclosures by holding business results briefings for institutional investors twice a year and posting the briefings materials on the Company's website for general investors.



Notice of General Meeting of Shareholders

NOF sends its Notice of Annual General Meeting of Shareholders three weeks in advance. In addition, we strive to provide information promptly by disclosing both Japanese and English versions as digital information four weeks in advance of the day of the meeting.

Publishing of CSR Reports

The Environmental Reports (Report on Responsible Care Activities) that had been published since fiscal 1995 have been published as the CSR Report since last year, and for this year that marks the second year of the Report, we made efforts to make the Report even easier to read. In addition, we are making every effort to improve accessibility to information through an ISO26000 comparison table posted on our CSR information website.

Information dissemination

The NOF Group proactively releases information on its new products and technology. In fiscal 2016, in addition to our 19 news releases, we responded actively to mass media coverage, which resulted in 81 mentions of the NOF Group businesses in the newspapers. We also present NOF Group products at various exhibitions and trade shows.

2016 AACR ANNUAL MEETING New Orleans, U.S.A. (April 2016)



Phospholipid

Automotive Engineering Exposition PACIFICO Yokohama (May 2016)



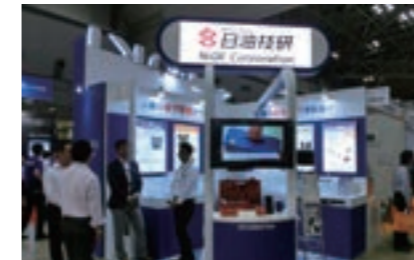
"GEOMET", a chrome-free anti-corrosion coating, etc.

BIOCONJUGATES San Francisco, U.S.A. (June 2016)

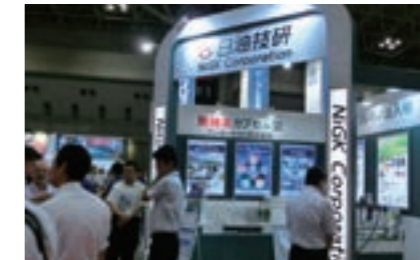


Activated PEGs

Maintenance & Resilience TOKYO 2016 Tokyo Big Sight (July 2016)

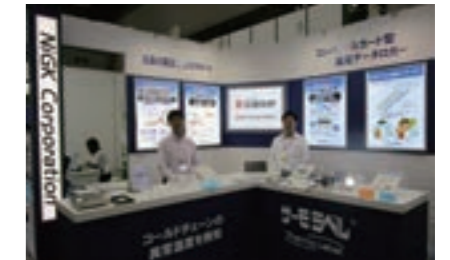


Plant Maintenance Show
RFID tag "TAGAT", etc.



Construction Material Tokyo
Cement capsule, etc.

Food Safety Japan Tokyo Big Sight (September 2016)



"Thermolabel", temperature indicating materials, etc.

2016 CPhI Worldwide Barcelona, Spain (October, 2016)



Activated PEGs, Ultra-Purity Polysorbate 80, 20

Health Ingredients Japan / Safety and Technology Japan 2016 Tokyo Big Sight (October 2016)



"Phosphatidylserine," a brain function improvement ingredient, etc.

American Association of Pharmaceutical Scientists Denver, U.S.A. (November 2016)



Activated PEGs, Ultra-Purity Polysorbate 80, 20

Compamed (an international medical equipment technology and parts exhibit) Dusseldorf, Germany (November 2016)



"Lipidure", a biocompatible material, etc.

Highway Techno Fair 2016 Tokyo Big Sight (November 2016)

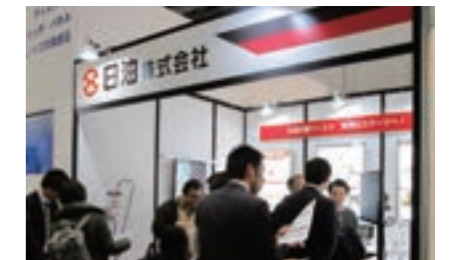


"KAMAGU", an antifreezing agent, etc.



"RBS Foam", a low-density urethane injection, etc.

INTERNEPCON JAPAN Tokyo Big Sight (January 2017)



Bronze paste for screen printing

Cosme Tech 2017 Tokyo Big Sight (January 2017)



General cosmetic materials and prescription proposals

Kawasaki International Echo-Tech Fair 2017 Todoroki Arena (February 2017)



"GEOMET", a chrome-free anti-corrosion coating, etc.



Naruhodo NOF! (Company website, Japanese only)

"Naruhodo NOF!" on the Company website introduces the businesses of the NOF Group. We use easily understood, user-friendly terms to explain our business, in an effort to further the understanding of the general public towards our undertakings.



Top page of NOF CORPORATION
(<https://www.nof.co.jp/english/index.html>)



Top page of "Naruhodo NOF!"
(<https://www.nof.co.jp/about/index.html>)

Performance data by organizational unit (Fiscal 2016 Results)

Item	Unit	Amagasaki Plant	Kawasaki Works	Oita Plant	Aichi Works	NOF, etc.
Production volume	[thousand tons]	98.3	63.4	18.6	19.8	—
Gross-energy input	[thousand GJ]	1,205	556	310	626	26
Total material input	[thousand tons]	101	66.1	39.2	41.5	—
Water resource input	[thousand m ³]	3,563	741	321	1,341	0.7
GHG emission	[thousand t-CO ₂]	69.6	27.8	18.9	42.9	1.7
SO _x emission	[tons]	0.03	0	0.1	4.2	—
NO _x emission	[tons]	69	3.5	5.5	10	—
COD emissions	[tons]	28	1.5	5.0	33	—
Waste quantity emitted by plants	[tons]	9,466	5,911	421	4,538	19.4
Internal recycling quantity	[tons]	0	0	0	1,177	—
External recycling quantity	[tons]	6,167	5,662	110	3,009	7.2
Finally disposed waste quantity	[tons]	39.7	1.7	0	24.2	0
Emissions of substances regulated by PRTR law	[tons]	19	69	0.7	34	0

Item	Unit	Nippon Koki	NiGK	Showa Kinzoku	HOKKAIDO NOF	Nippo Kogyo	YUKA SANGYO
Production volume	[thousand tons]	3.3	2.8	0.4	2.3	0.1	2.4
Gross-energy input	[thousand GJ]	147	34.9	15.4	47.6	3.1	2.0
Total material input	[thousand tons]	4.3	3.2	0.4	5.3	0.1	1.3
Water resource input	[thousand m ³]	466	25.6	22.2	24.8	3.0	7.0
GHG emission	[thousand t-CO ₂]	8.8	1.8	0.8	3.2	0.2	0.1
SO _x emission	[tons]	2.0	0.1	0	2.4	0	0
NO _x emission	[tons]	2.0	0.1	0	0	0	0
COD emissions	[tons]	0	0	0.1	0.2	0	0
Waste quantity emitted by plants	[tons]	160	117	72.8	186	14.9	206
Internal recycling quantity	[tons]	0	0	0	0	0	0
External recycling quantity	[tons]	149	102	44.7	19.0	7.9	0
Finally disposed waste quantity	[tons]	11.2	0.5	8.3	67.7	0	2.4
Emissions of substances regulated by PRTR law	[tons]	4.1	1.1	0	0	0	0.6

Item	Unit	Nichiyu Kogyo	NOF METAL COATINGS	NIKKA COATING	NICHIYU LOGISTICS	Other Domestic total	Overseas total
Production volume	[thousand tons]	2.7	2.4	2.9	—	—	25.7
Gross-energy input	[thousand GJ]	11.5	7.6	18.1	7.6	1.2	413
Total material input	[thousand tons]	2.5	1.9	—	—	—	—
Water resource input	[thousand m ³]	37.0	6.0	1.5	—	—	1,680
GHG emission	[thousand t-CO ₂]	0.6	0.4	1.0	0.5	0.1	20.5
SO _x emission	[tons]	0	0	0	—	—	0.4
NO _x emission	[tons]	0.5	0	0	—	—	2.5
COD emissions	[tons]	0.4	0	0	—	—	157
Waste quantity emitted by plants	[tons]	38.1	133	72.5	—	—	4,216
Internal recycling quantity	[tons]	0	0	0	—	—	0
External recycling quantity	[tons]	37.8	133	72.0	—	—	359
Finally disposed waste quantity	[tons]	0.3	0.1	0.5	—	—	1,176
Emissions of substances regulated by PRTR law	[tons]	0	0.5	41.7	—	—	—

Changes in performance data (NOF Group)

Item	Unit	2010	2011	2012	2013	2014	2015	2016
Production volume	[thousand tons]	226	225	214	216	214	217	219
Gross-energy input	[thousand GJ]	3,181	3,083	2,975	3,033	3,039	3,016	3,018
Total material input	[thousand tons]	261	267	255	256	259	263	267
Water resource input	[thousand m ³]	6,443	6,312	5,924	6,454	6,396	6,389	6,560
GHG emission	[thousand t-CO ₂]	175	168	180	186	183	171	179
SO _x emission	[tons]	13	12	13	13	6	7	9
NO _x emission	[tons]	69	60	68	86	87	60	90
Soot and dust emissions	[tons]	5	2	3	4	3	3	4
BOD emissions	[tons]	36	34	38	35	32	39	28
COD emissions	[tons]	75	60	69	71	61	78	68
Suspended solid emissions	[tons]	35	36	30	38	35	41	39
Waste quantity emitted by plants	[tons]	21,456	20,127	19,038	19,395	19,966	20,829	21,351
Internal recycling quantity	[tons]	2,339	4,864	5,609	2,242	5,100	3,929	1,177
External recycling quantity	[tons]	16,047	11,612	11,876	13,025	14,011	14,064	16,696
Finally disposed waste quantity	[tons]	254	162	103	149	159	142	157
Emissions of substances regulated by PRTR law	[tons]	269	241	232	233	232	187	170

Changes in performance data (NOF)

Item	Unit	2010	2011	2012	2013	2014	2015	2016
Production volume	[thousand tons]	207	204	192	194	193	198	200
Gross-energy input	[thousand GJ]	2,887	2,789	2,705	2,725	2,751	2,753	2,739
Total material input	[thousand tons]	243	248	232	234	236	243	248
Water resource input	[thousand m ³]	5,918	5,668	5,368	5,832	5,760	5,838	5,967
GHG emission	[thousand t-CO ₂]	159	153	165	169	164	154	162
SO _x emission	[tons]	7	8	9	10	2	3	4
NO _x emission	[tons]	67	58	66	84	85	58	88
Soot and dust emissions	[tons]	3	1	2	1	1	2	2
BOD emissions	[tons]	28	26	30	31	29	35	25
COD emissions	[tons]	75	60	69	70	60	78	68
Suspended solid emissions	[tons]	25	19	21	32	29	33	31
Waste quantity emitted by plants	[tons]	20,736	19,311	18,196	18,694	19,156	19,961	20,350
Internal recycling quantity	[tons]	2,339	4,864	5,609	2,242	5,100	3,929	1,177
External recycling quantity	[tons]	15,734	11,048	11,302	12,631	13,466	13,440	16,132
Finally disposed waste quantity	[tons]	102	81	52	63	55	62	66
Emissions of substances regulated by PRTR law	[tons]	216	187	183	192	188	142	123

Emissions of substances regulated by PRTR Law in Fiscal 2016 (Domestic Group)

(tons/year)

Cabinet order No.	Substance	Emission quantity				Transfer quantity	Recycling quantity
		Air	Water	Earth	Total		
13	Acetonitrile	0.0	0.0	0.0	0.0	99.3	41.9
56	Ethylene oxide	3.4	0.0	0.0	3.4	0.0	0.0
68	1,2-epoxypropane	5.2	0.0	0.0	5.2	0.0	0.0
80	Xylene	1.2	0.0	0.0	1.2	0.5	0.0
83	Cumene	28.6	0.0	0.0	28.6	156.3	0.0
123	3-chloropropene	11.2	0.0	0.0	11.2	8.5	0.0
127	Chloroform	1.5	0.0	0.0	1.5	31.3	0.0
128	Chloromethane	18.0	0.0	0.0	18.0	0.0	0.0
131	Methallyl chloride	8.1	0.0	0.0	8.1	0.0	0.0
186	Dichloromethane	44.3	0.0	0.0	44.3	48.2	0.0
262	Tetrachloroethylene	2.1	0.0	0.0	2.1	0.0	0.0
281	Trichloroethylene	1.4	0.0	0.0	1.4	0.0	0.0
300	Toluene	21.8	0.0	0.0	21.8	78.8	3.5
308	Nickel	0.0	0.0	0.0	0.0	2.0	0.0
330	Bis (1-methyl-1-phenylethyl) peroxide	0.0	0.0	0.0	0.0	1.6	0.0
366	tert-Butyl hydroperoxide	0.5	0.0	0.0	0.5	9.9	0.0
392	Normal hexane	16.3	0.0	0.0	16.3	40.5	0.0
400	Benzene	0.0	0.0	0.0	0.0	4.1	0.0
407	Poly (oxyethylene)=alkyl ether (alkyl group C number: 12 to 15)	0.0	0.0	0.0	0.0	2.6	0.0
420	Methyl methacrylate	2.1	0.0	0.0	2.1	0.0	0.0
436	-methyl styrene	0.3	0.0	0.0	0.3	79.2	0.0
440	1-Methyl-1-phenylethyl hydroperoxide	0.0	0.0	0.0	0.0	2.1	0.0
—	Other substances (126 materials)	3.9	0.2	0.0	4.0	2.2	0.1
	Total*1	170.0	0.2	0.0	170.2	567.2	45.6

Emissions of substances regulated by PRTR Law in Fiscal 2016 (NOF)

(tons/year)

Cabinet order No.	Substance	Emission quantity				Transfer quantity	Recycling quantity
		Air	Water	Earth	Total		
13	Acetonitrile	0.0	0.0	0.0	0.0	99.3	41.9
56	Ethylene oxide	3.4	0.0	0.0	3.4	0.0	0.0
68	1,2-epoxypropane	5.2	0.0	0.0	5.2	0.0	0.0
83	Cumene	28.6	0.0	0.0	28.6	156.3	0.0
123	3-chloropropene	11.2	0.0	0.0	11.2	8.5	0.0
127	Chloroform	1.5	0.0	0.0	1.5	31.3	0.0
128	Chloromethane	18.0	0.0	0.0	18.0	0.0	0.0
131	Methallyl chloride	8.1	0.0	0.0	8.1	0.0	0.0
186	Dichloromethane	1.7	0.0	0.0	1.7	48.0	0.0
300	Toluene	20.7	0.0	0.0	20.7	78.7	2.4
308	Nickel	0.0	0.0	0.0	0.0	2.0	0.0
330	Bis (1-methyl-1-phenylethyl) peroxide	0.0	0.0	0.0	0.0	1.6	0.0
366	tert-Butyl hydroperoxide	0.5	0.0	0.0	0.5	9.9	0.0
392	Normal hexane	16.3	0.0	0.0	16.3	40.5	0.0
400	Benzene	0.0	0.0	0.0	0.0	4.1	0.0
407	Poly (oxyethylene)=alkyl ether (alkyl group C number: 12 to 15)	0.0	0.0	0.0	0.0	2.6	0.0
420	Methyl methacrylate	2.1	0.0	0.0	2.1	0.0	0.0
436	-methyl styrene	0.3	0.0	0.0	0.3	79.2	0.0
440	1-Methyl-1-phenylethyl hydroperoxide	0.0	0.0	0.0	0.0	2.1	0.0
—	Other substances (107 materials)	4.4	0.2	0.0	4.6	1.6	0.1
	Total*1	122.1	0.2	0.0	122.3	565.9	44.4

*1: The round-off will produce differences.

Group Companies (17 Manufacturing Companies)

Business location	Address	Contact	ISO-14001	ISO-9000's
Nippon Koki Co., Ltd. Shirakawa Plant	Aza Tsuchio 2-1, Oaza Nagasaka, Nishigomura, Shirakawa-gun, Fukushima 961-8686, Japan	+81-248-22-3691 (Environmental Safety Control Office)	JSAE741: Renewed on Dec. 5, 2015	JSAQ2282: Renewed on Mar. 17, 2015
NIKKO Corporation	21-2, Matoba Shinmachi Kawagoe, Saitama 350-1107, Japan	+81-49-231-2103 (Environmental Security Control Office)	YKA 4005084/J: Renewed on Mar. 17, 2017	BSKO152: Renewed on Mar. 4, 2017
Showa Kinzoku Kogyo Co., Ltd.	Iwase 2120, Sakuragawa, Ibaraki 309-1211, Japan	+81-296-76-1811 (Environmental Safety Planning Dept.)	—	02479-2011-AQ-KOB-JAB: Renewed on Mar. 18, 2015
HOKKAIDO NOF CORPORATION	549 Koshunai, Bibai, Hokkaido 079-0167, Japan	+81-126-67-2211 (Administration Dept.)	—	—
Nippo Kogyo Co., Ltd.	Chabatake 1838, Susono, Shizuoka 410-1121, Japan	+81-55-922-0476 (Operations Dept.)	—	—
YUKA SANGYO CO., LTD. Yamato Plant	13-13, Yanagibashi 5-chome, Yamato-shi, Kanagawa 242-0022, Japan	+81-46-267-2684 (Production Technology Dept.)	—	BV 3370916: Renewed on Apr. 30, 2015
Nichiyu Kogyo Co., Ltd.	22-1, Dou-cho 4-chome, Takatsuki, Osaka 569-0011, Japan	+81-72-669-5141 (Production Dept.)	—	—
NOF METAL COATINGS ASIA PACIFIC CO., LTD.	3-3, Chidori-cho, Kawasaki-ku, Kawasaki, Kanagawa 210-0865, Japan	+81-44-280-3024 (Operation Planning Dept.)	BV 3469871: Renewed on Nov. 28, 2016	3090893: Renewed on Nov. 28, 2016
NIKKA COATING CO., LTD.	Higashi-Saitama Technopolis, 3-6 Asahi, Yoshikawa, Saitama 342-0008, Japan	+81-48-991-9854	—	JICQA 3357: Renewed on Mar. 15, 2013
NICHYU LOGISTICS CO., LTD.	3-2, Chidori-cho, Kawasaki-ku, Kawasaki, Kanagawa 210-0865, Japan	+81-44-280-0560 (General Affairs Dept.)	Green Management T140069: Renewed on Nov. 10, 2015	—
NOF METAL COATINGS NORTH AMERICA INC.	275 Industrial Parkway Chardon, Ohio 44024-1083, U.S.A.	+81-44-280-3024 (Operation Planning Dept. of NOF METAL COATINGS ASIA PACIFIC CO., LTD.)	—	66561-IS6: Renewed on Oct. 25, 2012
NOF METAL COATINGS EUROPE N.V.	Bouwvelven 1, Industriezone Klein-Gent, BE-2280 Grobbendonk, Belgium	Ditto	ANT10200: Renewed on Oct. 26, 2016	ANT10200: Renewed on Oct. 26, 2016
NOF METAL COATINGS SOUTH AMERICA IND. E COM.LTDA.	Rua Minas Gerais No85 Vila Oriental CEP 09941-760 Diadema Sao Paulo, Brazil	Ditto	348994UM: Renewed on Oct. 10, 2014	320993QM08: Renewed on Oct. 10, 2014
NOF METAL COATINGS KOREA CO., LTD.	9F Munhwaillbo B/D, 68, Chung Jeongno 1-ga, Seoul 100-723, Korea	Ditto	REM1342: Renewed on Mar. 1, 2013	ISO/TS16949 RTSOS250: Renewed on Nov. 21, 2011
PT. NOF MAS CHEMICAL INDUSTRIES	Kawasan Industri Bekasi Fajar, Block D-1 Mekar Wangi, MM2100 Industrial Town Phase III Cibitung-Bekasi 17520, Indonesia	+81-3-5424-6838 (Planning Office, Functional Chemicals & Polymers Div., NOF)	Preparing for acquisition	ID00/18019: Acquired in Mar. 2014
Changshu NOF Chemical Co., Ltd.	Wan fu road, Riverside Industrial Park, Chang shu Economic Development Zone, Jiang Su Province 215537, China	Ditto	00115E20093R2M/3200: Renewed on Jan. 8, 2015	00115Q20072R2M/3200: Renewed on Jan. 4, 2015

*In addition to the above, GEORGIA METAL COATINGS COMPANY is included.

Group Companies (8 Sales Companies)

Business location	Address
NICHYU TRADING CO., LTD.	Ebisu Neonato, 1-18 Ebisu 4-chome, Shibuya-ku, Tokyo 150-0013, Japan
JAPEX Corp.	Shinbashi Chuo Bldg., 11-5 Nishi-Shinbashi 1-chome, Minato-ku, Tokyo 105-0003, Japan
CACTUS Co., Ltd.	Sengoku Coathouse Bldg., 37-4 Sengoku 4-chome, Bunkyo-ku, Tokyo 112-0011, Japan
NOF METAL COATINGS EUROPE S.A.	120, rue Galilee F-60315 CREIL Cedex, France
NOF AMERICA CORPORATION	One North Broadway, Suite 912, White Plains, N.Y. 10601, U.S.A.
NOF EUROPE GmbH	Mainzer Landstrasse 46, 60325, Frankfurt am Main, Germany
SIE s.r.l.	Via. Avogadro, 11 10121, TORINO (TO), Italy
NOF (Shanghai) Co., Ltd.	Room 2402, 24F, Huaning Plaza North Building, No. 300 Xuanhua Road, Changning District, Shanghai 200050, China

NOF CORPORATION

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