



 Something **Better** with Chemicals

OSAKA SODA CO., LTD.

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OSAKA SODA CO., LTD.

# Something Better with Chemicals. That is Our Motivation.

Based on our concept of contributing to the realization of a safe and affluent society through our creative technologies and innovative products, we have continued to respond to the continually changing needs of the times through a range of different businesses.

We believe it is our social responsibility as a company to provide every person in the world with a happier life and more healthy days.

We shall create new value through our uniquely creative manufacturing DNA that has been passed on from our founding, making "Something Better with Chemicals."



## Message

Founded in 1915, Osaka Soda set a path for domestic production of caustic soda as the pioneer of industrial scale manufacturing by electrolysis. Since that time, Osaka Soda Group has contributed greatly to the development of industry by supplying various chemical products through our unique technology including basic chemical products that we have manufactured since our founding, and functional chemical products focused on Global Niche Top (GNT) and Active Pharmaceutical Ingredients and their intermediates.

At present, we are engaged in building the business structure centered on the high-value-added products, along with the expansion of functional chemical business, healthcare business and the creation of new businesses with a focus on the fields of the biotechnology and the environment, aiming to "Be a corporate group that provides new value to society through chemistry". In order to achieve this, Osaka Soda Group will continue pursuing the possibility of chemistry and promote manufacturing that contributes to the development of industry and society by leveraging our energies and innovative capabilities to constantly challenge new fields.



**Kenshi Terada**  
President & CEO



## case 01

**Safe water from the tap.  
Every day, we protect the peace  
of mind we take for granted.**

Water is something we cannot live without in our day to day lives.  
It is proper safe and hygienic management that allows us to drink water or use it in cooking with peace of mind.  
This hygiene management is supported behind the scenes by sodium hypochlorite, with its amazing ability to kill germs.  
This is one of the chemicals needed for sterilizing and disinfecting the water in our water supply and sewerage systems.



## case 02

**Supporting the downsizing  
of engines.  
Making driving friendly to the  
earth a reality.**

Environmentally friendly cars are in greater and greater demand these days.  
As one way to reduce CO<sub>2</sub> emissions, engine rooms are being made ever smaller.  
However, if they are too small it is hard to heat to escape, increasing the temperature around the engine.  
One of the ways these high temperatures are countered is the use of our special synthetic rubber, Epichlorohydrin Rubber.  
As a material for engine hoses that is resistant to heat and oil, it helps make vehicles more eco-friendly.



## case 03

**Food containers should be more  
than just clean and make food  
easy to see.  
And protecting the environment  
properly.**

Look at the milk or juice paper cartons on your dining table.  
Most of these cartons use organic solvent-free UV ink for printing, making them not just well designed but good for the environment as well.  
UV inks using DAP resin dry very fast, in just a few seconds, if irradiated with UV light.  
They allow cartons to be printed that are eco-friendly and very easy to work.



## case 04

**Wishing for a healthy tomorrow.  
Supporting pharmaceutical  
research and development  
around the world.**

With the stresses of modern society and the changes in our lifestyles, there is an increasing awareness of health issues worldwide.  
Our Silica Gel for Liquid Chromatography is used in separating active ingredient and impurities to increase the purity of pharmaceutical products.  
Used in the development and manufacture of pharmaceutical products, it supports human health from behind the scenes.

# Sustainability



**We pursue the possibilities of chemistry and continuously contribute to the realization of a sustainable society by challenging new fields.**

Our mission as a chemical company is to address a variety of social issues through innovative chemistry. Our group will strengthen manufacturing with consideration for the environment and safety, contribute to the SDGs through companywide activities, in addition to contribute through superior products and technologies created through the deepening and fusion of core technologies.

## Initiatives in Production Activities

As part of our group's efforts to mitigate climate change such as global warming, we continue to promote initiatives to reduce GHG emissions and environmental footprint.

We are also actively involved in environmental preservation, occupational health and safety activities, and the development of future leaders.



## Initiatives in Business Activities

### Basic Chemicals Business



We facilitate the establishment of safe and hygienic living environments, such as chlor-alkali products including caustic soda and sodium hypochlorite, which are used in water treatment chemicals, fertilizers, agricultural raw materials, and antimicrobial agents/disinfectants.

### Functional Chemicals Business



We contribute to reducing environmental loads with our global niche products, such as DAP resin, which is used in UV inks that are energy-efficient and uses no organic solvents; epichlorohydrin rubber, which is beneficial for reducing automobile transpiration gas; acrylic rubber, which is installed around the turbo engine of eco-friendly cars; and CABRUS™, which is used as a modifier in energy-saving tires. In addition, we promote R&D activities which is making use of our originality in the areas of mobility, information and communication, and environment and energy.

### Health Care Business



We contribute the pharmaceutical industry through production of active pharmaceutical ingredients & intermediates and pharmaceutical purification materials by using three core technologies: unique organic synthesis, biotechnology, and chromatography. Also, we aim to create a new business through expansion in growing area such as biopharmaceuticals by responding to the needs of diverse therapeutic measure in recent years.

Through our unique electrolysis technology,  
expanding the possibilities of chemistry  
and supporting variety industries

Basic Chemicals Business

Functional Chemicals Business

Health Care Business

Other

]: Product Name

⬇: Raw Material



# Basic Chemicals Business

We will support safe and secure lifestyles with the reliable technologies we have nurtured since our founding.

Our core business ever since our founding

## Chlor-Alkali

Chlor-alkali products are manufactured via the electrolysis of salt. In addition to being sold as products themselves, they are also used as the raw materials from which many other Osaka Soda Group products are manufactured. We ensure a stable supply through integrated production from raw materials to finished product.

Caustic Soda / Chlorine Gas / Liquid Chlorine / Hydrogen Gas / Caustic Soda / Hydrochloric Acid / Sodium Hypochlorite / Low Salt Sodium Hypochlorite [MEKKRON™] / Ferric Chloride / Sodium Chlorate / Sodium Chlorite / Stabilized Chlorine Dioxide [DAISO OSLON™]



Caustic Soda

Used in a wide range of fields, including bleaching paper, pulp, and textiles and in general manufacturing of foodstuffs and chemical products.



Sodium Hypochlorite

Mainly used in the sterilization of drinking water. The particularly high grade MEKKRON™ is used in fields where high levels of hygiene control are required.



Hydrogen Gas

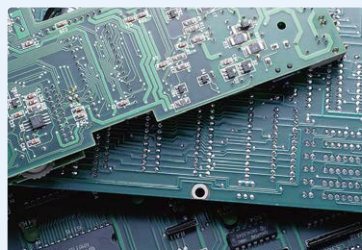
This is expected to play a major role as a clean energy that does not produce CO<sub>2</sub>.

Source of our uniquely creative manufacturing

## Allyl Chloride / Epichlorohydrin

Allyl Chloride (AC) and Epichlorohydrin (EP) are manufactured through the chlorination of propylene. This is used as the main raw material for our unique functional chemical products. It also supports a range of industries as the raw material for epoxy resin.

Allyl Chloride / Epichlorohydrin / 1,3-dichloropropene [DC] / Trichloropropane



Epichlorohydrin

Finds use in a range of different fields, including as a sealant for electronic parts and as a binder for anti-corrosive paint and carbon fiber for bridges, ships, and so on.



Allyl Chloride

In addition to being used as the raw material for epichlorohydrin, it is also used as a raw material in pesticides and pharmaceutical products.



# Functional Chemicals Business

We will respond to an ever-changing world with our unique technologies to realize the evolution of tomorrow.

Boasting the world's top sales performance

## Allyl Ethers

Allyl ethers are multifunctional organic intermediates produced from allyl chloride or epichlorohydrin, and find a number of uses in electronic parts, coatings, and other fields.

Allyl Glycidyl Ether [NEOALLYL™ G] / Trimethylolpropane Diallyl Ether [NEOALLYL™ T-20] / Pentaerythritol Triallyl Ether [NEOALLYL™ P-30] / Glycerine Monoallyl Ether [NEOALLYL™ E-10] / Diallyl Dimethyl Ammonium Chloride [DADMAC™]



NEOALLYL™ G

As a raw ingredient for silane coupling agents, it is useful for increasing the adhesiveness of resins, metal and glass fiber in printed circuit boards or semiconductor encapsulation.



NEOALLYL™ T-20

Used as an additive to improve quick-dry speeds for high-class wood coatings.



DADMAC™

Used in a wide range of applications, from dye fixing agents that prevent textiles from fading to resin additives or water purification treatment.

Heat-resistant specialty synthetic rubber

## Epichlorohydrin Rubber / Acrylic Rubber

Epichlorohydrin rubber offers superbly well-balanced heat resistance, oil resistance, and low temperatures flexibility. In addition to improving vehicle performance and compliance with environmental regulations. It is also used in OA device fields thanks to its semi-conductor properties. Acrylic rubber shows outstanding oil resistance at high-temperature.

Epichlorohydrin Rubber [EPICHLIMER™] [EPION™] / Acrylic Rubber [RACRESTER™]



EPICHLIMER™

Used in vehicle fuel hoses and intake/exhaust hoses.



EPION™

Used for electrostatic charging, transferring and developing rolls in digital color copiers.



RACRESTER™

Used in bearing seals, automotive oil seals, and intake and exhaust hoses.

## Health Care Business

From development to manufacturing, we will spread healthy smiles with reliable performance.

High-performance silica gel invaluable in the analysis and purification of pharmaceutical products

### Silica Gel for Liquid Chromatography

Our silica gel for liquid chromatography, manufactured under GMP control, is used as a functional separation material in the research and development of new pharmaceutical products and in their purification processes. With a generous lineup of peripheral products that includes more than 300 grades and packed columns for fractional isolation and analysis, we support customer demands both through our rich selection as well as by providing fine-tuned services and technologies.

Silica Gel for Liquid Chromatography [DAISOGEL™] / Packed columns [CAPCELL PAK™]



DAISOGEL™ (enlarged view)



CAPCELL PAK™



GMP-compliant modified silica gel production facility

Used in the analysis and preparative isolation/purification of pharmaceutical products as well as cosmetics and functional foods.

Supporting health and happiness through an organic synthesis and biotechnology

### APIs and their intermediates

We have established our position as a reliable manufacturer of APIs and their intermediates by drawing on our special technologies such as optically active materials using catalyst technology, saccharide-related compounds using gene recombination technology, enzymes using extraction technology, or Japan's largest freeze dryer under GMP control. We use these technologies in a wide range of life science fields such as diagnostic agents and raw materials for cosmetics. As a trustworthy partner in pharmaceutical product development, the Osaka Soda Group will continue to provide high quality products.

Contract manufacturing of various types of APIs and intermediates, optically active compounds, diagnostic agents, raw materials for cosmetics



Contract manufacturing



APIs and intermediates



UBASTEC™-AUTO for liver function diagnostic

We provide contract manufacturing of various types of APIs and intermediates, optically active substances, and diagnostic agents.

“Global Niche Top” thermosetting resin

### DAP resin (Diallyl Phthalate Resin) / Non-Phthalate Allyl Resin

DAP resin is a thermosetting resin with both high heat resistance and electrical insulation properties, and is mainly used for electronic and electrical parts. It is becoming more widely used recently, such as in UV ink. In addition, non-phthalate Allyl resins that retain the properties of DAP resins are being developed, and we are expanding their use in UV ink for plastic base materials.

Diallyl Phthalate Prepolymer [DAISO DAP™] / Diallyl Isophthalate Prepolymer [DAISO ISO-DAP™] / Diallyl Orthophthalate Monomer [DAISO DAP™ Monomer] / Diallyl Isophthalate Monomer [DAISO DAP™ 100 Monomer] / Non-Phthalate Allyl Resin [RADPAR™]



DAISO DAP™

Used in electrical components that require high durability, such as electrical control panels.



DAISO DAP™

Used for additives for eco-friendly UV inks, used in printing for food containers such as packaging labels.



RADPAR™

Used as an UV ink additive for plastic materials.

Environmentally-friendly high-endurance electrodes

### Electrodes

Our electrodes, which have been manufactured using the reliable technologies and expertise in electrochemistry we have gained since our founding, are not only helpful in protecting the environment through reducing electricity consumption, but their long life and durability mean that they help our customers save costs. We boast Japan's top market share in oxygen-generating electrodes in particular.

Electrodes (NEOLORD™ series: oxygen-generating electrodes, chlorine-generating electrodes, water electrolysis electrodes), supplementary plant engineering



Chlorine-generating electrodes

Used as electrodes for producing chlor alkali.



Oxygen-generating electrodes

Used in the steel plating process for home electronics housings and as current collectors for lithium-ion batteries.



Water electrolysis electrodes

Used in alkali ion water conditioners and industrial-use strong electrolytic water generators.

Contributes to reduced CO<sub>2</sub> emissions from automobiles

### Modifying agent for low fuel consumption tires

Our CABRUS™ is used as a modifying agent for low fuel consumption tires. Blending CABRUS™ helps fuse the rubber and silica, not only reducing the rolling resistance of the tire but also helping achieve better braking on wet roads. By providing such products, our company contributes to the conservation of the global environment, including the reduction of CO<sub>2</sub>.

Polysulfide Silane Coupling Agent (CABRUS™)



CABRUS™

# Research and Development



## “A group of technology development engineers with an entrepreneur mindset creates unique value.”

Osaka Soda has produced many specialty chemicals having world top shares based on our innovative and unique technology.

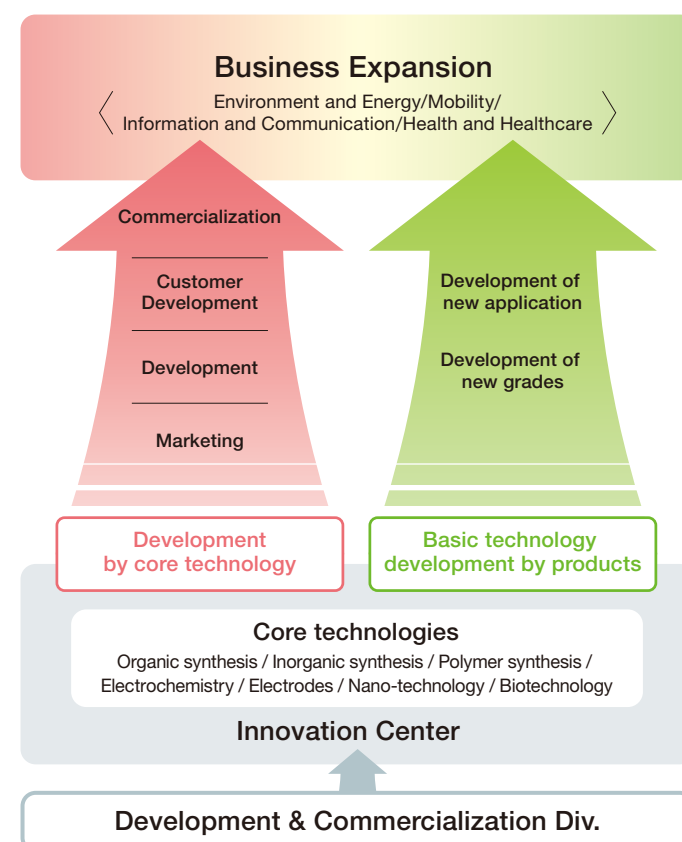
The Development and Commercialization Division (D&C Div.) is a group of engineers with an entrepreneurial mindset, directly above the Innovation Center, which aims to further improve the fundamental technologies at the core of Osaka Soda.

At the Innovation Center, the Development Planning Group, which uses our company's proprietary technologies to explore and plan development themes, is at the forefront of pursuing the potential of new products and businesses.

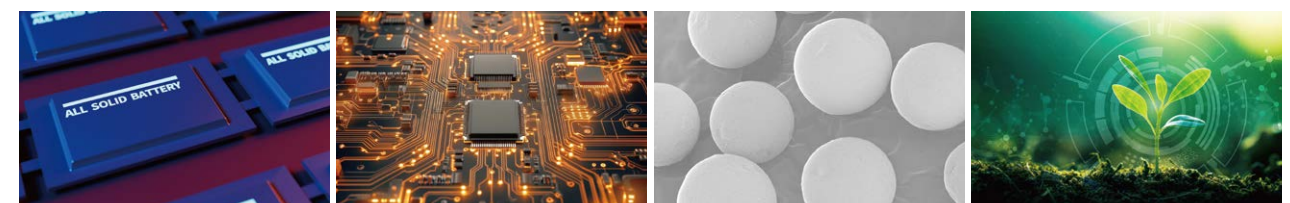
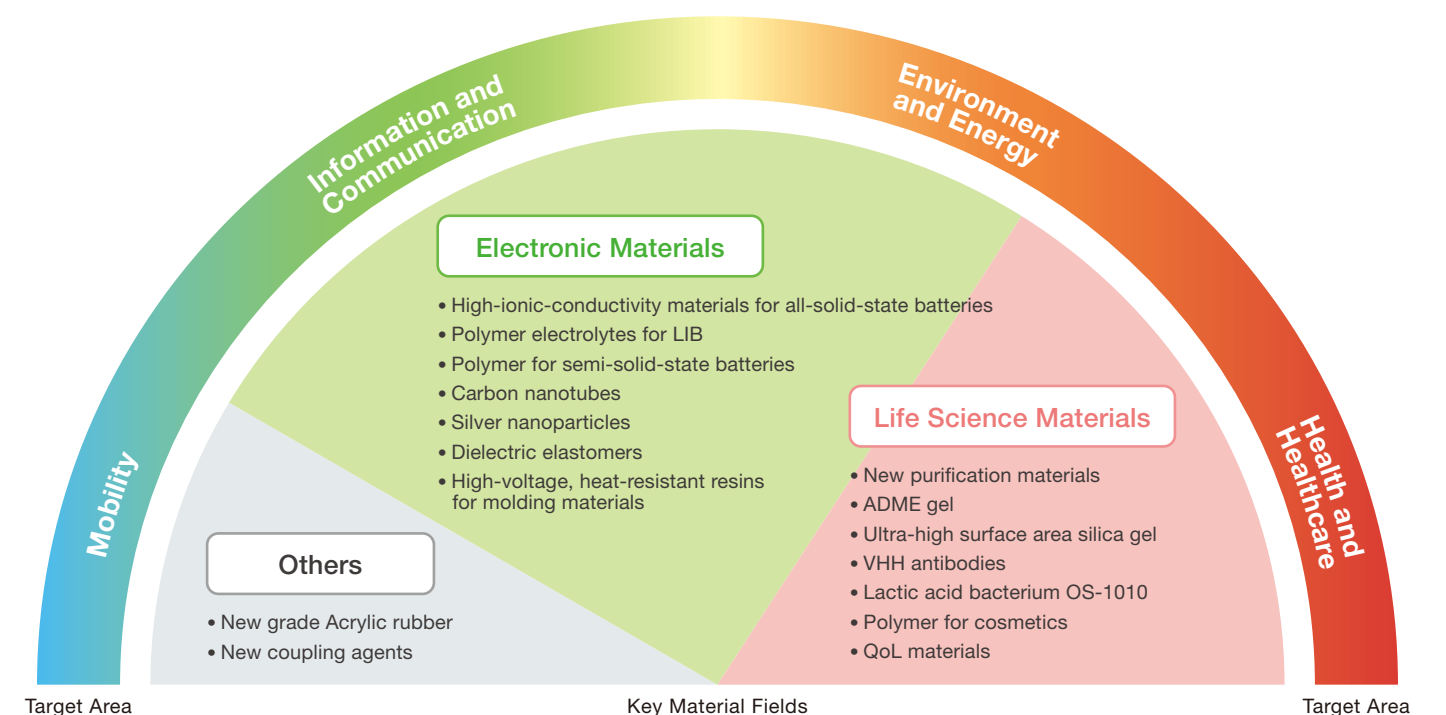
The Development Sales Group, which is part of the Corporate Planning Department, specializes in exploring new themes and is focused on discovering new business opportunities that will support future growth.

Under the control of the Development Planning Group, which acts as the command center, each development group is engaged in the development of new materials, new grades around existing businesses, and new applications.

These organizations each have different roles, and through their close collaboration we are able to accelerate commercialization and further create unique value. Osaka Soda will continue to contribute to the realization of a prosperous society.



## 〈Target Areas and Key Material Fields〉



# Production System, Quality Assurance, Safety & Health



## Production System

Ensuring stable supply by cooperation of our plants.  
Raising global competitiveness through innovation and improvement.

We have opened manufacturing bases around Japan: Kitakyushu Plant (Kyushu Area), Amagasaki Plant (Kansai Area), Matsuyama Plant (Shikoku Area), and Mizushima Plant/Okayama Plant (Chugoku Area). In this system, operations are handled in locations near to the various consumption areas, allowing us to provide products promptly to customers.

In addition, we have constructed a system by which manufacturing at five plants means that should a disaster or problem arise at one of the plants, preventing plant operation, the other plants can quickly take over to supplement it. Moreover, each plant sets targets to beat the global competition, actively promoting innovation and improvement to increase its cost competitiveness while maintaining both quality and productivity.



**Kitakyushu Plant**

Currently, it is the supply base for caustic soda and chlorides to the Kyushu area.



**Matsuyama Plant**

ISO9001 Certification No. JQA-0998  
Manufacturing base for various functional chemicals and silica gel, alongside the main production site for APIs and their intermediates of SANYO FINE Co., Ltd.



**Amagasaki Plant**

ISO9001 Certification No. JQA-1181  
Core manufacturing base for inorganic products, electrodes, and silica gels.



**Mizushima Plant**

ISO9001 Certification No. JQA-0539  
Okayama Plant  
Our largest manufacturing base for allyl chloride, epichlorohydrin and caustic soda.

## Quality Assurance

Ensuring quality control with ISO9001 and GMP, and continual improvements to quality assurance levels

"We provide products that satisfy our customers." With that as our target, we carry out quality control using the ISO9001 international standard for quality management systems and the GMP method for drug-related product standards. We are working to establish the reliability and safety of our products and to constantly improve our quality assurance levels.

[GMP plant] Good Manufacturing Practice: The manufacturing and quality control standard for drugs and quasi-drugs.



Amagasaki Plant  
Modified silica gel production facility



SANYO FINE Co., Ltd.  
Matsuyama Plant



SANYO FINE Co., Ltd.  
Fukui Plant



SANYO FINE Co., Ltd.  
Kakogawa Plant



## Safety & Health

Eliminating serious accidents and industrial injuries through Occupational Safety & Health and Process Safety & Disaster Prevention Committee.

We promote occupational safety & health and process safety & disaster prevention activities through RC Committee, RC Promotion Conference, Workplace RC Committee. In particular, we are working on eliminating serious accidents and industrial injury by incorporating ZA (Zero Accident) and activities to prevent major accidents into our PDCA cycle.

# Group Network

Our Group's energy expands through Japan and overseas,  
empowering us to an even greater future.

Company name  
OSAKA SODA CO., LTD.

Representative  
Kenshi Terada President & CEO

Headquarters  
JP Tower Osaka 19F, 2-2 Umeda 3-Chome, Kita-ku,  
Osaka City, Osaka, Japan 530-0001  
Tel:+81-6-7733-1001 Fax:+81-6-7733-1101

Offices  
Tokyo Branch / Chugoku-Shikoku Regional Office /  
Kyushu Regional Office / Research Center /  
Kitakyushu Plant / Amagasaki Plant / Matsuyama Plant /  
Mizushima Plant / Okayama Plant



## ■ Group Companies in Japan

**DAISO CHEMICAL CO., LTD.**  
[Sale of Chemical Products and Consumer Products]  
JP Tower Osaka 19F, 2-2 Umeda 3-Chome, Kita-ku, Osaka 530-0001, Japan

**JMR CO., LTD.**  
[Resource Recycling]  
9-2, Otakasu-cho, Amagasaki, Hyogo 660-0842, Japan

**DS WELLFOODS CO., LTD.**  
[Manufacture, Processing and Sale of Health Food Materials]  
JP Tower Osaka 19F, 2-2 Umeda 3-Chome, Kita-ku, Osaka 530-0001, Japan

**DAISO ENGINEERING CO., LTD.**  
[Manufacture and Sale of Electrodes, Maintenance]  
JP Tower Osaka 19F, 2-2 Umeda 3-Chome, Kita-ku, Osaka 530-0001, Japan

**DS LOGISTICS CO., LTD.**  
[Shipping and Handling for Chemical Products]  
11, Otakasu-cho, Amagasaki, Hyogo 660-0842, Japan

**DAISO INSURANCE CO. LTD.**  
[Providing nonlife and life insurance products & services]  
JP Tower Osaka 19F, 2-2 Umeda 3-Chome, Kita-ku, Osaka 530-0001, Japan

**SANYO FINE CO., LTD.**  
[Manufacture and Sale of APIs and Intermediates]  
JP Tower Osaka 19F, 2-2 Umeda 3-Chome, Kita-ku, Osaka 530-0001, Japan

**SANYO FINE IRICA TECHNOLOGY CO., LTD.**  
[Manufacture of Columns, Devices, and other Analysis Equipment]  
12, Nishikawabecho, Higashikujo, Minami-ku, Kyoto 601-8037, Japan

**INB Planning Co., Ltd.**  
[Manufacture and Sale of Rubber Products]  
1-100 Takaoka-cho, Obu, Aichi 474-0042, Japan

## ■ Overseas Group Companies

**SANYO FINE TRADING CO., LTD.**  
[Sale of Columns, Devices, and other Analysis Equipment]  
Room 02,20th Floor,Jinghui Building, NO.118 Jianguo Road Yi,Chaoyang District,Beijing,100022,China

**DAISO Fine Chem USA, Inc.**  
[Sale of Pharmaceutical Purification Materials]  
1750 E. Golf Rd. Suite 1140 Schaumburg, IL 60173, USA

**DAISO Fine Chem GmbH**  
[Sale of Pharmaceutical Purification Materials and Functional Chemicals]  
Am Seestern 18, 40547, Duesseldorf, Germany

**DAISO CHEMICAL (Shanghai) CO., LTD.**  
[Importation and Exportation of Functional Chemicals, Electronic Materials, etc.]  
Room No.1704,Tower 1, NO.523, Loushanguan Road, Changning District, Shanghai, P.R.C. 200051, China

**DAISO CHEMICAL (THAILAND) CO., LTD.**  
[Importation and Exportation of Functional Chemicals, Electronic Materials, etc.]  
54 Harindhorn Tower, 9th floor, Unit 9F, North Sathorn Rd, Silom, Bangrak, Bangkok 10500, Thailand

# Progress of Osaka Soda

Building on more than a century of history  
for tomorrow's challenges.

**1915**  
Establishment of OSAKA SODA CO., LTD.



Ujigawa Power Building, our headquarters when we were founded

**1916**  
Opening of Kokura Plant in Kita-Kyushu, Fukuoka



Kokura Plant

**1931**  
Opening of Amagasaki Plant in Amagasaki City, Hyogo



Amagasaki Plant

**1948**  
Opening of Tokyo Branch

**1949**  
Listed on the First Section of the Osaka Securities Exchange



Matsuyama Plant

**1952**  
Opening of Matsuyama Plant in Matsuyama City, Ehime

**1953**  
Listed on the First Section of the Tokyo Stock Exchange



Research Center

**1956**  
Establishment of DAISO TRADING CO., LTD.

**1961**  
Opening of Research Center in Amagasaki City, Hyogo

**1962**  
Started production of DAP resin

**1968**  
Establishment of OKAYAMA CHEMICAL CO., LTD. jointly founded by Asahi Chemical Industry Co., Ltd. (currently Asahi Kasei Chemicals Corporation)

**1970**  
•Establishment of DAISO ORGANICS CO., LTD.  
•Opening of Mizushima Plant, OKAYAMA CHEMICAL CO., LTD.



OKAYAMA CHEMICAL

**1971**  
Started production of allyl chloride and epichlorohydrin

**1975**  
•Establishment of DAISO ENGINEERING CO., LTD.  
•Merger and acquisition of DAISO ORGANICS CO., LTD. to create the OSAKA SODA Mizushima Plant



Mizushima Plant

**1978**  
Started production of allyl glycidyl ether

**1979**  
Started production of epichlorohydrin rubber

**1992**  
Started production of silica gel for liquid chromatography



Silica gel production facility

**2001**  
•Started production of CABRUS™ modifying agent for low fuel consumption tires  
•Establishment of JMR CO., LTD.



CABRUS™ production facility

**2002**  
Conversion of Chori Chemical Co., Ltd. to a subsidiary; changed the company name to DAISO CHEMICAL CO., LTD.

**2005**  
Establishment of DAISO CHEMICAL (SHANGHAI) CO., LTD.

**2006**  
•Establishment of DS WELLFOODS CO., LTD.  
•Establishment of DAISO Fine Chem USA, Inc.

**2008**  
•Establishment of DAISO Fine Chem GmbH and DS LOGISTICS CO., LTD.  
•Conversion of SANYO FINE CO., LTD. to a subsidiary



SANYO FINE Matsuyama Plant

**2010**  
•Conversion of Food & Bio Research Center, Inc. to a subsidiary  
•Merger of SANYO FINE CO., LTD. with Food & Bio Research Center, Inc.

**2012**  
•OKAYAMA CHEMICAL CO., LTD. is transformed to a wholly owned subsidiary  
•Establishment of DAISO CHEMICAL (THAILAND) CO., LTD.  
•Conversion of IMPEX CORPORATION to a subsidiary

**2014**  
•DAP resin selected as one of the "Hundred Global Niche Top (GNT) Companies" by Ministry of Economy, Trade and Industry  
•Capital investment in INB Planning Co., Ltd.



Testimonials

**2015**  
100th anniversary of company founding  
Changed name to Osaka Soda Co., Ltd.



OSAKA SODA

**2016**  
Merger of DAISO CHEMICAL CO., LTD. with IMPEX CORPORATION

**2017**  
•Started production of acrylic rubber  
•Opening of Corporate R&D Center  
•Conversion of SHISEIDO IRICA TECHNOLOGY Inc. to a subsidiary; changed the company name to SANYO FINE IRICA TECHNOLOGY CO., LTD.  
•Establishment of SANYO FINE TRADING CO., LTD.



Acrylic rubber production facility



Corporate R&D Center

**2018**  
•Started production of non-phthalate allyl resins



Non-phthalate allyl resin production facility

**2021**  
•Merger of OKAYAMA CHEMICAL CO., LTD. into OSAKA SODA as Okayama Plant  
•Moved Kokura Plant and changed the plant name to Kitakyushu Plant

**2024**  
•Construction of the Battery Research Building



Battery Research Building