NOF Group

Company Profile

From the Biosphere to Outer Space

NOF CORPORATION

OUR POLICY

To remain "a trusted company."

Top Message

Since our founding in 1937, we at NOF Group have been expanding our business as a chemical manufacturer in a broad range of ways. We stay true to our corporate philosophy of "Contributing to Society by Generating New Value in Wide-ranging Fields, from the Biosphere to Outer Space."

Today, as economies continue to globalize, societies around the world face various problems affecting the environment, food supplies, and natural resources. We believe that we must play a strong role in supporting the sustainable development of societies around the world, and to help them to prosper.

As an enterprise with a strong presence that develops and provides functional materials which contribute to prosperity, NOF CORPORATION will continue to grow by investing our corporate resources in the three business fields of life/healthcare, electronics/IT, and environment/energy.

Furthermore, in complying with regulations as a member of society, we will also fulfil our corporate social responsibilities to protect the environment and guarantee safety in the desire that all our stakeholders will continue to see as a trustworthy company.

We would like to extend our thanks to all of you for your continued understanding and support for NOF Group's business operations.

Takeo Miyaji
President & Chief Executive Officer

Contents

Corporate Philosophy

NOF Group is dedicated to contributing to humankind 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 at the global level.
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, and strive to create a rewarding place to work and fulfilling lifestyles.

Code of Conduct

Above all, listen to our customers
Transform customer value into tomorrow's success.

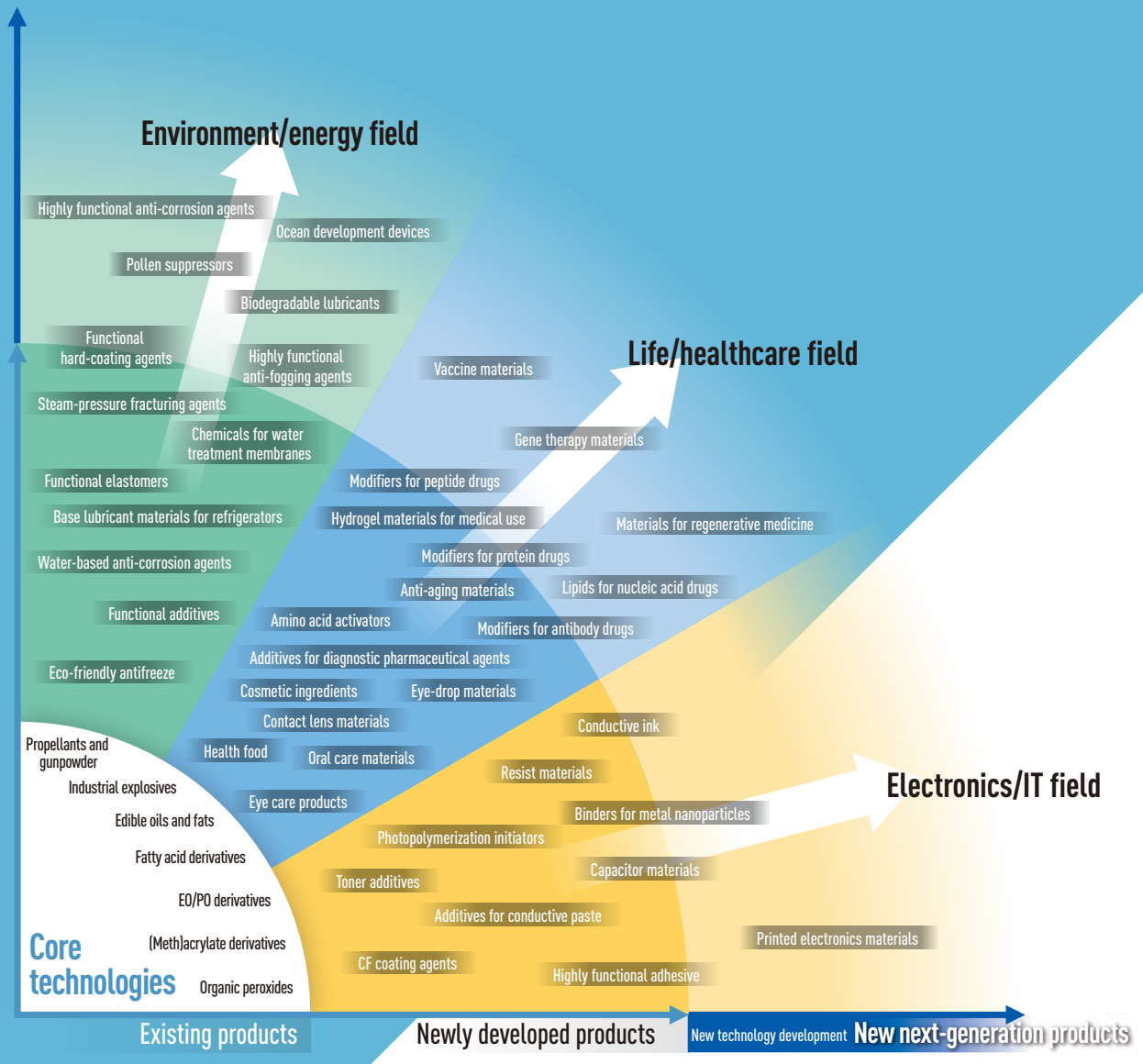
Develop exciting technologies
Focus your energy, work fast.

Protect the Earth's future Place priority
On the environment and living things.

Generate strong earnings
Create profits for everybody and a better tomorrow.

Take on ambitious challenges
Think innovatively for personal and business development.

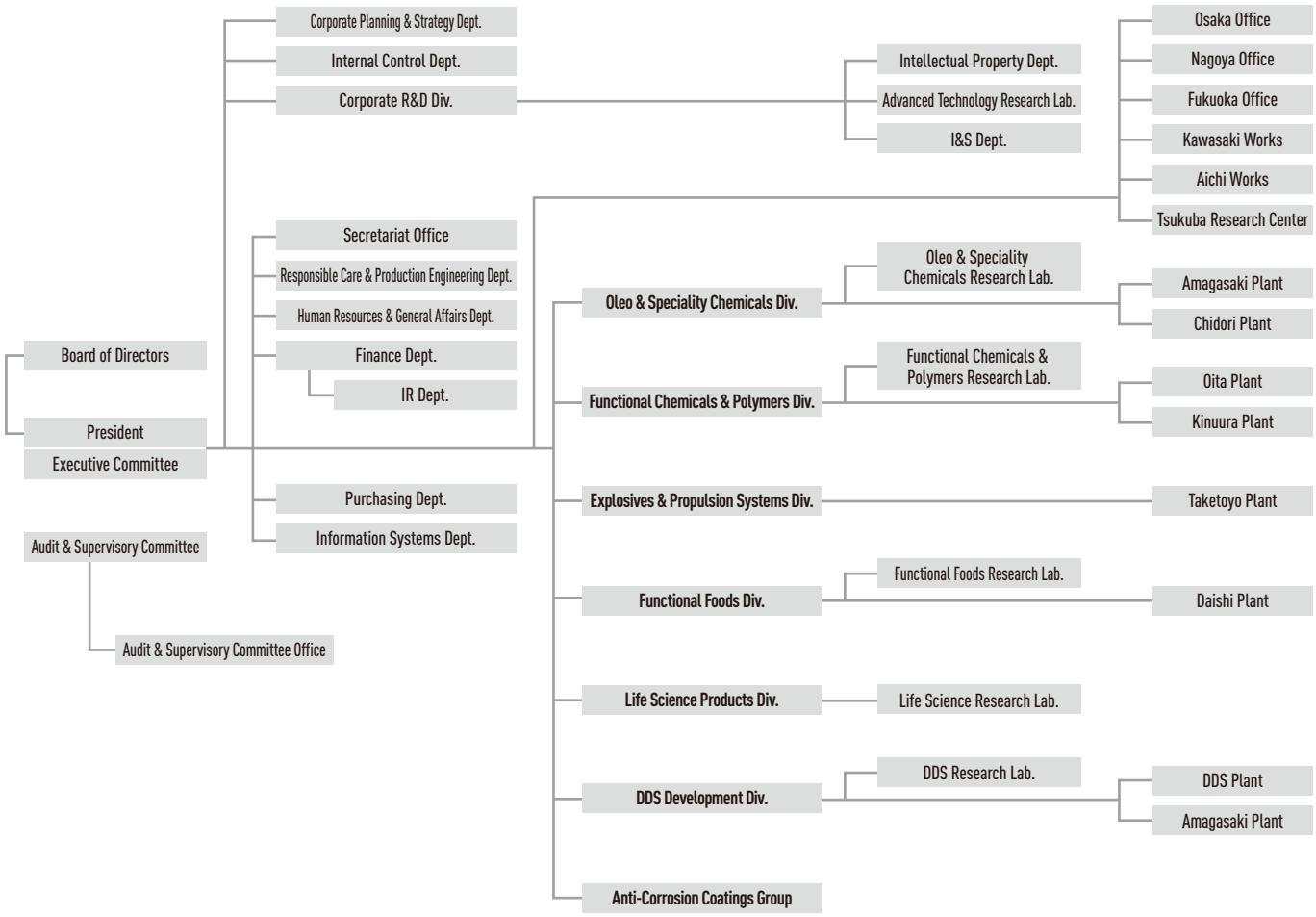
NOF Group's Target Areas



OUR ORGANIZATION

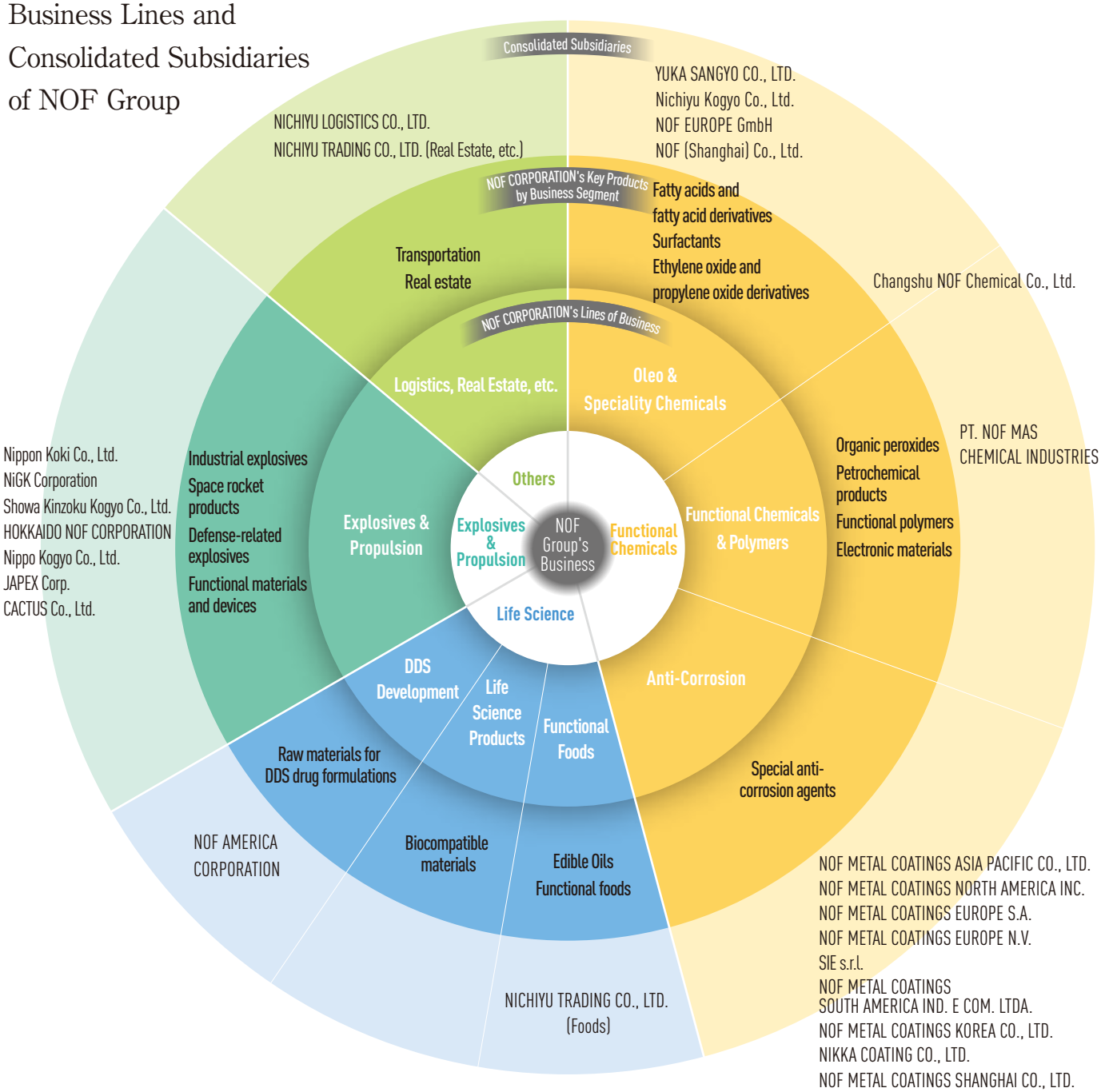
Contributing globally in various domains

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 oleo & speciality chemicals, functional chemicals & polymers, explosives & propulsion systems, functional foods, life science products, DDS development, anti-corrosion coatings, 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



Oleo & Speciality Chemicals

Pursuing oleochemistry and its integration with petrochemistry to create a range of functional products

Since the birth of our oleochemical business in 1910, we have been leading the industry as the pioneer in the field of oleochemistry.
Today, we are developing not only oleochemical products such as fatty acids, their derivatives, and surfactants but also various types of functional petrochemical products using alkylene oxide derivatives and (meth)acrylic acid esters as bases, and introducing them to growth areas experiencing rapid technical innovation including resources, the environment, energy, electronics, information, and healthcare.
Oils and fats are both new and old materials. We will continue to explore the possibilities these materials offer, apply our decades of unique expertise to develop highly functional, high value-added products in many areas of oleochemistry and petrochemistry, and develop businesses with a strong presence in leading-edge growth areas.

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

Production Bases


Amagasaki Plant


Chidori Plant


Changshu NOF Chemical Co., Ltd. (China)

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.

Cement additives

Building stronger and more durable concrete structures requires using less water in the cement. We provide additives that act at the cement-water interface to minimize the amount of water needed.

Feed additives

Our feed additives for pigs and dairy and beef cattle use fatty acids as ingredients. These highly rated additives, together with others such as minerals, form a highly functional product group covering a wide variety of livestock-raising applications.

Metal working fluids

Our metal working fluids (the METALEX® series) include metal cleaning agents, anti-corrosion agents, and metal processing oil that use various types of surfactants as ingredients. Recently, we have been developing eco-friendly cleansers for inks, paints, adhesives, and sugar processing.

Biodegradable lubricants

Biodegradable lubricants are broken down into water and carbon dioxide by micro-organisms and returned to nature, thereby reducing the environmental impact. We develop eco-friendly biodegradable lubricants ideal for aquatic environments such as oceans and rivers.

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.

Paper making additives

We deliver deposit-control agents to key plants of major paper manufacturers. In the recycled paper manufacturing process, deposit-control agents are designed to remove deposits (foreign objects) from the main ingredient, which is waste paper, and enhance the usage rate of that waste paper.

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.

Functional Chemicals & Polymers

Applying next-generation technology to cultivate new fields of chemistry. We are building a wide range of businesses with innovative ideas for creating cutting-edge materials.

Our functional chemicals & polymers business originally began in 1957 as a producer of organic peroxides. Since then, we have been steadily expanding our operations, and currently organic peroxides, functional polymers, petrochemicals, electronics and information technology products serve as the four pillars of our wide-ranging business operations.
In the organic peroxides business, we proactively develop products and cultivate new product applications. The functional polymer business focuses on applying a group of highly functional polymer products generated from innovative ideas for various purposes, and the petrochemical business is contributing extensively to the growth of related industries.
Moving forward, we will continue to focus on creating cutting-edge materials to support next-generation technologies, and cultivate new fields of chemistry while building our ability to develop new products.

Main Products

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

Production Bases


Kinuura Plant


Oita Plant


PT. NOF MAS CHEMICAL INDUSTRIES (Indonesia)


Changshu NOF Chemical Co., Ltd. (China)

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.

Petrochemicals

The Oita 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.

Functional Polymers (anti-fog agents)

The MODIPER® and NOF®-ALLOY series include highly functional polymers developed based on our proprietary techniques. Our anti-fog agents include MODIPER technology and are used for automobile lamp lenses to avoid fogging problems.

Functional Polymers (thermoplastic elastomers)

The MODIPER® and NOF®-ALLOY series include highly functional polymers developed based on our proprietary techniques. Our thermoplastic elastomers include NOF®-ALLOY technology could be applied for wide variety needs with excellent oil and heat resistance.

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, gun ammunitions, 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, oceangraphic 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, ammunition, 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.

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.

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.

Gun Ammunitions

Our Group companies Nippon Koki Co., Ltd., Showa Kinzoku Kogyo Co., Ltd., and Nippo Kogyo Co., Ltd. produce most types of small- and medium-caliber gun ammunitions. They also carry out gun powder loading for and assembly of large-caliber shells.

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 the registered trademark of Nippon Koki Co., Ltd. in Japan.

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.

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.

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.

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

Enriching our dietary culture for fine flavors and good health

Since launching our functional foods business, we have been an innovator of edible oil and fat refining and processing techniques. In addition to edible oils and fats, we have expanded into the health-related business.
In the edible oil business, we apply decades of accumulated expertise and techniques, as a pioneer of oil and fat processing, to create products with a focus on fine flavors. The product lineup includes margarine, shortening, confectionary oil, depanning oil, fillings and toppings, oil and fat powders, and ingredients for precooked frozen food— all widely contributing to the food industry.
The health-related business, we are continually creating new products while improving our technologies that deliver health to society. Product examples include functional materials, emulsified and solubilized products, coatings, and nutritional products.
We will continue providing products can contribute to society through enriching our dietary culture for fine flavors and good health.

Main Products

Shortening
For confectionery and bread
Margarine
For confectionery and bread, spreads, frozen food, and for cooking
Oils and fats for non-dairy cream
For whipped cream and coffee whitener
Fillings and toppings
For confectioneries and bread, and for cooking
Oil and fat powders
For instant foods, snacks, frozen food, and animal feed
Depanning oil
For bread and confectioneries (both Western and Japanese styles)
Healthy foods
Nutritional foods
Functional materials
Coatings
Solubilized products
Ingredients for processed foods

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 oils and fats

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.

Functional 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.

Coatings

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.

Solubilized 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 Products

Improving Quality of Life with Unique Technology.

We have successfully developed the manufacturing process for LIPIDURE® on a commercial scale. LIPIDURE® is polymer composed of MPC (2-methacryloyloxyethylphosphorylcholine) which has the same structure as the phospholipid polar groups. This success allowed us to establish Life Science Products Division and we have been actively marketing LIPIDURE® as a biocompatible material.
Our business covers a wide range of areas such as eye care, skin care, oral care, medical devices and diagnostics. All these products are highly rated by our customers.
We utilize our technology in molecular design, purification and evaluation to improve product development and cultivate new applications.
We will utilize our unique technology to create innovative value and contribute to improving quality of life (QOL).

Main Products

Biomaterials for
Contact Lens
Eye Care, Skin Care and Oral Care
Hand Sanitizers
Coating Agent for Medical Device
Reagents for Biochemistry and In-vitro Diagnostics
Research Reagents for
Assay Reagents
Oxidative Stress Markers

Production Base


Oita Plant

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.

Hand Sanitizers

Demand for hand sanitizers has increased to prevent infectious diseases like the flu. We have developed hand sanitizers that contain LIPIDURE® to provide powerful skin protection and solve the problem of rough skin caused by alcohol.

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.

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.

Materials for Eye Care, Skin Care and Oral Care

Used in eye care and skin care materials, LIPIDURE® has been attracting attention in recent years for its high moisturizing and protection capabilities. It can also be used as an oral care material since it repels bacteria that cause cavities and protects mucosal cells from toxins produced by periodontal bacteria.

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.

Assay Reagents

Totally synthetic polymers are the main ingredients of immunoassay blocking reagents and peroxidase stabilizers. Their excellent blocking and enzyme-stabilizing effects are unique to synthetic polymers.

DDS Development

Contributing to DDS innovation with high-purity materials and brand-new technology

In the pharmaceutical industry, many drugs have been commercialized with a Drug Delivery System (DDS), which maximizes their therapeutic effects.
A DDS enhances the effect of a drug by modulating its physiological activity, side effects, pharmacokinetics, chemical stability, and metabolic activity, etc., to make the required amount of drug act for the necessary duration in the body.
The effectiveness of this technique has been noticed for its ability to treat various types of diseases.
We have supplied creative pharmaceutical materials to the DDS field under our GMP-compliant high-level quality control system. Such materials include polyethylene glycol (PEG) derivatives, single molecular weight PEGs, nucleic acid and gene delivery lipids, PEG lipids, and high purity polysorbates—all developed using our proprietary molecule design, synthesis, and purification techniques.
We will continue to supply high-quality novel materials globally to help advance the field of DDS.

Main Products

Single molecular weight PEGs
Nucleic acid and gene delivery lipids
PEG lipids
High-purity polysorbates

Clean Room
To supply our customers with safe products, we manufacture products in a GMP-controlled clean room.

Production Bases

Amagasaki Plant

DDS 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.

High-purity polysorbates

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.

Lipids

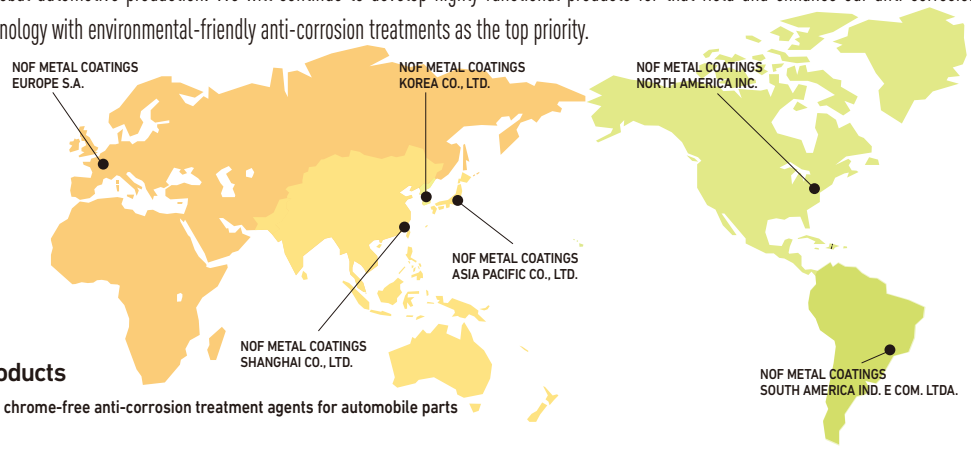
We produce GMP-compliant high purity phospholipids for liposomal drugs. We also develop PEG lipids and nucleic acid and gene delivery lipids for nucleic acid drugs and gene therapy drugs.

Anti-Corrosion 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, NOF anti-corrosion 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 the registered trademarks of NOF METAL COATINGS NORTH AMERICA INC. in Japan.
* "ECHOTE" is the 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.

In an era of rapid technological change, particularly in IT, digital transformation (DX) and life science innovation—which can significantly change our daily lives—chemical materials must also evolve.
NOF Group has chosen life/healthcare, electronics/IT, and environment/energy as the target areas for expansion. The Group is actively developing new technologies and products—such as oleo & speciality chemicals, functional chemicals & polymers, explosives & propulsion systems, functional foods, and anti-corrosion coatings—at research laboratories that support our core businesses, and also at other research laboratories that focus on growth areas such as life science and DDS. The Corporate R&D Division plans and proposes company-wide research strategies, coordinates collaboration among research laboratories of different divisions, and conducts fundamental research to develop and innovative materials for the future. While promoting global searches for new technologies and collaboration with third parties, Corporate R&D Division is actively pursuing the creation of new technologies and products.

Corporate R&D Division

Quest for cutting-edge technology
Conducting FS of new research projects
Creating synergy and combining the company's proprietary technologies
Acquisition and use of intellectual property

New domains to explore

Core Business Research Laboratories

Oleo & Speciality Chemicals
Functional Chemicals & Polymers
Explosives & Propulsion Systems
Functional Foods
Anti-Corrosion Coatings

Core technology innovation
Meeting changing market needs
Increasing profitability of core technologies

Growth Business Research Laboratories

Life Science Products
DDS Development

Concentrating research resources
Rolling out new core technologies
Expanding business in growth markets

Advanced Technology Research Laboratory

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.

Oleo & Speciality Chemicals Research Laboratory

(Oleo & Speciality Chemicals Division)

With applied research on oils and fats, their derivatives, surfactants, and polymers, this laboratory is developing, from broad perspectives, highly functional and high value-added products in the areas of resources, the environment, energy, healthcare, electronics, and information.

Functional Chemicals & Polymers Research Laboratory

(Functional Chemicals & Polymers Division)

This laboratory creates state-of-the-art materials. Such as highly functional polymers developed through high-level application of synthesis, analysis, polymerization, and evaluation techniques accumulated through R&D on 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 Laboratory

(Functional Foods Division)

This laboratory develops safe and reliable edible oils, functional foods, and nutritious foods by using: oils and fats processing, emulsification, solubilization, powderization, and microencapsulation technologies; techniques to utilize emulsifier and enzyme capabilities; and techniques to take advantage of functional materials in DHA.

Life Science Research Laboratory

(Life Science Products Division)

This laboratory researches applications for biocompatible materials, focusing on MPC polymers for the fields of pharmaceutical products for eye care, skin care, and oral care, medical devices, and diagnostic reagents.

DDS Research Laboratory

(DDS Development Division)

This laboratory carries out R&D to widely apply high-purity materials and advanced technologies, such as PEG derivatives, phospholipids, and novel DDS materials, to the DDS field.

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

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

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 Tsukuba Research Center [Ibaraki]
18 Advanced Technology Research Lab. [Ibaraki]
19 I&S Department [Kanagawa]
20 Oleo & Speciality Chemicals Research Lab. (Amagasaki Plant) [Hyogo]
21 Oleo & Speciality Chemicals Research Lab. (Chidori Plant) [Kanagawa]
22 Functional Foods Research Lab. [Kanagawa]
23 Life Science Research Lab. [Kanagawa]
24 DDS Research Lab. [Kanagawa]
25 R&D Department (Explosives & Propulsion) [Aichi]
26 Functional Chemicals & Polymers Research Lab. [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 HOKKAIDO NOF CORPORATION [Hokkaido]
35 Nippo Kogyo Co., Ltd. [Shizuoka]
36 JAPEX Corp. [Tokyo]
37 CACTUS Co., Ltd. [Tokyo]
38 NOF METAL COATINGS ASIA PACIFIC CO., LTD. [Kanagawa]
39 NIPPON C&Z CO., LTD. [Aichi]
40 NIKKA COATING CO., LTD. [Saitama]
41 NICHIYU LOGISTICS CO., LTD. [Kanagawa]
42 NICHIYU TRADING CO., LTD. [Tokyo]

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

Contact numbers and addresses of Group companies:
https://www.nof.co.jp/company/group.html

OUTLINE

Corporate Overview (as of March 31, 2021)

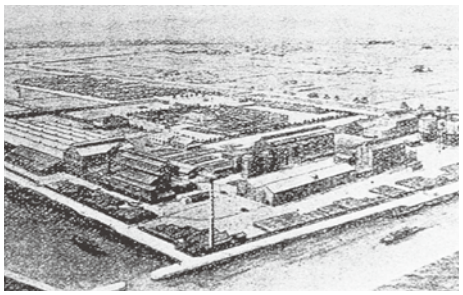
● **Company Name**	NOF CORPORATION
● **Establishment**	June 1, 1937
● **Incorporation**	July 1, 1949
● **Head Office**	20-3 Ebisu 4-chome, Shibuya-ku, Tokyo, Japan
● **Capital**	¥17,742 million
● **Sales**	¥172.6 billion (Consolidated) ¥119.2 billion (Non-consolidated)
● **Number of employees**	3,755 (Consolidated) 1,715 (Non-consolidated)

● **Board of Directors**

President and Chief Executive Officer	Takeo Miyaji
Representative Director and Senior Executive Operating Officer	Kazuhito Maeda
Director and Executive Operating Officer	Masanobu Miyo
Director and Operating Officer	Kazuyoshi Yamauchi
Outside Director	Shingo Unami
Outside Director	Izumi Hayashi
Director, Audit & Supervisory Committee Member	Tsuneharu Miyazaki
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 NICHIYU 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)

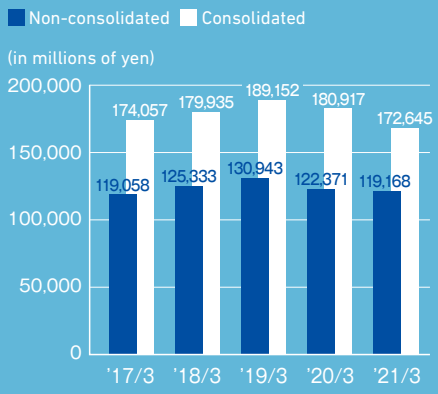
1950s

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

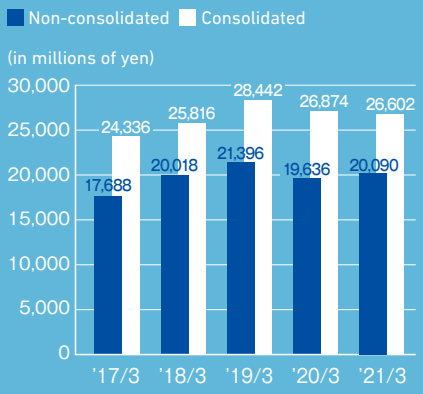
1960s

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

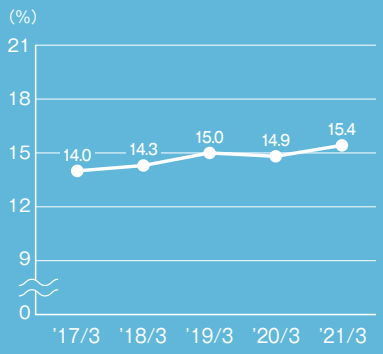
● Sales



● Operating profit



● 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
Mar. 1994 HOKKAIDO NOF CORPORATION 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

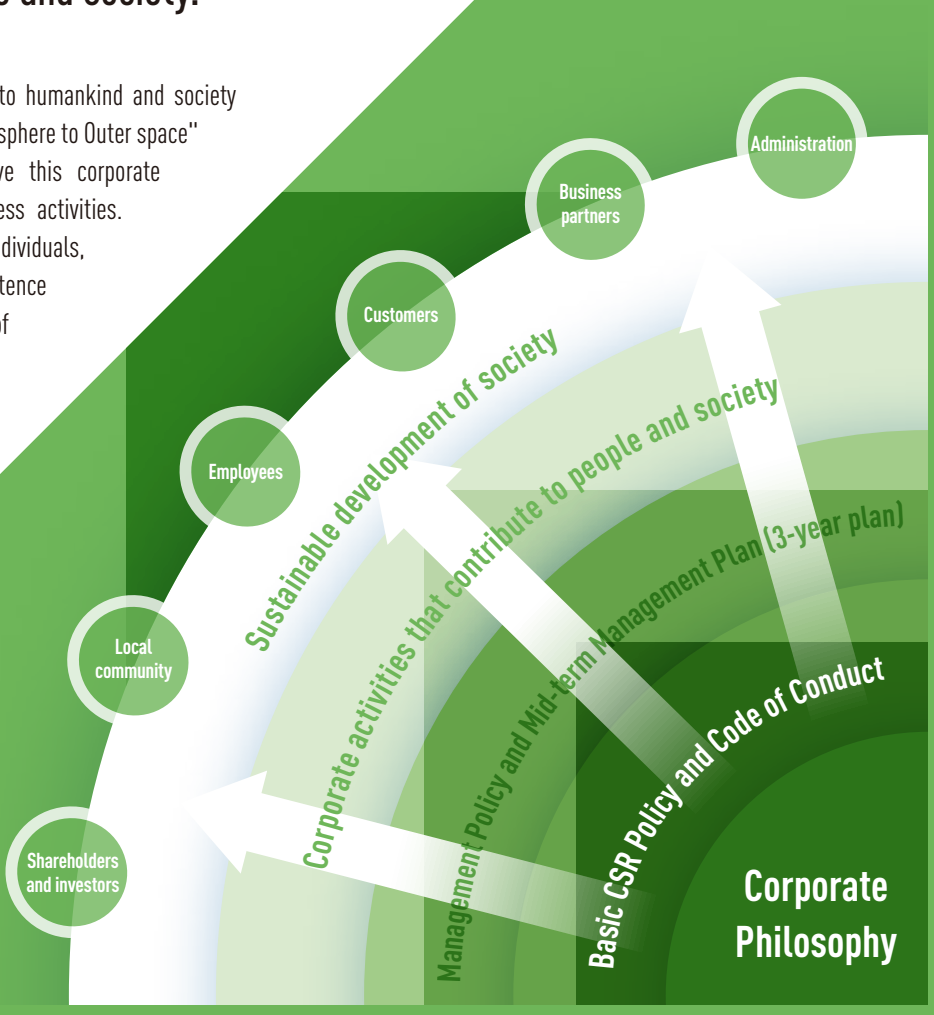
Sept. 2010 Nichiyu Giken Kogyo Co., Ltd. (currently NiGK Corporation)
became a wholly owned subsidiary through a share exchange
July 2012 Tsukuba Corporate Research Lab. was
reorganized into Tsukuba Research Center
Nov. 2014 NOF EUROPE (BELGIUM) N.V. was relocated to Germany, and
NOF EUROPE GmbH was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

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.



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

Oleo & Speciality Chemicals

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®, in contrast, uses natural oils and fats as ingredients to effectively release asphalt while helping to protect the environment.

Oleo & Speciality Chemicals

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.

Oleo & Speciality Chemicals

Additives for waste-paper recycling

Recycled paper resources contain numerous impurities, including sticky substances such as adhesives. These impurities reduce the efficiency of the paper recycling process and affect the quality of the end product. BIOREX®, which facilitates adhesive detachment when dissolving waste paper, and DETAC®, the pitch control agent for removing foreign objects, solve these problems to promote recycling of waste paper.

*"DETAC" is the registered trademark of Solenis Technologies Cayman, L. P. in Japan.

Functional Chemicals & Polymers

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®-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.

HOKKAIDO NOF CORPORATION

Chloride-free antifreeze agents

KAMAGU, 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® Jet is an automatic anti-freeze spray system. It uses sensors to automatically spray KAMAGU 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.

NOF METAL COATINGS ASIA PACIFIC CO., LTD.

Water-based chrome-free anti-corrosion agents

GEOMET® 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® for any place or area of the world. GEOMET® is therefore chosen by automotive manufacturers around the world.

*"GEOMET" is the registered trademark of NOF METAL COATINGS NORTH AMERICA INC.

For more information on our CSR, please visit our website or see the CSR Report.
https://www.nof.co.jp/english/csr/index.html

NOF CORPORATION

Watch
the company
introduction video:

Website URL:
http://www.nof.co.jp/english

Created in June 2020
Revised in June 2021