



# NOF Group

## Company Profile

From the Biosphere to Outer Space

 **NOF CORPORATION**

# OUR POLICY

## To remain "a trusted company."

### Top message

Since its founding in 1937, we at NOF Group have been committed to our mission of contributing to the development of various fields of industry through the supply of products that meet current demands. We stay true to our management philosophy of "Contributing to humanity and society as a corporate group that creates new value through the power of chemistry, from the biosphere to outer space." The modern world faces a wide variety of problems including climate change, resource and energy issues, and health and safety concerns. To help solve these problems as a corporate group that develops and provides functional materials that contribute to prosperity, NOF Group will grow by investing our corporate resources in the three business fields of life/healthcare, environment/energy, and electronics/IT. We provide our customers with innovative technologies as well as custom products that meet their needs, aiming to build long-lasting partnerships and grow together with them. Furthermore, we proactively conduct CSR activities to contribute to the realization of a sustainable society in hopes that we will continue to be seen as a trusted company by our stakeholders. We would like to extend our thanks to all of you for your continued understanding and support for NOF Group's business operations.

### Koji Sawamura

President & Chief Executive Officer



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# Corporate Philosophy and Guiding Framework

## Corporate Philosophy

The NOF Group is dedicated to contributing to humanity and society as a corporate group that creates new value through the power of chemistry, “from the biosphere to outer space.”

## Values

**Challenge Fairness Harmony**

## Code of Conduct

- 1 Provide the highest quality products and services globally for the development of humanity and society.
- 2 Leverage the group's collective strengths to develop cutting-edge technologies and products that create new value across a wide range of fields.
- 3 Take on ambitious challenges to achieve personal growth and a fulfilling lifestyle.
- 4 Respect diversity and act fairly with high ethical standards and good sense.
- 5 Be conscious of safety and being in harmony with the environment, while solving social issues by bringing everyone's strengths together.

Principles, Commitments, and Policies

Code of Ethical Conduct

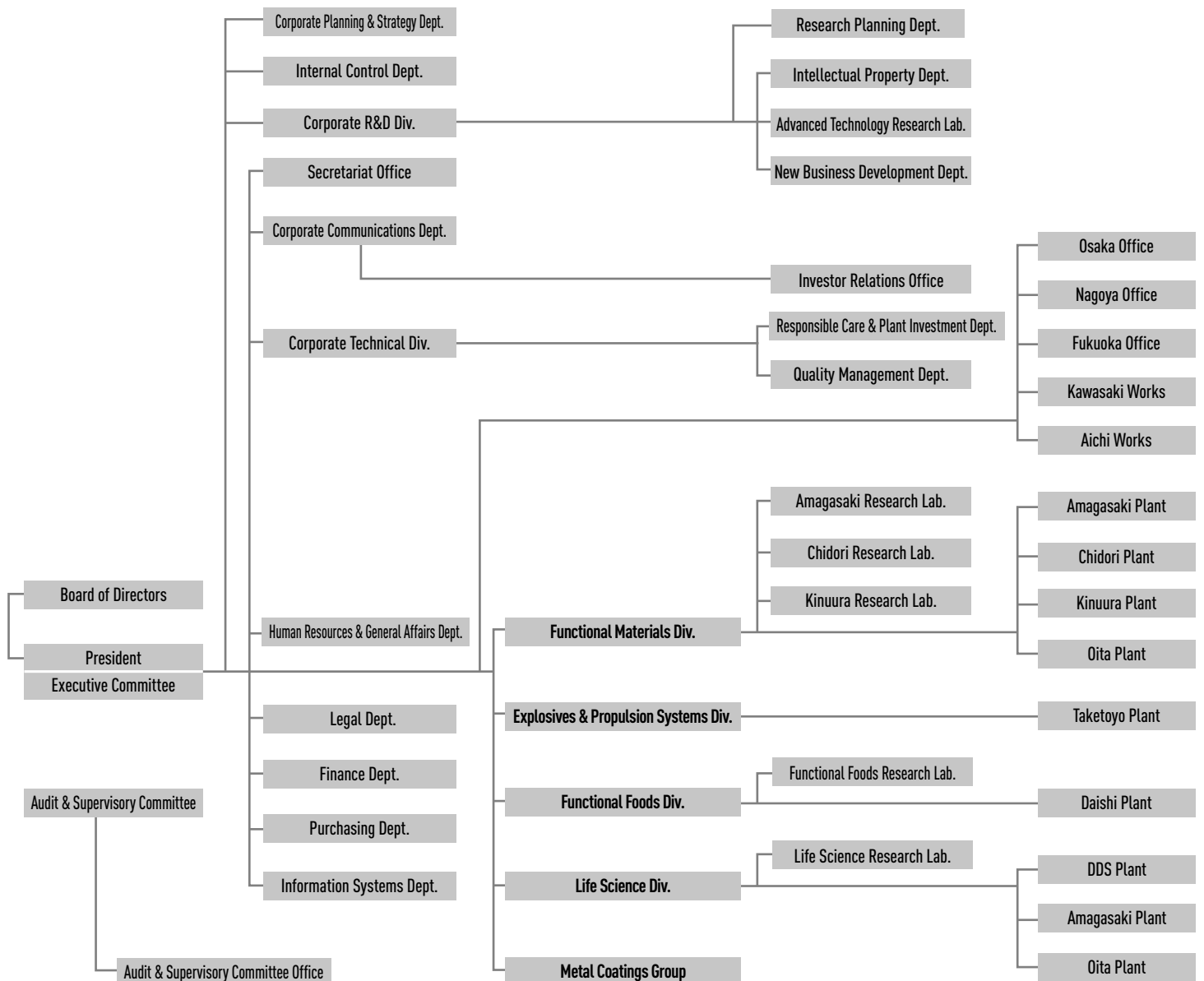
Our corporate philosophy system is based on a Corporate Philosophy that identifies the mission and ideal state of the group, three Values to focus on in practicing the Corporate Philosophy, and Code of Conduct that communicates an attitude towards putting precise action into practice in conducting business based on said Corporate Philosophy and Values. We place policies and declarations under the Code of Conduct and position the Code of Ethical Conduct as the foundation of the entire corporate philosophy system.

# OUR ORGANIZATION

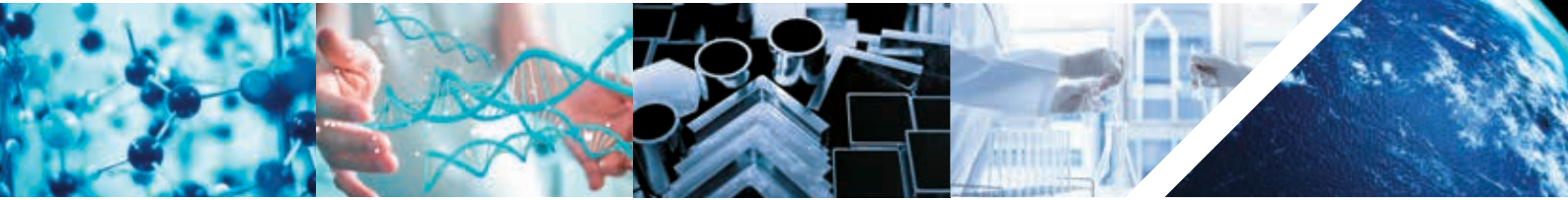
Contributing globally in various domains



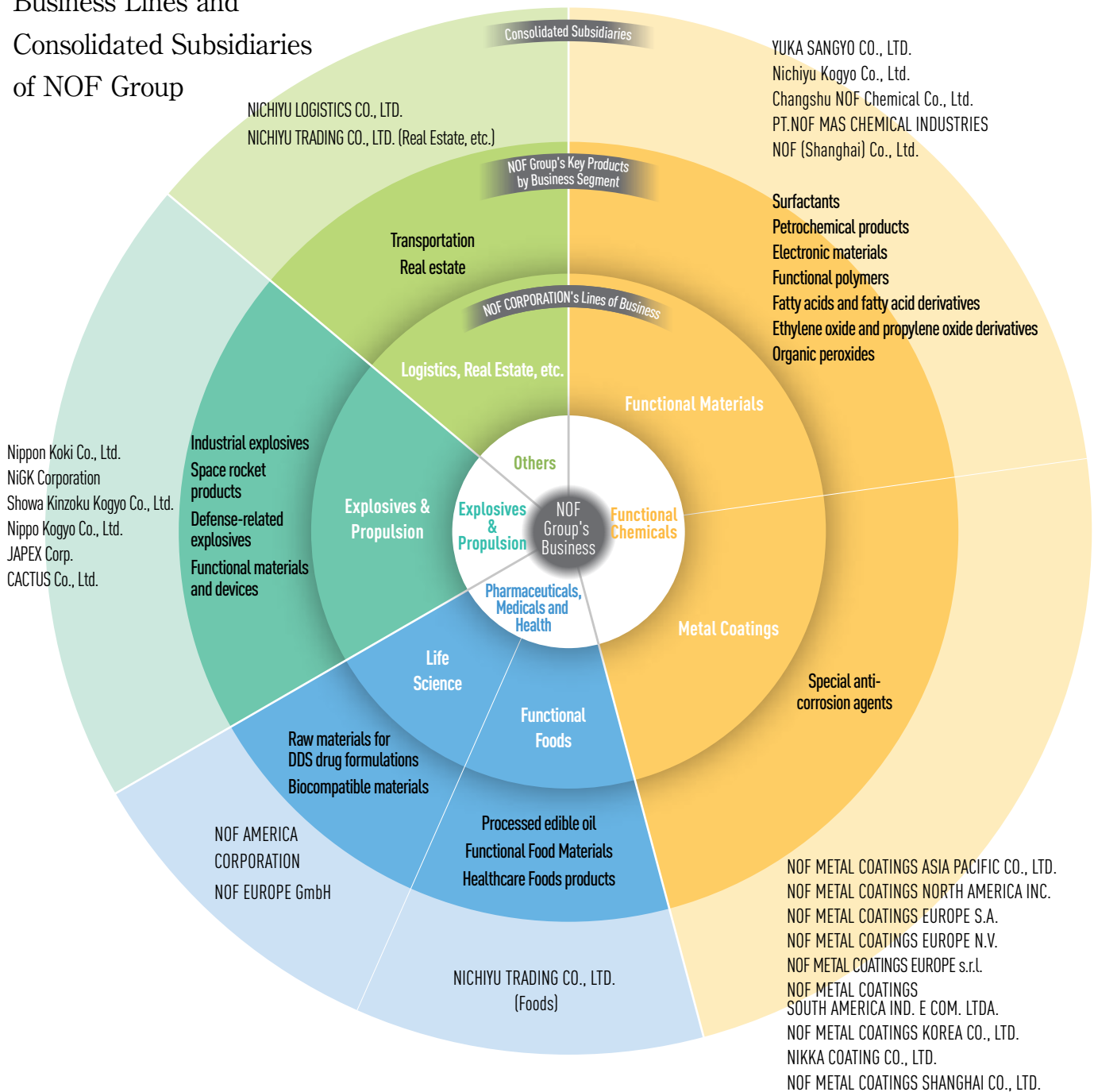
## Organizational Chart



We, NOF Group, continue to expand our business into the leading-edge areas of the time, provide new value in business domains "From the Biosphere to Outer Space" that are unconventional for chemical manufacturers, and contribute to society from a wide range of perspectives. Our current business includes functional materials, explosives & propulsion systems, functional foods, life science, anti-corrosion, and more. The unique technologies used in each field are highly evaluated and trusted in various industrial and lifestyle sectors.



## Business Lines and Consolidated Subsidiaries of NOF Group





# Functional Materials

Since its foundation in 1910, the functional materials business has led the industry as a pioneer in the oleo-chemicals field in Japan.

Today, we are steadily expanding our business domain and developing products in the life/healthcare, electronics/information-related, environment/energy, besides resin/automotive fields.

## ● Main Products

### **Fatty acids**

Hydrogenated Oils, General Fatty Acids, Distilled High-Purity Fatty Acids, Stearic Acids, Oleic Acids, Glycerin, and Higher Alcohols

### **Fatty acid derivatives and surfactants**

Metallic Soaps, Anionic, Cationic, Nonionic, and Amphoteric Surfactants, Lubricants for Fibers, Lubricants for Metals, Additives for Synthetic Resin, Emulsifiers for Polymerization, Cosmetics Ingredients, Materials for Pharmaceuticals, Detergent for Laundry, Emulsifiers for Food, Feed Additives, Chemicals for Paper Making, Chemicals for Fermentation Industry, Various Materials for Detergents, Additives for Use In Civil Engineering, Construction, and Ceramics

### **Petrochemicals**

Polyethylene Glycol, Polypropylene Glycol, Polyalkylene Glycol, Defoaming Agents, Reactive Epoxy Resin Diluents, Various (Meth)Acrylate Derivatives, and Various Polyalkylene Glycol Derivatives

### **Organic Peroxides**

Curing agents for unsaturated polyesters, polymerization initiators for polyvinyl chloride, low-density polyethylene, polystyrene, acrylic resins and other polymers, and cross-linking agents for polyolefins and synthetic rubbers

### **Functional Polymers**

Anti-fog agents, tribological improvers, squeak noise improvers, anti-scratch improvers, antifouling agents, low-shrinkage agents, and thermoplastic elastomers

### **Petrochemical Products**

Polybutene and Isoparaffin-based odorless solvents

### **Electronics and Information Technology Products**

Blocked carboxylic acid-related products, over-coating agents for LCD color filter, Functional sealing/coating material

## ● Production Bases



Amagasaki Plant



Chidori Plant



Kinuura Plant



Oita Plant



Changshu NOF Chemical Co., Ltd. (China)



PT. NOF MAS CHEMICAL INDUSTRIES (Indonesia)



**Mild surfactants**

Consumers prefer mild body cleansers, such as shampoos and body soap, that do not irritate the skin or eyes. To satisfy this need, we develop mild surfactants that match the properties of body cleansers.



**Highly functional acrylic monomers and polymers**

We develop highly functional acrylic monomers and polymers, whose demand is on the rise as electronic components continue to shrink as processing speeds rise.



**High-purity solid esters**

We develop high-purity solid esters suitable for digital multifunction copiers through high-level processing of oleochemical products, using fatty acid purification technology and design / synthesis technology for esters.



**Fatty acid chlorides and aliphatic amines**

We manufacture fatty acid chlorides, which are used in amino acid surfactants and functional polymers, and aliphatic amines, which are used as intermediates for chemical products, antistatic agents, lubricant additives, water treatment agents, and more.



**Organic Peroxides**

Organic peroxides are used in synthetic resin and synthetic rubber products such as plastics, packaging materials, solar cells, bathtubs, golf balls, etc. We develop new organic peroxides and cultivate application to match various customer needs.



**Functional Polymers (anti-fog agents)**

Anti-fogging agents made with our functional polymer technology are widely used in the lenses of automobile headlamps.



**Functional Polymers (thermoplastic elastomers)**

Thermoplastic elastomers developed through functional polymer technology are used in automotive parts and other applications requiring oil and heat resistance.



**Petrochemicals**

The Dita Plant, which opened in 1969, manufactures polybutene, isoparaffin-based odorless solvents etc., as ingredients for products including cosmetics, lubricants, adhesives, glues, and insulating oils, they contribute extensively to related industries.



**Electronics and Information Technology Products**

The products for electronics and information technology are developed with our unique technology, such as blocked carboxylic acid. We continue to propose new products with high functionality that meet the needs of a rapidly changing market.

**Cosmetics and pharmaceutical materials**

We develop and produce a wide range of cosmetics and pharmaceutical materials using accumulated precision synthesis and original refining techniques. We also suggest ways that our customers can use these materials to add value to their final products.





# Explosives & Propulsion Systems

## State-of-the-art pyrotechnics for paving the path to the future

Our explosives and propulsion business originally launched as an explosives business back in 1919. Since then, we have been creating and supplying groups of highly functional products and application technology using our outstanding R&D capabilities and manufacturing techniques.

NOF Group has established a solid business base as one of the world's rare diversified explosives manufacturers, and operates in the fields of industrial explosives, defense and space development, as well as consumer products.

Our industrial explosive business contributes to national land development that involves, for example, tunnel boring, with emulsion explosives, ammonium nitrate fuel oil (ANFO) explosives, and electric detonators.

In the defense and space development business, we take advantage of our up-to-date technology in materials such as gun powder, solid propellants, and blasting devices to produce high-performance products and contribute to national defense and space development programs.

In the consumer product business, we contribute widely to provide products for various aspects of our daily living such as anti-freeze agents, oceanographic survey devices, thermal indicator materials, sterilizing materials, pharmaceutical materials, and security devices.

### ● Main Products

#### Explosives

Emulsion explosives, Ammonium nitrate fuel oil (ANFO) explosives, and Warhead explosives

#### Gun powder and Propellants

Smokeless gun powder for defense use, Solid propellants for defense use, and Solid rocket propellants for space development

#### Explosives Loading and Assembly

Missiles, and mines

#### Pyrotechnics

Detonators, pyrotechnic devices for rockets, blank cartridges, safe blasting devices, security devices, and explosives disposal

#### Eco-friendly products

Anti-freeze agents, Oceanographic survey devices, and Steam pressure fracturing agents

#### Pharmaceutical Materials

Nitroglycerine-based pharmaceutical materials for treating heart disease and Sterilization materials for medical use

### ● Key production Bases



Taketoyo Plant



Tanegashima Plant on Tanegashima Island  
(Japan Aerospace Exploration Agency)



Nippon Koki Co., Ltd.



NIGK Corporation





### Hayabusa 2 Impactor (explosion section)

Hayabusa 2, the asteroid explorer, is equipped with a new feature called an impactor. It is propelled by the force of an explosion and creates an artificial crater. It was developed jointly by Nippon Koki Co., Ltd. and JAXA.



### Industrial Explosives

Industrial explosives are used in national land development and in mines. We develop high-performance and highly safe products such as emulsion explosives, ANFO explosives, electric detonators, electromagnetic induction detonating system, and remote explosive loading system.



### Steam-Pressure Fracturing Agents

Nippon Koki Co., Ltd. developed the industry's first low-vibration fracturing method using a steam-pressure fracturing agent. This method uses steam pressure to fracture bedrock, rocks, and concrete structures in a low-vibration state while protecting the surrounding environment.



### Oceanographic Survey Devices

NIGK Corporation is working on research and development of oceanographic survey devices needed for observing and studying the oceans, and develops and supplies a wide variety of survey devices. The company's product manufacturing and technical services are now attracting attention both inside and outside Japan.



### Security Devices

When activated, Nippon Koki Co., Ltd.'s NetLauncher® shoots out and spreads a net to catch and restrict movements of a suspicious individual. Meanwhile, others can escape or call the police.

NetLauncher is a registered trademark of Nippon Koki Co., Ltd. in Japan.



### Propellant

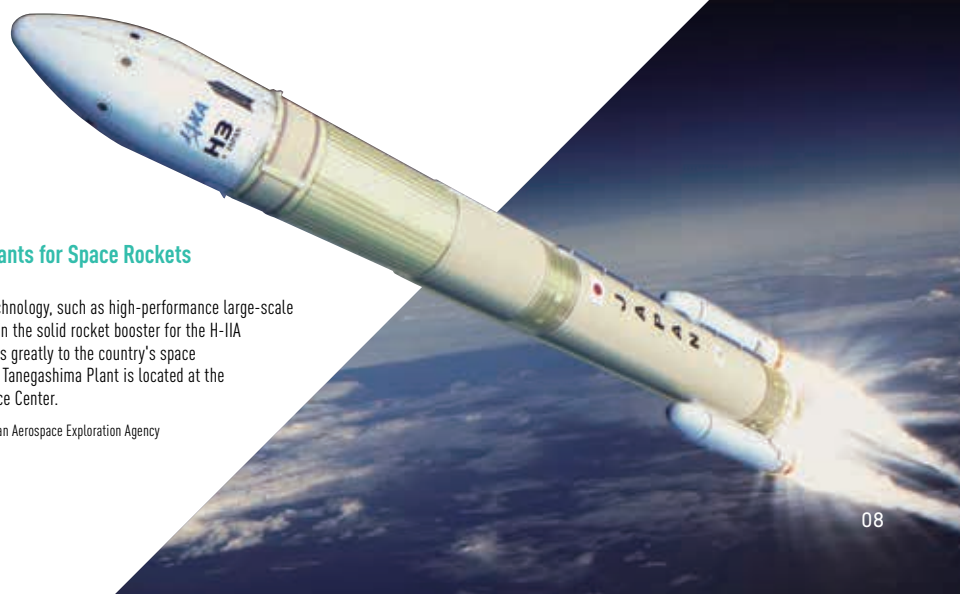
We began producing propellants in 1954. They have been evolving mainly in the defense realm as propellants for rockets and missiles. We supply most kinds of propellants to the market, and customers rate our technological capabilities highly.

### Gun powder

Since our founding, we have consistently been producing high-quality gun powder for defense and industrial uses under a strict quality assurance system. We also take advantage of accumulated expertise to focus on development of new products.

### Pharmaceutical Materials

We manufacture nitroglycerin-based drug substances which are effective for angina. These substances are supplied to produce drugs for patients with heart disease, whose number is on the rise due to Japan's aging society and a Westernized diet.



### Solid Propellants for Space Rockets

Our propellant technology, such as high-performance large-scale propellants used in the solid rocket booster for the H-IIA rocket, contributes greatly to the country's space development. Our Tanegashima Plant is located at the Tanegashima Space Center.

Photo courtesy of Japan Aerospace Exploration Agency



# Functional Foods

Through food functions,  
we contribute to building a sustainable society and the health of people.

The Functional Foods Division has always been a pioneer in the innovations in edible oils and fats re-finishing and processing techniques since it was established in 1917. At present, it is expanding its business areas such as processing oils and fats for food and the health related business.

The processing of oils and fats for food contributes widely to the food industry by striving for the development of products in pursuit of deliciousness based on the technologies cultivated as a pioneer of processing oils and fats such as margarine, shortening, refined fat for confectionery use, depanning oil, filling and topping materials, powder oils and fats, and materials for cooking and frozen foods.

The health related business has developed one new product after another such as functional lipids, emulsifying and nano-emulsion products, oils and fats coating products while striving for steady researches to provide the society with health.

The Functional Foods Division will supply products which can contribute to the society by enriching people's "food culture" step by step, tasty and healthy.

## ● Main Products

### Functional food materials

For bread, confectionery and processed foods

Margarine

Shortening

Fillings and toppings

Oil and fat for non-dairy cream

Oil and fat for infant formula

### Health food materials

Fats-coating products

Nano-emulsion products

Health foods ODM

Nutritional foods (protein drink) ODM

## ● Production Base



Daishi Plant



### Edible Oils

Edible oils and fats play a key role in flavoring foods. We supply edible oils for a wide variety of processed foods, contributing heavily to the food industry. Moreover, our proprietary oil and fat processing techniques can satisfy a diverse range of needs.



### Functional food materials

We develop techniques and functional products to enhance food textures. Common examples include adding enzymes and emulsifiers to oils and fats to enhance the flavors of foods and improve textural qualities such as high softness and low chewiness in bread, flakiness in pastries and crispiness in fried foods.



### Health food materials

Using our techniques to extract, refine, and stabilize oils and fats, we develop functional oils and fats that people to maintain a healthy lifestyle. Our R&D covers a full range of lipids toward creating an extensive suite of functional lipids for the food processing market.



### Fats-coating products

Our unique fat-coating technique involves coating core materials with fats to increase their stability, mask their tastes, prevent them from absorbing moisture, and protect them against contact. We are also developing new technologies for applying fat coatings.



### Nutritional foods

Based on emulsification techniques using proteins and oils, we develop nutritional food products (such as "high-protein beverages" and "functional oil-based beverages" that contain DHA, etc.). Right from concept creation to production and quality assurance of the final product, we provide one-stop support for the development of nutritional food products as we cast customer's ideas into shape.



### Nano-emulsion products

Using our fat emulsification techniques, we create solubilized products by emulsifying and processing lipophilic components that are insoluble in water. This makes it possible to add lipophilic components to drinks and jelly, opening opportunities to develop new product functions.





# Life Science

## Contributing to technological innovation in the global pharmaceutical and medical industries with high-performance life science materials

### 1. Activated PEG for PEGylation

NOF produces the world's best quality Activated PEGs from our high-quality methoxypoly(ethylene glycol) (mPEG). NOF also supplies our proprietary high-purity branched, multi-arm and hetero-functional Activated PEGs tailored to meet our customers' PEG Drugs. NOF can supply Activated PEGs produced under GMP standards in our state-of-the-art GMP facility. NOF can help you to modify your drugs by using our PEGylation technology and our high-quality Activated PEGs.

### 2. Functional Lipids

Using the world's most advanced synthetic and purification technologies, NOF manufactures and supplies a series of high purity lipid derivatives (COATSOME® Series) suitable for the formulation of lipid nanoparticles for nucleic acid and gene therapy drugs, liposomal and emulsion formulations for small molecule drugs. Especially for the lipid nanoparticle formulation, We offer our proprietary ionizable lipids (COATSOME® SS Series) which enable efficient delivery of nucleic acids and low toxicity. In addition, we can respond to requests from our customers with tailor-made synthesis of any phospholipids with the desired structures.

### 3. Ultrapure Polysorbate 80

Polysorbate 80(HX2)™ of NOF is ultrapure Polysorbate 80 for injectable grade which has outstanding features as follows;

- Low Allergic Reaction  
(Low degranulation characteristics)
- Low Cell Toxicity and Low Hemolysis
- Low Peroxide, Colorless and Odorless
- Vegetable Source (No animal sources)
- Multi-Compendial (NF(USP), EP, ChP and JP)

Our Polysorbate 80(HX2)™ has an outstanding safer characteristic and will be a world wide standard product in pharmaceutical especially for injectable purpose.

### 4. MPC

NOF are also expanding into the fields of pharmaceuticals for eye care applications, medical devices, and diagnostics, etc., using our biocompatible material LIPIDURE® (MPC polymer (2-methacryloyloxyethyl phosphorylcholine polymer)) as a key material.

### ● Main Products

**PEG derivatives**  
**Functional Lipids**  
**Ultrapure Polysorbate 80**

**Biomaterials for**  
Contact Lens  
Eye Care  
Coating Agent for Medical Device  
Reagents for Biochemistry and In-vitro Diagnostics  
**Research Reagents for**  
Oxidative Stress Markers

### ● Production Bases



DDS Plant



Amagasaki Plant



Oita Plant



### PEG derivatives

We take advantage of our unique polymerization and organic synthesis and purification techniques to provide PEG derivatives to the DDS industry. We also supply PEG linkers for antibody-drug conjugates (ADCs) to the antibody drug market, where a lot of product development is taking place.



### Ultrapure Polysorbate 80

Polysorbates are employed as emulsifiers, solubilizers, and stabilizers in pharmaceuticals. We use high-purity oleic acid as a raw material and our advanced ethylene oxide addition technology to produce polysorbates. Our polysorbates are compliant with Japanese, European, American, and Chinese pharmacopoeia.



### Materials for Eye Care

Used in eye care materials, LIPIDURE® has been attracting attention in recent years for its high moisturizing and protection capabilities.



### Additives for Biochemical and In-vitro Diagnostic Agents

LIPIDURE® is useful as a highly-functional additive for biochemical and in-vitro diagnostic reagents. LIPIDURE® makes quality management of reagents easier, improves reagent performance and eliminates biological hazards since it is a fully-synthetic polymer.



### Functional Lipids

We produce GMP-compliant high purity phospholipids for liposomal drugs. We also develop PEG lipids and nucleic acid and gene delivery lipids for nucleic acid drugs and gene therapy drugs.

(Photo courtesy of FEI Company Japan Ltd.)



### Contact Lens Materials

Contact lenses containing MPC have high biocompatibility and are popular among people who feel discomfort due to dryness. LIPIDURE® (MPC polymer) is used in contact lens packaging solutions as an additive.



### Medical Device Coating Materials

Antithrombogenicity is a feature required for artificial organs, catheters and surgical instruments. LIPIDURE® has been gaining attention as a coating material for medical devices because it can prevent adsorption of platelets and proteins.



### Oxidative Stress Markers

Oxidative stress is believed to cause aging-related diseases such as arteriosclerosis, cancer, and diabetes. We are developing markers to measure the oxidative stress of lipids, DNA, and sugars.



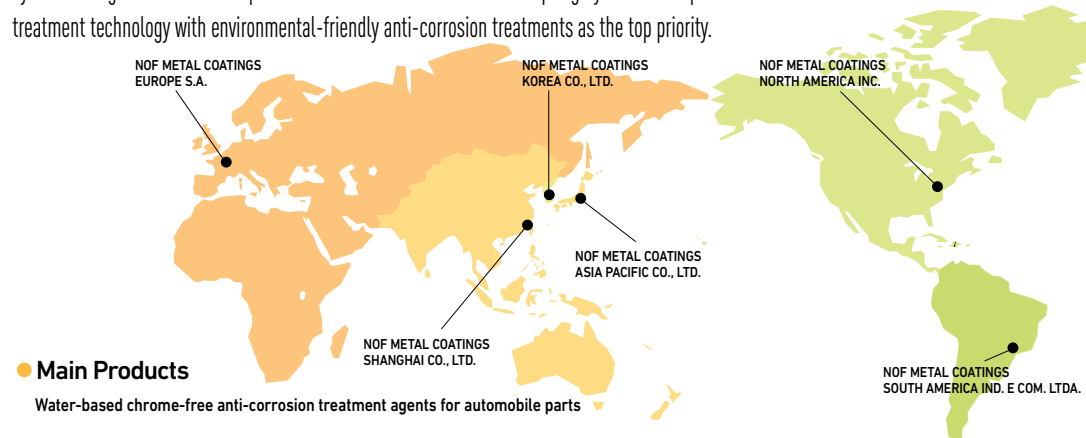


# Metal Coatings

With our high-performance waterborne anti-corrosion agents, we provide a solution for environmental issues through cutting-edge surface treatment technologies

Centering on our original high-performance waterborne anti-corrosion agents, Metal Coatings business has been long supplying cutting-edge surface treatment technologies. These have advanced to become the world's de facto standard in the field of anti-corrosion treatments for automotive parts industries.

This is now operated by our global business network with NOF METAL COATINGS ASIA PACIFIC CO. LTD for Asian region including Japan, China, Korea and other Asian countries, NOF METAL COATINGS NORTH AMERICA INC. (in the U.S.A.) for NAFTA area and NOF METAL COATINGS EUROPE S.A. (in France) for Europe including Africa and South America. Our established worldwide network of waterborne anti-corrosion agents fully supports supply systems for global automotive production. We will continue to develop highly functional products for that field and enhance our anti-corrosion treatment technology with environmental-friendly anti-corrosion treatments as the top priority.



● **Main Products**

Water-based chrome-free anti-corrosion treatment agents for automobile parts

● **Production Bases**



NOF METAL COATINGS ASIA PACIFIC CO., LTD.



NOF METAL COATINGS NORTH AMERICA INC. Head Office (in the U.S.A.)



NOF METAL COATINGS EUROPE S.A. Head Office (in France)



NOF METAL COATINGS KOREA CO., LTD. (South Korea)



NOF METAL COATINGS SOUTH AMERICA IND. E COM. LTDA. (Brazil)



**Waterborne chrome-free anti-corrosion agents GEOMET®**

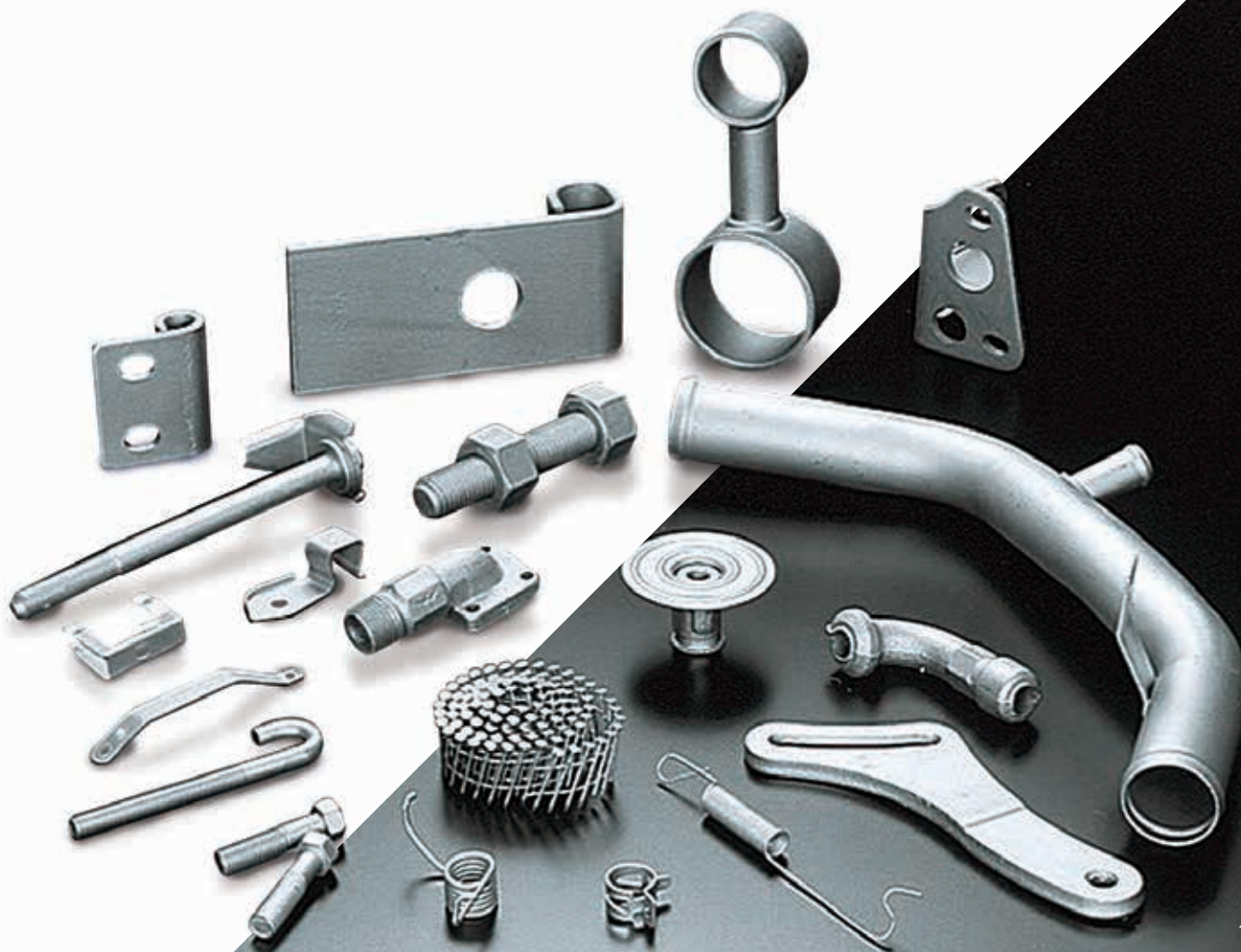
GEOMET® is an environmental-friendly, chrome-free, waterborne anti-corrosion treatment agent. It is used to prevent rust on automotive and construction parts and materials. It is highly rated by customers and is widely used for automotive and other objects globally.



**GEOMET® PLUS ECHOTE® Series**

These lubricant stabilizers are indispensable when tightening bolts. This series of products is used with automobiles, segment bolts for Tokyo Bay Aqua-Line Expressway and other constructions materials for bridges, towers and others. We have also been expanding applications of several products for housing, home appliances and some devices used for ships.

GEOMET is a registered trademark of NOF METAL COATINGS NORTH AMERICA INC. in Japan.  
ECHOTE is a registered trademark of NOF METAL COATINGS ASIA PACIFIC CO., LTD. in Japan.



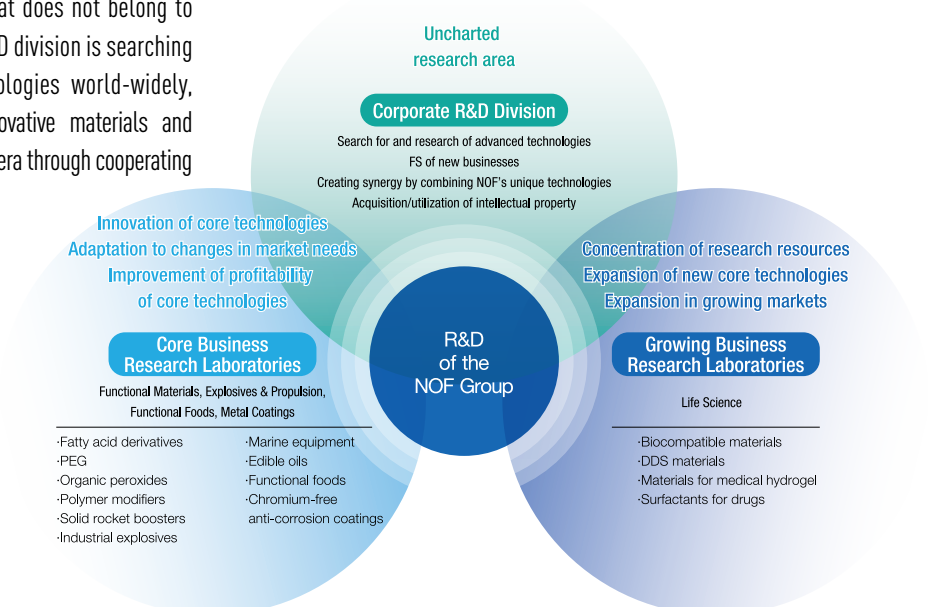


# Research & Development

**Innovative Materials and Advanced Technologies.**

**We promote "endeavor and co-creation" for new developments through open innovation and business-academia collaborations, searching for new materials and technologies, and internal synergy.**

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 sence 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. Three laboratories are for supporting the core business units (Functional Materials, Explosives & Propulsion systems, Functional Foods). And, one laboratory is for the priority business area (Life science) to specialize, and the remaining one is for Corporate R&D division that does not belong to any business units. 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 Lab.**

The main research focuses of this laboratory are biomaterials, functional materials, and fine polymers. It also exchanges information and techniques with internal and external research organizations and takes part in joint research with entities from other industries.



**I&S Department**

*\*Innovation & Solution providing Department*

Focusing on R&D of new materials and technologies in medical fields, the I & S Department bases its development activities at the Innovation Center of Nanomedicine (iCONM), with the objective of finding partners to co-create in open innovation.



**Amagasaki Research Lab.**  
(Functional Materials Division)

Focusing on application researches mainly for oils and fats and their derivatives, surfactants, macromolecules, the Amagasaki Research Laboratory is approaching from various angles and developing high-function and high-value-added products in the fields including resource, environment, energy, healthcare, information and electronics.



**Chidori Research Lab.**  
(Functional Materials Division)

Taking advantage of sophisticated technologies for polymerizing ethylene oxide and propylene oxide acquired through experience in developing polyalkylene glycol derivatives, this division develops highly functional and high value-added products that support technologies in the fields of healthcare, electronic information, and environmental energy.



**Kinuura Research Lab.**  
(Functional Materials Div.)

In this laboratory, we are developing novel high performance polymers and advanced materials which the technologies from synthesis, analytical, and evaluation of organic peroxides.



**R&D Department**  
(Explosives & Propulsion Systems Division)

The R&D Department cultivates new techniques and business fields, and develops the products related to explosives and hazard materials such as gun powder and propellants while creating a collaborative framework with overseas partners. Our eco-conscious testing facility, Kamioka Testing Center is located in the confined spaces of underground mines. By utilizing the spaces, we are able to implement the evaluation of the products while isolating aural output.



**Functional Foods Research Lab.**  
(Functional Foods Division)

By combining various processing technologies including oil processing, emulsifying, powderizing, and oil coating with various functional materials such as enzymes, emulsifiers, and materials for health foods, this division works on developing new products that contribute to building a sustainable society and the health of people.



**Life Science Research Lab.**  
(Life Science Division)

This laboratory develops high quality materials such as PEG derivatives, functional lipids, and MPC polymers widely deployed in the fields of biopharmaceuticals, medical devices, and diagnostic agents. Through this research and development, we are contributing to the advancement of medicine and medical technology.



**Nippon Koki Co., Ltd.**  
R&D Department

The R&D Department of Nippon Koki Co., Ltd. takes advantage of its expertise in defense equipment, gun powder, and precision product manufacturing techniques to develop non-conventional products in the security and criminal prevention fields.



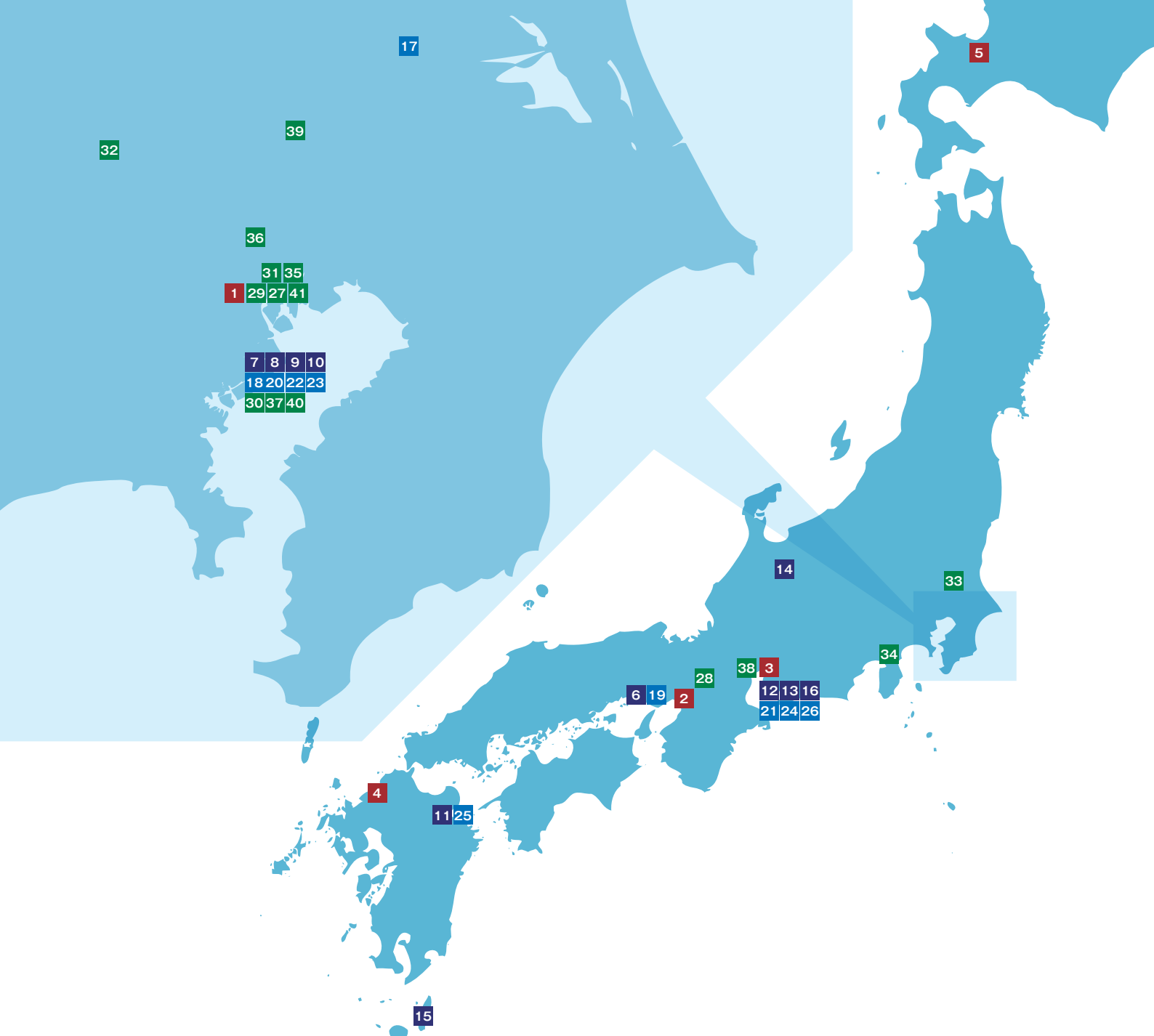
**NiGK Corporation**  
R&D Department

Taking advantage of its unique core technologies, NiGK Corporation's strength is in integrating conventional and new technologies and creating a wide variety of new products through its R&D framework, which combines specialized fields such as chemistry, electricity, machinery, control, and processing.



**NOF METAL COATINGS ASIA PACIFIC CO., LTD.**  
Technical Development Department

NOF METAL COATINGS ASIA PACIFIC CO., LTD. is the world's leading supplier of waterborne chrome-free anti-corrosion agents for metals. It is developing unique waterborne anticorrosion agents for automotive industries while leading the field in environmental-friendly high-performance products.



## Overseas Business Locations

### Group Companies and Consolidated Subsidiaries

- 42 Changshu NOF Chemical Co., Ltd.
- 43 PT. NOF MAS CHEMICAL INDUSTRIES
- 44 NOF METAL COATINGS NORTH AMERICA INC.
- 45 NOF METAL COATINGS EUROPE S.A.
- 46 NOF METAL COATINGS EUROPE N.V.
- 47 NOF METAL COATINGS EUROPE s.r.l.
- 48 NOF METAL COATINGS SOUTH AMERICA IND. E COM.LTDA.
- 49 NOF METAL COATINGS KOREA CO., LTD.
- 50 NOF METAL COATINGS SHANGHAI CO., LTD.
- 51 NOF EUROPE GmbH
- 52 NOF AMERICA CORPORATION
- 53 NOF (Shanghai) Co., Ltd.

BELGIUM  
FRANCE 45 51 GERMANY  
ITALY 47

# NETWORK

NOF Group operates globally via business bases inside and outside Japan.

## Business Locations in Japan

Head Office /  
Regional Offices /  
Branch Offices /  
Sales Offices

- 1 Head Office [Tokyo]
- 2 Osaka Office [Osaka]
- 3 Nagoya Office [Aichi]
- 4 Fukuoka Office [Fukuoka]
- 5 Sapporo Office [Hokkaido]

### Plants

- 6 Amagasaki Plant [Hyogo]
- 7 Kawasaki Works [Kanagawa]
- 8 Chidori Plant [Kanagawa]
- 9 Daishi Plant [Kanagawa]
- 10 DDS Plant [Kanagawa]
- 11 Oita Plant [Oita]
- 12 Aichi Works [Aichi]
- 13 Taketoyo Plant [Aichi]
- 14 Kamioka Test Center [Gifu]
- 15 Tanegashima Plant [Kagoshima]
- 16 Kinuura Plant [Aichi]

### Research Laboratories

- 17 Advanced Technology Research Lab. [Ibaraki]
- 18 I&S Department [Kanagawa]
- 19 Amagasaki Research Lab.  
(Functional Materials Division) [Hyogo]
- 20 Chidori Research Lab.  
(Functional Materials Division) [Kanagawa]
- 21 Kinuura Research Lab.  
(Functional Materials Division) [Aichi]
- 22 Functional Foods Research Lab. [Kanagawa]
- 23 Life Science Research Lab. [Kanagawa]
- 24 Life Science Research Lab. [Aichi]
- 25 Life Science Research Lab. [Oita]
- 26 R&D Department  
(Explosives & Propulsion) [Aichi]

### Group Companies and Consolidated Subsidiaries

- 27 YUKA SANGYO CO., LTD. [Tokyo]
- 28 Nichiyu Kogyo Co., Ltd. [Osaka]
- 29 JEUNE BEAUTY Corporation [Tokyo]
- 30 Nichiyu Techno Co., Ltd. [Kanagawa]
- 31 Nippon Koki Co., Ltd. [Tokyo]
- 32 NiGK Corporation [Saitama]
- 33 Showa Kinzoku Kogyo Co., Ltd. [Ibaraki]
- 34 Nippo Kogyo Co., Ltd. [Shizuoka]
- 35 JAPEX Corp. [Tokyo]
- 36 CACTUS Co., Ltd. [Tokyo]
- 37 NOF METAL COATINGS  
ASIA PACIFIC CO., LTD. [Kanagawa]
- 38 NIPPON C&Z CO., LTD. [Aichi]
- 39 NIKKA COATING CO., LTD. [Saitama]
- 40 NICHYU LOGISTICS CO., LTD. [Kanagawa]
- 41 NICHYU TRADING CO., LTD. [Tokyo]



Contact numbers and addresses of NOF's offices, plants, and labs:  
<https://www.nof.co.jp/english/company/plant>

Contact numbers and addresses of Group companies:  
<https://www.nof.co.jp/english/company/group-companies>



# OUTLINE

Corporate Overview (as of March 31, 2023)

● Company Name	NOF CORPORATION
● Establishment	June 1, 1937
● Incorporation	July 1, 1949
● Head Office	20-3 Ebisu 4-chome, Shibuya-ku, Tokyo, Japan
● Capital	¥17,742 million
● Sales	¥217.7 billion (Consolidated) ¥155.1 billion (Non-consolidated)
● Number of employees	3,818 (Consolidated) 1,762 (Non-consolidated)

## ● Board of Directors

Chairman and Chief Executive Officer	Takeo Miyaji
President and Chief Executive Officer	Koji Sawamura
Director and Executive Operating Officer	Manabu Saito
Director and Executive Operating Officer	Kazuyoshi Yamauchi
Outside Director	Shingo Unami
Outside Director	Izumi Hayashi
Director, Audit & Supervisory Committee Member	Masanobu Miyo
Outside Director, Audit & Supervisory Committee Member	Kunimitsu Ito
Outside Director, Audit & Supervisory Committee Member	Yuriko Sagara
Outside Director, Audit & Supervisory Committee Member	Keiichi Miura

# HISTORY

## Company History



Amagasaki Plant in 1910 when it first opened



NOF CORPORATION establishment ceremony on July 20, 1937

## 1910s

- Sept. 1910 Japan Lever Brothers (currently Amagasaki Plant) was established
- Aug. 1917 Suzuki Shoten oil refinery (former Oji Plant) was established
- Nov. 1919 Teikoku Explosives Industries Co., Ltd.  
(Currently Aichi Works, Taketoyo Plant) was established

## 1930s

- June 1936 Nippo Kogyo Co., Ltd. (Former Nippon Shikki Co., Ltd.) was established
- June 1937 Nippon Oil & Fats Co., Ltd. was established (Head office: Nissan-kan)
- Jan. 1938 Hokkaido Oil and Fats Industries and 14 other companies merged

## 1940s

- Feb. 1943 Showa Kinzoku Kogyo Co., Ltd. was established
- Apr. 1945 Acquired the chemical division of Nippon Mining Co., Ltd.,  
and renamed it to Nissan Chemical Industries, Ltd.
- June 1947 NICHYU TRADING CO., LTD. (Former Nissei Shoji Co., Ltd.) was established
- July 1949 Company was reestablished as Nippon Oil & Fats Co., Ltd.  
following the enactment of the Economic Deconcentration Law  
(Head office: Shirokiya, Nihonbashi, Tokyo)

## 1950s

- Oct. 1951 Head office moved to Marunouchi Tokyo Building
- Oct. 1954 Production of rocket propellants began
- Feb. 1957 Production of organic peroxides began

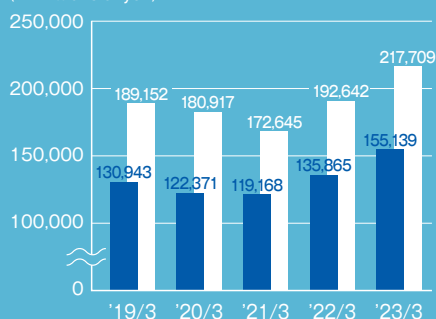
## 1960s

- July 1961 Nichiyu Kogyo Co., Ltd. was established
- Nov. 1961 Chidori Plant opened
- Feb. 1966 YUKA SANGYO CO., LTD. was established
- May 1967 Head office moved to Yurakucho Building, Tokyo

## ● Sales

■ Non-consolidated ■ Consolidated

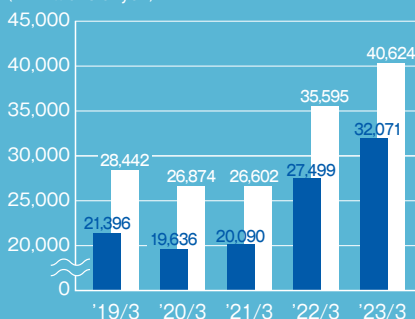
(in millions of yen)



## ● Operating profit

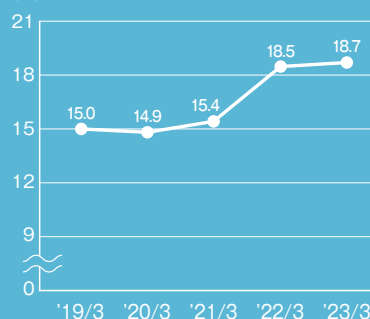
■ Non-consolidated ■ Consolidated

(in millions of yen)



## ● Operating margin (Consolidated)

(%)



## 1970s

- June 1970 Merged with Teikoku Pyrotechnics Co., Ltd.
- June 1973 Nippon Dacro Shamrock Co., Ltd. (currently NOF METAL COATINGS ASIA PACIFIC CO., LTD.) was established

## 1980s

- Dec. 1980 Nichiyu Giken Kogyo Co., Ltd. (currently NiGK Corporation) was established
- Feb. 1983 Tsukuba Corporate Research Laboratory opened
- Sept. 1984 Metal Coatings International Inc. (currently NOF METAL COATINGS NORTH AMERICA INC.) was established in U.S. Made the French company DACRAL S.A. (currently NOF METAL COATINGS EUROPE S.A.) its subsidiary at the same time.
- Dec. 1988 NOF AMERICA CORPORATION was established in U.S.

## 1990s

- Jan. 1991 German subsidiary Nippon Oil & Fats GmbH was established
- Oct. 1992 Kamioka Test Center was established
- July 1994 Nippon Oil & Fats GmbH was dissolved for further expansion, and NOF EUROPE N.V. was established in Belgium
- Nov. 1994 Head office moved to Yebisu Garden Place Tower, Tokyo
- Nov. 1995 PT. NOF MAS CHEMICAL INDUSTRIES was established in Indonesia
- Feb. 1996 JAPEX Corp. was established
- Dec. 1997 Tanegashima Plant opened
- Oct. 1999 Nippon Koki Co., Ltd. was made a subsidiary through share acquisition
- Dec. 1999 Life Science Products Division was launched

## 2000s

- Oct. 2001 DDS Development Department was launched
- Apr. 2004 All Taseto Co., Ltd. shares were sold to Shinko Taseto Co., Ltd.
- June 2004 Daishi Plant opened
- Oct. 2004 Changshu NOF Chemical Co., Ltd. was established in China
- Oct. 2004 NICHiyu LOGISTICS CO., LTD. was established
- Mar. 2005 All shares in BASF NOF Coatings Co., Ltd. were sold to BASF Coatings AG
- July 2005 DDS Plant opened
- June 2006 Anti-Corrosion Coatings Group was launched
- Oct. 2007 Company's Japanese trading name changed to Nichiyu Kabushikigaisha
- Apr. 2009 YUKA SANGYO CO., LTD. acquired Nichiyu Solution Inc.

## 2010s

- Sept. 2010 Nichiyu Giken Kogyo Co., Ltd. (currently NiGK Corporation) became a wholly owned subsidiary through a share exchange
- July 2012 Reorganized the research function of Tsukuba Corporate Research Lab. into Advanced Research Technology Lab.
- Nov. 2014 NOF EUROPE (BELGIUM) N.V. was relocated to Germany, and NOF EUROPE GmbH was established

## 2020s

- Apr. 2023 The Oleo & Speciality Chemicals Division and the Functional Chemicals & Polymers Division are consolidated to form the Functional Materials Division. The Functional Foods Division (Shokuhin-Jigyo-Bu) changes the name to the Functional Foods Division (Kinou-Shokuhin-Jigyo-Bu) (The name in English remains the same.). The Life Science Products Division and the DDS Development Division are consolidated to form the Life Science Division.
- Apr. 2024 Nippon Koki Co., Ltd. acquired HOKKAIDO NOF CORPORATION

# OUR CSR

## Our approach to CSR

**"From the Biosphere to Outer Space"— demonstrating the synergy among NOF Group companies in a wide range of business fields and generating new value that contributes to people and society.**

NOF Group is dedicated to "contributing to humankind and society through creation of new value, from the Biosphere to Outer space" as our corporate philosophy. We believe this corporate philosophy represents our CSR in business activities. With corporate governance, respect for individuals, Responsible Care (RC) activities, and coexistence and co-prosperity forming the foundation of our CSR activities, we strive to maximize the value shared between our stakeholders and society.

## 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 of our stakeholders.
- 5** We will contribute to society in cooperation with local communities.



## Responsible Care

Responsible Care is a voluntary management activity that started in Canada to ensure chemical-related safety in 1985. More specifically, it means to act responsibly to ensure environmental protection, safety, and health throughout the cycle of research, development, manufacturing, use, and disposal of chemicals.

# NOF Group's eco-friendly products

## Highly biodegradable asphalt-release agents

Asphalt mixture sticks to the back of trucks or a hoppers in plant equipment during road work. Traditionally, petroleum solvents have been used as asphalt release agents, but they adversely affect the environment through soil or water contamination. Highly biodegradable ASPHARUB<sup>®</sup>, in contrast, uses natural oils and fats as ingredients to effectively release asphalt while helping to protect the environment.

## Refrigerator oils using CFC substitute refrigerants to prevent depletion of the ozone layer

Refrigerants used in air conditioners and refrigerators have been replaced with CFC substitutes that do not contribute to ozone layer depletion. Our eco-friendly refrigerator oils save energy with increased CFC substitute compatibility to improve thermal stability, electric insulation quality, and other properties, and have lowered viscosity. In recent years, refrigerants must have low global-warming potential, too. We at NOF CORPORATION also develop refrigerator oils for refrigerants with low global-warming potential.

## Recyclable vulcanized rubber substitutes

A large amount of vulcanized rubber is used in automobile parts and sealing materials that require properties such as heat and oil resistance. Vulcanized rubber, however, is not recyclable since it will not melt again once it is molded. NOF<sup>®</sup>-ALLOY TZ, on the other hand, can be recycled by repeatedly heating and melting it. It is therefore widely used as a vulcanized rubber substitute.

## Chloride-free antifreeze agents

KAMAGU<sup>™</sup>, the eco-friendly antifreeze agent used on roads in cold areas, is a chloride-free, acetic acid-based chemical. Unlike conventional products, it does not cause salt damage. AUTOKAMAGU<sup>®</sup> Jet is an automatic anti-freeze spray system. It uses sensors to automatically spray KAMAGU<sup>™</sup> on snowy or frozen roads. It can be operated by solar power, making it possible to manage road surfaces through remote monitoring and operation. By doing so, it contributes to environmental conservation and road safety.

## Water-based chrome-free anti-corrosion agents

GEOMET<sup>®</sup> is a waterborne anti-corrosion chrome-free agent. Since it provides chrome-free in both the treatment process and in final products, it is gentle on the natural and work environment and meets both European ELV and RoHS requirements. We have a system in place to ensure that treatment uses GEOMET<sup>®</sup> for any place or area of the world. GEOMET<sup>®</sup> is therefore chosen by automotive manufacturers around the world.

GEOMET is a registered trademark of NOF METAL COATINGS NORTH AMERICA INC.



For more information on our CSR (Integrated Report, ESG DATA BOOK etc.), please visit our website.  
<https://www.nof.co.jp/english/csr>



# NOF CORPORATION



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