# Corporate Information (As of March 31, 2022)

| | | | |
|---|---|---|---|
| **Company Name** | OSAKA SODA CO., LTD. | **Number of Employees** | 991 (Consolidated) |
| **Headquarters** | 1-12-18, Awaza, Nishi-ku, Osaka 550-0011, Japan | **Listed on** | The Prime Market of Tokyo Stock Exchange (Securities code: 4046) |
| **Establishment** | October 26, 1915 | **Independent Auditor** | Ernst & Young ShinNihon LLC |
| **Capital** | ¥15,871 million | **Annual General Shareholders Meeting** | June |

# Osaka Soda Group Network (as of March 31, 2022)

**Main Offices**

**Headquarters/** 1-12-18, Awaza, Nishi-ku, Osaka 550-0011, Japan
**Tokyo Branch/** Palaceside Bldg. 8F, 1-1,Hitotsubashi 1-chome, Chiyoda-ku, Tokyo 100-0003, Japan
**Chugoku-Shikoku Regional Office/** 2767-29, Kojima-Shionasu, Kurashiki, Okayama 711-0934, Japan
**Kyushu Regional Office/** Kamiyohakata Bldg. 4F, 1-2-5 Hakata-ekimae, Hakata-ku, Fukuoka 812-0011, Japan
**Research Center/** 9, Otakasu-cho, Amagasaki, Hyogo 660-0842, Japan
**Kitakyushu Plant/** 1-3, Kurosakishiroishi, Yahatanishi-ku, Kitakyushu-shi, Fukuoka 806-0004, Japan
**Amagasaki Plant/** 11, Otakasu-cho, Amagasaki, Hyogo 660-0842, Japan
**Matsuyama Plant/** 77, Kitayoshida-cho, Matsuyama, Ehime 791-8525, Japan
**Mizushima Plant/** 2767-13, aza-Niihama, Kojima-Shionasu, Kurashiki, Okayama 711-0934, Japan
**Okayama Plant/** 2767-29, Kojima-Shionasu, Kurashiki, Okayama 711-0934, Japan

## Group Companies in Japan

| Company Name | Principal Business |
|---|---|
| DAISO CHEMICAL CO., LTD. | Sales of Chemical Products |
| DAISO ENGINEERING CO., LTD. | Manufacture and Sale of Electrodes, Design and Processing of Chemical Equipment |
| SANYO FINE CO., LTD. | Manufacture and Sale of APIs and Intermediates |
| JMR CO., LTD. | Resource Recycling |
| DS LOGISTICS CO., LTD. | Shipping and Handling for Chemical Products |
| SANYO FINE IRICA TECHNOLOGY CO., LTD. | Manufacture of Column, Devices and other Analysis Equipment |
| DS WELLFOODS CO., LTD. | Manufacture, Processing and Sale of Health Food Materials |
| DAISO INSURANCE CO., LTD. | Sales of casualty insurance and life insurance |
| NITTO KAKO CO., LTD. | Manufacture and Sale of Industrial Rubbers and Resin Products |
| INB Planning Co., Ltd. | Manufacture and Sale of Rubber Compounds |

## Overseas Group Companies

| Company Name | Principal Business |
|---|---|
| SANYO FINE TRADING CO., LTD. | Sale of Columns, Devices, and other Analysis Equipment |
| DAISO Fine Chem USA, Inc. | Manufacture and Sale of Pharmaceutical Purification Materials |
| DAISO Fine Chem GmbH | Sale of Pharmaceutical Purification Materials and Functional Chemicals |
| DAISO CHEMICAL(Shanghai) CO., LTD. | Importation and Exportation of Functional Chemicals, Electronic Materials, etc. |
| TAIWAN DAISO CHEMICAL CO., LTD. | Importation and Exportation of Functional Chemicals, Electronic Materials, etc. |
| DAISO CHEMICAL(THAILAND) CO., LTD. | Importation and Exportation of Functional Chemicals, Electronic Materials, etc. |
| DestinHaus Capital Fund 1 LP | Investment Business |

# Stock Information (as of March 31, 2022)

## Stock Information

Total number of shares authorized to be issued: 60,000,000 shares
Total number of shares issued: 26,732,017 shares
Number of shareholders: 5,047

## Major Shareholders (top ten)

| Name of Shareholder | Shareholding (1,000 shares) | Shareholding Ratio (%) |
|---|---|---|
| The Master Trust Bank of Japan, Ltd. (Trust Account) | 2,767 | 11.86 |
| Custody Bank of Japan, Ltd. (Trust Account) | 1,287 | 5.51 |
| MUFG Bank, Ltd. | 876 | 3.75 |
| THE BANK OF FUKUOKA, LTD. | 822 | 3.52 |
| THE IYO BANK, Ltd. | 748 | 3.20 |
| TEIJIN LIMITED | 678 | 2.90 |
| Mizuho Bank, Ltd. (MHBK) | 669 | 2.87 |
| Nippon Life Insurance Company | 637 | 2.73 |
| Stock Holding Union of OSAKA SODA's Business Partners | 621 | 2.66 |
| Sompo Japan Insurance Inc. | 615 | 2.63 |

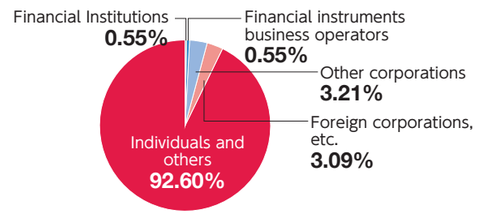
Note: Shareholding ratio is calculated by deducting treasury stock (3,399,626 shares) from total number of shares issued.

## Shareholder Registry Administrator

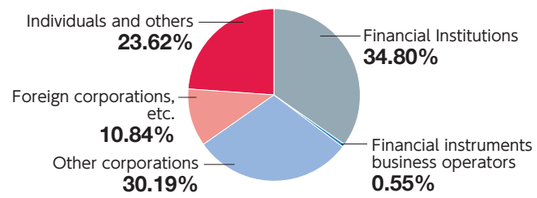
Mitsubishi UFJ Trust and Banking Corporation 4-5, Marunouchi 1-Chome, Chiyoda-ku, Tokyo 100-8212, Japan

## Shareholders Distribution

Number of shareholders




Number of shares




Note: Osaka Soda's shareholding ratio (12.74%) of treasury stock is included in "Individuals and others."

OSAKA SODA CO., LTD. Public Relations Group Corporate Planning Dept.
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https://www.osaka-soda.co.jp

2022.11

OSAKA SODA

Something Better with Chemicals

すごソーダ


# OSAKA SODA REPORT 2022

## Table of Contents



### Editorial Policy:

This OSAKA SODA Report comprehensively covers the strengths of the Group's business, growth strategy, performance, environmental preservation, quality assurance and other information with the objective of reporting the overall picture of our environmental safety efforts and business activities to all of our stakeholders in a way that is easy to understand. Through this report, we look forward to an even deeper understanding of the Group's business activities, which will pave the way to future initiatives aimed at the realization of a sustainable society.

### Reporting Period:

Fiscal 2021 (April 1, 2021 – March 31, 2022)
Data on industrial accidents is collated on a calendar year basis.

### Reporting Entities:

OSAKA SODA CO., LTD. and OSAKA SODA Group companies
Financial data is on a consolidated basis.
Environmental data covers all sites of OSAKA SODA CO., LTD., and the Matsuyama Plant of SANYO FINE CO., LTD.

# Our History

## The past 100 years and the next 100 years. Something Better with Chemicals for Society and the Future

2018 :
Commenced manufacture of non-phthalate allyl resin
2017 :
Commenced manufacture of acrylic rubber
Opened Research & Development Center
Expanded into manufacturing analytical equipment such as columns
2007 :
Commenced manufacture of modified silica gel
2006 :
Commenced manufacture of high-purity epoxy resin
2001 :
Commenced manufacture of energy saving tire additives
Expanding into the resource recycling business
1999 :
Commenced manufacture of active pharmaceutical ingredients (APIs) and their intermediates
1992 :
Started production of silica gel (purification materials for pharmaceuticals) for liquid chromatography

**1990s -**
Entered healthcare business

Modified silica gel production facilities

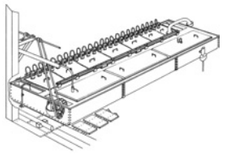
1980s:
Developed electrode business
1979 :
Started production of epichlorohydrin rubber
1978 :
Commenced manufacture of allyl ether
1971 :
Built Mizushima Plant
Commenced integrated production of Allyl Chloride (AC) and Epichlorohydrin (EP)
1962 :
Started production of diallyl phthalate (DAP) resin
1961 :
Opening of Research Center

**1960s -**
Expanding into the organic chemicals field to create new value added through unique chemical technologies

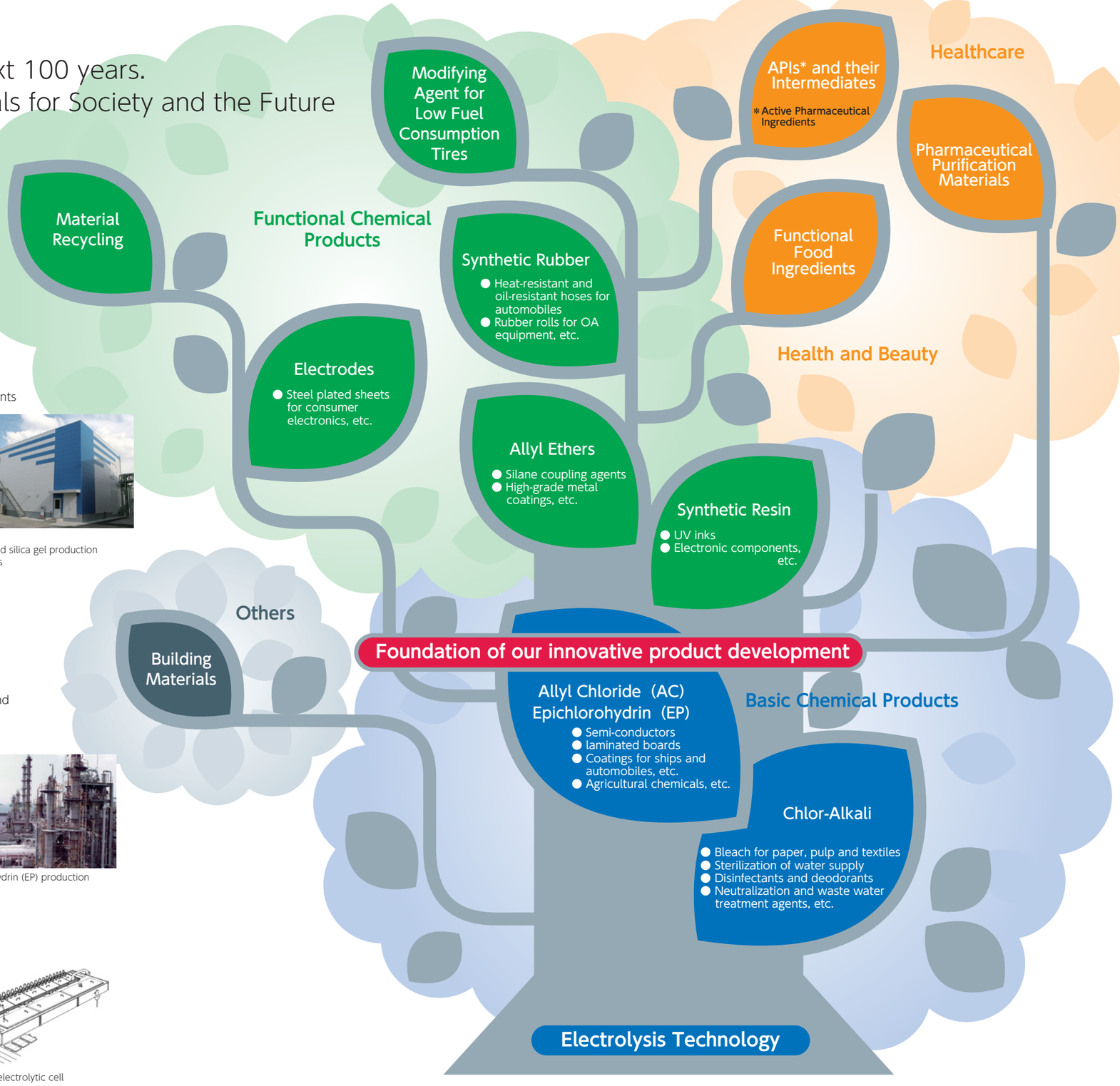
Epichlorohydrin (EP) production facilities

1953 :
Built Matsuyama Plant
1931 :
Built Amagasaki Plant
1916 :
Built Kokura Plant
1913 :
Established Japan's first manufacturing method for caustic soda using electrolysis

**1913 –**
Contributing to industrial development as a pioneer of electrolysis technology



The Daiso electrolytic cell

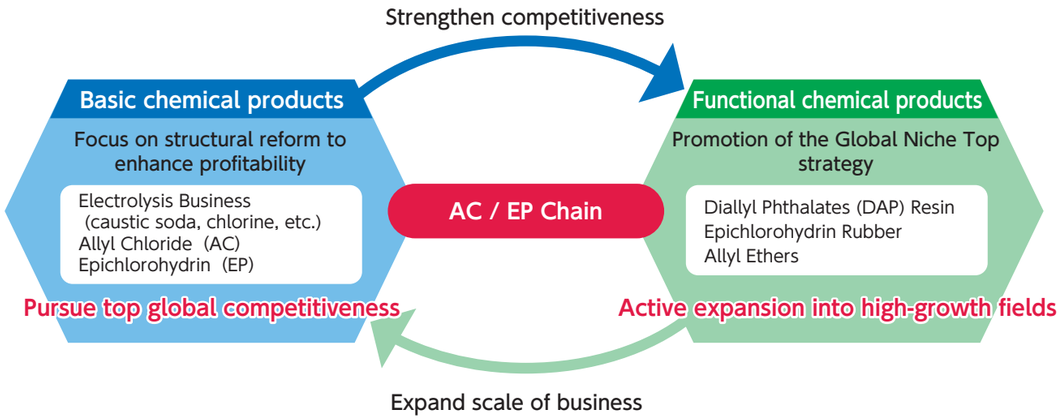



**Group Mission Statement**
To contribute to the realization of a safe and affluent society through our creative technologies and innovative products

# Our Strengths

Osaka Soda has achieved quality and cost optimization through full in-house production from basic chemical products to functional chemicals making use of the electrolysis business. In particular, the highly original products which Osaka Soda manufactures using AC and EP as raw materials have acquired No. 1 shares in the global market.

Through our pursuit of a competitive edge in the electrolysis business, our basic chemical products deliver competitiveness both in terms of cost and quality as raw materials for our functional chemical products. Meanwhile, demand for our functional chemical products is expanding due to active development of applications into fields with high growth potential, thus contributing to the expansion of our basic chemical products business. In this way, Osaka Soda has built a business model that seeks growth through synergies between both the basic chemical products and the functional chemical products businesses.




The AC / EP chain is arguably the foundation of our innovative product development. Many of the products Osaka Soda manufactures using AC and EP deliver outstanding performance in physical properties including electrical insulation, semi-conductivity, heat resistance, oil resistance, and reactivity, and are not easily replaced with other materials. Their manufacture also requires specialized technologies and knowledge, making entry into the field difficult for competitors.

As a result, our products have cemented No.1 market share positions in Japan and overseas despite being niche products, securing stable demand and maintaining high value added.

## Allyl Ethers

No. 1 in the world

Silane coupling agents
Semiconductor encapsulants and printed circuit boards

## Epichlorohydrin Rubber

No. 1 in Japan
No. 1 in the world

Heat-resistant and oil-resistant hoses for automobiles
Rubber rolls for OA equipment

## Diallyl Phthalate (DAP) Resin

No. 1 in the world

UV inks
Hot stamping
Electronic components
Decorative laminate

## Silica Gel for Liquid Chromatography

No. 1 in the world

Analysis equipment
Pharmaceutical purification

## Modifying Agent for Low Fuel Consumption Tires "CABRUS™"

No. 1 in Japan

Low fuel consumption tires

(シェア：当社調べ)



# Businesses and Products Contributing to the SDGs

## Chlor-Alkali

**Main products: caustic soda, sodium hypochlorite, etc.**

The Chlor-Alkali business has been a core business ever since our founding. Not only are its products used as basic raw materials in a wide range of industries, they are also the source of our cost-competitiveness as the raw materials from which Osaka Soda manufactures our functional chemicals.

## Allyl Chloride (AC) / Epichlorohydrin (EP)

AC and EP are the main raw materials for functional chemical products. They not only form the base for our original manufacturing, but also support a broad range of industries as raw materials for epoxy resin, pharmaceuticals, and agricultural chemicals.

## Synthetic Resins

**Main products: diallyl phthalates (DAP) resin, non-phthalate allyl resin, high-purity epoxy resin, etc.**

Osaka Soda concentrates on diallyl phthalates (DAP) resin, which was selected by Japan's Ministry of Economy, Trade and Industry for the Global Niche Top Companies Selection 100. Its unique physical properties meet the diverse needs of industry.

## Synthetic Rubber

**Main products: epichlorohydrin rubber, acrylic rubber, etc.**

Our synthetic rubber, which has a superior balance between physical properties such as heat resistance and oil resistance, has been a great success as a material that meets the higher performance of automobiles as well as environmental regulations.

## Allyl Ethers

Allyl ethers are used as raw materials for silane coupling agents that aid in bonding chemical substances in fields where high functionality is required, such as electronic materials and coatings.

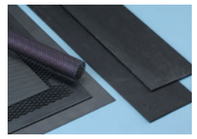
## Healthcare

**Main products: purification materials for pharmaceuticals, active pharmaceutical ingredients (APIs) and their intermediates, etc.**

In addition to the manufacture of special silica gel used in the analysis and purification of pharmaceuticals, cosmetics, and functional foods, Osaka Soda operates as a partner for pharmaceutical development and production, using our biotechnology and organic synthetic technology.

## Electrodes

**Main products: chlorine evolving electrodes, oxygen evolving electrodes, electrodes for water electrolysis**



Our electrode business achieves reductions in power consumption and superior durability based on the technology and know-how that Osaka Soda has built up ever since our establishment. Osaka Soda has won the top share of the Japanese market in the area of oxygen evolving electrodes.

## Material Recycling

Osaka Soda has developed a business in which Osaka Soda recycles fluorescent lights applying mercury absorption technology cultivated in the electrolysis business. Osaka Soda is contributing to zero emissions and the development of a recycling society.

# Eco-Friendly Products and Technologies

## CABRUS™*1: Modifying Agent for Low Fuel Consumption Tired Contributes to Reducing Automobile $CO_2$ Emissions

CABRUS™, a product Osaka Soda manufactures and sells, aids the coupling of rubber and silica, which do not normally have an affinity for each other. This reduces the rotational resistance*2 of tires, thereby improving fuel efficiency.

Tires that include silica using CABRUS™ consume less fuel and help emit less $CO_2$. These contributing to the preservation of the global environment.

*1: CABRUS™ consists of **C**oupling **A**gent for **B**onding **RU**bber and **Si**lica.

*2: Rotational resistance: heat generation of tires by vibration and friction against the ground while running

A tire that includes silica using CABRUS™

## SOU-NOU-KAN: A Nobiletin Supplement For an Era of Centenarians

SOU-NOU-KAN is the creation of an industry-government-academia collaboration project between Osaka Soda and Ehime Prefecture. This product is made from the peel powder of ponkan citrus and kawachi-bankan citrus produced in Ehime, the largest producer in Japan. SOU-NOU-KAN was certified in 2021 as an excellent recycled product under the prefecture's Sugo eco* program.

愛媛県認定リサイクル製品

*In the Sugo eco program, Ehime Prefecture certifies excellent recycling models for business establishments and stores that are actively engaged in the 3Rs (reduce, reuse, recycle) of waste. This program aims to foster environmental businesses and to build a resource-recycling society.

# We pursue the potential of chemicals to contribute to the achievement of a world with sustainable growth.

Founded in 2015, Osaka Soda was the first in Japan to succeed in industrial-scale production of caustic soda using electrolysis. Since that time, the Osaka Soda Group has used its unique technology to contribute greatly to the development of industry by supplying various chemical products, such as basic chemical products that we have manufactured since our founding, as well as global niche functional chemical products and active pharmaceutical ingredients and their intermediates.

At present, we are engaged in building a strong business structure centered on high value-added products, along with expanding the functional chemical and pharmaceuticals businesses, and creating new businesses with a focus on the fields of biotechnology and the environment.

In order to achieve this, the Osaka Soda Group will continue pursuing the potential of chemistry and undertaking the creation of innovative products that contribute to the development of industry and society as a corporate group with the energy and innovative capabilities for challenging new fields.

President & CEO
Kenshi Terada

## To pursue sustainable growth in an age of uncertainty

Amid the prolonged impact of COVID-19, the business environment surrounding the Group has been facing a very uncertain outlook due to supply constraints and rising raw material and fuel prices in addition to concerns about economic slowdown as a result of the situation in Ukraine and the continuation of China's Zero-COVID policy. This series of events truly symbolizes the VUCA* era. In these circumstances, the Group formulated EMPOWER THE NEXT-22, its two-year medium-term management plan starting in fiscal 2021 positioned as a period for building up strength. Under the plan, Osaka Soda have been pursuing initiatives aimed at sustainable growth with four basic policies, which are "Building a resilient business foundation," "Promotion of market-in-type development," "Efforts to achieve the SDGs," and "Reforming corporate culture and organizational culture."

In fiscal 2021, the initial year of the medium-term management plan, the Group pursued strategies to strengthen the three core businesses of chemicals, functional chemicals and healthcare with the aim of building a resilient business foundation. These strategies included building a system for the stable supply of chlor-alkali products in the Kyushu region through the launch of operations at the Kitakyushu Plant and expanding manufacturing capacity for allyl ethers, for which there is rising global demand. In the healthcare business, we also expanded manufacturing capacity for pharmaceutical purification materials and started construction of new facilities for active pharmaceutical ingredients (APIs) and their intermediates in preparation for future business expansion.

## Aiming to solve social issues and create new growth opportunities

For some time, Osaka Soda has been creating numerous global niche products. We contribute to solving a variety of social issues, such as reducing environmental impact, through our products and businesses, examples of which include DAP resin used in energy-saving, eco-friendly UV inks, epichlorohydrin rubber that contributes to the reduction of transpiration gases in automobiles, acrylic rubber fitted around turbo engines in eco cars, and a modifying agent for low fuel consumption tires (CABRUS™). With our original manufacturing technology cultivated over a period of more than 100 years, we believe there is value that only Osaka Soda can provide and direct toward solving issues from unique perspectives. Based on this belief, we aim to create distinctive new businesses and products in the following four growth fields.

We strive every day to solve social issues and create new growth opportunities in ultra-high heat-resistant grades of acrylic rubber in the Mobility field, silver nanoparticles for power semiconductors in the Information and Communications field, unique polyether for semi-solid state batteries developed jointly with Yamagata University in the Environment and Energy field, and the development of anti-aging products such as nobiletin supplement SOU-NOU-KAN and NMN lactic acid bacteria in the Health and Healthcare field.

## Efforts to enhance corporate value

The Group has established a basic policy on sustainability that aims to combine contributing to the realization of a sustainable society through our business activities with enhancing our corporate value, and we are committed to manufacturing with consideration for the environment and safety and to creating an employee-friendly workplace.

In this report, we feature efforts to enhance the Group's corporate value from the perspectives of the environment, society, and corporate governance.

With regard to reducing environmental impact, we will set medium-term reduction targets for greenhouse gas emissions and the final landfill rate of industrial waste in the Responsible Care activities we have been implementing and we will continue to develop as a company in harmony with the global environment.

With regard to creating an employee-friendly workplace, we will use our certification as a Health & Productivity Management Outstanding Organization as an opportunity to further ensure a safe workplace environment to increase employee engagement and maximize productivity, creativity, and motivation.

We also recognize that strengthening our corporate governance and compliance systems is essential for sound and sustainable growth, and we will further strengthen our management foundation through continuous improvements, as well as the creation of a system that emphasizes corporate governance and compliance.

We are committed to timely and appropriate disclosure of corporate information and proactive communication with our shareholders and investors, and we ask for your continued support as you deepen your understanding of the Group.

*VUCA: A word formed from the initial letters of Volatility, Uncertainty, Complexity, and Ambiguity. It refers to conditions in which it is difficult to predict the future due rapid change, increasing complexity in the surrounding environment, and the occurrence of unexpected events.

**Group Mission Statement**
To contribute to the realization of a safe and affluent society through our creative technologies and innovative products

**Vision Statement**
Be a corporate group that provides new value to society through chemistry
1. Contribute to the realization of a sustainable society through environmentally and safety-conscious manufacturing
2. Meet the needs of our customers with globally competitive technologies and qualities
3. Respect the values of each and every one of our employees and aim to be a company that grows together

**Basic Policy on Sustainability**
We aim to combine contributing to the realization of a sustainable society through our business activities with enhancing our corporate value.

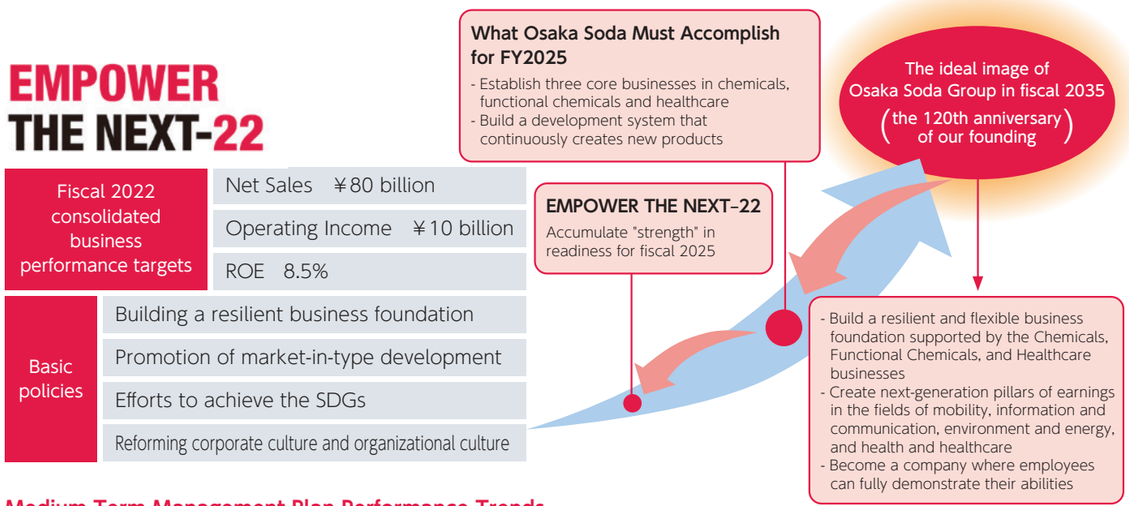
**Human Resources Policy**
1. Self-disciplined members of society
2. People who continuously achieve personal growth

**Conduct Guidelines**
1. We observe laws, regulations, and social norms and engage in fair and sound corporate activities.
2. We carry out research and development and provide high quality, reliable products.
3. We strive to preserve the global environment with the aim of realizing a safe and healthy living space.
4. We respect the human rights, individuality, and values of others and build a positive working environment.
5. We observe corporate regulations and make appropriate disclosures to stakeholders.

# Medium-term Management Plan: EMPOWER THE NEXT-22 (FY2021 – FY2022)

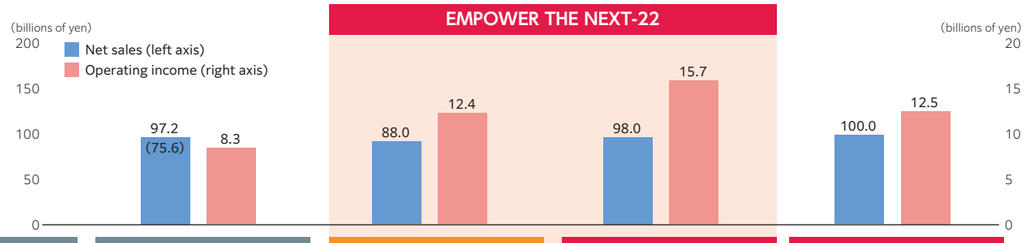
Since fiscal 2021, the Osaka Soda Group has been taking actions to advance its two-year medium-term management plan, EMPOWER THE NEXT-22. These are aimed at realizing the Group's ideal image for fiscal 2035, which marks the 120th anniversary of Osaka Soda's founding.

Here, Osaka Soda reports on the progress made in our four basic policies, which are "Building a resilient business foundation," "Promotion of market-in-type development," "Efforts to achieve the SDGs," and "Reforming corporate culture and organizational culture."




## Medium-Term Management Plan Performance Trends

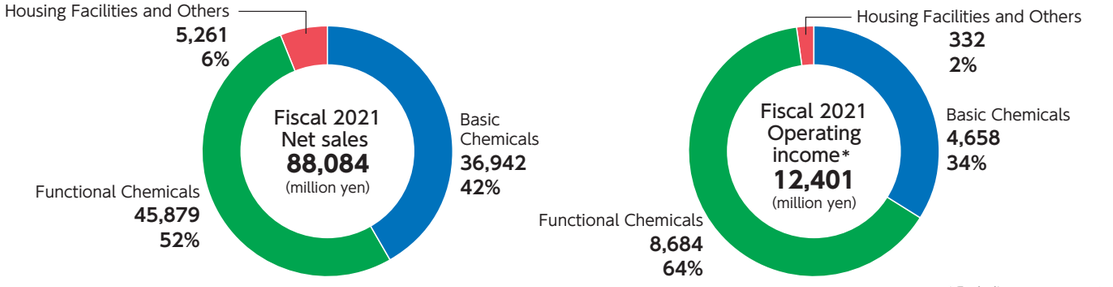
In fiscal 2021, Osaka Soda achieved the consolidated performance targets set forth in EMPOWER THE NEXT-22 one year ahead of schedule.




| Fiscal | 2020 Actual | 2021 Actual | 2022 Forecast | 2025 Target |
|---|---|---|---|---|
| Net Sales | 97.2 * (75.6) | 88.0 | **98.0** | **100.0** |
| Operating Income | 8.3 | 12.4 | **15.7** | **12.5** |
| ROE | 8.3% | 11.7% | **Over 8.5%** | **Over 8.5%** |

*The Accounting Standard for Revenue Recognition has been applied as of fiscal 2021. Figures in parentheses are calculated assuming the application of this standard.

## Fiscal 2021 Performance by Segment




*Excluding common costs



## Four basic policies and progress

### ① Building a resilient business foundation

Osaka Soda have positioned the Chemicals, Functional Chemicals, and Healthcare businesses as our core businesses and are pursuing resilience strategies for each.

**Basic Chemicals**

Chemicals

**Kitakyushu Plant begins operations**

In November 2021, caustic soda production facilities from Mitsubishi Chemical Corporation were successfully integrated as planned into Osaka Soda Kokura Plant, which was then renamed the Kitakyushu Plant.

**Functional Chemicals**

Functional Chemicals

**Increased production capacity for allyl ethers**

In February 2022, construction was completed to increase the production capacity of allyl ethers at Matsuyama Plant. Allyl ethers are used as raw materials for silane coupling agents, and sales have been strong in recent years on the back of rapid growth in demand for semiconductors.

Healthcare

**Decided to expand manufacturing facilities**

Osaka Soda decided to expand its manufacturing facilities for pharmaceutical purification materials, APIs, and intermediates, which are our mainstay products. Construction has begun for each of these facilities, with completion scheduled for spring 2023.

### ② Promotion of market-in-type development

Osaka Soda aims for early market launch by accurately grasping customer needs and planning new products under the leadership of the respective business division, and achieving rapid development at the R&D division.

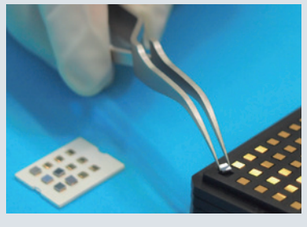
Osaka Soda is promoting development themes that make full use of our originality in the areas of "Mobility", "Information and Communication", "Environment and Energy", and "Health and Healthcare".

**Information and Communication**

**Expanded facilities for prototyping silver nanoparticles, expected to become a next-generation materials**

In February 2022, Osaka Soda expanded prototyping facilities for silver nanoparticles at the Research Center (Amagasaki, Hyogo).

Silver nanoparticles are expected to be used as a die bonding material to bond substrates with power semiconductor chips found in 5G communication bases and electric vehicles.

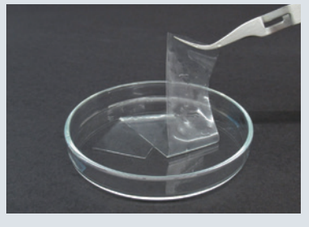


**Environment and Energy**

**Developed unique polyethers for semi-solid state batteries**

In December 2021, Osaka Soda developed a semi-solid state battery in collaboration with Yamagata University and Battery Innovation Hub (BIH), a startup from the university.

This semi-solid state battery uses our unique polyethers to gel the liquid electrolyte found in lithium-ion batteries, dramatically mitigating the issue of safety often found in conventional batteries.



**Health and Healthcare**

**Accelerated expansion into middle-molecule drugs**

For pharmaceutical purification materials, in response to modalities, Osaka Soda has developed middle-molecule drug grades with new separation functions for peptides.

The Compass Kit, a set of multiple purification materials, contributes to providing optimal solutions to our customers.

## ③ Efforts to achieve the SDGs

Under our Group Mission Statement, Osaka Soda has established a basic sustainability policy of aiming to combine contributing to the realization of a sustainable society through our business activities with enhancing our corporate value.

The Group has identified materiality (material issues) using the following identification with process. Osaka Soda have established key elements for each of the four materiality and incorporated them into specific initiatives for each.

### Materiality Identification Process

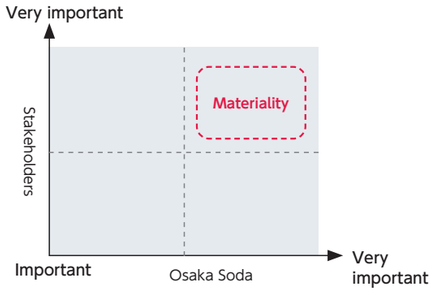
**STEP1** Identify the business activities with which the Group contributes and the challenges faced in order to continue sustainable growth

**STEP2** Identify issues from ISO 26000 and the GRI standards (issues with societal demands) that do not overlap with STEP 1

**STEP3** Identify issues from the perspectives of both stakeholders and the Group

**STEP4** Issues for the Group are distilled into materiality

**STEP5** Identify materiality for the SDGs at the Management Committee




### Materiality and Key Elements

| Materiality | Providing social value through business | | Strengthening business foundations | Developing human resources | Strengthening CSR activities | | | |
|---|---|---|---|---|---|---|---|---|
| Key Elements | Making social contributions through business activities | Providing new value demanded by society | Continuously strengthening business foundations | Creating an employee-friendly workplace and developing human resources | Occupational safety and health/ Disaster prevention | Chemicals management/ Safety and quality | Addressing climate change issues | Environmental preservation |

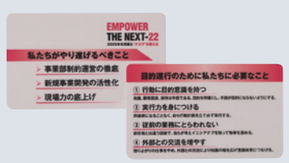
## ④ Reforming corporate culture and organizational culture

Under the new management philosophy system, Osaka Soda will reform our business system and personnel system, and raise the level of our organizational capabilities and human resources capabilities through business reform activities at all levels.

### Practicing and firmly establishing the Group Mission Statement and Vision Statement

**Improved employee engagement by promoting understanding of the new Group Mission Statement and Vision Statement, company policies, and medium-term management plan**

- Conducted an internal survey on the status of practice and understanding of the Group Mission Statement and Vision Statement
- Distributed policy cards




### Increasing operational efficiency

**After a fundamental review and optimization of operations, began introducing a system to increase operational efficiency and productivity**

- Restructured core systems
  Organized workflows and rigorously created systems for standardized tasks
- Building systems for harnessing information
  Fundamentally changing how employees work through full use of knowledge throughout Osaka Soda
- Developing optimal IT infrastructure for newly-introduced systems

### Updating personnel system

- **Restructured the human resource management system based on ideal talent defined in our Group Human Resources Policy**
- **Updated the personnel system and restructured the human resource development system based on the belief that employee growth is the driving force behind Osaka Soda's growth**

- Integrated management of manufacturing, sales, and development through a divisional organizational structure (From July 2021)
- Updated management personnel system (From April 2022)
  From a job function-based grading system to a role-based grading system
  *Adding evaluation items for human resource development through business operations, with emphasis on team results



# SDGs Materiality and KPIs

## Strengthening Business Foundations: Continuously strengthening business foundations

| Initiative | Measure (KPI) |
|---|---|
| Strengthening efforts for stable production | ● Reviewing work standards ● Reflecting on past issues and confirming countermeasure continuity/ effectiveness ● Operator training using skill maps |
| Improving product quality | ● Conducting regular training to raise awareness levels for quality assurance ● Rigorously enforcing change management ● Surveying suppliers on their CSR, quality management, and other initiatives |
| Reinforcing technological development capabilities and passing on fundamental technologies | ● Conducting regular technical meetings ● Taking cost reduction measures ● Curbing non-conforming products |
| Strengthening production facility management system | ● Strengthening autonomous maintenance management system ● Reinforcing scheduled maintenance management system ● Introducing, operating, entrenching a facilities management system |
| Promoting DX | ● Promoting visualization and standardization ● Standardizing operations, updating ERP, updating infrastructure and networks ● Improving productivity/R&D speed ● Increasing operational efficiency through automation/AI |

## Developing Human Resources: Creating an employee-friendly workplace and developing human resources

| Initiative | Measure (KPI) |
|---|---|
| Reforming corporate culture and organizational culture | ● Instilling the management philosophy system ● Promoting and executing business reforms |
| Expanding educational opportunities | ● Clarifying skills by grade ● Reviewing education and training programs |
| Promoting women's active engagement | ● Reviewing recruitment activities (ratio of female new graduates hired: 20% or more)<br>● Reviewing personnel and education systems (Increasing the ratio of female manager, including section chiefs by 1.5x by fiscal 2025 [vs. fiscal 2021]) |
| Promoting work-life balance | ● Encouraging use of annual paid leave (target: 70% or more)<br>● Encouraging male employees to use the childcare leave system |

## Strengthening CSR Activities: Occupational safety and health / Disaster prevention

| Initiative | Measure (KPI) |
|---|---|
| Eliminating lost worktime injuries by promoting health and safety activities | ● Organizing, understanding, and upholding work procedures ● Promoting 5S activities<br>● Utilizing information from past issues and incidents<br>● Instilling the Safety Guidelines (zero lost worktime accidents) |
| Promoting mental health care and activities for better physical health | ● Interviews at high-stress workplaces and activities to improve the workplace environment<br>● Mental health training (absences from work due to mental health issues: less than 0.6%)<br>● Recommending re-examination for those who require detailed testing or re-testing<br>● Promoting specific health guidance (checkup findings, re-testing/detailed testing rate: 70% or more) (checkup findings: less than 30%) |
| Curbing serious accidents | ● Mitigating risks through hazard source identification activities, including KY*, RA, SA, HAZOP<br>● Improving security management level ● Promoting facility management (zero serious accidents) |
| Preparing for major natural disasters | ● Upkeep of disaster prevention equipment, goods, and materials ● Conducting disaster drills in anticipation of large-scale earthquakes, etc. ● Reviewing BCP ● Planned renewals of aging facilities |

KY* : Hazard prediction activites

## Chemicals management / Safety and quality

| Initiative | Measure (KPI) |
|---|---|
| Complying with domestic and international chemical regulations | ● Appropriately complying with Japanese chemical laws and regulations such as the Chemical Substances Control Law, the PRTR Law, and the Fluorocarbons Recovery and Destruction Law.<br>● Appropriately complying with EU-REACH and other chemical laws and regulations outside Japan<br>● Disseminating information on revisions to chemical laws and regulations<br>● Conducting compliance training |
| Providing product safety information | ● Preparing and providing product Safety Data Sheets (SDSs) on our corporate website<br>● Providing information on chemical substance content through JAMP chemSHERPA<br>● Supporting customer research requests |

## Addressing climate change issues

Detailed data P15, 16

| Initiative | Measure (KPI) |
|---|---|
| Reducing greenhouse gas emissions | ● Introducing high-efficiency equipment ● Promoting energy conservation activities<br>● Streamlining production processes<br>● Promote the use of green energy (reduce $CO_2$ emissions: by 30% in fiscal 2030 (vs. fiscal 2013)) |

## Environmental preservation

Detailed data P17, 24

| Initiative | Measure (KPI) |
|---|---|
| Reducing industrial waste landfill rate | ● Increasing recycling rate of ash dust ● Reducing volume and recycling brine mud<br>● Promote in-house rense (final landfill rate: less than 1% in fiscal 2030) |

# Corporate Governance

## Basic Approach

Based on our Group Mission Statement, the Group has a basic policy which aims to ensure the transparency and fairness of management and further enhance the corporate governance system, thereby realizing sustainable corporate growth and medium- to long-term enhancement of corporate value.

## Board of Directors

The Board of Directors is composed of seven directors, three of whom are outside directors. As a rule, it meets once a month to deliberate on important matters as well as discuss the progress of business performance and actions to be taken in accordance with the rules of procedure for the Board of Directors.

In addition, Osaka Soda has made the term of office for directors one year and introduced an executive officer system that allocates the management decision-making and executive oversight functions to the Board of Directors and the implementation of operations to the executive officers. Our aim with this system is efficient corporate management and clarification of responsibility.

## Management Committee

Composed mainly of directors, the Management Committee is an advisory body for the Representative Director. The Committee deliberates important issues in the performance of the duties of the directors, forming a structure under which decision making by the Representative Director is understood and implemented accurately.

## Board of Auditors

There are three auditors, two of whom are outside auditors. The auditors attend meetings of the Board of Directors in addition to actively participating in important internal company meetings, enabling them to supervise the execution of duties by the directors adequately.

## Outside Directors and Outside Auditors

Osaka Soda has appointed three outside directors and two outside auditors with the aim that they will perform the role of advising and supervising Osaka Soda's management from an external perspective with an independent standpoint.

One of the three outside directors was appointed to reflect a wealth of experience as a manager and extensive insight into the business world in Osaka Soda's management. The second is an expert in taxation and was appointed as an outside director to reflect his profound insights and abundant experience. The third is an expert in pharmaceuticals and was appointed as an outside director to reflect her profound insight and abundant experience in Osaka Soda's management. All three have been designated as independent officers.

One of the two outside auditors was appointed to reflect a wealth of experience in financial institutions and expert insight finance and other areas in Osaka Soda's management. As an attorney-at-law, the other outside auditor was appointed to reflect this expert knowledge and experience and high level of insight into management. Both of the outside auditors have been designated as independent officers.

## Internal Audit System

The Internal Auditing Department (two members) is responsible for internal audits and implements audits that cover all operations.

## Accounting Auditors

Osaka Soda has an auditing agreement with Ernst & Young ShinNihon LLC. Ernst & Young ShinNihon spends ample time on audits and Osaka Soda has an internal system that facilitates audits.

## Nomination of Directors and Auditors and Determination of Remuneration

The Board of Directors, including the independent outside directors, nominate candidates for directors and auditors who are elected by the General Meeting of Shareholders.

The amounts of remuneration for individual directors are determined in accordance with internal rules by the Representative Director, who is entrusted to do so by the Board of Directors. These amounts are within the limit decided at the General Shareholders Meeting and subject to the report of the Nomination and Remuneration Committee, and reported to the Board of Directors. The amounts of remuneration for auditors are determined through consultation between the auditors within the limit decided at the General Shareholders Meeting.

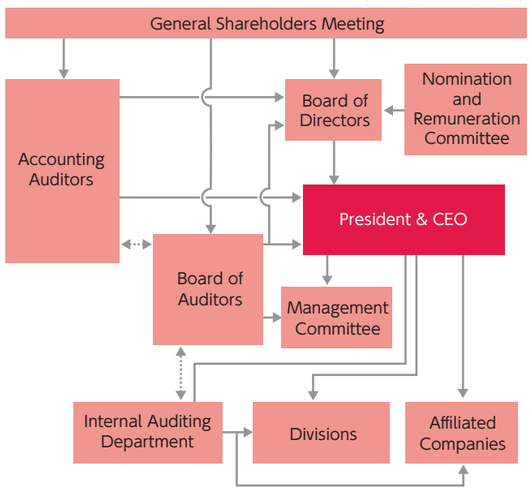
## Evaluation of the Effectiveness of the Board of Directors

Osaka Soda implemented self-evaluation questionnaires for all the directors and auditors on the effectiveness of the Board of Directors. Based on the collated results of the questionnaires, all the members of the Board of Directors analyzed and evaluated the effectiveness of the Board and discussed future initiatives. As a result, they confirmed that Osaka Soda's Board of Directors is operated appropriately and efficiently and engages in lively and constructive discussions, securing its overall effectiveness.

The Board of Directors will continue making active efforts with regard to the discussion of medium- to long-term growth strategy and vision and understanding and discussion of the main risks impacting business.

## System Chart

(as of December 2021)





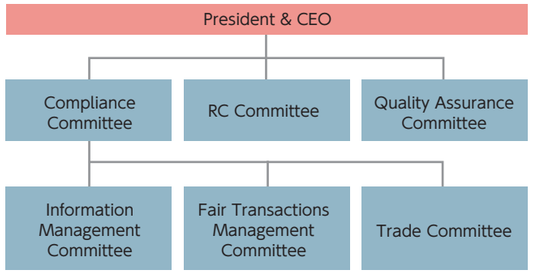

# CSR System

Based on our Group Mission Statement, "To realize an affluent society by developing innovative products through our aspirations for high standards," Osaka Soda considers promoting CSR activities to be putting the Mission Statement into practice and engages in extensive dialogue with diverse stakeholders, including customers and suppliers, employees, shareholders and investors, and local communities and governments as well as activities to enhance corporate value.

Osaka Soda has established a Code of Conduct based on the Group Mission Statement which must be practiced and will fulfill its responsibility to society.

The CSR management system at Osaka Soda is composed of three committees. Each committee is under the direct supervision of the President and promotes CSR activities through the holding of regular committee meetings.

## CSR System Chart




## Objectives of Each Committee

### (1) Compliance Committee

Recognizing the importance of compliance (observance of laws and regulations) in business activities, the Compliance Committee formulates and implements the measures necessary for complying with laws and regulations and conduct based on corporate ethics in line with our corporate philosophy.

Three expert committees (Information Management Committee, Fair Transactions Management Committee, and Trade Committee) have been established as subordinate organizations of the Compliance Committee.

**① Information Management Committee**

The Information Management Committee establishes policy on the handling and management of information that is held and obtained and optimizes information management.

**② Fair Transactions Management Committee**

Osaka Soda complies with the Antimonopoly Law, the Unfair Competition Prevention Law, and other relevant laws and regulations to ensure that our company and Osaka Soda Group does business fairly.

**③ Trade Committee**

The Trade Committee conducts the appropriate management of export control of national security-related goods to maintain international peace and security.

### (2) RC Committee

The RC Committee studies, deliberates on, and promotes measures related to responsible care, ensures environmental preservation, process safety & disaster prevention, occupational safety & health, and chemical safety over the entire product life cycle of chemical substances, from development to manufacture, distribution, use, final consumption, and disposal, and also implements measures for safety, health, and the environment, and works on improvements.

| | |
|---|---|
| RC Committee | Held twice a year |
| RC Promotion Conference (includes Safety and Health Conference) | Held twice a year |
| Plant RC Committee (includes Safety & Health and Process Safety & Disaster Prevention Committee) | Held monthly |
| Workplace Meeting | Held monthly |

RC Promotion Conference

### (3) Quality Assurance Committee

The Quality Assurance Committee promotes company-wide deliberations and measures on corporate roles and responsibilities vis-a-vis customers based on a comprehensive quality management system.

# Responsible Care (RC)

## What is Responsible Care?

Responsible Care (RC) is a voluntary management initiative taken by companies engaged in the manufacture or handling of chemical substances for implementing improvements and procedures in support of health, safety and environmental protection. Through this initiative, management policies are adopted to protect the environment and uphold safety over the entire product life cycle of chemical substances from development to manufacture, distribution, use, final consumption, and disposal. This approach is based on the principles of self-direction and acceptance of responsibility.

## Basic Approach of Responsible Care

- Osaka Soda will make efforts for continuous improvement of environmental, health, and safety performance across the entire product lifecycle from product development through to disposal as well as facility, process, and technology-related security, and will publish the results of such efforts.
- Management will show strong leadership and strive to preserve the environment and secure health and safety in Japan and overseas.
- In addition to complying with the laws and regulations of individual countries and with international rules, Osaka Soda will strive to raise the level of its voluntary initiatives.
- Through Responsible Care, Osaka Soda will contribute to improving quality of life and realizing a sustainable society to enhance public trust.

Responsible Care®
OUR COMMITMENT TO SUSTAINABILITY

## Responsible Care Policies

**1. Environmental Preservation**

(1) We will strive to reduce our environmental impact and curb global warming in harmony with the global environment.
(2) We will promote energy and resource conservation, and make efforts to reduce waste and promote their effective use.

**2. Process Safety & Disaster Prevention**

(1) We will make efforts to prevent major accidents and disasters with the mindset that “everything begins with safety.”
(2) We will comply with relevant laws and regulations, promote security management of facilities, and strictly follow our crisis management system during emergency situations.

**3. Occupational Safety & Health**

(1) We will foster a culture of safety, reduce potential hazards and strive to eliminate workplace accidents.
(2) We will make efforts to establish a pleasant workplace environment, and to maintain and promote the health of our employees.

**4. Distribution Safety**

(1) We will promote comprehensive safety in all our logistics operations and reduce risks in the transport and distribution of our products.

**5. Chemical & Product Safety**

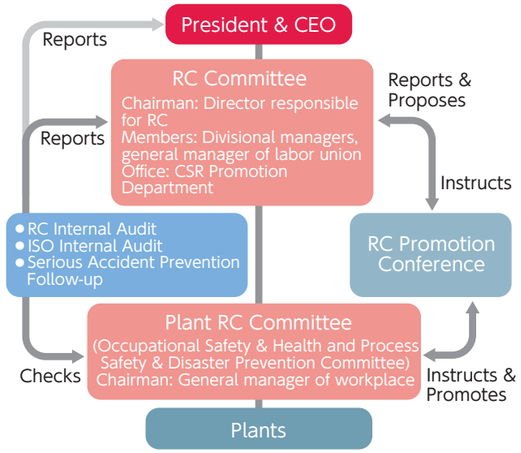
(1) We will strive to eliminate quality problems, and provide products that will satisfy our customers.
(2) We will strive for proper chemical management by ensuring the safety control of items such as high-pressure gases, hazardous materials, and poisonous and deleterious substances.
(3) We will take measures so our business partners will be able to safely handle chemicals.

**6. Communication (Publishing Results/Dialogue with Society)**

(1) We will bear in mind the concerns of regulatory authorities and people in the communities where we operate, disclose necessary information, and make efforts to engage in dialogue.
(2) We will continue dialogue and interaction with members of the local communities and activities that contribute to society.

Osaka Soda will communicate our basic policy on implementing our Responsible Care related activities to all employees within Osaka Soda and to the general public.

【Organizational Structure of Responsible Care】




Osaka Soda is continuously improving our RC activities including Occupational Safety & Health and Process Safety & Disaster Prevention by adopting the PDCA cycle.

| PLAN | DO | CHECK | ACTION |
|---|---|---|---|
| RC Committee<br>Plant RC Committee | Plants | RC Internal Audit<br>ISO Internal Audit | RC Committee<br>RC Promotion Conference |
| RC targets and measures for the fiscal year and adoption of the RC action plan<br>Adoption of the RC action plan at workplaces | Activities based on the RC action plan and campaigns to prevent serious accidents | Audit and report on RC action status | Review of plan and incorporation of changes in the plan for the subsequent fiscal year according to the RC action report and legal requirements |



# Responsible Care Initiatives

## Basic Approach on Safety

Our Responsible Care activities are based on the principle that safety is the starting point for all activities. In accordance, Osaka Soda have established the Safety and Health Regulations, Safety Guidelines, and Safety and Disaster Prevention Regulations to ensure the safe execution of all operations.

Furthermore, the purpose of safety is to protect a company's employees from industrial accidents and to improve production efficiency by creating a safe workplace. These are directly related to said company's business, and especially its production. Keeping in mind that the main purpose is not to take countermeasures against disasters or accidents, but rather only to prevent disasters, Osaka Soda carry out our daily work under the Safety Guidelines to build safe working habits.

## ZA (Zero Accidents) Activities

ZA activities are conducted under a slogan selected from an open submission available to all employees.

In fiscal 2021, Osaka Soda implemented initiatives to strengthen safety checks with the slogan, "Zero accidents through HO-REN-SO (reporting, communication, and consultation) without ignoring the small things that seem wrong".

# Targets and Results of Responsible Care Activities

| | Targets for Fiscal 2021 | Results for Fiscal 2021 |
|---|---|---|
| Environmental Preservation | ・To promote energy conservation and reduce energy consumption as well as reducing greenhouse gas emissions.<br>・To expand the effective use of industrial waste and reduce the final landfill rate.<br>・To reduce emissions into the atmosphere by appropriately managing environmentally hazardous facilities. | Energy consumption and greenhouse gas emissions were on par with the previous year as a result of ongoing efforts to upgrade facilities, such as the introduction of high-efficiency electrolyzers, and process improvements, such as optimization of operating conditions.<br>Worked to recycle industrial waste, reducing final landfill volume by approximately 0.5% year on year. For substances emitted into the atmosphere, emissions were reduced for SOx, NOx, and ash dust indices. |
| Process Safety & Disaster Prevention | ・To reduce the number of accidents by complying with relevant laws, regulations, internal standards, etc. In addition, to prevent serious accidents by promoting security management for facilities and piping and by maintaining emergency response capabilities. | Prevented serious accidents from occurring by mitigating risks through hazard source identification activities (KY, RA, SA, HAZOP, etc.), acquiring high-pressure gas certification to improve the level of safety management, and implementing planned and autonomous maintenance activities to prevent problems caused by equipment. |
| Occupational Safety & Health | ・To reduce the number of accidents with lost work through safety and health activities based on safety as the starting point for all activities and thorough compliance with safety guidelines and work standards and procedures. | Despite the implementation of 5S activities to promote understanding and compliance with work standards and procedures, and safety education utilizing information from past issues and incidents, the number of occupational accidents increased year on year. |
| Distribution Safety | ・To maintain safe transport and eliminate in-plant truck loading accidents. | Despite working with shipping companies to prevent distribution accidents, the number of distribution accidents increased by one from the previous year to four. |
| Chemical & Product Safety and Quality Assurance | ・To maintain zero product safety incidents through compliance with regulations on chemicals in Japan and overseas and SDS, etc.<br>・To reduce the number of quality incidents by appropriately operating quality assurance mechanisms, such as 4M change management. | Complied appropriately with regulations for chemical products in Japan (Chemical Substances Control Law, etc.) and overseas (REACH in Europe).<br>As a result of enforcing 4M change management, management of quality risks such as foreign substance contamination, and rigorous quality compliance, the number of quality incidents was significantly reduced. There were zero serious quality incidents. |
| Dialogue with Society | ・To publish an RC activity report and submit it to the government and to promote communication with society. | Submitted reports to the government and to the Japan Chemical Industry Association and actively engaged in local association and council activities. |

## Fiscal 2022 Targets and Major Initiatives

ZA2022 (Zero Accidents 2022): "Why are you checking that? Understand the principles and work together to prevent accidents."

| Item | | Targets | Major Initiatives |
|---|---|---|---|
| Environmental Preservation | Prevention of Global Warming | Reducing $CO_2$ emissions | ・Introducing high-efficiency equipment<br>・Promoting energy conservation activities |
| | Reduction of Industrial Waste | Reducing industrial waste landfill rate | ・Promoting volume reduction and recycling<br>・Promote in-house rense |
| Safety | Process Safety & Disaster Prevention | Zero serious accidents<br>Comply with laws and regulations and in-house standards, etc.<br>Rigorously operating our security management system<br>Promoting production facility management | ・Mitigating risks through hazard source identification activities (KY, RA, SA, HAZOP, etc.)<br>・Operating our security management system (maintenance of certification for high-pressure gas business sites)<br>・Planned renewals of aging facilities, including infrastructure<br>・Updating BCP |
| | Occupational Safety & Health | Zero lost worktime accidents<br>Promoting safety and health activities<br>Promoting better mental and physical health | ・Instilling the Safety Guidelines<br>・Promoting 5S activities<br>・Training using skill maps<br>・Promoting mental health care activities (e.g., improvements to high-stress workplaces) |
| | Distribution Safety | Zero distribution accidents | ・Operator training on product hazards, etc.<br>・Review of the customer ledger |
| Product Safety | Chemical Safety | Complying with domestic and international chemical regulations<br>Providing product safety information | ・Complying appropriately with domestic and international chemical regulations<br>・Providing the latest SDSs on our corporate website |
| | Quality Assurance | Reduce quality issues<br>Ensure thorough operation of 4M change management | ・Quality control using QC process charts<br>・Entrenching 4M change management enforcement<br>・Conducting compliance training |
| Dialogue with Society | | Publishing RC-related information<br>Promoting local community interactions and social contribution activities | ・Actively participating in local communities/association and council activities |

# Addressing Climate Change Issues

Based on the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), Osaka Soda has determined our governance, strategy, risk management, and metrics and targets. Osaka Soda is currently reviewing the organization in charge of assessing and managing climate-related risks and opportunities, the impact of each risk and opportunity on the Group's business, and calculation of Scope 3 emissions. Osaka Soda is preparing to disclose these in July 2023.

## Governance

On October 1, 2022, Osaka Soda established a Sustainability Committee, creating a system for receiving and overseeing reports on climate change. In addition, the Committee formulates sustainability policies, strategies, and measures, monitors and manages the progress of KPIs related to materiality defined in the SDGs, and reports and makes recommendations to the Board of Directors on a regular basis.


## Strategy

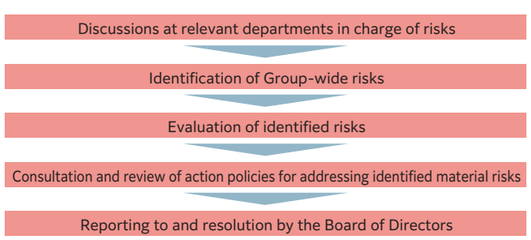
Osaka Soda used the 1.5/2℃ and 4℃ scenarios to identify risks associated with the transition to a decarbonized society (transition risks) and risks associated with physical impacts of global warming (physical risks), respectively. Under the 1.5/2℃ scenario, transition risks are assumed to be relatively higher than physical risks, while under the 4℃ scenario, physical risks such as reduced capacity utilization and unstable resource supply due to frequent disasters such as typhoons and floods are assumed to be relatively higher. Given this, Osaka Soda has identified the following risks and opportunities related to climate change that are important to us, and has formulated action policies for these.

| Risk/Opportunity Type | | | Period of Occurrence | Business Impact | Action Policy |
|---|---|---|---|---|---|
| Transition risk *1 | Policies and regulations | Increased carbon price and other regulatory compliance costs | Short term | High | ・Introducing high-efficiency equipment<br>・Promoting energy conservation activities<br>・Streamlining production processes<br>・Promoting use of green energy |
| | | Increased offset credit price | Long term | High | |
| | | Increased prices and difficulties in procurement of some materials due to regulations | Short term | Medium | ・Requesting and actively supporting decarbonization activities in the supply chain |
| | Markets | Decreased demand for commercial products with high environmental impact | Short term | Medium | ・Studying low-carbon production processes |
| Physical risk *2 | Acute | Decreased capacity utilization of business sites due to sudden disasters | Medium term | Medium | ・Upkeep of disaster prevention equipment, goods, and materials<br>・Conducting disaster drills in anticipation of large-scale earthquakes, etc.<br>・Reviewing BCP<br>・Planned renewals of aging facilities |
| | | Stopped operations due to damage in the supply chain | Medium term | Medium | ・Implementing supply chain management for sustainable procurement |
| | Chronic | Unstable supply of natural resources, water, electricity, raw materials, etc. | Medium term<br>Medium term | Medium<br>Medium | ・Diversifying raw material suppliers |
| Opportunity | Products and services | Increased subsidies for the development and implementation of environmentally friendly technologies | Short term | High | ・Developing materials reducing environmental impact and conserving energy by improving energy efficiency, extending service life, and eliminating solvents |
| | | Increased demand for materials, components, and solutions for environmentally friendly equipment | Short term | Medium | |
| | | Captured business opportunities by developing environmentally friendly technologies ahead of competitors | Short term | Medium | |
| | Markets | Enhanced corporate image by promoting disclosure of climate-related information | Short term | Medium | ・Disclosing investment and development information for growth of environmentally friendly businesses |

*1 Assumed to occur most significantly under the 1.5/2℃ scenario *2 Assumed to occur most significantly under the 4℃ scenario, etc.

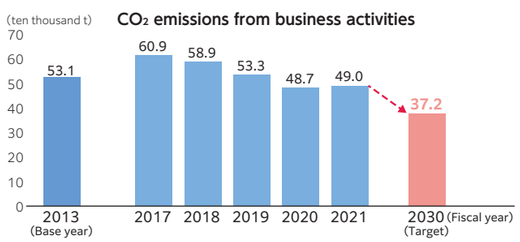
## Risk Management

At Osaka Soda, appropriate response to climate change is an important issue and is discussed in the relevant departments. These discussions are regularly reported to the Board of Directors.




## Metrics and Targets

$CO_2$ emissions were selected as a metric for evaluating climate change, with the target of reducing $CO_2$ emissions in fiscal 2030 by 30% in fiscal 2030 from its fiscal 2013 levels.






# Addressing Climate Change Issues

## Introducing High-efficiency Equipment

In fiscal 2021, the Matsuyama Plant improved its electricity consumption rate by increasing electrolyzer efficiency through modification of existing facilities. Other plants are also considering improving their electrolyzers' efficiency, and Osaka Soda will take measures in consideration of their operating conditions and other factors. Osaka Soda is also working to reduce energy when updating aging facilities by adopting more efficient equipment.

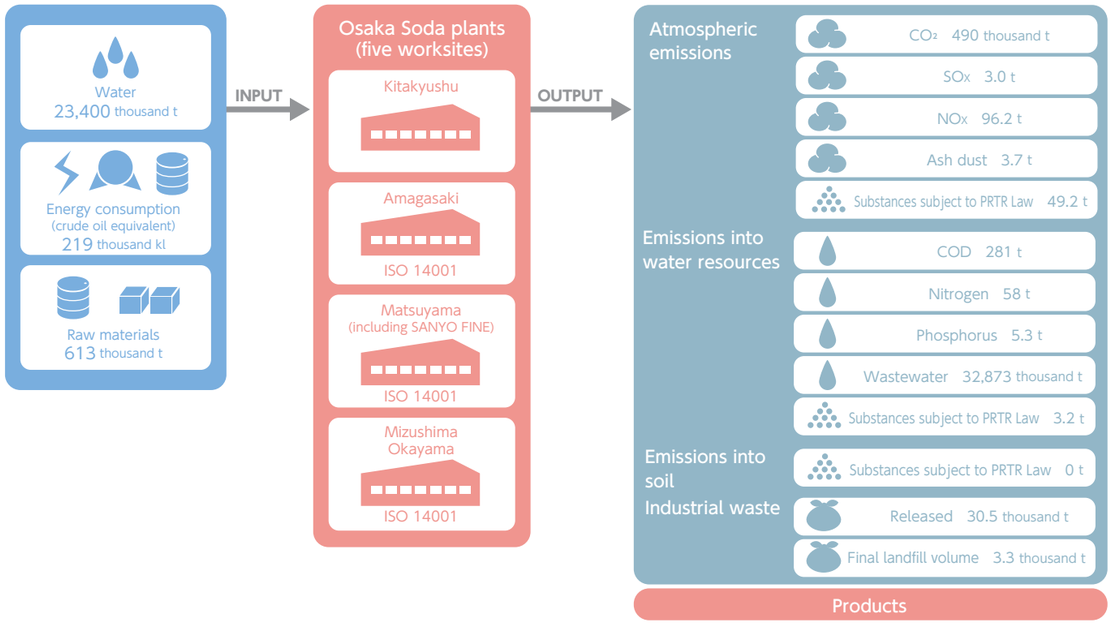
## Promoting Energy Conservation Activities

The Group conducts educational activities to increase knowledge and awareness through the energy conservation committees and responsible care committees at each business site. In addition, each department has set annual targets for discovering energy-saving themes, and in fiscal 2021, Osaka Soda reduced steam consumption by recovering waste heat and reduced electricity consumption by switching to LEDs.

# Material Balance of Production Activities

Detailed data P24, 25

The material balance resulting from our production activities during fiscal 2021 is shown below.




# Initiatives to Mitigate Global Warming

Detailed data P24

## Reducing Energy Consumption

In addition to considering the introduction of high-efficiency equipment when updating facilities, Osaka Soda aim to reduce $CO_2$ emissions by streamlining production processes, reducing energy use through labor-saving measures, and utilizing clean energy. Energy consumption in fiscal 2021 was approximately 219 thousand kiloliters (crude oil equivalent), a decrease of approximately 0.3% from the previous year.

## Utilizing Clean Energy

Osaka Soda uses hydrogen generated from soda electrolysis as a way to harness alternative energy. Osaka Soda currently has two hydrogen boilers in operation. In combination with a city gas boiler with low $CO_2$ emissions, our three boilers are capable of reducing heavy oil consumption by approximately 4,000 kiloliters per year (crude oil equivalent) and reducing $CO_2$ emissions by approximately 15,000 tons per year.

Hydrogen boiler
(Matsuyama Plant)

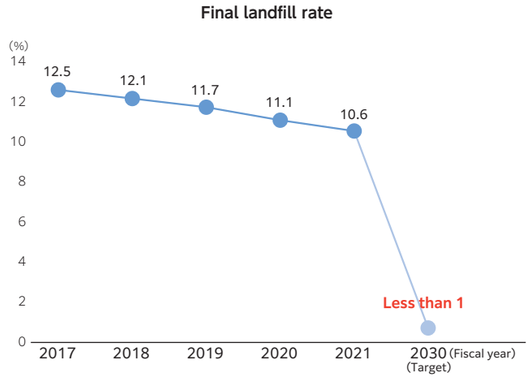
City gas boilers
(Amagasaki Plant)

# Initiatives to Reduce Waste

Detailed data P24

## Recycling Industrial Waste Landfill Rate

Under our basic policy of aiming to combine contributing to the realization of a sustainable society through our business activities with enhancing our corporate value. Osaka Soda has set a target of reducing the final landfill rate to less than 1% by fiscal 2030 by promoting the recycling and in-house reuse of waste materials. In fiscal 2021, the final landfill volume was 3,321 tons and the final landfill rate was 10.6%, a decrease of 0.5 percentage points from the previous year.




## Recycling Ash Dust

In cooperation with JMR CO., LTD., a Group company, Osaka Soda is working to increase our recycling rate by investigating and considering recycling sites for ash dust.

## Reducing Volume of and Recycling Brine Mud

In fiscal 2021, the Amagasaki Plant began recycling brine mud generated from electrolysis. Osaka Soda plans to gradually expand this initiative to other plants from fiscal 2022 onward.

## Promoting In-house Reuse

Osaka Soda reduces waste through its system that recovers hydrochloric acid and steam from hydrochloric acid production facilities and liquid waste combustion facilities, reusing these as resources and energy. These facilities use organochlorine compounds, by-products of our manufacturing processes. Osaka Soda is also engaged in the conversion of organic sludge generated from wastewater treatment into fertilizer, and the sorting, collection, and recycling of garbage.

Detailed data P25

## Initiatives to Prevent Atmospheric and Water Pollution

Our five plants (Kitakyushu, Amagasaki, Matsuyama, Mizushima and Okayama), and the Matsuyama Plant of SANYO FINE CO., LTD. engage in production activities in the Seto Inland Sea and nearby waters, making wastewater management a key theme for preserving the beautiful environment of the Seto Inland Sea.

Osaka Soda has also concluded agreements on pollution prevention and environmental preservation with the local area, and Osaka Soda not only strives to comply with environment-related laws but also to prevent and reduce atmospheric and water pollution.

The environmental impact of our wastewater is primarily attributable to the emissions from processes for organic products, etc. (organic products, plastics, pharmaceutical intermediates, etc.), and Osaka Soda takes steps to reduce this impact.

Facility for recovery of valuable materials through thermal decomposition of wastewater (Matsuyama Plant)





# Process Safety and Disaster Prevention Initiatives

Osaka Soda is taking action for security and disaster prevention, including establishing a basic policy for security management implemented at each business site. Furthermore, Osaka Soda has built a security management system for security, facilities, and operation to be implemented at each business site under the purview of the Group-wide and individual business site RC committees. In addition, Osaka Soda strives to prevent serious accidents with both soft and hard measures. These include training operators to improve their field capabilities and operating techniques, and by carrying out systematic maintenance management for facilities (planned and preventive maintenance).

## Identifying Hazard Sources and Mitigating Risks

HAZOP and other methods are used to identify hazard sources, conduct risk assessments, and systematically implement risk mitigation countermeasures according to the magnitude of risk.

## Improving Security Management Level

Mizushima Plant and Okayama Plant have established and are operating a security management system based on the Security Management Policy. As of January 2022, these were certified by the Minister of Economy, Trade and Industry as approved places of business under the High Pressure Gas Safety Act.

**Security Management Policy**

1. Strive for zero accidents and zero injuries based on the concept that safety is the starting point for all activities
2. Strictly follow the crisis management system during emergency situations
3. Promote security management of facilities and strive to improve security capabilities
4. Maintain and continually improve the security management system
5. Uphold specific requirements set forth at the plant
6. Establish security management targets based on this policy and strive to achieve them
7. Review security management targets at least once a year at the plant RC Committee
8. Disseminate this policy to all plant workers for greater understanding and to ensure proper implementation, upkeep, and improvement

Disaster prevention inspection

## Promoting Facility Management

A facility management system has been introduced and put into operation for systematic facility management. In addition, to encourage autonomous maintenance activities, Osaka Soda helps personnel gain qualification for the Autonomous Maintenance Certificate.
In fiscal 2021, 17 employees gained their Level 1 Autonomous Maintenance Certificate.

## Emergency Call

In the event of a major earthquake or other disaster or emergency, our safety confirmation system simultaneously sends e-mails and other communications to employees' registered contact information.

Employees at business sites in the area of an earthquake of seismic intensity 5 (on the Shindo scale) or higher are automatically sent safety confirmation messages.

## Disaster Prevention Drills

Each site participated in local disaster prevention drills. Comprehensive disaster prevention drills, reporting and communication drills, oil spill response team dispatch drills, and high pressure gas disaster prevention drills were also held within sites.


Research Center

Amagasaki Plant

Matsuyama Plant

Mizushima Plant

## Business Continuity Plan

In preparation for a major earthquake which it is forecast will occur in the near future, Osaka Soda has formulated a Business Continuity Plan (BCP) for each manufacturing site assuming damage to production facilities at each workplace and based on forecasts for the restoration of utilities including various raw materials, water, and electricity as well as logistics. Moreover, Osaka Soda has also prepared emergency response guidelines at each workplace and made all employees aware of the chain of command in an emergency and the procedures for confirming safety.

Osaka Soda has also formulated a BCP to prepare for large-scale outbreaks of influenza or other infectious diseases, and is taking into consideration the securing of production personnel by preventing infection among employees and establishing a mutual support system between business sites.

# Occupational Safety and Health Initiatives

## Preventing with Lost Worktime Accidents

Osaka Soda periodically convenes the RC Committee (includes the Safety & Health and Safety & Disaster Prevention Committee) and continuously implements serious accident prevention and KY activities in striving to prevent disasters.

**Number of Annual Lost Worktime Accidents (Year)**

| (year) | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| Number of lost worktime accidents | 0 | 0 | 1 | 1 | **3** |
| Frequency rate of lost worktime accidents | 0.00 | 0.00 | 0.70 | 0.71 | **2.02** |
| JCIA frequency rate of lost worktime accidents | 0.34 | 0.31 | 0.42 | 0.28 | **0.42** |

* Frequency rate = (No. of victims of lost worktime accidents ÷ total working hours) x 1,000,000
Frequency rate of accident victims per 1,000,000 working hours

## Fostering Hazard Prediction (KY) Trainers

Each plant and the Research Center foster hazard prediction (KY) trainers through external courses, which are reflected in workplace KY activities.

## Providing Non-Technical Skills Education

Non-technical skills (NTSs) are skills that supplement technical skills and contribute to the safe and efficient execution of work and consist of situational awareness, communication, leadership, courage to speak out, verbalizing, reflection, and overcoming the authority gradient.

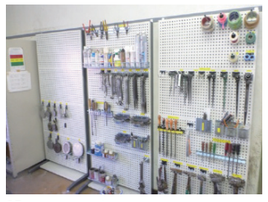
Osaka Soda provides NTSs education at four plants to prevent errors related to human factors and ensure safety.

## Promoting 5S Activities

Our responsible care action programs at each business site include systematically carrying out 5S activities. Here, work procedures are reviewed in the form of small-group activities, tagging unnecessary items, and 3F management (fixed position, fixed term, fixed quantity), continuously incorporating innovations tailored to tasks at each workplace.

5S is an abbreviation for Sort, Systematize, Sweep, Standardize, and Self-Discipline.

5S visualization board



3F management

# Quality Assurance System

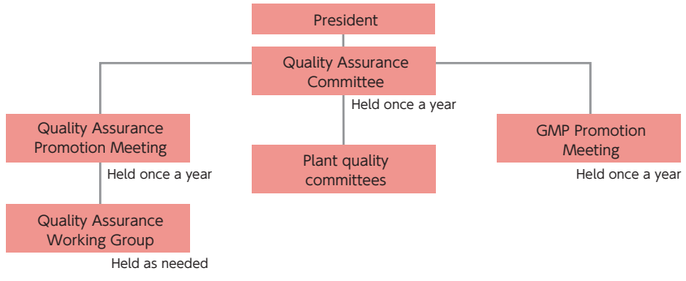
## Quality Assurance Policy

In order to "provide products that satisfy its customers," the Group continuously works to establish product reliability and safety and improve quality assurance levels. To this end, Osaka Soda has adopted the methods in ISO 9001, the international standard for quality management systems, and ICH-GMP (draft GMP guidelines) for quality management.

## Quality Assurance Organization Structure

Our quality assurance organization is headed by the Quality Assurance Committee, which reports directly to the President. This committee manages industrial manufacturing products such as chemicals, functional chemicals, and polymers, products subject to GMP such as modified silica gel, and external products such as outsourced products, as shown in the figure on the right.

In addition, ISO 9001-certified plant conduct external audits and internal audits, and GMP organizations conduct internal audits for continuous improvement.








## ISO 9001 Certification

As part of our RC activities, Osaka Soda takes initiatives on safety and quality assurance for the chemicals and products in our business activities as well as to respond promptly to customer requirements and to prevent quality problems.

Accordingly, our three main plants have ISO 9001 certification, the international standard for quality management systems. As a part of ISO activities, each workplace conducts a management review to check customer satisfaction levels which are evaluated through the marketing department every six months in our efforts to enhance customer satisfaction through continuous improvements as Osaka Soda strives to provide products that satisfy our customers.


Amagasaki Plant


Matsuyama Plant


Mizushima Plant

| Plant | Date of Certification | Certifier | Registration Number |
|---|---|---|---|
| Amagasaki Plant | March 1996 | Japan Quality Assurance Organization | JQA – 1181 |
| Matsuyama Plant | October 1995 | Japan Quality Assurance Organization | JQA – 0998 |
| Mizushima Plant | June 1994 | Japan Quality Assurance Organization | JQA – 0539 |

## Improving Quality Assurance Level

Quality audits are conducted twice a year at each plant to prevent quality incidents and ensure consistent quality. In parallel with quality audits, the quality assurance group of each plant is also involved in efforts to raise the level of quality assurance by examining quality incident case studies and providing compliance education on the importance and role of quality assurance groups.

## Preventing Quality Problems

Osaka Soda operates a database in order to promptly respond to and correct quality problems such as complaints. By sharing the information in the database, Osaka Soda conducts company-wide horizontal deployment of corrective action to prevent the occurrence of similar quality problems.

# Providing Safety Information

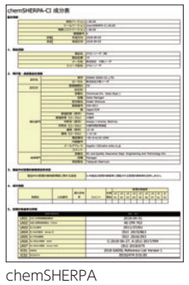
## Safety Data Sheets (SDSs)

Osaka Soda has created safety data sheets (SDSs) for our products and published many of them on our website.

Safety Data Sheets (SDSs)

## JAMP*1 chemSHERPA

Osaka Soda always makes efforts for substance management of our products and collection of information. Osaka Soda prepares Information Sheets on the Content of Certain Chemical Substances using Osaka Soda's own format to supplement our SDSs, as well as chemSHERPA*5 from the Joint Article Management Promotion-consortium (JAMP) in order to respond to requests from customers regarding detailed information on the content of chemical substances, including RoHS*3 and SVHC*4 in addition to Japan's Chemical Substance Control Law*2. Osaka Soda responds promptly to regular list revisions and provides the information to customers.



chemSHERPA

*1 JAMP is an acronym for Joint Article Management Promotion-consortium
*2 Chemical Substance Control Law is a shortened title for the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.
*3 RoHS is an acronym for Directive on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment.
*4 SVHC is an acronym for Substances of Very High Concern with carcinogenic and mutagenic effects, reproductive and developmental toxicity and other serious impacts on human health and the environment.
*5 chemSHERPA is a sheet for basic information transfer to facilitate sharing of information on chemical substances in products that lists the name of laws and regulations, etc., under which product constituents are declarable substances and whether a product contains a declarable substance or not.

# Distribution Safety Initiatives

## Holding Transportation Subcommittee and Emergency Response Drills

Each plant held a Transportation Subcommittee periodically and strived to ensure safe transportation by freight companies and drivers.

The relevant people at plants and freight companies held joint emergency response drills and reporting and communication drills.

## Yellow Cards and GHS Labels

We have prepared “yellow cards” for products classified as toxic substances, deleterious substances, and hazardous materials. Furthermore, we provided education, reporting, and communication drills for drivers aimed at ensuring safety during transportation and an appropriate response in an emergency.

In order to ensure safety during the mixed transport and storage of products in drums and oil drums, we affixed “GHS labels” (container yellow cards) that show emergency measures, the guideline number and the UN number to product containers.

Yellow card

GHS label

## Distribution Safety Commendations

Under its freight company commendation program, the Group recognizes outstanding drivers who have significantly contributed to the reduction of logistics accidents.

Kitakyushu area: 1 driver, Amagasaki area: 4 driver,
Matsuyama area: 1 driver, Mizushima area: 2 drivers

# Human Resource Development Initiatives

## Expanding Educational Opportunities

In order to realize autonomy and self-growth for all employees as stated in our Human Resources Policy, the Group has established an education plan that emphasizes setting learning goals, conducting training interviews, and autonomous skill development to fulfill the roles required of our employees. As part of this effort, Osaka Soda has established competency requirements (knowledge and skills appropriate to roles and tasks) to guide human resource development, and are developing independent learning support tools and training programs to help employees acquire these skills.

## Status of National Qualification Acquisition

**Major qualifications held by employees**
**Total number of qualified employees**
**(Cumulative) 1,693**

Each worksite sets a target for acquisition of qualifications and provides encouragement. As a result, the number of employees who possess a major qualification increased by 25 from the previous fiscal year.

(as of March 2022)

| Name of qualification | Category | Number of qualified employees |
|---|---|---|
| Health Officer | Class 1 | 78 |
| Food Hygiene Officer | – | 14 |
| Pollution Control Officer | Water Class 1 | 151 |
| | Atmosphere Class 1 | 101 |
| Qualified Person for Energy Management | – | 76 |
| High Pressure Gas Manufacturing Process Safety Manager | Class A and Class B Chemical | 85 |
| | Class A and Class B Machinery | 208 |
| Boiler Engineer | Special level | 6 |
| | Level 1 | 142 |
| | Level 2 | 287 |
| Hazardous Materials Engineer | Class A | 309 |
| Poisonous and Deleterious Substances Manager | – | 58 |
| Industrial Waste Processing Facility Manager | – | 7 |
| Specially Controlled Industrial Waste Manager | | 60 |
| High Pressure Gas Sales Safety Chief | – | 24 |
| Chief Electricity Engineer | Class 2 | 9 |
| | Class 3 | 26 |
| Electrician | Class 1 | 7 |
| | Class 2 | 45 |





# Creating an Employee-friendly Workplace

As the ideal image for fiscal 2035, the 120th anniversary of Osaka Soda's establishment, the Group aims to become "a company where employees can fully demonstrate their abilities." In order to achieve this, Osaka Soda is working to improve awareness of health and to enhance work-life balance.

## Certified as a Health & Productivity Management Outstanding Organization for 2022

Osaka Soda has been recognized as a Certified Health & Productivity Management Outstanding Organization for 2022 in this certification program operated by the Ministry of Economy, Trade and Industry and the Nippon Kenko Kaigi (Japan Health Council).

In the Certified Health & Productivity Management Outstanding Organization program, the Nippon Kenko Kaigi certifies corporations that practice health management at a level of particular excellence. This program is founded in initiatives for addressing regional health issues and the Nippon Kenko Kaigi's health promotion initiatives.

2022
健康経営優良法人
Health and productivity

**Health Management Declaration**

In order to increase employee engagement and maximize productivity, creativity, and motivation, Osaka Soda is committed to health management to maintain and improve the physical and mental health of employees and their families, and to ensure a vibrant and safe work environment.

**Basic Policy**

1. We will strive to provide information and create opportunities to raise awareness so that employees and their families can improve their health literacy and work autonomously to maintain and promote their physical and mental health.
2. We will strive to create a workplace environment in which diverse human resources can work with enthusiasm and peace of mind, as well as to stimulate communication and foster an open workplace culture.
3. Regarding health as an important management issue, we will actively engage in various measures and continue to verify and improve their impact.

## Recommending Health Checkup Re-examination for Employees

Osaka Soda strives to ensure and manage employees' health by providing health checkups for all employees once a year and recommending re-examinations for employees who are eligible for post-checkup reexamination.

## Providing Stress Checks

Osaka Soda provides annual stress checks to support the mental health of employees and engage in activities to improve the workplace environment based on the results of the checks.

## Mental Health Care

Osaka Soda strives to maintain and improve mental health at all of our business sites and the Matsuyama Plant of SANYO Fine Co., Ltd., by providing education by outside lecturers and in-house training once a year.

## Promoting Work-life Balance

To help each and every employee achieve a work-life balance, Osaka Soda is working to reduce working hours, curb long working hours, encourage employees to take annual paid leave, and promote the use of the childcare leave system for male employees.

# Initiatives for Promoting Women's Active Engagement

## Certified as a 2-Star Osaka City Leading Company in Women's Participation

In April 2021, Osaka Soda was certified as a 2-star Osaka City Leading Company in Women's Participation by the City of Osaka. Osaka Soda is advancing diversity in the interest of sustainable business development and strengthening our global competitiveness. Furthermore, Osaka Soda is working to create an employment environment in which all employees, regardless of gender, can play an active role. Our work to promote women's Active Engagement includes reviewing the recruitment process and enhancing the education and training system. In these efforts, Osaka Soda uses the ratio of female to new graduates and the ratio of female managers as indicators.

女性活躍リーディングカンパニー
2021大阪市認証

**What is the Osaka City Leading Company in Women's Participation System?**

This is a system where the City of Osaka examines and certifies, based on certain criteria, companies that not only comply with laws and regulations, but also actively promote building an organization where women can be motivated in their work, support work-life balance, and support men's participation in childcare, housework, and community activities.

## Certified as an Ikumen Promotion Company

Of certified Osaka City Leading Companies in Women's Participation, the Ikumen Project certifies those that support men's participation in childcare and similar activities. In order to encourage our male employees to utilize the childcare leave system, Osaka Soda conducts activities to raise awareness of the system and provide training to promote understanding of the system. These efforts were highly rated in the Ikumen Project.

# Communication with Society

## Dialogue with Society

- Osaka Soda submits our Responsible Care Implementation Report to the Responsible Care Committee of the Japan Chemical Industry Association (JCIA) every year.
- Osaka Soda also receives and reports on requests for inspections from government agencies and organizations.
- Our business sites report periodically to prefectures and municipalities in accordance with laws and regulations and environmental conservation agreements.
- Relationships with local communities are becoming increasingly important for corporations. Osaka Soda takes part in local responsible care briefing sessions.
- As part of our environmental preservation activities, we actively participate in a range of local activities, such as cleanup activities, to deepen community interaction.

## Social Contribution Activities

As part of its social contribution activities, the Group actively promotes interaction with local communities, starting with clean-up activities at all of its business sites.

**Local Cleanup**

Based on 5S (Sort, Systematize, Sweep, Standardize, Self-Discipline) activities, Osaka Soda not only conducts onsite cleanups but also carries out periodic cleanup activities around each worksite.


Headquarterss


Mizushima Plant


Amagasaki Plant


Matsuyama Plant

# Supporting the Cultivation of Next-generation Talent

## Plant Tours and Internships

In fiscal 2021, Osaka Soda conducted plant tours for students from nearby high schools, technical colleges, universities, etc., while giving due attention to measures to stop the spread of COVID-19. To deepen students' understanding and knowledge of chemistry, Osaka Soda provided an overview of our production activities and gave a presentation of our production facilities. In addition, at the request of educational institutions, we provide technical guidance to students and hands-on work experiences.

## Sponsored the International Chemistry Olympiad

We sponsored the 53rd International Chemistry Olympiad held in Japan from July 25 to August 2, 2021. In the yearly International Chemistry Olympiad, high school students from around the world use their chemical-related knowledge to compete and share ideas. This competition aims to develop global human resources for the next generation, both in academia and the chemical and materials industries.

IChO 2021 JAPAN
国際化学オリンピック日本大会を応援しています

# Community Interaction

## Community Safety and Beautification Activities

Since fiscal 2021, Osaka Soda has participated in the Hyogo Adopt* program, a town safety and beautification activity. By burying water pipes and the water canal near the Amagasaki Plant, Osaka Soda is working to secure lacking green spaces and improve beauty in the area.

*Hyogo Adopt is a system that helps volunteer cleaning and beautification activities in areas of activity managed by Hyogo Prefecture, such as rivers, roads, erosion control facilities, harbors, and coasts.

## Received Hyogo Prefecture Governor's Award

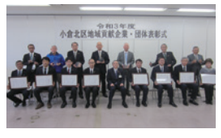
At the 59th Hyogo Prefecture High-Pressure Gas Competition, our employees received the Governor's Award in recognition of their many years of safety education activities.

## Received the KCS Award in Chemical Technology

The development of our non-phthalate allyl resin RADPAR™ received the 2021 KCS Award in Chemical Technology from the Kinka Chemical Society. This product is mainly used as an additive for UV inks, and is expected to contribute to energy conservation and reduction of environmental impact by expanding the use of UV curing systems.

## Received Kokurakita Ward Community Contribution Company Award

In 2021, Osaka Soda received the Kokurakita Ward Community Contribution Company Award in recognition of streetlights installed as part of our social contribution activities. These streetlights are contributing to crime prevention measures in the community.



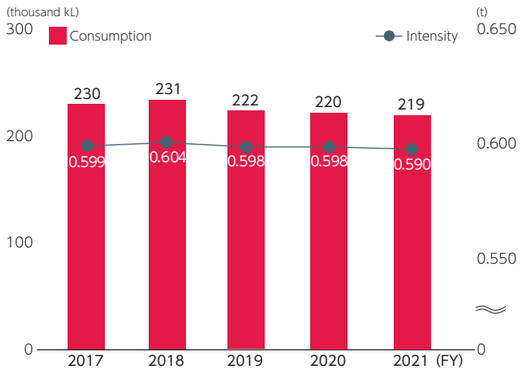




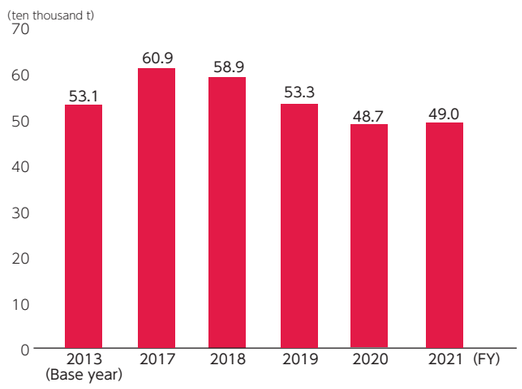
# Environment

## Energy Conservation Initiatives

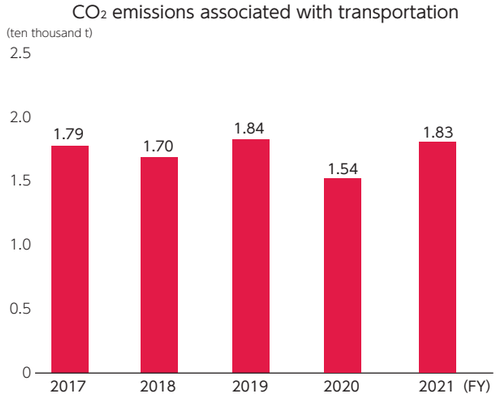
Energy consumption (Crude Oil Equivalent)




$CO_2$ emissions from business activities

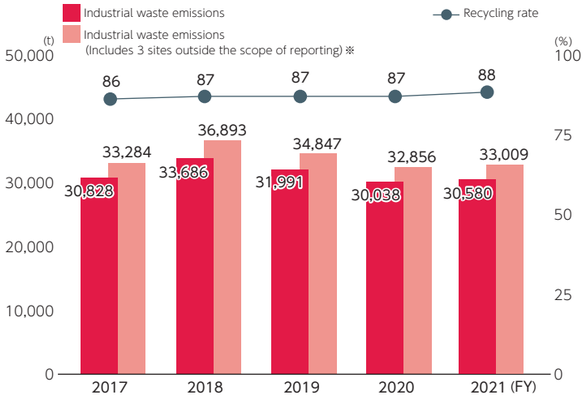



$CO_2$ emissions associated with transportation

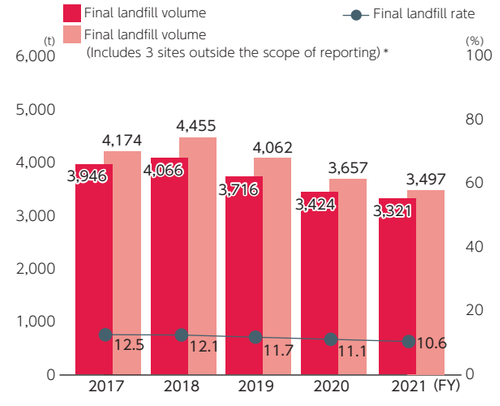



## Initiatives to Reduce Industrial Waste

Industrial waste emissions / recycling rate




Final landfill volume/Final landfill rate




*The Fukui Plant of SANYO FINE CO., LTD., the Kakogawa Plant, and JMR CO., LTD. were added to the organizations included in the scope of this report.

# Environmental Data

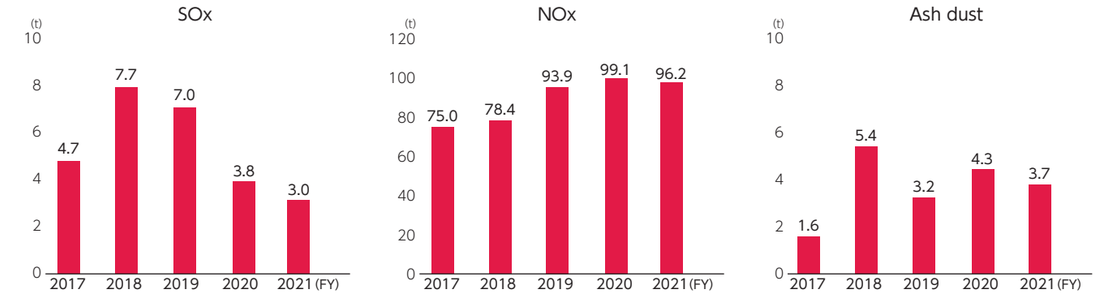
## Fiscal 2020 Transfers of Substances Subject to PRTR Law

Unit: t/year

| Substance name with CAS No. in square brackets | Atmospheric emissions | Emissions into water resources | Emissions into soil | Total emissions | Transferred | Total emissions and transfers |
|---|---|---|---|---|---|---|
| N-Hexane [110-54-3] | 41.09 | 0 | 0 | 41.09 | 16.27 | 57.36 |
| Toluene [108-88-3] | 0.79 | 0 | 0 | 0.79 | 84.74 | 85.53 |
| 3-Chloropropylene (Allyl chloride) [107-05-1] | 2.56 | 0 | 0 | 2.56 | 0 | 2.56 |
| Trichloroethylene [79001-6] | 0.81 | 0 | 0 | 0.81 | 34.01 | 34.82 |
| Epichlorohydrin [106-89-8] | 1.93 | 0 | 0 | 1.93 | 0 | 1.93 |
| 1,2-Dichloropropane [78-87-5] | 0.08 | 0.06 | 0 | 0.14 | 0 | 0.14 |
| 1,3-Dichloropropene (also known as D-D) [542-75-6] | 0 | 0 | 0 | 0 | 0 | 0 |
| Diallyl phthalate [131-11-3] | 0 | 0.73 | 0 | 0.73 | 0 | 0.73 |
| Dimethylamine [124-40-3] | 0.10 | 0.27 | 0 | 0.37 | 0 | 0.37 |
| Allyl alcohol [107-18-6] | 0.62 | 0 | 0 | 0.62 | 0 | 0.62 |
| 1-Allyloxy-2,3-epoxypropane [106-92-3] | 0.53 | 0 | 0 | 0.53 | 0 | 0.53 |
| Ethylene oxide [75-21-8] | 0.09 | 0 | 0 | 0.09 | 0 | 0.09 |
| 1,2,3-Trichloropropane [96-18-4] | 0.06 | 0 | 0 | 0.06 | 0 | 0.06 |
| 1,2-Epoxypropane [75-56-9] | 0.03 | 0 | 0 | 0.03 | 0 | 0.03 |
| Chlorodifluoromethane (HCFC-22) [75-45-6] | 0.50 | 0 | 0 | 0.50 | 0 | 0.50 |
| Ferric chloride [7705-08-0] | 0 | 0 | 0 | 0 | 0 | 0 |
| Organotin compounds | 0 | 0 | 0 | 0 | 0 | 0 |
| Tributyl phosphate [126-73-8] | 0 | 0 | 0 | 0 | 0 | 0 |
| Dichloromethane [75-09-2] | 0.02 | 0 | 0 | 0.02 | 7.37 | 7.38 |
| Ethyl acrylate [140-88-5] | 0 | 1.22 | 0 | 1.22 | 0 | 1.22 |
| n-butyl acrylate [141-32-2] | 0 | 0.96 | 0 | 0.96 | 0 | 0.96 |
| Pyridine [110-86-1] | 0 | 0 | 0 | 0 | 1.12 | 1.12 |
| Total | 49.20 | 3.24 | 0 | 52.44 | 143.50 | 195.94 |
| Dioxins [-] (Note) | 3.48 | 2.27 | 0 | 5.76 | 0 | 5.76 |

(Note) Unit for dioxins: mg-TEQ/year

## Atmospheric Pollutant Emissions

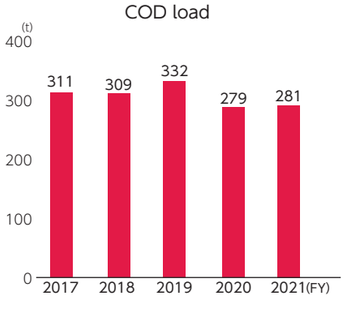


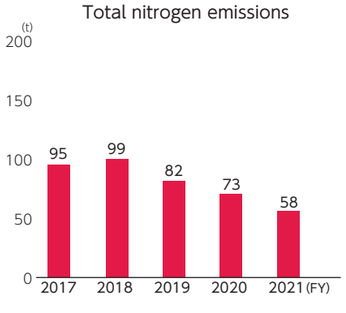


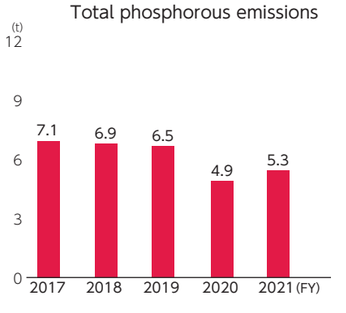





## Water Pollutant Emissions






# Main Financial Data (Consolidated)

| (FY) | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| **Business Performance** | | | | | |
| Net sales (millions of yen) | 101,231 | 107,874 | 105,477 | 97,266 | **88,084** |
| Operating income (millions of yen) | 7,318 | 9,488 | 9,698 | 8,341 | **12,401** |
| Ordinary income (millions of yen) | 7,485 | 10,053 | 10,321 | 8,838 | **13,435** |
| Profit (millions of yen) | 4,778 | 6,793 | 6,506 | 6,050 | **9,442** |
| **Per Share Data*** | | | | | |
| Net income per share (EPS) (Yen) | 223.24 | 297.10 | 276.14 | 257.37 | **404.73** |
| Book-value per share (BPS) (Yen) | 2,698.66 | 2,795.62 | 2,912.98 | 3,310.56 | **3,594.69** |
| Dividend per share (Annual) (Yen) | 57.5 | 65.0 | 65.0 | 65.0 | **80.0** |
| **Assets / Liabilities** | | | | | |
| Total assets (millions of yen) | 115,020 | 112,661 | 110,851 | 119,373 | **129,159** |
| Net assets (millions of yen) | 60,953 | 64,548 | 69,121 | 77,232 | **83,896** |
| Capital ratio (%) | 53.0 | 57.3 | 62.4 | 64.7 | **64.9** |
| Interest-bearing liabilities (millions of yen) | 23,504 | 19,231 | 17,767 | 15,909 | **15,905** |
| Interest-bearing liability ratio (Debt/equity ratio) (times) | 0.4 | 0.3 | 0.3 | 0.2 | **0.2** |
| **Financial Indicators** | | | | | |
| Return on Equity (ROE) (%) | 8.4 | 10.8 | 9.7 | 8.3 | **11.7** |
| Return on Assets (ROA) (%) | 6.9 | 8.8 | 9.2 | 7.7 | **10.8** |
| Price-Earnings Ratio (PE ratio) (times) | 12.6 | 9.1 | 9.3 | 10.2 | **7.7** |
| Capex (millions of yen) | 5,963 | 2,434 | 3,840 | 2,388 | **6,790** |
| Depreciation expenses (millions of yen) | 3,185 | 3,605 | 3,626 | 3,894 | **3,731** |
| R&D expenditures (millions of yen) | 1,896 | 2,289 | 2,187 | 2,201 | **2,344** |
| **Cash Flow** | | | | | |
| Cash flows from operating activities (millions of yen) | 7,757 | 9,854 | 10,336 | 9,347 | **13,378** |
| Cash flows from investing activities (millions of yen) | (7,398) | (4,542) | (4,092) | (1,850) | **(6,961)** |
| Cash flows from financing activities (millions of yen) | 3,097 | (5,003) | (1,677) | (4,464) | **(1,646)** |
| Cash and cash equivalents at end of period (millions of yen) | 23,993 | 24,376 | 28,899 | 31,936 | **37,016** |
| **Share Data (fiscal year-end)** | | | | | |
| Closing price (Yen) | 2,810 | 2,714 | 2,574 | 2,637 | **3,125** |
| No. of issued shares (shares) | 25,052,432 | 26,090,580 | 26,731,415 | 26,731,415 | **26,732,017** |
| Market capitalization (millions of yen) | 70,397 | 70,809 | 68,806 | 70,490 | **83,537** |

* Osaka Soda implemented a share consolidation at the ratio of five to one with an effective date of October 1, 2017.
Per share data reflects the impact of the share consolidation.