

# TOSOH REPORT

# Chemistry for a Better Tomorrow

To help improve people's lives around the world, we at Tosoh strive to contribute to a better tomorrow through innovation in chemistry.





Tosoh was founded in 1935 as Toyo Soda Manufacturing Co., Ltd. in Shunan City, Yamaguchi Prefecture. The company initially focused on inorganic chemicals such as soda, bromine, and cement, with the vision of becoming a modern, sustainable factory that efficiently recycles both materials and energy within the soda industry.

During the period of rapid economic growth, the company expanded its inorganic chemistry business and entered the petrochemical industry. Additionally, Tosoh made steady contributions to economic and industrial development and improved the quality of life by venturing into the scientific measurement (now Bioscience) business and other new fields, while also initiating efforts toward internationalization. However, the company's journey has not always been smooth.

Recognizing the lack of significant growth between 1975 and 1985, Tosoh announced a medium-term business plan. Founded on the notion that Tosoh's identity should be that of a company that, as a social entity, contributes to society while serving as a place for its employees to realize their own aspirations, the purpose of the plan was to clarify the corporate philosophy, foster a vibrant corporate structure, and cultivate a new corporate image. In this context, the company established its corporate philosophy: "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." It encapsulates the company's desire to continue contributing to society by mastering modern chemistry and achieving innovation on a daily basis as it continues to develop its business. Tosoh set ambitious goals, such as doubling sales and achieving a 60% focus in Specialty products.

Changes in international conditions significantly impacted the Japanese materials industry, however, and Tosoh was faced with a crisis of corporate survival. To rebuild from this severe set of circumstances, in 1992, Tosoh started to reform the structure of its operations by reviewing unprofitable businesses. It also implemented employment adjustments, established core businesses, and selectively built up its Specialty business. These activities have enabled the company to evolve into the dual management company it is today, with Commodities and Specialties as its core businesses.

Chemistry, the starting point of manufacturing, is intimately involved in our daily lives. It underpins all industries around the world and is indispensable in the construction of a sustainable global environment. Looking ahead, Tosoh will continue practicing its corporate philosophy through its dual management strategy, integrating Commodity and Specialty businesses, to create a better tomorrow. Tosoh is committed to maximizing the value it provides by harnessing the chemistry of innovation to address environmental and societal challenges.





# **Providing society** with a diverse range of products

Tosoh manufactures Commodity products that are fundamental materials used in virtually everything, and high-added-value Specialty products. The company ensures a stable supply of products that are essential to daily living.

# What We Want to Convey in the Tosoh Report

Strategies to enhance corporate value centered on Tosoh's hallmark dual-management approach

→P.15-16 Dual Management
 →P.25-26 Medium- and Long-term Management Policy







# **Creating products** for a better society

Under the themes of "reducing environmental impact" and "improving quality of life," Tosoh contributes to society through the chemistry of innovation by developing products that benefit all.

# What We Want to Convey in the Tosoh Report

Initiatives for the manufacture of products that contribute to the resolution of social issues

→P.41-42 Social Issues Solution
→P.43-44 Research and Development

# Protecting the sustainable global environment

We aim to achieve carbon neutrality by 2050 and are promoting a range of initiatives to that end. We, for example, utilize by-products and waste generated during production by converting them into new compounds or raw materials.

# What We Want to Convey in the Tosoh Report

We openly disclose information on our response to climate change issues, fulfilling our responsibility as a chemical manufacturer.

→P.29-32 Climate Change Issue









# **Table of Contents**

Corporate Philosophy System 01	
What We Want to Convey in the Tosoh Report	3
Table of Contents/Editorial Policy	5
Message from Management ····· 07	,

# About the Tosoh Group

History of Tosoh ·····	13
Dual Management ·····	15
Financial and Nonfinancial Highlights	17

# Value Creation Strategy

Value Creation Process ······	•••••	19
Message from the Chief Financial Officer $\cdots$		21
Medium- and Long-term Management Policy		25
Medium-term Business Plan (FY2023–2025)		27
Climate Change Issue ·····		29

#### **Value Creation Practices**

Message from the Head of Corporate Social Responsibility ······ 33	
Progress on Important CSR Issues	
Social Impact of Essential Products	
Social Issues Solution 41	
Research and Development ····· 43	
Intellectual Property ····· 45	
Introduction of Business Areas 46	
Key Indicators by Group ····· 47	
Overview by Business	
Olefins ····· 49	
Polymers ····· 51	
Chlor-alkali · · · · · 53	
Urethanes ····· 55	
Organic Chemicals	
Bioscience 59	
Advanced Materials ····· 61	

#### **Value Creation Foundation**

CSR Management
Responsible Care (RC) 64
Environmental Protection
Safe and Stable Operation 67
Product Safety and Quality Management ····· 68
Diversity and Inclusion 69
Respect for Human Rights 71
CSR Supply Chain Management ····· 72
List of Directors and Corporate Auditors · · · · · · · 73
Corporate Governance
Message from External Directors
Compliance
Cybersecurity

### **Management and Company Data**

10-Year Financial Highlights(Consolidated)	5
Company Overview(as of March 31,2024) ····· 8	7
Stock Information(as of March 31,2024) ····· 8	9
External Recognition	0



The Tosoh Report 2024 is published to provide investors and other stakeholders with an easy-to-understand overview of the Tosoh Group's efforts to enhance corporate value over the medium and long term.

This report integrates financial information, such as management strategies, business overview, and business performance, with nonfinancial information, such as environmental, social, and governance (ESG) information. We have also organized and presented the social impact of Tosoh's essential products in the form of a social impact report.

We hope that you will find this report useful for the better understanding of the Tosoh Group's present and future vision, as it strives for sustainable growth.

### Notes on forward-looking statements

This year's Tosoh Report contains forward-looking statements about the Tosoh Group's past and present facts as well as future plans, strategies, and financial outlook based on information currently available to the Company. Therefore, please be aware that these forward-looking statements are subject to various risks and uncertainties that may cause actual results and performance to differ factually from those described in the report.





#### Guidelines

- GRI (Global Reporting Initiative) Sustainability Reporting Guidelines
   ISO 26000
- · Japan Ministry of the Environment,
- •Japan Ministry of the Environment,
- Brivironmetal Accounting Guidelines 2005
   Japan Ministry of Economy, Trade and Industry, Guidance for Collaborative Value Creation

#### Scope of Report

Unless otherwise stated, this report covers Tosoh Corporation on a nonconsolidated basis. Financial information, however, is presented on a consolidated basis

#### **Reporting Period**

April 1, 2023, through March 31, 2024 (some information from April 2024 onward is included)

#### Issue

January 2025

#### Inquiries

CSR Advancement, Tosoh Corporation https://www.tosoh.co.jp/inquiry /csr/input/





Continue to Be a Company Indispensable to Society by Balancing Growth and Decarbonization

> Mamoru Kuwada Representative Director and President

# **Management Policy**

# Reaffirming and Putting into Practice the Commitments Stated in Our Corporate Philosophy

Our corporate philosophy, established in 1986, states: "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." At the time, I was just another young employee in my third year with the company, and with my daily responsibilities I didn't have much time to reflect on the philosophy. Only since becoming Tosoh's president and representative director 36 years later, in 2022, have I found more opportunity to ponder these words. And over time, I've come to deeply appreciate their profundity.

Since our founding in 1935, we have developed a wide range of materials, products, technologies, services, and solutions as a chemical manufacturer that contribute to the advancement of industry and society. Observing the world today, it's clear that our materials and products are widely used in many industries, in countless aspects of people's daily lives, and throughout society. Most recently, for instance, we supported the medical field in the emergency situation of COVID-19's rapid spread by quickly developing testing equipment, antigen kits, and RNA detection reagents capable of measuring infectious diseases in a short period of time.

The demands and expectations of society with regard to chemistry have evolved over time, and the business environment enveloping our company has presented one new hurdle after another. To overcome these challenges and realize sustainable growth, we have undertaken a variety of innovative approaches, such as the promotion of a global

### **Consolidated Results**

	FY2023 results	FY2024 results	FY2025 targets	FY2025 forecast
Net sales	¥1,064.4 billion	¥1,005.6 billion	¥1,160.0 billion	¥1,090.0 billion
Operating income	¥74.6 billion	¥79.8 billion	¥150.0 billion	¥100.0 billion
Operating income ratio	7.0%	7.9%	10% or more	9.2%
ROE	7.0%	7.5%	10% or more	-

strategy centered on Asia and structural reforms toward dual management that sees us balance our Commodities and Specialties businesses.

Today, we again face a hurdle—of unprecedented height: decarbonization. Mitigating greenhouse gas (GHG) emissions is a crucial issue that everyone on the planet must address. This includes all industrial sectors. But the issue is particularly challenging for the chemical industry. The chemical products so essential to society require for their manufacture a large volume of energy, such that chemical production processes emit a large volume of carbon dioxide (CO<sub>2</sub>).

Tosoh's core social responsibilities—our mission—are to ensure a safe, stable supply of essential products while minimizing, or ideally eliminating, GHG emissions during production. Solving this contradictory problem will require all divisions and departments of the Tosoh Group to work together with the aim of achieving growth and decarbonization. My view is that this is what chemical innovation means today for Tosoh.

# **Progress of Medium-term Business Plan**

# Improving the Earning Power of Each Business through Continued Investment in Growth

In fiscal 2024, the second year of our fiscal 2023–2025 medium-term business plan, our consolidated net sales fell 5.5% year over year, to ¥1,005.6 billion. This was the result of weakening overseas product markets and declining demand, partly driven by China's economic slowdown. Improved trade conditions, however, resulted in operating income rising 7.0%, to ¥79.8 billion. And despite significant deterioration in the availability of products for semiconductors and electronic components because of inventory adjustments, net income attributable to the owners of the parent company increased 13.9%, to ¥57.3 billion. This increase owed itself to the addition of foreign exchange gains resulting from the depreciation of the yen.

For fiscal 2025, we forecast an increase in net sales of 8.4%, to ¥1,090.0 billion, as a recovery in the semiconductor market is expected to lead to volume growth. We also anticipate operating income increasing 25.2%, to ¥100 billion, although achieving the numerical targets of the medium-term business plan will be difficult.

Our medium-term business plan faced several unexpected challenges following its launch after a record performance in fiscal 2022. These included the onset and prolongation of the Russia-Ukraine conflict, rising raw material and fuel prices, and a downturn in Commodity product markets on account of China's economic decline. I am convinced that our ability to turn a profit in an environment so severe that in the past we may likely have recorded a loss is proof that we have steadily bolstered our earning power.

We are also making continuous progress on strategies to achieve growth and decarbonization. We are investing for growth in plant and equipment, primarily in Specialty areas, such as sputtering targets, silica glass, and separation and purification media. And we are augmenting our Specialty supply capacity in preparation for the wave in demand that we see arriving soon. We are even investing in our Commodity business, with plans to establish a methylene diphenyl

2023

results

2024

results

diisocyanate (MDI) manufacturing base in Vietnam and, as we did in the Chinese market, to construct a system of local production for local consumption in the Southeast Asian market. We forecast total capital investment for the three-year period of our medium-term business plan of ¥225 billion, about 10% more than originally planned.

#### **Progress in Decarbonization Investments**

# Advancing Fuel Conversion and CO<sub>2</sub> Capture and Reuse Technologies

In addition to investing in the growth of our business, we continue our focus on decarbonization initiatives. The most important issue is to reduce our CO<sub>2</sub> emissions in our Commodity business, where energy consumption and emissions are high, while keeping costs down.

We have set an interim target of reducing our GHG emissions 30% from fiscal 2019 levels by fiscal 2031 in pursuit of achieving carbon neutrality by 2050. To meet this target, we plan to invest ¥120 billion in decarbonization efforts by fiscal 2031.

The largest of our decarbonization investments is in fuel conversion at our in-house coal-fired power generation facility at the Nanyo Complex. The facility has one of Japan's largest outputs (900 MW) for a single company and single site. In fiscal 2024, we initiated a plan to replace one of the six boilers at the facility with a biomass-dedicated boiler. Construction is underway, with the goal of initiating the operation of the new

100.0

2031

target

(FY)



75.0

2025

target

boiler in April 2026. We are also considering raising the biomass co-firing rate of the facility's five other boilers.

We have, meanwhile, also begun establishing a supply chain for black pellets—carbonized wood pellets—to stably procure biomass power generation fuel, which is expected to be in short supply. We are, in fact, thinking of building a black pellet production facility at our Nanyo Complex in the interest of partial self-sufficiency in this crucial fuel. In addition, we are considering adding a gas turbine power generation facility at the Yokkaichi Complex that will generate electricity from oil coke gas by-products. We intend to announce the specifics in our next medium-term business plan.

Mitigating CO<sub>2</sub> emissions through fuel conversion is one approach being taken at Tosoh. We are also moving aggressively to capture our CO<sub>2</sub> emissions and repurpose them as raw material for our products. A plant for this purpose is scheduled for full-scale operations at our Nanyo Complex in fall 2024. This plant will recover and convert CO<sub>2</sub> from combustion exhaust gas into raw material for isocyanate products. The plant was completed in only about two years from construction of a pilot plant through data collection and evaluation and demonstration testing to commercial operation.

The amine used for CO<sub>2</sub> recovery at this plant is a newly developed, proprietary Tosoh product. It resists high temperatures and acidic gases with high nitrogen dioxide (NOx) content, such as thermal power plant exhaust gas, and remains stable for longer than conventional products, which helps to lower operating costs.

Initially, we will utilize this amine for the recovery and conversion of CO<sub>2</sub> emissions into raw materials only at our plants. We look forward, however, to eventually selling our proprietary amine as a Specialty product and to proposing other of our technologies, including equipment, that we establish as system-wide solutions for CO<sub>2</sub> emissions reduction to an array of companies in and beyond our industry.

2022

results

50



### **Safety Initiatives**

# Ensuring That Safety Takes Precedence Throughout the Tosoh Group

For today's corporate management, nonfinancial capital initiatives in the way of environmental, social, and governance (ESG) undertakings have become increasingly important for raising corporate value.

Regarding the environment, as I previously mentioned, we are strengthening company-wide activities aimed at achieving decarbonization. However, as a company operating large-scale chemical plants, another priority I place great importance on is occupational safety and health at the worksite. My background in manufacturing has enabled me to develop various activities at Tosoh that encourage and, indeed, enforce safety in everything that we do.

In recent years, we have promoted the application of digital technology in safety measures. Examples include establishing a monitoring system that, through a distributed control system (DCS), provides a bird's-eye view of key safety-related data on a large screen; introducing an abnormality prediction detection system using machine learning; and adopting communication tablets at manufacturing and facility management sites. Our promotion of digital transformation (DX) enhances our level of safety.

On November 2, 2023, however, an explosion occurred at group company Tosoh SGM Corporation's Shin-Nanyo Factory within our Nanyo Complex, resulting in an employee's death. We pray for the soul of the deceased and extend our condolences to the bereaved family. The small test plant where the accident occurred did not handle hazardous materials as defined by the Fire Service Act, but due to several overlapping conditions, an explosion occurred. Since the explosion at our Nanyo Complex in 2011, we have continued to invest in maintenance projects to support preventive safety at our major plants and have implemented various safety measures to prevent major accidents. Although process-related incidents have steadily decreased in recent years, we deeply reflect on the fact that risk assessments across the group still have room for improvement.

In April 2024, we submitted our final report on that accident to the authorities. Our report investigated its cause and offered measures to prevent a recurrence. Our headquarters team in charge of environment and safety takes the lead in these respects, rigorously reviewing the safety management system and facility and operational safety throughout the Tosoh Group and enforcing the basic premise that safety takes precedence over everything else.

#### **Research and Development**

# "Seeding" Aggressively and Accelerating Research and Development

Research and development (R&D) is another aspect of nonfinancial capital that I emphasize. Generating technologies and products of value is a prerequisite for sustainable growth in any industry. But R&D requires more time in the chemical industry than in other industries. Functional products that support our growth as a highly profitable business—zirconia, separation



and purification media, silica glass, and high-silica zeolite—are all products that we researched as part of our business diversification strategy from the mid-1980s into the 1990s. And all were successfully commercialized over the next several decades.

Sluggish business performance, however, saw Tosoh reduce its investment in R&D in the 2000s. But since around 2010, management has been steering the company back toward strengthened R&D. We are looking 20 to 30 years ahead and are again focusing on seeding for growth—strategically planting the initial ideas, innovations, and investments that will foster future expansion—including investing in human resources. While we fine-tune the details in line with our market environment and progress in R&D, our R&D bases are constantly at work on about 30 themes a year, of which, 10 themes are in the commercialization phase. Highly profitable products are emerging, such as gallium nitride target materials and more that we expect to become pillars of our corporate value.

We are attempting to improve the R&D environment at our sites throughout Japan. In April 2023, we established the MI Center, which consolidates our materials informatics (MI) technology within our Tokyo Research Center, our advanced technology research facility. The MI Center's objective is to shorten development times from the previous 20 to 30 years by leveraging the power of artificial intelligence (AI), machine learning, and computational science simulations. In some fields, the center has already dramatically accelerated, by 10 to even 20 times, the speed of experiments and evaluations. And the results are becoming evident in such as AI-based proposals for compounds from new perspectives.

### **Cultivation of Human Resources**

Inheriting and Expanding a Corporate Culture That Encourages the Taking on of Challenges

As a manager, I'm naturally aware of the importance of human capital. It is self-evident that people are the most important management resource supporting a company's foundation and roots.

We at Tosoh have defined the type of personnel we seek as self-reliant individuals who can perform tasks and accept roles in any environment and who can work with others to achieve the best results. And we are working to cultivate them. We do not believe that such personnel can be developed solely through classroom lectures and educational training. Gaining a broad spectrum of work experiences is essential to each employee's growth and development.

My experience as the leader of a plant construction project at the Nanyo Complex some 20 years ago made a strong impression on me. I made a mistake that delayed construction for over a year. I managed to get through this painful situation with the help of subordinates and superiors alike. Looking back, I recognize this experience as significant for my personal and professional growth.

It would, of course, had been better, for me and the company, to have avoided so difficult a situation. It is nevertheless true that human resources develop in part through failure, albeit preferably of a small scale. A corporate culture that encourages employees to challenge the unknown is vitally important. Failure is nothing more than a potential outcome of taking on a challenge. Our corporate culture has long encouraged employees, even young employees, to tackle challenges. If they fail, they are supported by the people around them.

To pass on this free and vigorous corporate culture, we urge employees to work on-site as much as possible. This may go against trends, but I believe that there are many things that can only be learned through a presence at the company and in direct, face-to-face communication with superiors, subordinates, and people from outside the company.

One of the key reasons for relocating our headquarters to Tokyo Midtown Yaesu's Yaesu Central Tower, near Tokyo Station, in March 2024, was to create a highly accessible workplace that attracts talent and fosters a desirable environment where people want to work. To that end, we've established refreshment areas and numerous meeting spaces. Our hope is that this environment promotes interactions that transcend departmental boundaries and fosters the development of self-reliant, challenge-accepting human resources.

### **Dialogue with Stakeholders**

# Connecting with Stakeholders to Enhance Corporate Value

Another important management mission is to deepen communication and mutual understanding with our stakeholders. This includes customers, employees, shareholders, investors, business partners, and local communities.

For more than 10 years before I became Tosoh's president, I visited the company's manufacturing sites throughout Japan annually to communicate with frontline staff. The presidency has granted me opportunities to communicate directly with an even broader range of stakeholders. I enjoy dinner meetings and discussions not only with people in our production departments but also with sales staff, female career-track employees, and many others in the full range of occupations and positions at Tosoh. It has afforded me the chance to hear the voices of the people at each of our workplaces.

And yet I wish to elevate our dissemination of information to our stakeholders to a whole new level. I want to heighten their understanding of our approach to improving our corporate value, of our strategy for medium- to long-term growth, and of our progress on specific initiatives.

In January 2024, Tosoh released its first brand movie as a television commercial. Its content conveys the utility of Tosoh's technologies and products in all of the important scenes and stages in the life of a single woman.

The movie's principal aim is to enhance our corporate image among job-hunting students and others. But it is in fact also a message to Tosoh Group employees and other stakeholders. The movie appears in advertisements on media such as YouTube. We hope that everyone will view it and that it will reaffirm that Tosoh is indeed a company that produces value for people's lives in myriad ways.

Tosoh will continue to contribute to people's lives through the chemistry of innovation while tackling the challenge of balancing growth and decarbonization. We seek as such to be a company indispensable to society.

The Tosoh Group humbly asks all of its stakeholders for their continued understanding and support.

Representative Director and President

Mr. Juwela



Plant at time of founding (1935)

In 1935, the company was established as Toyo Soda Manufacturing Co., Ltd. with the aim of becoming an ideal modern factory in the soda industry. The company primarily developed in the soda industry, including soda and chlorides, as well as inorganic chemicals such as bromine, and supported economic and industrial development, particularly in the textile industry.



Cement No. 1 kiln firing ceremony (1935)

The company achieved the integration of its soda and cement businesses, which were the origin of its founding. The company established a system focused on achieving zero waste by effectively utilizing energy, limestone residue, and byproducts generated during the soda production process as raw materials for cement, thereby contributing to infrastructure development for postwar reconstruction



Chloroprene rubber plant (1971)

During Japan's high economic growth period, the company expanded its existing inorganic chemistry business and entered the petrochemical industry, including vinyl chloride monome (VCM), polyethylene, and synthetic rubber. It expanded to Yokkaichi City, Mie Prefecture, as its second base of operations, contributing to economic growth and improving people's quality of life. Additionally, the company opened its first representative office in New York, marking the start of its global expansion.



Kasumi Industrial Complex (1972)

In 1975, the company merged with Tekkosha Co., Ltd., which had been diversifying its business primarily in the Tohoku region This merger resulted in the addition of integrated PVC production and a metals division In 1990, the company merged with Shin-Daikyowa Co., Ltd., becoming a comprehensive chemical company with an ethylene center, and has since responded to society's diversifying needs.



Nanyo Complex, a production base with an eye on Asia

As the economy began to regress, the company promoted structural reforms to focus and concentrate its businesses. It launched the vinyl chain concept for PVC and caustic soda with a focus on Asia, strengthened its Specialty businesses, and accelerated global expansion

MDI (8M) plant (2007)

Tosoh strengthened its relationship with Nippon Polyurethane Industry Co., Ltd. and expanded its vinyl chain into a vinvl isocvanate chain to meet the growing demand in China. In the specialty business, it adopted high-silica zeolites for exhaust gas purification catalysts and biopharmaceutical separation and purification media, securing a foothold for growth.

High-silica zeolite plant (2019)

In 2014, Tosoh merged with Nippon Polyurethane Industry Co., Ltd., accelerating the differentiation of its specialty business. The company aims to further deepen its dual management approach by enhancing both its Commodity and Specialty businesses in a well-balanced manner

Tosoh aims to build an operating income base exceeding ¥100 billion in the specialty business by expanding capacity and market share in growth areas, creating new businesses, and pursuing M&A. It will also take on the challenge of achieving carbon neutrality by 2050. Through innovation, Tosoh will develop products and technologies that contribute to solving social issues and realizing a sustainable society

# **Dual Management**

# **Overall Structure of Dual Management at Tosoh Corporation**

Since its establishment, the Tosoh Group has deepened its chemistry-based technologies and products. The company aims constantly to be a chemical company with a strong presence and a distinctive character.

The Tosoh Group operates and grows its business based on two pillars: the Commodity business and the Specialty business. Its Commodities encompass products indispensable for society's sustainable development, including basic materials for which

demand remains constant. Its Specialties are high-value-added products and technologies that resolve some of society's most vexing issues.

Tosoh continues to strengthen its Commodity business to contribute to the overall vision of dual management. But the company is focused on expanding the earnings of its Specialty business to enhance its corporate value.

**Specialty Business** 

High-value-added products and technologies that, through distinctive

functions and performance, contribute to resolving various of society's

Development of state-of-the-art technologies and pioneering

Inability to innovate negatively affecting competitiveness

products, making it possible to capture opportunities for growth

• Technological innovation leading to contraction or disappearance

FUNCTIONAL

LIRETHANES

issues and to enhancing people's quality of life.

• Key indicator: Profit ratio

(product obsolescence) of markets

**Opportunities and Risks** 

**Business areas** 

FUNCTIONA 

### Enhance corporate value by investing profit in growth.

#### **Commodity Business**

Basic materials (general-purpose products) that are used in various applications in support of society's foundation.

### Key indicator: Profit

#### Opportunity and Risks

- Global economic development driving market expansion
- Market fluctuations in products, including raw materials and fuels, leading to declines in profit
- Competitors' business development (production capacities, sales policies, etc.) negatively affecting Tosoh's market share

#### Business areas OLEFINS POLYMERS CHLOR-ALKALI URETHANES CEMENT

Business	Restructuring	and	Profitability
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Tosoh experienced a lower level of profitability compared to that of its competitors because of the global recession and internal factors, which have been in play since the bubble economy collapsed in Japan back in the early 1990s. Given this, in the early 1990s, the company underwent a period of restructuring of its business. With the aim of being a highly distinctive. comprehensive chemical manufacturer, the business vision for the company was to achieve a strengthening and expansion of

its core vinyl chain business while selectively fortifying its Specialty businesses. In addition, the company constructed a group of high value-added businesses that have established global positions in specialized fields. To follow on from these achievements, we now plan to reinforce our Specialty business and develop new products and technologies with the medium- to long-term goal of formulating a profit base in excess of ¥100 billion in Specialty business operating income by FY2031.



# Major Production Base Links the Commodity and Specialty Businesses

Tosoh has established a vinyl isocyanate chain at its Nanyo Complex by integrating its vinyl chain, which, using industrial salt as the raw material, manufactures vinyl chloride monomer (VCM), and its isocyanate business, which manufactures methylene diphenyl diisocyanate (MDI), a raw material for urethane. Tosoh's vinyl chain and the isocyanate business originate in Japan's largest electrolysis facility

The caustic soda, chlorine, and hydrogen produced at this facility also serve as raw materials for Tosoh's Specialty products and manufacturing processes. This makes the Nanyo Complex a competitive production base with a connection to Commodities and Specialties.

At the Yokkaichi Complex, Tosoh has constructed an integrated petrochemical production system encompassing everything from naphtha cracking furnaces to PVC resin production. The Yokkaichi Complex is instrumental in developing and bolstering Tosoh's functional products business through its utilization of each distillate refined from naphtha. And it, like the Nanyo Complex, has its own power generation capability to enable high production efficiency in the way of reliable power supply to all plants and utilities.



# Specialty Products Valued for Functionality

Zirconia

serves as a raw material in the

in cosmetic dental applications

properties, aesthetic quality, and

meet its customers' requirements.

biocompatibility

Tosoh is active in diverse fields at the cutting edge of global trends, including healthcare, semiconductors, electronic materials, and the environment. We have globally positioned product lines in zirconia, high-silica zeolites, silica glass for semiconductors, optical and liquid crystal sectors, separation and purification media, medical immunodiagnostic equipment and reagents, bromine, sputtering target materials, and more. Our aim is the realization of healthy and prosperous societies and the protection of the environment worldwide

OY nd	OPEARL <sup>®</sup> separation purification media	
_	-	- 3





TOYOPEARL is a chromatographic separation and purification resin, produced in the form of a porous, spherical polymer, to which functional groups are attached. It is used primarily as purification media in the manufacturing of biopharmaceuticals such as antibody and oligonucleotide therapeutic drugs, and of functional foods

From analysis to purification, Tosoh offers a variety of exquisitely useful products similar to TOYOPEARL

Zirconia is a high-purity powder that Silica glass is a material characterized by its high purity, high heat resistance, and superior light production of fine ceramics. It is used transmittance capability. Tosoh offers because of its excellent mechanical fused silica glass and synthetic silica glass in multiple grades and characteristics. These products are Tosoh's strength lies in its ability used in a wide range of applications, to provide a reliable supply of superior including the production of products, such as zirconia, through semiconductors and flat panel high technological capabilities that manufacturing, optics, energy, and telecommunications



#### Silica glass



#### Bromine



Bromine is an essential raw material for flame retardants for resins, for bromobutyl rubber for automobile tires, for the organic synthesis of intermediates for pharmaceuticals and agrochemicals, and for other areas where the properties of halogens can be utilized

Steady growth in demand compels us to expand our bromine business

# **Financial and Nonfinancial Highlights**



In fiscal 2024, sales volume fell ¥58.7 billion year on year, to ¥1,005.6 billion. This was due to a decline in selling prices resulting from lower raw material and fuel prices, a deterioration in overseas product market conditions, a drop in demand, scheduled maintenance, and plant trouble



ROA fell 0.2 percentage points from the previous year, to 7.7% ROE improved 0.5 percentage points, to 7.5%.

**Operating income** Operating income to net sales ratio



The difference between inventory receipts and payments deteriorated significantly in fiscal 2024 Although sales volume was down improved trade conditions owing to lower raw material and fuel prices resulted in operating income of ¥79.8 billion, a year-on-year increase of ¥5.2 billion





Total assets amounted to ¥1,289.9 billion, up ¥95.7 billion from the previous fiscal year

Interest-bearing debt at fiscal 2024 year-end was ¥183.1 billion, a year-on-year increase of ¥0.2 billion

The net debt to equity ratio improved 0.05 points from the end of the previous fiscal vear. to 0.04 times

1(Interest-bearing debt - cash and deposits) ÷ net assets





Net income attributable to owners of the parent company totaled ¥57.3 billion in fiscal 2024, a year-on-year gain of ¥7.0 billion. EPS improved ¥22.0 from the previous fiscal year, to ¥180.1.

**Dividend per share Dividend payout ratio** 



The shareholder return policy under the medium-term business plan is to ensure consistent dividends and a dividend payout ratio of 30%.

The annual dividend for fiscal 2024 was ¥85 per share, resulting in a dividend payout ratio of 47.2%



80

20







R&D expenses for fiscal 2024 increased ¥0.6 billion, to ¥22.0 billion, compared with the previous year

GHG emissions in fiscal 2024 decreased 620,000 kilotons-CO2e compared with the base year

\*2 Review due to revisions to the Act on the Rational Use of Energy and to the Act on Promotion of Global Warming Countermeasures

Number of management-level female employees\*3 Proportion of management-level female employees\*3



Tosoh is diligent in developing female executives. The goal is to increase its proportion of female employees in executive positions to at least 2.6% by fiscal 2025. \*3 Tosoh Registry: Employees belonging to Tosoh (including seconded employees from within Tosoh), but excluding seconded employees from external companies or organizations



 Proportion of female employees taking childcare leave

> Tosoh believes that the participation of men in childcare has a positive impact on the development of a comfortable workplace. As such, the company is working to achieve a male childcare leave utilization rate of 90% or better



2020 2021 2022 2023 **2024** 

Proportion of male employees taking childcare leave



Financial data Nonfinancial data



The final landfill industrial waste disposal volume in fiscal 2024 was 507 metric tons, a decrease of 367 tons from the previous year The ratio of the amount of landfill industrial waste to the amount of industrial waste generated over the past five years was less than 0.5%

# Composition of board of directors (nonconsolidated) **Proportion of external directors** (nonconsolidated)



\*4 as of June, 30, 2024

To ensure an appropriate governance structure with a neutral, objective supervisory function, Tosoh has appointed four outside directors, including two female directors. The company has established an efficient organizational structure capable of responding quickly to changes in the business environment.

# **Value Creation Process**

The Tosoh Group has been growing its business for nearly a century, guided by its corporate philosophy. In alignment with our corporate governance, we allocate management resources to diverse initiatives, such as Vision 2030, medium-term business plans, and CSR issues. Those initiatives enable us to address various social challenges and to enhance our corporate value. Underpinning our growth and our initiatives is a business model supported by two core pillars. The first is the Commodity

business, which includes essential basic products that are crucial for society's sustainable development and that are in strong demand. The second is the Specialty business, which focuses on high-value-added product groups. We generate economic and social value through this dual management approach. The combined results of our two core business pillars—Commodities and Specialties—generate the resources that drive the sustainable growth of the Tosoh Group.



19 Tosoh Report 2024

Value Creation Strategy Value

# Next source of sustainable growth

	Outcome	
	Contribution through	
	provision of products	
Others		
	Energy-saving	
	Renewable energy	
<u> </u>	Reduction of GHG emissions	
	Reduction of hazardous substances and volatile	
·····	organic compounds(VOCs)	
	Ecosystem and	
	Ecosystem and water conservation	
	Recycling	
	Health and medical care	
	Infrastructure and food	
llion	Energy generation	
on		
ro	Energy storage	
re	Waste reduction	
%	Waste reduction	
<del></del>	Disaster prevention	
11	countermeasures	
llion	Contribution to	
n	Carbon Neutrality	
···		
	Reducing GHG emissions	
	by 30% by FY2031	
	(compared with FY2019)	
	Taking on the challenge	
<u> </u>	of achieving carbon neutrality	
n	by 2050	

# **Message from the Chief Financial Officer**

Promote Strategies for Raising Corporate Value Based on a Strong Financial Foundation

# Toru Adachi Representative Director Senior Executive Vice President

# Approach to Financial Soundness

Since its founding in 1935, Tosoh's goal has been to become a chemical manufacturer with a strong presence and sense of individuality that makes chemistry-based contributions to society. The year 2025 marks our 90th anniversary of a journey along a road that has not always been smooth. We have contended with business crises on numerous occasions.

In the early 1990s in particular, the bursting of Japan's asset price bubble economy set back the medium-term business plan for fiscal 1986 to 1991 in which the company had invested significant management resources. The setback caused the Tosoh Group's business performance to decline steeply and damaged its finances. We responded by reforming our business structure, including adjustments in employment, reductions in fixed costs, and reviews of unprofitable businesses.

The transformation of our business portfolio to enhance profitability resulted in a material change in our earnings structure and financial standing. We have stable earnings and, because we've reduced our interest-bearing debt, a robust financial foundation. The medium-term business plan that began in fiscal 2023 shifts our policy from capital accumulation for the purpose of bolstering our financial base to the application of capital for enhancing our corporate value. We need a robust financial base to steadily and flexibly execute our growth strategy. A weak base may not enable us to commit to strategic investments even amid growth, and that could lead to missed opportunities.

Our financial structure must be sound especially if we are to achieve Specialty business operating income of ¥100 billion in fiscal 2031. This objective is stated in our medium- to long-term management policy Vision 2030, alongside that of further growth to enhance corporate value long term.

# Progress of Investments in the Medium-term Business Plan

Our medium-term business plan calls for investments of ¥80 billion in the Specialty business, ¥40 billion in the Commodity business, ¥30 billion in CO<sub>2</sub> reduction, and ¥50 billion in shared assets and others. The plan's three-year period thus calls for investments totaling ¥200 billion.

We are proceeding with investments for growth in our Specialty business. These include production capacity increases for pharmaceutical separation and purification media, for sputtering targets for thin film deposition materials in the US semiconductor market, and for silica glass materials and

### Three-year cumulative total (FY 2023-2025)



fabricated quartzware products for semiconductor manufacturing equipment.

Our decision to increase separation and purification media production capacity anticipates growing demand. Consequently, we will invest ¥93 billion to raise our production of this essential media, ¥13 billion more than originally planned. We continue, meanwhile, to deliberate our originally planned investments in chloroprene rubber, brominated flame retardants, and zirconia and are monitoring trends in demand and business development.

Capital investments in our Commodity business center on our decision to install MDI splitters overseas and are ongoing. Investments to this end will total ¥47 billion, ¥7 billion more than the original amount.

Our investments in CO<sub>2</sub> reduction, too, are ongoing. They include investments in biomass power generation facilities and CO<sub>2</sub> capture and feedstock conversion facilities. We also continue to consider adding gas turbine facilities at our Yokkaichi Complex. We anticipate that additional investment would raise the total to ¥34 billion, ¥4 billion above the initial sum.

Investments in shared assets and others are likewise progressing. They will total ¥51 billion, ¥1 billion more than originally planned.

With the conclusion of our medium-term business plan at year-end fiscal 2025, we anticipate having invested ¥225 billion in our operations. This is ¥25 billion beyond what is stipulated in the plan.

### Three-year dividend of ¥80 per share: ¥77 billion ¥5 increase in dividend for fiscal years 2024 and 2025 Compared Breakdown with plan Specialty ¥93 billion +¥13 billior Commodity ¥47 hillion +¥7 billior CO<sub>2</sub> reduction ¥34 billion +¥4 hillion Shared assets etc ¥51 billion +¥1 billion Additional returns are being considered in the event of an upswing in operating cash flow

#### Major Capital Investment Projects in Medium-term Business Plan (FY2023-2025)

Growth investment	Overview	
Separation and	Demand for separation and purification media is growing in the nucleic acid and antibody drug fields. Impressively, Tosoh's SuperQ-5PW separation media is the gold standard in nucleic acid drugs. We will construct a plant dedicated to the production of this product.	Approximately ¥16 billion
purification media	We will establish new manufacturing facilities at the Yokkaichi Complex to satisfy the robust demand sparked by market growth. Decentralizing manufacturing and storage bases will enable a strong, stable supply system from a business continuity plan (BCP) perspective.	Approximately ¥14 billion
Silica glass materials and fabricated quartzware	To cope with strong demand from semiconductor equipment manufacturers, Tosoh has intermittently increased its silica glass material(Japan) and fabricated quartzware(Japan and Taiwan) manufacturing capacity.	Approximately ¥16 billion
Sputtering targets	In response to the subject of global semiconductor thin-film deposition material shortage, wholly-owned U.S. group company Tosoh SMD Inc. is periodically implementing large-scale sputtering target capacity expansion.	Approximately ¥17 billion
Bromine and flame retardants	Tosoh extracts bromine from seawater. However, amid the tightening of global environmental regulations, there are now more restrictions regarding increased production on overseas manufacturers that extract bromine from salt lakes and brine. In addition, the steady requirement for the electrification of automobiles is driving an expansion in demand for flame retardants for use in electronic substrates. The next expansion of manufacturing capacity is also under consideration.	Approximately ¥10 billion Under consideration for fiscal 2026
Zirconia powder	Demand for dental materials, as well as decorative and grinding applications, has grown steadily. Tosoh dominates the competition with its ability to provide a stable supply of high-performance, high-quality zirconia powder products. To maintain this dominance, the company will further reinforce its position as the world's leading supplier through capacity expansion.	Under consideration
Chloroprene rubber	Advanced manufacturing knowledge is sometimes a barrier to entry, effectively limiting the number of possible suppliers. Whereas market expansion is generally driven by the high demand from emerging countries. Therefore, controlling investment costs is often an issue, when taking sharply rising material and construction costs into consideration.	Under consideration
MDI splitter	Frozen storage is essential in the long-term quality retention of monomeric MDI. This kind of storage makes bulk supply to remote areas a challenge, it can, however, be accomplished by installing splitters in areas of demand overseas. Our installation of an MDI splitter in Vietnam will help to meet growing demand in Southeast Asia.	Approximately ¥15 billion

#### Major capital investment project schedule



### Improvement in Capital Efficiency

We maintain our return on equity (ROE) at a consistent level—7.0% ROE in fiscal 2023 and 7.5% ROE in fiscal 2024—even amid a severe business environment. Our ROE, however, is below the 8% to 10% generally acknowledged as acceptable.

In fiscal years 2023 and 2024, we failed to achieve our operating income targets. Factors included a decline in demand in fiscal 2023 caused by soaring raw material and fuel prices and economic stagnation and, in fiscal 2024, a delay in the recovery of semiconductor demand. Customers' inventory adjustments and plant issues also contributed. We anticipate no such factors in fiscal 2025 and predict an improved ROE. But we feel it necessary to shift to a business structure that facilitates a sustained ROE of 10% or greater.

To strengthen our earnings base, we will invest to boost

profits—primarily in advanced materials—with the launch of our next medium-term business plan onward. Although the hurdle seems high, we believe that our target for fiscal 2031 remains achievable.

The Chlor-alkali and Petrochemical Groups that are our core businesses supply products essential to maintaining and enhancing people's quality of life and the well-being of society overall. They contribute to numerous industries and support our Specialty business with raw materials and utility supply.

Our Commodity business is easily affected by overseas market conditions, so we aim to ensure that it is solidly structured. There is potential for increased demand arising from economic growth in India and in Southeast Asia. And this compels us to pursue a structure that makes possible immediate responses to market trends. In short, this means local production for local consumption depending on where demand is highest.

# Measures to Improve Our Price-to-Book Ratio

Our price-to-book ratio (PBR) is below one times. Broken down into ROE and the price-earnings ratio (PER), however, our PBR has exceeded one times whenever ROE has been high. We believe this to be among the reasons for the drop in our ROE.

Our PER has mostly remained below 10 times—well under the average of 15 times—and our view is that this can be improved. We recognize that we have not disclosed information about our growth in a way easily understood by the market and can do better in this respect. We believe that the steady implementation of our medium-term business plan's growth strategies will propel us to an ROE target of 10% or more and that heightening the market's confidence in our growth will lead to improved PER and, eventually, to a PBR higher than one times.

Our intention regarding shareholder returns is to pay continuous, stable dividends based on a consideration of earnings trends, financial situation, and funds necessary for business development. Tosoh's basic policy is to flexibly conduct share buybacks while considering factors such as its level of free cash flow.







In fiscal 2024, our business environment was adversely affected by such factors as the global economic slowdown caused by inflation and continued restrictive monetary policy, delayed demand recovery in China, and heightened geopolitical risks arising from Russian's invasion of Ukraine and from conflict in the Middle East. We nevertheless succeeded in securing a respectable profit and continue to pay progressive dividends. Tosoh, in fact, has not reduced its dividends since the 2007–2009 global financial crisis.

We expect increased profits in fiscal 2025 and have decided to raise our full-year dividend ¥5, to ¥85 per share, convinced as we are that we can maintain stable dividends going forward. Because we foresee negative free cash flow, however, we will not repurchase shares in fiscal 2025.

In preparing for all eventualities, we are implementing measures that underpin our robust financial foundation, that meet our shareholders' expectations, and that thus sustainably enhance our corporate value. We ask our stakeholders for their ongoing understanding and support as the Tosoh Group grows over the medium to long term.



# **Medium- and Long-term Management Policy**

# Vision2030

# **Balancing Growth and Decarbonization**

# **Basic Concept**

Profit Structure

Based on our corporate philosophy, "We at Tosoh constantly strive to contribute to society through the chemistry of innovation,"we will fully leverage the technologies and know-how we have cultivated over the years to provide a wide range of chemical products, thereby contributing to the realization of a sustainable society.Our medium- to long-term management policy is founded on the basic concept of achieving sustainable growth. In our Commodity business, we will focus on decarbonization measures and further deepen our Tosoh dual management approach to formulate a business structure that is less susceptible to changes in the external environment. We aim to achieve growth, or expansion of revenue and business scale, and decarbonization, or reduction of GHG emissions, in our Specialty business. Through fiscal 2031, our biggest management challenge will be to achieve both growth and decarbonization.

Reduce GHG emissions by

**30%** compared with FY2019 levels

Decarbonation



#### Profit Structure(Operating Income)



\*Specialty:Specialty Group + Functional polymers (Petrochemical Group) + Functional urethanes (Chlor-alkali Group) \*Sluggish demand for specialty products(reagents,automotive, etc.) in Q4 FY2020 and FY2021 due to the impact of COVID-19



# Measures Toward Vision 2030



### Specialty business

Generate operating income in excess of ¥100 billion by strengthening our earnings foundation.

#### **Growth investment**

- Increase capacity, expand market share in growth areas, and boost profits through new businesses and M&A activity.
- Concentrate R&D resources in the three priority fields of life sciences, electronic materials, and environment and energy.

#### Specialty business operating income trends



### • Operating income composition by business segment

Business segments	FY2031 targets	Composition ratio
BIOSCIENCE	¥25-35 billion	25%
ADVANCED MATERIALS	¥40-50 billion	40%
ORGANIC CHEMICALS	¥20-25 billion	20%
FUNCTIONAL POLYMERS FUNCTIONAL URETHANES	¥15-20 billion	15%
Total	¥100 billion	100%

### Decarbonization

Over 80% of GHG emissions are energy-based, therefore, decarbonization requires us to look at alternative power sources for our plants. To combat this challenge, Tosoh will promptly implement a host of measures toward our target of a 30% reduction in emissions by fiscal 2031 (compared with fiscal 2019) while also considering the Japanese government's energy policy, technological innovation trends, and the distribution of carbon-free fuels.

#### Fuel conversion (reduction rate: 22%)

- Reduce coal consumption by increasing the biomass co-firing ratio in existing boilers
- Introduce boilers capable of biomass-only combustion

#### Invest in energy-saving measures (reduction rate: 5%)

- Introduce state-of-the-art turbines
- Retrofit electrolyzer to save energy
- Install additional gas turbine for energy efficiency

### Convert CO2 into raw material (reduction rate: 3%)

- Convert CO<sub>2</sub> feedstock at carbon monoxide plant
- Synthesize urethane raw materials from power plant exhaust gas CO<sub>2</sub>

### 30% Reduction in GHG Emissions



# Medium-term Business Plan (FY2023-2025)

# Medium-term Business Plan Progress

In fiscal 2024, the second year of Tosoh's three-year medium-term business plan, operating income totaled ¥79.8 billion, far short of the ¥150 billion targeted in the plan.

Although raw material and fuel prices have softened, contrary to the assumptions on which the plan is based, we do not expect a rapid recovery in our business environment in fiscal 2025, the plan's final year. This is because China's economic slump and declining demand for semiconductors have deteriorated the product market. Challenging business environment notwithstanding, we will make every effort to achieve the plan's profit targets.

Our capital investment is expected to remain at a level above the plan's initial three-year outlay of ¥200 billion. Unfavorable business environment or not, Tosoh intends to steadily invest in its growth.

We have resolved in our Commodity business to install an MDI splitter in Vietnam, and we will move strategically toward local production for local consumption in such growing

# **Basic Management Policy**

- Focus on expanding Specialty business earnings while maintaining the dual management approach as the basis of our operations
- Commodity Business Achieve an optimal combination of business enhancement and CO<sub>2</sub> emission reduction, and maintain a stable supply by implementing cost sharing and price pass-on when necessary.
- Specialty Business Expand earnings foundation by investing in capacity expansion in comparatively well-positioned businesses, focusing management resources on growth areas, and cultivating new businesses.

markets. Our Specialty business will see us bolster production capacities for the sputtering target, silica glass, and fabricated products used in semiconductor manufacturing. This will prepare us for growth when semiconductor demand recovers. We will likewise seek to capitalize on growing demand by augmenting our production capacities for the separation and purification media used in the R&D and manufacturing of products such as biopharmaceuticals.

In parallel with our investments in growth, we are investing to mitigate our CO<sup>2</sup> emissions. We are constructing a circulating fluidized bed boiler and a CO<sup>2</sup> feedstock conversion facility in the isocyanate production process. As such, we continue to strive to balance growth and decarbon-ization.

- Make a concerted effort to reduce CO<sub>2</sub> emissions and effectively utilize CO<sub>2</sub> Promote decarbonization in every respect and fulfill our corporate responsibility to help realize a sustainable society.
- 3. Invest aggressively based on sound financial positioning
- The move toward decarbonization will change the business environment dramatically, so we see this as an opportunity to invest in a timely, strategic manner in preparation for the future.
- 4. Reinforce safety infrastructure and establish and deepen a safety culture for everyone. Continue efforts to reinforce safety infrastructure and establish and deepen the safety culture.

# **Consolidated Results**

		FY2023	FY2024	FY2	025
		Results	Results	Targets	Forecast
Net sales		¥1,064.4 billion	¥1,005.6 billion	¥1,160.0 billion	¥1,090.0 billion
Operating income		¥74.6 billion	¥79.8 billion	¥150.0 billion	¥100.0 billion
Operating income ratio		7.0%	7.9%	<b>10%</b> or more	9.2%
ROE		7.0%	7.5%	<b>10%</b> or more	_
ନ୍ତୁ US Dollar		¥135.5/\$1	¥144.6/\$1	¥125.0/\$1	¥145.0/\$1
umpt	Euro	¥141.0/€	¥156.8/€	¥135.0/€	¥158.0/€
ions	Naphtha	¥76,600/kl	¥69,100/kl	¥75,000/kl	¥75,000/kl

# Efforts Toward Decarbonization

- Implement specific measures to achieve a 30% reduction in CO<sub>2</sub> emissions by FY2031 (compared with FY2019)
- A 30% reduction with current technology will chiefly be due to the conversion of wood-based biomass as fuel for power generation facilities; diversify fuels by introducing biomass power generation facilities with the view of fuel diversification.
- Chemical manufacturers are on a mission to convert CO<sub>2</sub> feedstock; they have elevated it in terms of priority, and are strengthening their efforts to encourage improvement.

#### Major initiatives

- Construction of a new black pellet production facility
- Undertook the construction of a new biomass power generation facility (scheduled for completion in April 2026)
- Conducted a demonstration test of CO<sub>2</sub> recovery and conversion to feedstock
- Participated in projects: Afforestation in a joint conservation project for the production of wood for use as wood-based biomass in Shunan City, Yamaguchi Prefecture, and in Japan's New Energy and Industrial Technology Development Organization (NEDO) Green Innovation Fund project as a member of the Matsuri Project

# Investment and Lending Plan

- FY2023–2025 three-year cumulative investment = ¥200 billion in capital investment + M&A, additional support for decarbonization
- Invest aggressively with a focus on Specialty, including capital investment of ¥30 billion for CO<sub>2</sub> reduction.
- M&A exploration focused on biotechnology-related businesses

Estimated cumulative investment (FY2023–2025): ¥224.6 billion

- Capacity expansion investment
- Bromine production facility
- Separation and purification media production facilities
- Sputtering target production facilities
- Silica glass material and fabricated quartzware facilities
- Investment in CO<sub>2</sub> reduction
- Biomass power generation facilities
- CO2 recovery and raw material conversion equipment
- Normal investment
- Overseas installation of MDI splitter
- Tokyo Research Center

# Cumulative three-year capital investment for fiscal 2023–2025



\*Investment amount is based on payment.

# R&D

- Concentrate R&D resources in the three main priority fields of life sciences, electronic materials, and environment and energy.
- Accelerate R&D by effectively leveraging research infrastructure, using MI technology to improve the efficiency of material design, promoting open innovation, and acquiring cutting-edge technologies through means such as funds allocated by the company.

Major initiatives
Details: R&D and Intellectual Property P.43-45

# Safety Foundation and Culture

• Continue existing and develop new initiatives toward reinforcing the safety infrastructure and fostering a culture of safety.

#### **Major initiatives**

- Smart Security Promotion: Applying digital transformation (DX) to operations, safety, and facility management
- Upgraded safety education: Further enhancement of simulators and other educational facilities, hands-on learning devices, and hazard simulation training.
- Construction system reinforcement: Cooperating with partner companies to strengthen the safety management structure.
- Safety technology formulation: Upgrading risk assessment and training safety technology specialists.

# Shareholder Returns

- Our basic policy is to pay stable dividends, and we will also strive to use share buybacks to improve capital efficiency.
- Targeting a dividend payout ratio of 30%
- We will flexibly implement share buybacks, taking into account factors such as the level of free cash flow.

Shareholder Returns Dividend per share - Dividend payout ratio (yen) (%) 90 60 80 60 40 20 30 2020 2021 2022 2023 2024 2025 (FY) forecast

\* Repurchased ¥10 billion of treasury stock in FY2021

# **Climate Change Issue**

Climate change is one of the world's most pressing societal issues. The Tosoh Group recognizes that contributing to the reduction of GHG emissions generated through its business activities is the single most important issue for the company's medium- to long-term growth. As such, the company is promoting the reduction of  $CO_2$  emissions through energy savings and fuel conversion and investigations into technologies so  $CO_2$  can be managed more effectively.

In response to the Japanese government's 2050 carbon-neutral declaration, the company established a new groupwide GHG emission reduction policy in 2022. We will promptly implement a host of measures toward realizing a decarbonized society while considering Japan's energy policy trends, technological innovation, and the distribution of carbon-free fuels.

In November 2019, Tosoh declared its support for the Task Force for Climate-Related Financial Disclosures (TCFD<sup>\*1</sup>) recommendations. (TCFD dissolved and succeeded by IFRS S2<sup>\*2</sup>) The company will continue disclosing information on Tosoh Group initiatives.

- \*1 An organization established by the Financial Stability Board to provide a framework for valuable information disclosure useful for understanding climate-related corporate risks and opportunities. In June 2017, the TCFD published recommendations related to items of information disclosure.
- \*2 Climate-related disclosure items in the International Sustainability Standards Board (ISSB) Sustainability Disclosure Standards.

# Information Disclosure Based on TCFD Recommendations

# Governance

Tosoh's CSR Committee has identified the response to climate change issues as critical to the CSR mission, and specific measures are being promoted mainly by the CO<sub>2</sub> Reduction and Utilization Promotion Committee and its Central Energy Management Committee. The CO<sub>2</sub> Reduction and Utilization Promotion Committee plays a pivotal role in

collecting information and data on social trends, regulatory requirements, and climate change-related risk management and in sharing this information with Group companies and internally. Matters related to these activities are reported to the Board of Directors for approval when appropriate, and instructions are received when action is required.

#### **Promotional Structure**

	Board of Directors
Reporting Proposal	
CSR Committee	Reporting Proposal
Chairperson : President Committee members : Executive vice presidents level and above, Senior general managers(Complexes),group presidents, chairpersons of each committee, and general managers of head office administrative departments Secretariat : CSR Promotion	CO2 Reduction and Utilization Promotion Committee         Central Energy Management Committee           Chairperson : President Committee members : Senior general managers(Nanyo and Yokkaichi Complexes), group presidents, and general managers of head office administrative departments         Catral Energy Management Committee           Secretariat : CO2 Reduction and Utilization Secretariat : CO2 Reduction and Utilization         Chairperson : General manager, CO2 Reduction and Utilization Strategy (Energy Management Supervisor) Secretariat : CO2 Reduction and Utilization
Complexes,head office administration, etc. Compliance Committee	CO <sub>2</sub> Reduction and Utilization Strategy
Export Control Committee	Nanyo Complex     CO <sub>2</sub> Reduction and Utilization Strategy Task Force Nanyo
Fair Trade Compliance Committee	Vokkaichi Complex – CO <sub>2</sub> Reduction and Utilization Strategy Task Force Yokkaichi
CO <sub>2</sub> Reduction and Utilization Promotion Committee	
Cybersecurity Committee	
CSR Promotion Liaison Meeting	



Yutaka Shiokawa Vice President General Manager, CO<sub>2</sub> Reduction and Utilization Strategy Strategies

Conducting scenario analysis will aid the Tosoh Group in ascertaining the impact of climate change-related risks and opportunities, we can then reflect any influential results in our medium- and long-term business plans. The purpose is to formulate strategies to further promote the provision of products, technologies, and services that contribute to solving social issues to realize a sustainable society.

We conducted an analysis based on two temperature rise scenarios—the World Energy Outlook (WEO) NZE 2050 +1.5°C scenario and the Intergovernmental Panel on Climate Change's

#### Transition/physical risk

Pick factors	Financial	Qualitative evaluation	high relevance		e	Response required(  ; in progress)	
RISK Idelois	impact factors	*Red frame: Items that significantly affect Tosoh's business operations	Chlor-alkali	Petrochemical	Specialty	kesponse required (	
1.5°C(2050 carbon neutral(CN))scenario		)					
Strengthening of GHG	Increased fossil fuel-derived costs due to higher carbon pricing and other factors	<ul> <li>Increased operating costs commensurate with the carbon tax due to delayed decarbonization efforts on the part of the company</li> <li>*Quantitative Assessment 1</li> </ul>	0	0	0	<ul> <li>Apply internal carbon pricing in investment decisions(promote investment in CO<sub>2</sub> reduction, assess business feasibility when considering the increase in CO<sub>2</sub> emissions which are driven by capacity expansion)</li> <li>Investigate new technologies for the conversion from fossil fuels of in-house thermal power generation facilities, which</li> </ul>	
emission regulations	Increased energy costs due to increased renewable energy source utilization ratio	<ul> <li>Increased operating costs owing to expansion of renewable energy ratio in accordance with customer and government requirements</li> </ul>	0		0	account for about 80% of the company's total GHG emissions →Diversify decarbonized fuels →Consider future fuel mixes, the impact on operating costs, application of subsidies, when making investment decisions →Determine whether to invest in biomass power generation facilities(-500,000 t- CO <sub>2</sub> )	
Transition to decarbonization technologies	Increased capital investment and fuel expenses increased due to the fuel conversion of in-house thermal power generation facilities	Increased capital investment costs were incurred at the decarbonizing power generation facilities *Quantitative Assessment 2 Increased fuel costs were incurred owing to decarbonization of power generation facilities	0	0	0	<ul> <li>Efficiently execute the fuel conversion of private thermal power generation facilities, implement carbon-neutral technology through coordination between complexes</li> <li>Investigation into the creation of a mechanism to appropriately pass CO<sub>2</sub> reduction measure costs in collaboration with the rule formation working group of the Ministry of Economy, Trade and Industry's(METI)GX League</li> </ul>	
Changes in raw	Increased raw material costs in line with heightened demand for bio-based raw materials	<ul> <li>Increased procurement costs owing to an insufficient supply capacity of environmentally friendly bio feedstock such as naphtha and benzene</li> </ul>	0	0	0	Bio-based raw material products; Identify demand, diversify sources of raw material procurement	
material costs	Increased primary fuel costs due to factors such as higher carbon pricing	Passing on cost increases related to primary fuel suppliers' efforts toward decarbonization	0	0	0	related reduction plan	
	Decrease in sales of GHG-intensive products due to increased recognition of low-carbon alternatives and transition to a circular economy	<ul> <li>Decrease in sales of energy- intensive products and those products in high demand given the transition to a circular economy</li> </ul>	0	0	0	<ul> <li>Calculate and disclose CFP by product in response to requests from customers</li> <li>Establish and acquire certification for a carbon-free product supply system</li> <li>Develop circular economy-compatible materials, recycling systems</li> </ul>	
Changes in Consumer behavior	Decrease in sales of gasoline vehicle-related products sue to the growing EV market	Decrease in sales of gasoline internal combustion engine-related materials		0		<ul> <li>Monitor regulatory trends in various countries, including synthetic fuels, and develop and launch</li> </ul>	
	Decrease in sales of diesel vehicle-related products sue to the growing EV market	<ul> <li>Maintain sales of diesel internal combustion engine–related materials (raw materials for exhaust gas purification catalysts, etc.) until around 2035</li> </ul>			0	<ul> <li>new products in a timely manner</li> <li>Leverage superior catalyst technology in developing new applications</li> </ul>	
4°C(status quo)so	enario						
		Severe damage at domestic plants caused by flooding, and storm surges *Quantitative Assessment 3	0	0	0	<ul> <li>Implement business continuity/BCP)measures in</li> </ul>	
	Increased losses	Damage at a Japanese production site caused by strong winds *Quantitative Assessment 3	0	0	0	<ul> <li>Implements backnows of the environment</li> <li>→Tosoh has implemented damage control measures primarily for major electrical equipment, to prevent or mitigate damage resulting from severe weather</li> </ul>	
Intensification of abnormal weather	caused by flooding, and supply chain disruptions resulting from unexpectedly severe wind and flood	<ul> <li>Reduction in operations at downstream plants in the supply chain(chlor-alkali plants abroad)due to closure of domestic plants</li> </ul>	0			<ul> <li>Implementing measures for safe shutdown and early restoration based on the assumption of severe flooding up to a depth of 1.25m in Volkiaichi where aertheurice and taurami risk are</li> </ul>	
	severe wind and flood damage	<ul> <li>Reduced plant operations due to shutdowns at the manufacturing facilities of overseas sites, customers, and raw material suppliers</li> <li>"Quantitative Assessment 4</li> </ul>		0		<ul> <li>Review raw material and product inventory capacity, and Establish product bases</li> <li>Reinforce BCP response across the breadth of the supply chain</li> </ul>	
		<ul> <li>Reduced plant operations and increased logistics costs due to vessel docking restrictions and rerouting</li> </ul>	0	0	0	Suppry Chain	
Increase in average temperature	Increase in various operating costs due to rising temperatures	<ul> <li>Reduced work efficiency and prolonged downtime due to heightened risk of heat stroke during routine plant repair work</li> <li>Reduction in production capacity due to insufficient cooling capacity equipment at plants</li> </ul>	0	0	0	<ul> <li>Strengthening of the health management system relevant to actual work scenarios</li> <li>Review of plant design standards</li> </ul>	

(IPCC) SSP5-8.5 +4°C scenario—as well as qualitative and quantitative assessment of transition and physical risk and business opportunities for the 2030 and 2050 time horizons. We also considered the entire supply chain and assessed any foreseeable impact on the Tosoh Group.

In fiscal 2024, we conducted a scenario analysis of the Chlor-alkali Group, which has the highest GHG emissions of our four business groups. We are adding the Petrochemical and Specialty Groups to the scenario analysis in fiscal 2025.

#### Climate Change-Related Business Opportunities

Opportunity	Financial	Qualitative assessment	Groups with high relevance			Posponso required( . in progress)	
factors	impact factors	* Red frame: Items that significantly affect Tosoh's business operations	Chlor-alkali Petrochemical Specialty		Specialty	Response required (	
1.5°C(2050 carbo	on neutral(CN))scenario						
	Growth in business opportunities for recycling-related technologies, given the transition to a circular economy	Environmental contribution through the establishment of composite plastic material and chemical recycling technology		0		<ul> <li>Bolster development of functional products suitable for recycling</li> <li>Establish a recycling chain in cooperation with mining industries</li> </ul>	
	Growth in business opportunities for CO <sub>2</sub> recovery and effective utilization of technology in line with an increased demand for carbon capture, utilization, and storage (CCUS)	<ul> <li>Respond to CCUS demands through the establishment of CO<sub>2</sub> separation and recovery technology using proprietary amine absorbers and separation membranes</li> <li>Boost sales of CO<sub>2</sub> separation materials such as amine absorbers and zeolite</li> </ul>			0	<ul> <li>Promote CCUS-related R&amp;D</li> <li>Strengthen product lineup of CO<sub>2</sub> recovery technologies, including hardware</li> <li>Accumulate CO<sub>2</sub> separation and recovery know-how through demonstrations of CO<sub>2</sub> feedstock conversion at the Nanyo carbon monoxide plant(investment decision)</li> </ul>	
	Increased demand for products derived from CO <sup>2</sup> which is in line with growth in CCUS demand	<ul> <li>Increase in sales of CO<sub>2</sub>-derived urethane products</li> <li>Increase in sales of microalgae-derived urethane products</li> </ul>	0			<ul> <li>Establish a stable supply system to satisfy any demand requirements</li> <li>Heighten market recognition of CO<sub>2</sub>-derived chemicals, and create a mechanism as a greer commodity for appropriate price pass-on</li> </ul>	
Increase in demand for	Increase sales of products related to electric vehicles (EVs) and semiconductors in line with market expansion	<ul> <li>Increase sales of basic chemicals required for manufacturing EV-related components because of heightened demand for storage batteries and other products</li> </ul>	0	0			
contributing products and technologies		Increase sales of basic chemicals that contribute to lower automobile fuel consumption		0		Accelerate research and development of EV-related products     Ensure supply structure to satisfy deman	
		<ul> <li>Increase sales of ceramic raw materials required for manufacturing components for fuel cell vehicles</li> </ul>			0		
		Increase sales of semiconductor-related products	0	0	0		
	Increased sales of electrolytic technology -based products due to	<ul> <li>Contribute to CO<sub>2</sub> emission reduction through joint development of energy-saving electrolyzers</li> <li>Increase in sales through the application of energy-saving electrode technology to water electrolysis</li> </ul>	0			<ul> <li>Further develop and disseminate energy-saving electrolyzers</li> <li>Accelerate the development of</li> </ul>	
	growing demand for the technology	<ul> <li>Increased sales due to high value-added byproduct hydrogen</li> </ul>		0		<ul> <li>Development of hydrogen derivatives, formulation of business models</li> </ul>	
		<ul> <li>Increase sales of water electrolysis component raw materials</li> </ul>			0		
	Growing demand for building materials related to energy efficiency in line with the increased prevalence of energy-efficient buildings (ZEB, ZEH)	Increase sales of building materials with superior thermal insulation performance and of solar cell materials (Reference: Contribution of Tosoh products to the environment)	0	0		<ul> <li>Stable supply of building materials that contribute to carbon neutrality</li> </ul>	
l°C(status quo)	scenario						
Intensification	Heightened demand for infrastructure-related products in line with the intensification of abnormal weather events	<ul> <li>Increased sales of building materials for infrastructure facility reinforcement in the interest of disaster prevention</li> </ul>	0			Investigate needs domestically and abroad, and ensure stable product supp	
weather	Growing demand for products related to infectious diseases in line with proliferation	<ul> <li>Increase in sales of diagnostic equipment and reagents for infectious diseases</li> <li>Increase in sales of chlorine disinfectants</li> </ul>			0	<ul> <li>Continue R&amp;D and ensure a stable supply structure and BCP measures an in place</li> </ul>	

#### Assessment of Tosoh Group Overall

The Tosoh Group's GHG emissions are currently among the highest in the chemical industry, and reducing these emissions is considered essential. We have already launched specific measures related to fuel conversion at our in-house thermal power generation facilities-which account for about 80% of Tosoh's GHG emissions—and renewable energy procurement, which are vital initiatives. Meanwhile, with regard to business opportunities, we identified potential risks and opportunities spanning a broad range of business domains in both the Commodity and Specialty businesses. Approaching the climate change issue as a good opportunity, we will focus our attention on developing technologies and products for the future from a broader perspective.

#### Assessments of the Chlor-alkali, Petrochemical, and **Specialty Groups**

Our assessment of the Chlor-alkali Group reaffirms that rising energy costs have the most significant impact on its manufacturing given this business's inherently high-power consumption. Tosoh recognizes the importance of developing mechanisms to reduce CO2 emissions during production while managing increasing energy costs by incorporating some of

the additional expenses of low-carbon production and decarbonization into product pricing. Since the Chlor-alkali Group's products primarily consist of basic materials with a wide range of applications, our analysis remains neutral at this stage, balancing the risks and opportunities associated with climate change

The Petrochemical Group's business centers on the naphtha cracking furnace at the Yokkaichi Complex. High CO2 emissions from using by-product gas as fuel remain a challenge, but the Petrochemical Group is exploring solutions. such as converting CO<sub>2</sub> into hydrogen and ammonia and finding better uses for by-product gas. Similar to the Chlor-alkali Group, most of the Petrochemical Group's products are basic materials. Our analysis at this stage remains balanced, without leaning toward either risks or opportunities.

The Specialty Group's GHG emissions are low compared with its sales. As with our other product groups, however, it faces risks, including rising energy costs. Our expectations for the Specialty Group are nonetheless higher than for the other product groups because we anticipate growth in EVs, digital markets, CO2 capture-related products, and more.

# **Risk Management**

Utilizing information on societal trends, and the status of consultations and discussions with the Japanese government, any potential risks posed by climate change issues are assessed through the CSR Committee by each division under its jurisdiction.

The CO<sub>2</sub> Reduction and Utilization Promotion Committee is responsible for comprehensive risk management for the reduction of GHG emissions and the effective use of CO2. Tosoh calculates and evaluates a product's hypothetical profit or loss and drafts countermeasures based on GHG emissions by business and plant and the presumed carbon tax.

# Indicators and Targets

#### 1) GHG emission volume

In response to the October 2020 declaration by the Japanese government of carbon neutrality by 2050 and the renewed GHG emissions reduction target for fiscal 2031, Tosoh established a new groupwide GHG emissions reduction policy in January 2022.

- Reduce Scope 1 + 2 GHG emissions by 30% in fiscal 2031 compared with fiscal 2019
- Address the challenge of achieving carbon neutrality by 2050

#### **Tosoh Group GHG Emissions Reduction Plan**

(kilotons-CO<sub>2</sub>e) 10.000 Fuel conversion for 8,416 power generation Overseas Energy-saving group companies investment CO<sub>2</sub> feedstock Domestic group companies conversion (22%) (5%) 5,000 (3%) (α) Nonconsolidated 2019 2024 (base year)

\*Review due to revisions to the Act on the Rational Use of Energy and to the Act on Promotion of Global Warming Countermeasures

# 2) Disclosure in accordance with climate-related indicator categories

The essential items are as follows.

### Capital allocation

Tosoh plans to allocate ¥120 billion to climate change-related investment by fiscal 2031 and ¥60 billion by fiscal 2027 (based on approved investment amounts). Maior investments

1 Construction of the biomass power generation facility at the Nanyo Complex:

 $\rightarrow$  CO<sub>2</sub> emission reduction of approx. 500,000 tons

Each division that manages business operation-related risk primarily identifies risks only associated with their own division, they assess the potential financial impact, and report their findings to the president. Risk management in day-to-day business activities is managed independently and overseen by the specific director in charge. Finally, the report is submitted to the Board of Directors for approval and further instructions. Moreover, we apply internal carbon pricing when formulating capital investment plans. Tosoh as a responsible company is careful to not only consider profitability, but also the environmental impact.





2 CO2 recovery and raw material use at the carbon monoxide (CO) production facility at the Nanyo Complex:

 $\rightarrow$  CO<sub>2</sub> emission reduction of approx. 40,000 tons

### Internal carbon pricing

Tosoh applies an internal carbon pricing system (¥6,000 /ton-CO2) to discern the impact of capital investment on GHG emissions. Internal carbon pricing is also applied in the aforementioned investment decision process.

### Compensation

In July 2024, we introduced performance-based compensation using as the performance measure the degree to which KPIs for CSR issues are achieved.

# Message from the Head of Corporate Social Responsibility

Address CSR issues and Contribute to the Realization of a Sustainable Society



# CSR as a Core Management Pursuit

Tosoh positions CSR at the core of its management and focuses on activities related to the environment, society, and governance with the objective of realizing a sustainable society. These activities are closely linked to our business strategy and, as such, are also critical to our efforts to achieve sustainable corporate growth.

The Tosoh Group considers it vital, as a chemical manufacturer, to contribute to society through safe, stable production, steady supply, an emphasis on compliance, and sustainable product development. These are important CSR issues in themselves, and I recognize that consistently addressing each of them is my mission.

# **CSR Activity Reviews**

### Important CSR Issues

We review our principal CSR issues throughout the period of our medium-term business plans. Fiscal 2024 was the penultimate year of our fiscal 2023–2025 plan, and it saw us continue to promote the activities defined in the plan. Effective July 2024, in fact, we have linked executive compensation to the degree key performance indicators (KPI) on these activities were attained in the preceding fiscal year. We have done so with the objective of employing compensation incentives to enhance corporate value and thereby profit sharing with shareholders and to further our contributions to establishing a sustainable society.

In fiscal 2024, we did not achieve some of the targets related to the nine CSR issues declared important in the plan. Most significantly, a Tosoh Group company in Japan suffered a serious occupational accident. This is disappointing, given our efforts on safety since the 2011 explosion and fire at one of our domestic VCM plants. To make matters worse, we also experienced various safety incidents and quality issues deemed serious by Tosoh standards. We therefore dedicate ourselves to work ever harder to raise the profiles and effectiveness of the safety assessment and quality management systems at our Nanyo and Yokkaichi Complexes and at our domestic companies.

Our focus on environmental issues, meanwhile, saw us make further investment decisions on greenhouse gas (GHG)

emission reduction themes. The Tosoh Group's goal is to have reduced its GHG emissions 30% by fiscal 2031 compared with fiscal 2019. And we are pursuing that target.

Improved corporate governance is likewise a critical CSR issue within our medium-term business plan. In fiscal 2024, we thus undertook to revitalize domestic and overseas group company compliance activities.

We also further addressed respect for human rights. This saw us revise our code of conduct and our CSR procurement guidelines in accordance with the Tosoh Group Human Rights Policy. We are performing due diligence on human rights in our operations and began in fiscal 2024 to identify potential risks to those rights in each of our business activities.

#### Social Contributions through Business

In fiscal 2023, we launched a Social Issues Solution certification system, under which we certified seven products and technologies in fiscal 2024. We continue as such to strive to contribute to society through our business activities.

Such of Tosoh's products as caustic soda, PVC resin, and isocyanate (urethane) are indispensable to industry functions and people's lives. Given the importance of these and other of our products, we systematically detailed each product's social and environmental impacts and benefits in fiscal 2024.

# **Future Initiatives**

Fiscal 2025 is a crucial year to review what CSR issues will be important in our next medium-term business plan.

Our CSR Promotion Liaison Meeting is the forum for groupwide discussions to define those issues and related KPIs and targets. Its participants include employees from our headquarters, business divisions, and complexes.

We are committed to the sustainable growth of society and the Tosoh Group. To that end, we are aware of how essential it is to earn our stakeholders' trust.

# **Progress on Important CSR Issues**

The Tosoh Group has established specific KPIs and targets for key CSR issues. We continuously strive to achieve these goals.

Recognizing that these efforts contribute to both society's sustainable development and the Tosoh Group's long-term growth, we

have positioned CSR activities at the core of our management structure and are making a groupwide effort.

Assessment Achi				Assessment Achieved O In progre	ess $\circ$ Not achieved $ riangle$				
Important CSR	Objectives for	KPIs and targets		EV2022 results	FY2024 results				
Issues	addressing issues			r 12025 lesuits	Results Assessment		Results of initiatives	to society	
		Number of projects commercialized	Complete at least 110% when compared to the previous Medium-term Business Plan by the end of fiscal 2025	In progress	In progress	0	•Formulate a plan for commercialization, conduct periodic progress checks, and implement countermeasures		
products and	products and technologies that	Number of submissions	30 or more/year	69	51	0	<ul> <li>Encourage proactive contribution to Tosoh's research and technical reports, as well as recommendations for external presentations</li> </ul>	<ul> <li>Realization of a sustainable and</li> </ul>	
technologies to resolve social	support the environment and quality of life and deliver new	Number of news releases	Two or more/year	2	4	O	Published in the American Journal of Chemistry (research results of environmentally friendly zirconia powder)     Adopted as a NEDO-commissioned project (R&D related to water electrolysis)	prosperous	
135003	Value	Number of patent applications	105% or more of the previous year's level	93%	117%	0	<ul> <li>Expanding the range of topics for which strategic applications are filed</li> </ul>		
		Utilization Level of Materials Informatics (MI)	3 or higher(5-point scale)	2.8	3.0	0	Promote utilization at MI Center (established in April 2023) and research laboratories		
Climate change response	Respond to reduction of GHG emissions, a key cause of global warming	Tosoh Group GHG emissions	Reduce by 30% in FY2031 compared to FY2019	In progress	In progress	0	<ul> <li>Make decisions regarding investments in major GHG emission reduction themes</li> <li>Install solar power generation equipment (domestic group companies)</li> </ul>	Preservation of	
Strengthening of environmental preservation activities	Appropriately manage and enhance the environmental impact resulting from the Tosoh Group's business activities	Major environmental accidents	Zero	Zero	Zero	O	<ul> <li>Ensure compliance with voluntary control values</li> <li>Promote environmental education</li> <li>Cooperate with group companies</li> </ul>	the Earth's environment	
Safe and stable ensuring the safety of all human resources—the company's most		Major security accidents	Zero	Zero	2 (domestic group companies)		<ul> <li>Ship (empty vessel) stranding accident: Introduce unmanned condition warning system on ship's bridge</li> <li>Accident involving combustible gas leakage and explosion: Review group companies' process safety assessment system</li> </ul>		
operation	valuable assets—as well as safe production and stable supply	Major industrial accidents	Zero	Zero	1 (domestic group companies)	$\bigtriangleup$	(•Accident involving combustible gas leakage and explosion: See above)	•Stakeholder safety and health	
Product safety and quality management Promote appropriate management, provide information on substances, and offer products of stable quality.	Major quality issues	Zero	1	1		<ul> <li>Cooperate in a cross-departmental manner to reduce product complaints</li> <li>Strengthen supply chain management: Outsource production, audit raw material suppliers, etc.</li> <li>Conduct quality control survey of Tosoh and its group companies (ongoing)</li> </ul>	Stable supply of products		
	products of stable quality.	Occurrence of serious nonconformities (chemicals)	Zero	Zero	Zero	O	<ul> <li>Ensure implementation of risk assessment related to chemical substances</li> <li>Comply with the revised Industrial Safety and Health Act</li> <li>Publicize newly designated substances: Systematize poisonous and deleterious substance ledgers for products sold</li> </ul>		
	Foster a comfortable work	Proportion of male employees taking childcare leave	FY2023:50% or more FY2024-:90% or more	85.5%	70.4%	$\bigtriangleup$	<ul> <li>Send letters of encouragement to eligible persons</li> <li>Publish testimonials from those who have taken leave in the company newsletter</li> <li>Explain childcare leave system and purpose to newly appointed executives</li> </ul>		
	environment that encourages the	Proportion of taking annual paid leave (all employees)	FY2024:80% or more	85.0%	89.5%	0	Promote use of leave through mid-year feedback on status of use		
Diversity and inclusion	growth of a self-reliant work force —the company's most valuable asset—and enables employees to fully demonstrate their capabilities while balancing their work and private life	Proportion of women hired for career-track positions	In fiscal 2025:20% or more	29.9%	24.2%	O	<ul> <li>Participate in seminars oriented toward female job seekers to promote Tosoh</li> <li>Increase the number of female recruiters</li> </ul>	•Utilize diverse human resources	
		Proportion of women in executive positions	In fiscal 2025:2.6% or more	In progress	In progress	0	<ul> <li>Expand career-track job opportunities for female employees: Assign to manufacturing, facility management, and sales departments</li> <li>Provide continuous support through a career counseling system</li> </ul>		
		Proportion of employees using career counseling	In fiscal 2025:70% or more	In progress	In progress	0	Provide opportunities for participants in tier-based training to attend counseling		
	Aim for stable procurement of	Results of 1st CSR Survey	Follow up	Follow-up completed	(Completed in FY2023)	) ()	-		
Strengthening of CSR supply chain	raw materials by fulfilling its responsibility as a member of the supply chain by understanding	2nd CSR Survey	Review content	(Initiatives since FY2024)	In progress	0	<ul> <li>Completed preparation of new CSR survey form; began requesting responses from target suppliers</li> </ul>	•Formulation of a sustainable	
management	CSR initiatives and requesting corrective action when required	Review new suppliers	Implement review	(Initiatives since FY2024)	In progress	0	Distributed CSR survey sheets to new suppliers	supply chain	
Strengthening of compliance	Aim to create a workplace that	Number of serious legal violations	Zero	Zero	Zero		<ul> <li>Raise compliance awareness and foster understanding to preclude violations</li> <li>Utilize questionnaires and operate a consultation service to prevent compliance violations and ensure early correction</li> </ul>		
	employees regard as a free and open environment and that has the trust of society	Ensure compliance with laws and regulations and ensure that corporate ethics education activities are spread throughout the entire Group	-	Implemented	Implemented	0	<ul> <li>Activate compliance activities at domestic group companies</li> <li>Export control: Establish new department head, provide education to Tosoh and domestic group companies</li> <li>Comply with Antimonopoly Act: Investigate implementation status at group companies and comply with the Subcontract Act</li> </ul>	•Realize a healthy	
	Committee interest for a l	Human rights policy	Develop a human rights policy	Formulation completed	(formulated)	0	<ul> <li>Action taken following formulation of human rights policy: Completed revision of code of conduct and procurement quidelines</li> </ul>	and well-ordered	
Respect for human	standards for corporations to fulfill the responsibility to respect	Human rights education	Implement human rights education	Implemented	Implemented	0	<ul> <li>Human rights education in tier-based training programs, publication of relevant articles in company newsletter</li> <li>Conducted internal questionnaire to inform employees of human rights policy</li> </ul>	society	
rights	human rights that are recognized internationally	Human rights due diligence (DD)	Prepare human rights due diligence response	(Initiatives since FY2024)	In progress	0	<ul> <li>Determined priority targets for fact-finding surveys among potential human rights risks</li> <li>Conducted human rights seminar for Tosoh's officers and presidents of domestic group companies</li> </ul>		

# **Social Impact of Essential Products**

We contribute to society's sustainable development by providing chemical products in alignment with our corporate philosophy: "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." To further our contribution, we have organized our essential products by social impact. This aids us in identifying and implementing initiatives to increase the value we deliver to society.

# **Essential Products**

Essential products are indispensable to industry and everyday life and difficult to substitute because of their unique properties. Examples include caustic soda; vinyl chloride monomer (VCM), a precursor to PVC resin; and isocyanate, a raw material for polyurethane.



### **Application:**

Caustic soda is used in myriad fields, including chemical fiber, paper and pulp, and aluminum manufacturing.



Application: VCM is the raw material for PVC resin, which is processed into pipes, film, sheets and more



Isocyanate is a polyurethane material used in synthetic fibers, heat insulators, paints adhesives and more

# **Background of Social Impact Assessment**

Essential products are critical for society's sustainable development. As basic chemicals used upstream in the supply chain, however, their direct value is not immediately visible. A full understanding of the value they provide requires an assessment of their place in the downstream supply chain. Tosoh has undertaken just such an assessment to define and enhance the value of its essential products for society.

# Method of Assessing Social Impact



We evaluated the social impact through the creation of a logic model. As the framework for the logic model, we organized downstream applications (materials and products manufactured using Tosoh products) as outputs and identified the outcomes of those applications and their impact on society. Furthermore, we began quantifying the outcomes and impacts for some key applications.

### **Definition of terms**

Output: Applications downstream for products and services provided through business activities Outcome: Stakeholder benefits and effects resulting from the downstream use of products and services Impact: Value provided to the economy, to society, and to the environment because of continuous outcomes

# Tosoh's Management Resources and Strengths Support the Supply of Essential Products

Tosoh's strengths lie in its ability to manufacture at low cost and with minimal environmental impact, to deliver a stable supply of products, and to sustainably develop products. These strengths owe themselves to the company's establishment of a vinyl isocyanate chain and dual management structure.



### Essential products are used upstream in the manufacturing of materials and products and have a broad range of downstream applications. Our first step in visualizing their social impact is to identify their outputs. We then determine their corresponding results and impacts and organize them within the logic model as illustrated in the accompanying figure. Given the extensive variety of applications for our products and materials, we are here highlighting only those of our materials and products with the most significant uses and social impacts.

### Caustic soda

The output, products or applications that are derived from caustic soda, spans a wide range of fields, including mobility, energy, healthcare, and daily goods. While its production process requires a large amount of energy, we also contribute to reducing CO<sub>2</sub> emissions through results such as vehicle weight reduction, the promotion of electrification, and the widespread use of renewable energy.



# Dual Management

4 ) Financial foundation

Manage product portfolio comprising basic chemicals, for which demand is stable, and functional chemicals, for which demand fluctuates but profitability is high

Established a stable financial foundation befitting a leading company

### Stable supply of products, steady investment in R&D

### Vinyl chloride monomer(VCM)

Vinyl chloride monomer (VCM) is a major raw material for polyvinyl chloride (PVC) resin, a thermoplastic that can be heated and molded into various shapes. PVC's versatility facilitates its widespread use in everyday goods, including medical products and building materials. PVC is crucial to ensuring access to safe food, particularly through its use in agricultural films, water pipelines, and food packaging.



### Isocyanate

Isocyanates are a principal raw materials for polyurethane, which is widely used in everyday consumer products as a thermal insulator, including in building materials, refrigerators, synthetic leather, and such elastic fibers as spandex. Isocyanates are also essential in industrial applications. They are used as curing agents in the production of wood boards and a soil and rock stabilizer in tunnel construction.



# Estimating Social Impact

We have begun quantifying the outcomes as well as the impacts associated with the outputs derived from caustic soda, VCM, and isocyanate. These estimates will enable us to measure the societal impact of our products more accurately. Moving forward, we will use these insights to explore initiatives that can further expand our positive impact on society.

F	Product	Output	Outcome	Impact	Items for estimation and analysis
Lithium-ion batteries (car batteries for EVs)		Lithium-ion batteries (car batteries for EVs)	<ul> <li>Electrification to reduce CO<sub>2</sub> emissions</li> </ul>	<ul> <li>Economic benefits from natural disaster mitigation</li> </ul>	<ul> <li>Reduces CO<sub>2</sub> emissions</li> <li>Economic benefits from natural disaster mitigation</li> </ul>
		Aluminum (Automobile bodies) <ul><li>Reduction of transport equipment weight to improve fuel efficiency and lower CO2 emissions</li></ul>		<ul> <li>Economic benefits from natural disaster mitigation</li> </ul>	<ul> <li>Reduces CO<sub>2</sub> emissions</li> <li>Economic benefits from natural disaster mitigation</li> </ul>
Agricultural film (flexible PVC)		<ul> <li>Heightens availability of low-cost food</li> <li>Improves food supply access</li> </ul>	<ul> <li>Total floor area of vinyl greenhouses that can be produced</li> </ul>		
•PVC F		PTP (drug packaging sheets)	<ul> <li>Improvement in quality of health and medical services</li> </ul>	<ul> <li>Extension of healthy life expectancy</li> </ul>	<ul> <li>Proportion of Tosoh drug packaging sheets relative to distribution volume</li> </ul>
Wooden boards (adhesive curing agent)  • Reduction of haz substance emiss (formaldehyde) • Improved use of conserve resource		<ul> <li>Reduction of hazardous substance emissions (formaldehyde)</li> <li>Improved use of wood to conserve resources</li> </ul>	<ul> <li>Optimal use of wood fragments to conserve forests</li> <li>Economic benefits from reduced air pollution</li> </ul>	<ul> <li>Wooden board production volume (also estimated by forest area)</li> <li>Carbon sequestration and economic benefits for reduced CO<sub>2</sub> emissions</li> </ul>	
e•Urethane		Soil stabilizers  • Reduction of impact on soil groundwater, and other elements of surrounding environment • Improvement in transportat access with tunnel		<ul> <li>Preservation of neighboring environment and ecosystems</li> <li>Lowers prices of goods and services</li> <li>Generation of local employment</li> </ul>	<ul> <li>Tunnel length enhanced through construction application</li> <li>Effects of improved transportation accessibility</li> </ul>



• We estimated the volume of aluminum used in automobile bodies based on Tosoh's shipping volume and then estimated the reduction in  $\ensuremath{\text{CO}_2}$  emissions through reduced • We also accounted for emissions during caustic soda and aluminum production to • We will strive to maximize our social impact by providing a stable supply of caustic duces CC eight and emissions Outcome Impact

# **Social Issues Solution**

As stated in its corporate philosophy, "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." To follow this philosophy, the Tosoh Group focuses on achieving sustainable growth by developing businesses that contribute to resolving social issues, while continuing to be a company that is trusted by all stakeholders and valued in society. We consider the Sustainable Development Goals, or SDGs, adopted by the United Nations as fundamental guiding principles and believe that our mission is to manufacture products beneficial to society, thereby contributing to achieving a sustainable society. Based on this belief, the Tosoh Group has certified its products, technologies, and services that all contribute to solving social issues, such as reducing environmental impact and improving quality of life, as Social Issues Solution and the Group are promoting the development and diffusion of these solutions.

# **Certification Requirements**

The requirements for certification as Social Issues Solution are "contribution to solving social issues" and "contribution to enhancement of corporate value and sustainable growth." For the former, Tosoh uses 169 targets, which are the specific goals aligned with the company's 17 SDGs, as certification requirements. These targets serve as essential guiding principles for the company's contribution to resolving social issues. In the case of the latter, Tosoh regards Social Issues Solution as not only about solving social issues, but also about contributing to enhancing corporate value and sustainable growth. The certification requires that the company continue its efforts to achieve SDGs.

Certification Requirements				
I. Contribution to solving social issues	<ul> <li>Contribution to achieving 169 SDGs targets</li> </ul>			
II. Contribution to enhancement of corporate value and sustainable growth	<ul> <li>Provision to society(marketed products)</li> <li>Business continuity</li> </ul>			

# **Certification Procedure**

The CSR Promotion Liaison Meeting discusses products proposed by business units, complexes and operating companies and subsequently submits its successful proposals to the CSR Committee and the Board of Directors for approval



# Social Issues Targeted by Certified Products

item	Targeted social issues				
Reducing environmental impact	<ul> <li>Energy conservation</li> <li>Renewable energy</li> <li>Creation energy</li> <li>Energy storage</li> <li>Reduction of GHG emissions</li> </ul>	<ul> <li>Reduction of hazardous substances and VOCs</li> <li>Reduction of waste</li> <li>Preservation of ecosystem</li> <li>Conservation of water</li> <li>Recycling</li> </ul>			
Improving quality of life	<ul> <li>Infrastructure</li> <li>Food</li> </ul>	<ul> <li>Health and medical care</li> <li>Disaster preparedness</li> </ul>			

# Introduction of Certified Products

Tosoh's Social Issues Solution products and technologies encompass those that reduce environmental impact and enhance quality of life. In the second round of certification, 7 additional products were recognized, bringing the total to 21, from the 14 certified in the first round. This time certified products include those that contribute to energy generation, energy storage, and disaster preparedness. The certification criteria for contributions have also been expanded.

# Examples of Solutions Certified in the Second Round

Area of contribution Name Reason for certification		Reason for certification	SDGs
Reducing environmental impact	<b>Caustic soda</b> for use in manufacturing positive electrode material for lithium-ion batteries	<ul> <li>Lithium-ion batteries (secondary batteries) are used in electric vehicles (EVs), smartphones, computers, and energy equipment, contributing significantly to electrification, which, in turn, contributes to CO<sub>2</sub> emissions reduction.</li> <li>Caustic soda is an essential raw material in the production of lithium-ion battery cathode precursor materials.</li> </ul>	7.1 7.2
Improving quality of life	Flamecut <sup>®</sup> 120G for brominated flame retardants	<ul> <li>Flamecut 120G serves as a flame retardant in the laminates used in printed circuit boards for electrical products and devices, either alone or in reaction with other materials.</li> <li>Flamecut 120G, moreover, saves lives from fires caused by the ignition of electrical products and equipment and prevents economic losses from fires. It also contributes to the optimal use of sustainable resources on the strength of the proprietary technology behind its manufacture, which facilitates the production of bromine from seawater.</li> </ul>	
Reducing environmental impact and improving quality of lifePolymeric MDI and polyol systems for rock hardening agents		<ul> <li>The polymeric MDI and polyol system is used as an injection material and hardener to ensure safety through ground improvement to help mitigate the risk of ground deformation and collapse during mountain tunnel excavation.</li> <li>It reduces the contamination of the surrounding environment, including land and groundwater, and minimizes the risk of ground collapse during excavation due to rock and soil instability. This, in turn, increases labor efficiency by shortening construction periods.</li> </ul>	

# Tosoh Group Contribution to Reducing GHG Emissions

Tosoh Group GHG emission reduction and targets





#### **Proportion of Certified Social Issues Solutions**



\*Life Cycle Assessment (LCA) calculation

# **Research and Development**

# Reform of R&D Structure

### **Heightened Expectations for R&D**

The Tosoh Group aims to continue to be a company that is necessary to society under its corporate philosophy: "We at Tosoh constantly strive to contribute to society through the chemistry of innovation." We believe that our single-greatest corporate social responsibility (CSR) is to fully leverage the technologies we have cultivated over the years to create value and to contribute to industrial development and the enrichment of people's lives.

The three-year medium-term business plan that concludes in fiscal 2025 expounds Tosoh's management duality, of Commodity and Specialty businesses. It focuses, however, on boosting earnings in high-value-added specialties. R&D at Tosoh thus works to add value to Commodity products and to generate unique Specialty products.

We also engage in open innovation with universities and research institutes to quickly anticipate and respond to changes in the market driven by factors such as digitalization and globalization. The intent is to build a solid corporate foundation resilient to the external environment. Our efforts in this respect involve acquiring innovative technologies and developing products and businesses by fusing our proprietary technologies, as well as cooperating with external parties.

To provide impetus to our R&D, we established the MI Center in fiscal 2024. Its development of proprietary materials informatics (MI) technology will play a role in Tosoh's digital transformation (DX) and help to build our specialty business.

#### A Further Step Forward under a New Structure

In 2014, we reorganized our R&D by technological field and function into seven research laboratories. This clarified the expertise and responsibility of each laboratory and deepened the technologies and products of each. Since that time, however, the social and research environments have undergone rapid change. This has occasioned another reorganization of our R&D structure, effective June 2024.

A newly established Research Division oversees all research operations. Under it are three specialized research centers and six research laboratories. This restructuring is meant to foster collaboration across our R&D operations and to facilitate the Research Division's approach to societal challenges, growth markets, and research digitalization.

Earlier in the year, in April 2024, we introduced a system to foster a corporate culture that prizes advanced specialization and that promotes the development of specialized researchers. This system has two tiers: executive fellows and research fellows. It bestows the title of fellow on researchers with a high level of expertise and manages their personnel status accordingly.

Tosoh thus reinforces cooperation in its R&D activities and cultivates personnel capable of pushing those activities forward with new products and technologies of ever-greater value.

New R&D Organization

anced Inte

wer Research Cent

nctional Materials

President

Research Division

# Basic Policy

Based on the concept of creating shared value (CSV\*), Tosoh plans to introduce innovative products and technologies that offer unprecedented value and is heavily committed to R&D to resolve several social issues based on SDGs.

Since our previous medium-term business plan, we have designated three priority research fields: life sciences, electronic materials, and environment and energy. We will in each of these fields pursue the following three objectives. That focus, expedited by our new R&D structure, will contribute to generating ¥100 billion in Specialty business operating income toward Vision 2030.

Steadily achieve product commercialization
 Enhance sophistication and efficiency of R&D
 Generate major next-generation themes

\*Creating shared value (CSV): The idea that strategically addressing social issues will contribute to a company's long-term growth.



Toru Doi Director, Executive Vice President Senior General Manager, Research Division

Research and Development Planning

Advanced Materials Research Laboratory

Polymer Materials Research

Organic Materials Research Laboratory

Inorganic Materials Research Laboratory

Catalyst Research Group

Polyurethane Research

Life Science Research

MI Center

Laboratory

# Toward Vision 2030

### Steadily achieve product commercialization

We have established the development of products and technologies that contribute to the environment and to quality of life as a key performance indicator (KPI). This KPI addresses our major CSR target to generate and provide products and technologies that solve social issues.

### Enhance sophistication and efficiency of R&D

Our R&D emphasizes three keywords: "systematization," "digitalization," and "automation." The digitalization of R&D in particular will enhance efficiency by using proprietary materials informatics (MI) technology. So we are promoting MI education for all researchers.

#### Initiatives by the six research laboratories in three priority fields and three business sectors

					Business sector		
	Research centers Research laboratories		Three priority fiel	Petro- chemical	Chlor-al kali	Specialty	
Corporate themes	Advanced Integration	Life Science Research Laboratory	Life sciences	R	-	-	•
	Research Center	Advanced Materials Research Laboratory			•	-	•
	Petrochemical and	Polymer Materials Research Laboratory	Electronic materials		•	-	-
Business-related	Research Center	Polyurethane Research Laboratory			-	•	-
themes	Functional Materials	Organic Materials Research Laboratory	Environment and energy	$\mathcal{L}$	-	•	•
	Research Center	Inorganic Materials Research Laboratory		-	-	•	•

# Participation in National Projects

#### New Energy and Industrial Technolo Development Organization (NEDC

- •Production of polyurethane feedstock using CO2
- •Chemical recycling of multilayer plastic film
- Improved efficiency of CO<sup>2</sup> separation and recovery process by adopting innovative CO<sup>2</sup> separation membrane modules
- •Development of water electrolysis catalysts
- •Production of plastics using microalgae feedstock

# Constant improvement of R&D infrastructure

- •We are always investing in our R&D infrastructure, including augmenting our number of researchers and their skills. Going forward, we will in particular invest aggressively in functional products, the goal being to achieve ¥100 billion in Specialty business operating income.
- •Two of our three main research centers are at the Nanyo and Yokkaichi Complexes. The third is our Tokyo Research Center, for which we are constructing a new research building. Construction is ongoing and is slated for completion in fiscal 2027.

# ■Generate major next-generation themes

### Initiatives in priority fields

Improved collaboration made possible by our new Research Division structure will give rise to R&D themes in each of our three priority fields of life sciences, electronic materials, and environment and energy. And that will push forward our acquisition of technologies and our involvement in large joint research initiatives.

# Acquisition of external technology through open innovation

Aggressive activities and participation in diverse projects will inform our acquisition of technologies externally.

#### Japan Science and Technology Agency (JST)

- •Development of adhesion technology using Tosoh's chlorosulfonated polyethylene (CSM)
- •Development of method for producing long-chain polyhydric alcohols
- •Establishment of polymer material database based on molecular
- dynamics computation



#### R&D expenditures and number of researchers

# Intellectual Property

# **Basic Policy**

Under its three basic policies, the Intellectual Property Department aims to function as an engine for generating profits and as a mentor for exercising rights and differentiating technologies. In collaboration with Tosoh's business and research teams, the department accelerates the development of intellectual property to enhance corporate value

- Intellectual property and globalization expansion to protect Tosoh's operations
- Strategic intellectual property acquisition
- Intellectual property development cycle

#### Intellectual property and globalization expansion to protect Tosoh's operations

Differentiated technologies are Tosoh's source of competitiveness in its Specialty business, necessitating that the company continuously expand its intellectual property. Our Specialty products comprise inorganic, organic, polymer, and bio technologies that have a large proportion of sales overseas that we seek to enlarge.

When we acquire intellectual property, we think not only about expanding our intellectual property rights in the major markets of Europe, the United States, and China. We also consider the business domain and each product's growth potential therein.

In addition to increasing our number of patents in Japan, we are pursuing foreign patent applications to expand and protect the globalization of our business.

Number of	of patent		(Number o	of patents)		
Fiscal	2019	2020	2021	2022	2023	2024
Domestic	1,732	1,788	1,888	1,995	2,112	2,257
Overseas	912	963	1,002	963	1,009	1,118

#### Strategic intellectual property acquisition

Our intellectual property activities were previously focused on defensive rights to protect our operations. Going forward, we seek to acquire highly exclusive intellectual property from a more "aggressive" standpoint to deter the market entry of competitors.

We have analyzed our patents using Biz Cruncher, a patent search and analysis platform provided by Patent Result Co., Ltd. Our number of registered and pending patents has been on the rise since 2016. The Patent Score, moreover, calculated based on our track record of utilizing the patent system to obtain rights and the patent citation histories of other companies, has also grown.

Tosoh is forming a strategic intellectual property network. That network has high industrial application and competitive advantage in that it enhances our intellectual property in quantity and quality.



Hiroshi Ogawa Vice President General Manager, Legal & Patents



\*Generated by Tosoh using Biz Cruncher, a patent analysis tool provided by Patent Result Co., Ltd. \*Valid patents are those still in force or pending or under request for examination

### Intellectual property development cycle

Tosoh's management challenge of realizing growth and decarbonization necessitates the acquisition of technologies and the differentiation of intellectual property. With this in mind, we are bolstering the structure of our intellectual property function and our interorganizational cooperation.

We are, for example, digitalizing our intellectual property function. In addition, we are increasing the capabilities of our laboratory personnel and raising the number of specialized personnel to improve our acquisition of intellectual property rights, our R&D for greater technology differentiation, and our intellectual property management. We are, furthermore, capitalizing on opportunities for regular exchange among our business and research teams to update our intellectual property activities from the perspective of our sales and research teams. This includes utilizing intellectual property in global market to promote sales and broadening our rights acquisition proposals for heightened technology differentiation.

The multilateral activities of our business, research, and intellectual property arms will enhance our cycle of cultivating intellectual property to propel the growth of our operations. Those activities will in particular be reflected in our Specialty business, which is superior to our Commodity business in profitability and potential for growth.



# Introduction of Business Areas

### **Petrochemical Group**

### OLEFINS/POLYMERS

The Petrochemical Group uses naphtha, produced from crude oil, as a raw material in manufacturing fundamental petrochemical feedstocks that it supplies to other of Tosoh's operations. These include olefins such as ethylene and propylene, as well as derivatives such as polyethylene and synthetic rubber.

The polymer business offers products that satisfy a broad range of needs beyond the basics. And Tosoh is leveraging accumulated technologies to develop distinctive businesses in high-value-added medical, food, and semiconductor products.



Polyethylene (High-purity chemical containers)

Melthene®-M (food container lid material)

# Chlor-alkali Group

# CHLOR-ALKALI/URETHANES/CEMENT

Tosoh's Chlor-alkali Group manufactures a wide array of products that support social infrastructure. Caustic soda, obtained through the electrolysis of salt, is used in manufacturing aluminum, paper, and pulp, while chlorine is used in producing PVC resin and in disinfecting, bleaching, and other applications in diverse industries.

Chlorine and hydrogen, moreover, are raw materials used in the production of polyurethane, which is found in construction materials, automobiles, home appliances, and numerous other end products Tosoh, meanwhile, promotes recycling throughout society. The company utilizes waste generated internally and

externally as a raw material in its manufacture of cement.



Caustic soda

PVC resin (window frames)

# **Specialty Group**

# ORGANIC CHEMICALS/BIOSCIENCE/ADVANCED MATERIALS

The Specialty Group's high-added-value products contribute to people's health and lifestyles and to society's overall prosperity and cleanliness. Its products include sputtering targets used in thin-film deposition and silica glass essential to manufacturing of semiconductors and electronic components, separation and purification media for biopharmaceuticals, diagnostic equipment used to test for infectious and other diseases, high-silica zeolites for high-performance catalysts used in automobile exhaust gas purification, and environmental chemicals such as heavy metal treatment agents





Bromine

High-performance liquid chromatography columns dioxide

# **Engineering Group**

ENGINEERING/ANCILLARY

Tosoh's Engineering Group consists of Organo Corporation, which handles water treatment and pure water equipment, and Tohoku Denki Tekko Co., Ltd., which undertakes plant construction and electrical work. Tosoh's ancillary business comprises logistics, trading, and service companies. For example, Tosoh Logistics Corporation provides transportation, cargo handling, and insurance agency services for the Tosoh Group's products and raw materials, and Tosoh Nikkemi Corporation, which sells organic chemicals, inorganic chemicals, and resins.







Synthetic rubber TOSO-CSM®

Chloroprene rubbe





MDI (cushion material)

MDI (construction adhesives)



Cement





Electrolytic manganese



Zirconia powders (dental material)

# **Key Indicators by Group**

Tosoh has established business groups at its headquarters, with each group formulating comprehensive strategies and conducting business activities in Japan and abroad related to its respective products and services. Based on these groups, Tosoh's operations are divided into four reportable segments: Petrochemical, Chlor-alkali, Specialty, and Engineering.

# **Petrochemical Group**











## Chlor-alkali Group

**Specialty Group** 

Net Sales

(billion ven)

300

225

150

75



#### Operating income/Operating income ratio (billion ven) (%) 80 20.0 60 15.0 10.0 40 5.0 20 16 1 1.0

Operating income --- Operating income ratio

Operating income/Operating income ratio

Operating income --- Operating income ratio

-20





(%)

20

15

10

 $\sim \sim$ 

(FY)

376.2

# Capital investment/depreciation and amortization





Capital investment/depreciation and amortization





R&D expenses

R&D expenses

Engineering Group/Ancillary

2020 2021 2022 2023 **2024** 2025 (FY)



278.4

259.6



**27.6** 27.7

2020 2021 2022 2023 **2024** 2025 (FY)



10

-5.0

Segment assets --- ROA

Segment assets/ROA

(billion ven)

400

300

200

100





Capital investment/depreciation and amortization







\*ROA is calculated by dividing segment operating income by segment assets.







(FY)

28

2020 2021 2022 2023 2024





No. of employees



# **Petrochemical Group**

# **OLEFINS**



Akira Hashimoto Vice President Senior General Manager, Olefins Divis

We aim to further enhance the company's foundation and competitiveness, with a focus on becoming a self-sustaining entity.

Located at the Kasumi Industrial Complex, Tosoh's naphtha cracker, which forms the foundation of our petrochemical business, requires maintaining stable and high operational capacity. It is vital not only in providing raw materials for Tosoh's derivative product manufacturing but also in supplying materials to other companies in the industrial complex. As the owner of the only naphtha cracker in Japan's Chukyo region, Tosoh places the highest priority on safe and stable operations, to maintain high operational capacity. Toward this end, we will efficiently utilize each fraction produced by our naphtha cracker to realize high added value. And we will work to mitigate CO<sub>2</sub> emissions through energy efficiency and the use of CO<sub>2</sub>-free fuels with the goal of achieving carbon neutrality. We aim to achieve a self-sustaining Kasumi Industrial Complex by pursuing the optimal combination of business enhancement and decarbonization efforts, while coordinating with other companies in the complex.

### Medium-term Business Policy (FY2023–2025)

- Maintaining stable production from naphtha cracking furnace and high utilization rate through expansion of sales and self-consumption
- Launched investigation into chemical recycling of petrochemical products

# Medium-term Business Policy Initiatives

As part of our efforts during the medium-term business plan period, we are undertaking the aromatization of C4 fractions by leveraging the strength of our in-house zeolite catalyst technology, with a view to expanding into chemical recycling. The purpose is to bolster the foundation of our olefins business. Within the framework of the Kasumi Industrial Complex, we will implement measures to meet the rising demand for hydrogen and explore collaborations with other companies to expand capacity and construct new facilities for derivative product production.

With regard to decarbonization, we will add gas turbines to reduce CO<sub>2</sub> emissions with the aim of improving energy efficiency. In addition, we are considering introducing non-oil bionaphtha and using CO<sub>2</sub>-free fuels such as biomass and ammonia. Moreover, the company will further deepen cooperative relationships with other companies in the Kasumi Industrial Complex on future themes, including collaboration based on Tosoh's CO<sub>2</sub> separation and recovery technology and the utilization of surplus methane resulting from CO<sub>2</sub> reduction.

We will also discuss the possibilities of appropriate cost-sharing and the pass-on expenses associated with decarbonization measures in mind.



Major products					
Cumene					
• Benzene					
• Toluene					
Xylene					
<ul> <li>Cracked heavy oil</li> </ul>					



# **Differentiation Strategies**

# **Utilization of Digital Transformation (DX)**

Tosoh installed an advanced control system at its BTX production facility, which has been in full-scale operation since January 2023, maintaining stable performance. It is well known that the composition of BTX raw materials can vary, and traditionally, skilled operators would watch for the best distribution while conducting operations. Therefore, making adjustments to raw materials manually inevitably causes fluctuations, which led to the company introducing an advanced control system. Differences in operational experience do not affect operations, making smooth, stable production possible at near-top capacity. To achieve further stabilization. Tosoh modified the advanced control system at its BTX facility by expanding its control range during the scheduled maintenance period in March 2024, and installed the same system in its cumene facilities, with full-scale operation beginning in April 2024.



Naphtha cracking furnace

# **SWOT Analysis**



# Response to Carbon Neutrality

Tosoh has set the goal of reducing group wide GHG emissions by thirty percent compared with fiscal 2019 levels by fiscal 2031. Among the various measures under consideration, the company is considering installing one additional gas turbine at our Yokkaichi Complex to improve energy efficiency. The power plant at the Yokkaichi Complex currently uses oil coke as its primary fuel source for in-house power generation. Within the next few years, we plan to install a gas turbine that uses the plant's surplus gas as fuel,

# Efforts Toward Effective Utilization of Unused Fractions

Looking at process development for the aromatization of unused C4 fractions, in addition to spent C5 and C9, we have begun searching for an economically rational raw material mix that can be used as a blending material, by branching out into waste plastic oil, which can be obtained through polyethylene (PE)-based chemical recycling.

Tosoh operates a zeolite business and is highly capable in the area of catalyst technology. As such, the company's objective is to capitalize on this strength and effectively use unused fractions as situations dictate. Although there are certain issues that the company must overcome in terms of practical application, we aim to achieve this goal and resolve any issues as quickly as possible.

# Effective Utilization of C4 Fraction (research and development underway)



thereby mitigating the demand on existing facilities and lowering  $CO_2$  emissions. We must also consider other future energy trends, including ammonia, hydrogen, and biomass when considering such aspects as stable procurement and infrastructure installation. To its merit, Tosoh is also a participant in the Yokkaichi Carbon Neutral Promotion Committee, formed in conjunction with Mie Prefecture, Yokkaichi City, and neighboring companies, to investigate ways to reduce  $CO_2$  emissions.

# **Petrochemical Group**

# POLYMERS



Nobuya Fujii Vice President Senior General Manager, Polymers Divi

### Medium-term Business Policy (FY2023–2025)

Polyethylene	<ul> <li>Differentiate, and ensure higher-added-value</li> <li>Increase base sales price to expand earnings</li> </ul>
Functional polymers	<ul><li>Functional polymers</li><li>Increase production capacity in growth areas</li><li>Expand applications to grow market share</li></ul>

# **Medium-term Business Policy Initiatives**

Stagnation in demand characterizes the present environment surrounding petrochemical products—particularly in China—while the construction of new facilities is easing the supply-demand balance. The Polymers Division will continue promoting differentiation and high-value-added products. We will refine the superior cleanliness, low odor, and off-flavor properties of polyethylene products to strengthen its position in the food packaging, medical, and semiconductor fields. We will leverage its catalyst and compounding technologies to expand the product lineup to meet detailed user needs, while also developing products addressing two of the 3Rs—recycling and reducing—in the plastics industry.

Looking at functional polymers, Tosoh will promote R&D for products compatible with the medical field as well as with the automotive fields, where vehicle electrification is growing. Furthermore, to fulfill its responsibility as a manufacturer, Tosoh will continue systematic facility maintenance to achieve a stable supply structure.

# Deepen differentiation and high-value-added products and evolve environmental response to achieve sustainable growth

In response to the challenging business environment that has resulted from the global trend toward decarbonization and de-plasticization, Tosoh has identified three priority themes: stable operations and supply, differentiation and higher-added-value, and environmental response.

The focus on differentiation and higher-added-value will further deepen functions and performance in applications that have traditionally been the company's strengths. Under the environmental response theme, we will continue developing and expanding sales of products that enhance plastic recyclability as well as products for the electric vehicle (EV) market.

While maintaining a strong awareness that plastics are essential materials for our daily lives, Tosoh will continue working hard to satisfy increasingly diverse user demands



### Major products Nipolon<sup>®</sup> low-density Polyethylene(LDPE) • Nipolon<sup>®</sup> Hard high- density Polyethylene(HDPE) Polvethvlene Nipoflex<sup>®</sup> Ethylene-vinyl acetate(EVA) copolymer Melthene<sup>®</sup> H saponified EVA copolymer etc Synthetic rubber: TOSO-CSM<sup>®</sup> chlorosulfonated polyethylene • Synthetic rubber: Skyprene® chloroprene rubber Functional Ryuron Paste<sup>®</sup> PVC paste polymers Susteel<sup>®</sup> polyphenylene sulfide(PPS) Petrotack<sup>®</sup>, Petcoal<sup>®</sup> petroleum resins etc

# Products Certified as Solutions to Social Issues

• Ethylene-vinyl acetate (EVA) copolymer for encapsulation of solar cells

# **Differentiation Strategies**

# Cellulose nanofiber-reinforced composite synthetic rubber

In the area of chloroprene rubber (CR), a synthetic rubber, we have launched a grade integrated with cellulose nanofiber (CNF), a biomass-derived raw material that, while one-fifth the weight of steel, is over five times stronger.

Conventionally, the mixing of CNF into rubber materials was considered challenging technically. We have succeeded, however, in nano-level dispersion of CNF using our proprietary technology and applying CNF's reinforcing effect to rubber materials. This has made lighter product weight and longer service life possible.

To promote the expansion of applications in a vast range of industries and satisfy future demand for environmentally friendly products, Tosoh will establish a large-scale production system with stable quality.

# SWOT Analysis

- Lineup of high-quality grades to satisfy wide- ranging needs
   Stability of production system based on in-house raw materials
   World's only high-end market manufacturer of CSM
   Stability of domestic market and growth in demand abroad
- Demand from automotive electrification and high-speed communications
- Enhanced environmental awareness and resulting material development

### S High-quality Grade to Satisfy Broad-Ranging Needs

We will continue to promote the tailoring of products to satisfy user needs, not only pursuing production efficiency, but leveraging the mobility of small-scale plants as well as the resin design and compounding technologies we have cultivated. We believe that tailoring our products to customer needs will not only boost satisfaction but also strengthen our development and technical capabilities, ultimately driving sustainable business growth. We remain committed to maintaining this approach. And as user needs and demands become increasingly diverse, we will remain diligent in our efforts to develop products and further enhance our lineup.

# Environmentally Friendly Automobile-Related Products

Tosoh entered the engineering plastics business—where it anticipated growth—and launched production of polyphenylene sulfide (PPS) in Japan for the first time in 1986. With noticeably superior characteristics such as heat resistance, rigidity, and dimensional stability, PPS is now widely used in various applications, including automotive parts as well as electrical and electronic components. With the recent transition to EVs, we anticipate growth in demand for electrical components, and the superior metal bonding properties of Tosoh's PPS have gained attention, leading to its adoption as the world's first metal-bonding resin for automotive applications. Tosoh will continue to develop numerous grades for such applications.



Small plant scale
 Increase in plant maintenance costs
 Weaknesses
 New and additional construction by overseas manufacturers in North America (shale gas) and Asia(naphtha)
 Reduction in plastic waste and bioplastics leading to decline in demand

 Geopolitical risks raising concerns regarding stable procurement of raw fuels

# Growing Environmental Awareness and Corresponding Material Development

In the polyethylene sector, we are working to reduce plastic usage by transitioning items such as food containers to paper alternatives and by reducing weight through thinner films. Building on these achievements, we are also planning to expand our business internationally. To improve recyclability, we focus on plastic recycling aids and shifting from plastic composite to mono-materials.

In the area of functional polymers, we are applying metal bonded PPS to reducing the weight of EVs and developing and deploying petroleum resin to enhance the performance of fuel-efficient tires.

# Chlor-alkali Group

# **CHLOR-ALKALI**



Hisashi Murata

# Our goal is to achieve both carbon neutrality and sustained business success.

Tosoh owns one of the largest electrolysis facilities in Asia at its Nanyo Plant, contributing to industrial and social development and maintaining a healthy living environment through the stable supply of caustic soda and chlorine derivatives. Demand for our products is expected to increase due to the economic growth in Southeast Asia and other countries. Moving forward, the Tosoh Group will continue to capitalize on such opportunities to expand its business.

The chemical industry involves the production of chemicals through the electrolysis of industrial salt, making it an energy-intensive industry. Therefore, reducing CO<sub>2</sub> emissions from self-generated power facilities is considered a crucial challenge for business continuity. Tosoh aims to stabilize earnings by promoting energy diversification and energy conservation, along with reducing CO<sub>2</sub> emissions. This strategy seeks to achieve both growth and decarbonization

# Medium-term Business Policy (FY2023–2025)

- Strengthen the domestic business foundation to secure stable earnings
- Expand overseas operations to increase earnings

# Medium-term Business Policy Initiatives

To hold on to our top share in the domestic caustic soda market and ensure appropriate profit levels, Tosoh will supply materials for domestic semiconductors and EV battery cathode production-for which demand is rising-and conduct production and sales activities commensurate with demand.

Demand for caustic soda and PVC also continues to grow in the Southeast Asian market, therefore, the company is seriously considering building a new electrolysis and PVC plant to accommodate this expected demand. This in turn will further strengthen the Tosoh Group's business foundation, as the company aims to optimize its production structure and logistics network.

As part of Tosoh's initiatives toward achieving decarbonization, we are taking a host of measures to reduce CO2 emissions-including the company's commitment to constructing a new biomass power generation facility-and will continue diversifying our energy sources.

We will also strive to effectively utilize waste by incorporating construction waste and densified fuel derived from refuse-derived paper and plastics (RPF).



rine
la
/pochlorite
nloride

#### Products Certified as Solutions to Social Issues

- PVC resin for plastic sashes
- PVC resin for pipes and fittings
- Licensing of technology for energy-saving brine electrolyzer
- · Caustic soda for use in manufacturing positive electrode material for lithium-ion batteries

# **Differentiation Strategies**

# **Boost Production Capacity at Electrolysis** Facilities –Establish a stable supply system to meet demand from the Philippines-

Demand for caustic soda and chlorine is growing in the Philippines, as used in industrial applications, water and sewage system disinfection in line with infrastructure development, and in bleaching agents. Mabuhay Vinyl Corporation (88% owned by Tosoh), the lone electrolysis manufacturer in the Philippines, has increased its production capacity and established a stable supply system to satisfy increased demand for caustic soda and chlorine derivatives.

With regard to the expansion of electrolysis production capacity, reducing the consumption of electricity and steam and effectively leveraging hydroelectric power generation will result in reduced CO2 emissions even before any increase in production capacity is implemented.

Tosoh will fulfill its responsibility as a main supplier by responding to robust growth in demand, while at the same

# **SWOT Analysis**



### **Balance Between Caustic Soda and Chlorine Products**

In electrolysis facilities, caustic soda and chlorine are produced in a constant ratio. Therefore, prevailing demand for one or the other may periodically result in limited production.

Tosoh offers a host of chlorine derivatives, such as PVC resin, calcium hypochlorite, sodium hypochlorite and liquid chlorine, hydrochloric acid and calcium chloride. The supply-demand balance for these products enables the manufacturing facility to maintain a highly stable plant operation schedule.

Products	Applications
PVC resin	Water pipes, agricultural pipes, fittings, firm and sheets
Calcium hypochlorite Sodium hypochlorite Liquid chlorine	Sterilization, disinfection
Hydrochloric acid	Neutralization in food, chemical industries
Calcium chloride	De-icing agent, effluent treatment

time, augmenting the company's contribution to society by reducing CO2 emissions.

# **Optimize Domestic Production System, CO**<sup>2</sup> **Countermeasures, Primary Fuel**

Tosoh strengthened its existing stable supply structure by reinforcing its business foundation and domestic complex infrastructure. Moreover, the company appropriately passed higher raw material, fuel, and other costs onto product prices, thereby maintaining good profitability.

Decarbonization is an important issue for electrolysis plants-a power-intensive enterprise. To address this issue, the company plans to promote a gradual transition to alternative energy sources such as biomass, liquefied natural gas (LNG), carbon-free hydrogen, and ammonia that emit less CO2. We will also consider the introduction of renewable energy sources such as solar and wind power more seriously to further promote decarbonization.

# **Competitive Infrastructure**

In addition to our large Nanyo Complex, Tosoh delivers products to users nationwide from our Yokkaichi Complex and Tohoku Tosoh Chemical Co., Ltd. (Sakata City, Yamagata Prefecture) production facilities, ensuring a stable and reliable vlague

The Nanvo Complex has the largest port facilities of any single Tosoh facility and maintains high logistics efficiency from vital raw material procurement to product shipment. The company has installed caustic soda storage tanks throughout Japan and has established a delivery network to meet the diverse demands of our users.

Tosoh has one of Japan's largest caustic soda inventory and shipping facilities for overseas supply located in Etajima City, Hiroshima Prefecture. The company has also established an efficient export system to satisfy major caustic soda consumption in Australia and Southeast Asia

# Chlor-alkali Group

# URETHANES



Takafumi Kiuchi Senior Vice President Senior General Manager, Urethane Divi

# We aim to strengthen our business through differentiation while embracing the challenge of advancing green chemistry.

With Tosoh's production and sales activities proceeding at full speed for its main products, it is extremely important for the company to formulate a sustainable growth strategy. Moreover, since the company's urethane business earnings depend heavily on overseas market conditions for methylene diphenyl diisocyanate (MDI), we are now looking to stabilize this business. Therefore, manufacturing, sales, and research will work collectively to stabilize and maximize profits and expand the business by reinforcing the foundation of MDI, thus growing the functional urethane business, and cultivating new businesses. With respect to climate change issues, we will endeavor to reduce GHG emissions by establishing improved manufacturing methods for polyurethane raw materials, such as isocyanates, that employ CO<sub>2</sub> as a raw material and by improving our existing manufacturing processes.

In addition to expanding capacity for existing businesses, the entire Urethane Division will work collectively and with a sense of urgency to fully establish new isocyanate businesses and promote product development using biomass materials with the objective to cultivate new businesses.

# Medium-term Business Policy (FY2023–2025)

MDI

- Diversify customer base to stabilize earnings
   Promote CO<sub>2</sub> feedstock
- Functional urethanes
- Expand revenue base through increased competitive advantage and capacity expansion

# Medium-term Business Policy Initiatives

### **MDI Business Initiatives**

With production and sales activities in full swing, Tosoh will work hard to bolster sales in Southeast Asia and India, where we anticipate a steady growth in demand. As part of this effort, the company will promote the construction of new splitters by establishing Southeast Asia's only MDI manufacturing company in Vietnam. Meanwhile, when considering domestic sales, we will continue to augment and upgrade our logistics infrastructure, placing the upmost importance on ensuring a consistent and dependable supply.

#### MDI distillation separation process flow chart



#### (overseas locations with deman

### Toward Specialty Business Operating Income in Excess of ¥100 Billion

Tosoh intends to proactively expand the scale of the company's business by bolstering its solutions business. We intend to do this by developing more environmentally friendly products, creating added value, and fortifying the company's market presence. We also plan to introduce our main product line, HDI paint curing agents, into the global marketplace. In pursuing this, competitive advantages include the agent's non-yellowing properties, its standout feature. Additionally, being water-based and low-viscosity facilitates low-temperature curing, presenting customers the attraction of reduced VOC emissions and energy consumption.

Further downstream, for thermoplastic and thermosetting elastomers—which are polyurethane resins—we will operate a proposal-based business in which we develop grades that match the characteristics and requirements of each elastomer.

#### Net sales trends



Major products		
MDI	Monomeric MDI     Polymeric MDI	
Functional	<ul> <li>HDI(Hexamethylene Diisocyanate)</li> <li>Polyurethane resins for adhesives</li> </ul>	

urethanes 

Polyurethane elastomers(themoplastic and thermosetting)

Polycarbonate diols

### Products Certified as Solutions to Social Issues

- Polymeric and modified MDI for heat insulators in building material applications
- MDI Woodcure<sup>®</sup> series particle board adhesives used in building materials and furniture
- Polymeric MDI and polyol systems for rock hardening agents

# **Differentiation Strategies**

# Initiatives and Social Contributions Related to Producing Urethane Raw Materials Using CO<sub>2</sub> as a Raw Material

Tosoh is in the process of constructing a new facility at the Nanyo Complex to recover CO<sub>2</sub> from combustion gas and use it as a raw material. The objective for such a procedure is to benefit from its practical use of producing carbon monoxide (CO), a raw material for isocyanate products—a Tosoh mainstay— operation is scheduled to begin in the fall of 2024. By using this product instead of petrochemical feedstock, the company aims to reduce the carbon footprint associated with the production of polyurethane products that utilize Tosoh isocyanate products.

This initiative is being developed as part of the NEDO Green Innovation Fund Project, aiming to create production technologies for isocyanate, dialkyl carbonate, and other polyurethane raw materials by utilizing factory exhaust gas instead of phosgene. The project includes plans for constructing a pilot plant in 2026 and a commercial plant in 2030 or beyond.

Moreover, in response to growing market demand for environmentally friendly products, Tosoh intends to develop new urethane products using castor oil and other biomass raw materials.

# **SWOT Analysis**

<ul> <li>Efficient, integrated production system</li> </ul>	
based on vinyl isocyanate chain	

- Functional product lineup with distinctive features
- R&D structure to respond to market needs Strengths
- Steady urethane market growth
- New demand resulting from societal desire for carbon neutral and other environmentally friendly products
- Geographically situated near China-the largest urethane market-as well as Southeast Asia and India, where growth in demand is expected

### S Functional Product Lineup with Distinctive Features

As Tosoh operates both isocyanate and polyol businesses, this enables the company to satisfy specific customer needs in system design. And, since we beat competitors to the market with many of our products, we are completely trusted by our customers.

Further developments include creating and introducing new environmentally friendly products utilizing bio-based raw materials, and responding to diversifying needs associated with changes in the automotive industry, centered on the world's transition to electric vehicles (EVs).

# Global Expansion of HDI and Contribution to Society

HDI, primarily utilized as a paint curing agent, provides a high performance essential for paints in terms of aesthetic and substrate protection. It ensures no yellowing and offers superior resistance to weathering. Tosoh's lineup features a variety of curing agents modified with HDI monomers, as well as environmentally friendly agents that are water-based, featuring low viscosity, and enabling low-temperature curing. The company is also focusing on developing customized products to satisfy various customer needs.

Continued growth is forecast in the demand for paints particularly in emerging countries. Similarly, demand for HDI curing agents is expected to grow in high-end applications, such as new car paints, automotive repair, and construction, prompting plans to expand the range of derivative products. The company is also actively involved in developing

technologies that employ CO<sub>2</sub> as a raw material and will endeavor to create products that address sustainability.





# Demand Growth in China, Southeast Asia and India

China is the world's largest consumer of MDI. China also produces and exports a wide variety of products globally, therefore steady growth in demand for MDI continues.

Similarly, while demand volume in Southeast Asia and India is not as high as in China, the economic growth rate in that region is still rather high—at 5–8%—and the growth rate of MDI is expected to surpass that figure. Particular growth in demand is evident for insulation in building construction and electric refrigerators, resin for shoe soles, and spandex applications, and MDI demand is forecast to rise in line with higher living standards in the forementioned regions.

# **Specialty Group**

# **ORGANIC CHEMICALS**



Hideaki Imoto Vice President Senior General Manager, Organic Chemicals Divisic

In addition to the amine and bromine chains, we will build a new business portfolio with highly innovative product lines, strengthening our role in the Specialty business.

The factors of change—including the economic downturn due to tightening of credit in Europe and the United States, a slowdown in economic growth in China, and geopolitical risks such as the United States-China conflict and the situations in the Middle East and Ukraine—are becoming increasingly complex, and the outlook for the business environment remains uncertain. Despite these conditions, Tosoh will continue striving to provide a stable supply of its mainstay bromine and ethyleneamines products and grow our customer base as a manufacturer situated in Asia, the most significant source of demand for these products.

Additionally, the Organic Chemicals Division's advanced organic synthesis and differentiation technologies will also play a role in achieving carbon-neutral society a pressing global issue—and societal change based on the SDGs, including activity in the fields of environment and energy.

### Medium-term Business Policy (FY2023–2025)

#### Bromine and flame retardants

 Develop business based on supplying raw materials of superior quality

•Meet growth demand through capacity expansion Ethyleneamines

Stabilize earnings by adding value to low-amine products
 Stabilize earnings by strengthening derivative cost

#### competitivenes Eco products

57

Tosoh Report 2024

•Expand market share by leveraging advantages related to raw materials

•Expand business domain through new product launches New materials

•Cultivate new revenue sources by developing and launching new products and expanding applications

# **Medium-term Business Policy Initiatives**

# Toward Specialty Business Operating Income in Excess of ¥100 Billion

Tosoh's operational concept, '2+ Challengers,' refers to its two core substances, bromine and amines. 'Challengers' represents eco-business products and newly developed ventures that address rising environmental awareness, supported by the advanced technologies the company has cultivated over time.

To contribute to the development of a sustainable society, in the bromine and amine fields—which have strong implications for supporting permanent social infrastructure—the bromine business will endeavor to further increase capacity. When it comes to amines, in addition to business development centered on high amines, we aim to maximize profits across the amine chain by adding higher value to low amines. We will establish a well-balanced, stable business structure by strengthening our two core businesses, bromine and amines, while developing and launching products in our 'Challengers' segment that contribute to a prosperous society, with a strong focus on environmental sustainability.

#### Net sales trends



#### Major products Bromine Bromine and Brominated flame retardants flame retardants etc Hydrobromic acid Ethyleneamines Ethyleneamines Urethane foam catalyst etc Heavy metal treatment agents Hydrocarbon cleaning agents Eco products Non-halogen, non-flammable cleaning agents Conductive polymer(selftron<sup>®</sup>) New materials CO<sub>2</sub> recovery amines

# Products Certified as Social Issues Solution

FLAMECUT<sup>®</sup> 120G for brominated flame retardants
 TS Series fly ash heavy metal chelating agents

# **Differentiation Strategies**

#### **Tosoh Group's Strengths in Bromine**

Demand for flame retardants—the most common application for bromine—is growing due to the increasing use of EVs and the advanced development of autonomous driving technology. Flame retardants, which help prevent combustion in electrical products, electronic equipment, and other flammable items that quickly generate high levels of heat or catch fire and burn, contribute significantly to saving lives and avoiding economic losses caused by fires.

Tosoh produces bromine by extraction from seawater, the supply of which is considered essentially inexhaustible. Compared with overseas manufacturers that extract bromine from salt lakes and brine, Tosoh's method is less vulnerable to raw material depletion and environmental issues, making production more sustainable.

Leveraging these strengths, the company has sought to boost its bromine capacity to further expand its earnings base. Looking ahead, Tosoh will maintain a stable supply while closely monitoring global demand trends. The company will explore opportunities to enhance its earning potential and expand the scale of its business operations.

# **SWOT Analysis**

- Creation of new materials through the deepening of organic synthesis technology
   Global sales bases
- Collaboration across manufacturing, sales,
- and research departments Strengths

# Chemical products indispensable to society and a stable market

 Few bromine and ethyleneamine manufacturers in Asia
 Opportunities

# Global Sales Bases

Tosoh has sales bases in the United States, Europe, China, and Southeast Asia, where staff members dedicated to organic chemical products conduct extensive sales activities. The bases promptly report any information they collect directly to headquarters, and through close collaboration with each base, Tosoh conducts sales activities focused on customer's needs in each region. Particularly notable is that Tosoh was one of the first companies to establish a global ethyleneamines network and pioneered the development of various sales channels overseas. Conducting this global expansion independently has allowed Tosoh to obtain firsthand information on global markets, which the company can now draw from in real-time when creating the division's sales strategies.

#### **Deployment of CO2 Recovery Amine Products**

Tosoh, one of the few ethyleneamines manufacturers in Asia, is developing amines for use in CO2 recovery. The company's strengths are its extensive knowledge of amines and the ability to use its amines in product development and manufacturing. Tosoh's CO<sub>2</sub> recovery amine is an agent that absorbs and captures CO<sub>2</sub>, which is found in combustion exhaust gas, created from the use of coal, natural gas, and other fossil fuels. In addition to its superior energy-saving performance in CO2 recovery, Tosoh's recovery amine features low degradation against NOx and other substances found in combustion exhaust gas, along with stable long-term use. To further benefit from this technology, the company has decided to implement their proprietary CO2 recovery amine at a new isocyanate feedstock conversion plant scheduled to begin operations in the fall of 2024. In the future, Tosoh plans to optimize the agent based on mounting collection data, and the company is in the process of marketing it externally. Tosoh will accept the challenge of creating innovation by combining all the technologies and experiences accumulated over the years to contribute to achieving a carbon-neutral society.



# Dominance of Bromine and Ethyleneamines in Asia

Tosoh's geographic proximity to Asia—particularly China, the largest market for both bromine and ethyleneamines provides the company with a strategic advantage, allowing for shorter lead times in its product supply chains.

Furthermore, we are confident that this geographical advantage not only benefits us logistically; but also fosters the development of stronger relationships with our users due to proximity. We will, therefore, establish a meticulous production and sales system, leveraging our capacity for frequent communication with many users.

# **Specialty Group**

# BIOSCIENCE



Tatsuji Kushimoto

# Driven by science, we will continue to provide products that foster a world where everyone can live with peace of mind.

In addition to successfully expanding sales in our existing separations and diagnostics businesses, Tosoh aims to achieve consolidated net sales of 100 billion ven in fiscal 2031 by expanding into peripheral areas within our existing businesses while also venturing into new businesses. Expansion has been the company's policy since the introduction of the previous medium-term business plan, but we have also entered into technological collaborations and acquisitions with external parties, leading to multiple new business opportunities.

While we will essentially adhere to this fundamental policy, in the future, the company plans to continue looking for new projects while working hard to ensure the success of any new businesses we have launched.

# Medium-term Business Policy (FY2023-2025)

Diagnostics	<ul> <li>Accelerate transition to AIA<sup>®</sup>-CL series</li> </ul>
	<ul> <li>Expand inspection parameters</li> </ul>
	<ul> <li>Strengthen business foundation by creating</li> </ul>
	new businesses

Separations • Increase market share for biopharmaceuticals Expand products into related businesses Expand business scale by creating new businesses

# **Medium-term Business Policy Initiatives**

## **Toward Specialty Business Operating Income** in Excess of ¥100 Billion

#### Tosoh's fundamental policy is as described below.

#### 1 New product development

Tosoh primarily develops products internally, but if this becomes difficult due to technological or time constraints, we will consider exploring external collaborations or M&A concurrently.

#### 2 Bolster sales capabilities

Tosoh will strengthen its global marketing efforts to drive further penetration of the Tosoh brand and make sales activities more streamlined.

#### 3 Stable supply structure

Tosoh Report 2024

59

To avoid missing out on business opportunities, Tosoh will implement timely capacity expansion and consider multiple manufacturing and distribution bases.

#### 4 Human resource development

It is essential to have global collaboration in many areas, including sales, development, and manufacturing. With this in mind, we will foster an environment that encourages international business acumen, for example, by primarily assigning young employees to overseas sales offices.



Major products		
Diagnostics	<ul> <li>Immunoassay analyzers(AIA®-CL series fully automated chemiluminescent enzyme immunoassay analyzers and AIA® series automated enzyme immunoassay analyzers)</li> <li>Nucleic acid testing products (TRCReady® series)</li> <li>Glycohemoglobin analyzers(HLC-723® series)</li> <li>Various diagnostic reagents</li> </ul>	
Separations	Measuring instruments (HLC®-8420GPC, IC-8100® series)     HPLC columns(TSKgel® series)     Separation and purification media (TOYOPEARL® series) etc	

# Products Certified as Solutions to Social Issues

- IC-8100<sup>®</sup> series high-speed ion chromatography systems
- AIA®-CL series fully automated chemiluminescent enzyme immunoassay analyzers
- AIA® series automated enzyme immunoassay analyzers
- HLC-723<sup>®</sup> series automatic glycohemoglobin analyzers
- TRCReady<sup>®</sup>-80 series automated nucleic acid testing
- systems
- TOYOPEARL<sup>®</sup> series separation and purification media

# **Differentiation Strategies**

### **Expansion of Product Lineup for Biopharmaceuticals**

Driven by rising demand for antibody drugs, gene therapies, and infectious disease vaccines, the biopharmaceutical market is anticipated to experience substantial growth. In contrast to the batch production method of conventional liquid chromatography technology, continuous chromatography is attracting attention as a new and more effective method for responding to demand fluctuations and managing production costs.

Tosoh made an investment in Semba Biosciences Inc. (now Tosoh Bioscience Wisconsin Inc.), a company that specializes in the manufacture and distribution of chromatography systems. Through this collaboration, Tosoh introduced the world's first tabletop continuous chromatography system and expanded its product range, including developing the ProGMP™ continuous chromatography system. In 2021, Semba officially became a wholly owned member of the Tosoh Group, with the objective of expanding the continuous chromatography business and establishing synergies with TOYOPEARL liquid chromatography separation and purification

media as well as the SkillPak™ pre-packed business

The company will continue working hard to enhance its existing business operations and expand into peripheral and new areas to become a comprehensive biopharmaceutical purification solution provider.



TOYOPEARL®

Opportunities

# SWOT Analysis

- Proprietary technology based on separations An extensive lineup of diagnostic tests and automated systems with short measurement times, ensuring fast results Strength Worldwide sales network Expanded opportunities for testing due to events such as infectious disease outbreaks Demand is driven by pharmaceutical
- manufacturing trends and other factors

# **Proprietary Technology Through Separation**

More than 50 years ago, Tosoh began its involvement in this business, drawing from its experience in liquid chromatography technology initially developed for internal use in R&D and quality control applications for chemical industry products like polyethylene. Subsequently, Tosoh commercialized liquid chromatography columns in response to requests from other companies. Following this, Tosoh introduced the world's first dedicated high-speed gel permeation chromatography (GPC) system, broadening the range of its applications from the chemical industry to include sectors such as pharmaceuticals, food, and environment. Moreover, the company launched the versatile TSKgel series of high-performance liquid chromatography columns, featuring various separation modes. This separation technology was also extended to the clinical field. Additionally, we have made contributions to



## Immunoassay systems that meet customer needs

Tosoh's AIA-CL series of fully automated chemiluminescent enzyme immunoassay analyzers are capable of automatic measurement and, once the sample is set and started, can deliver results in as little as 15 minutes. It features unique technologies that other companies do not have, including simplicity of operation and single-test packaging for reagent stability. It further has user-friendly specifications such as the same reagents being compatible with all models.

With a lineup featuring three different system sizes-the AIA-CL300, AIA-CL1200, and AIA-CL2400-Tosoh offers the optimal model for facilities of any scale. Each year, the number of testable items, including infectious and other diseases, increases. In 2020, Tosoh launched a joint research project with Yokohama City University and other institutions on SARS-CoV-2. In December of the same year, the company also started selling antibody detection reagents and in September 2021, reagents for antigen testing.

We will continue to aim for a system that can flexibly respond to customer scale and needs through a wide range of testable items and a comprehensive lineup of

equipment.



AIA®-CL series



the medical care field by introducing a system designed to rapidly and accurately separate and measure hemoglobin A1c (HbA1c), a diagnostic marker for diabetes used in monitoring blood glucose concentration. In addition to separations, we have also developed technologies for purifying both natural product ingredients and chemically synthesized products. The widespread use of our Toyopearl industrial separation and purification media in biopharmaceuticals is contributing to the rapid expansion of the business.

Moving forward, Tosoh plans to further evolve technologies related to separations, developing and launching continuous chromatography systems and Skillpak loaded with separation and purification media to meet the diverse needs of a wide variety of customers.

**Specialty Group** 

# **ADVANCED MATERIALS**



By pursuing materials science and embracing the challenges of the future, we contribute to the creation of a sustainable society.

By delivering products and services with new value to the market, the Advanced Materials Division strives to establish itself as a specialty business group with a global presence. Our main value proposition and competitive edge lie in our technology-driven performance and quality. We focus on developing globally distinctive products, including zirconia powder, synthetic zeolites, silica glass, sputtering targets, and electrolytic manganese dioxide (EMD). Through the sustainable and reliable supply of these products, we aim to enhance societal well-being and reduce environmental impact. In every facet of our business, the company is committed to our mission of realizing a sustainable society. With this objective in mind, we will actively promote the development of new technologies associated with the circular economy and carbon recycling so we can contribute more to the actualization of a recycling society.

### Medium-term Business Policy (FY2023-2025)

#### Ceramics

Maintain supply of the world's top share of zirconia powder for fine ceramics

#### Zeolites

• Expand market share by enhancing functionality and reducing costs

### **Electronic Materials**

• Capitalize on the growing semiconductor demand through timely capacity expansion

### Battery Materials

• Continue to introduce high-performance products Achieve stable profit growth by diversifying raw material ore

# Medium-term Business Policy Initiatives

### **Toward Specialty Business Operating Income** in Excess of ¥100 Billion

We will achieve our objectives through the execution of three strategies: partnership, involving co-creation with customers; technology dissemination-the creation of new demand-and brand strategy. The company will continuously develop and introduce distinct products, propose solutions to customers, and progressively increase production capacity, specifically for silica and sputtering targets. Moreover, we will aim to achieve our goals while considering M&A to reinforce our weaknesses.

The company has begun to boost production capacity at manufacturing facilities dedicated to sputtering target materials used for semiconductor thin film formation, as well as for silica materials and fabricated quartzware. Our recent product launches include environmentally friendly zirconia powder with a low sintering temperature, high-silica zeolites offering superior thermal stability and compliance with automotive emissions standards, and gallium nitride sputtering targets designed to meet semiconductor market demands.

As we explore new business opportunities, Tosoh's goal is to develop new products and provide solutions that align with societal demands. This involves utilizing both forecasting, where business strategies are formulated based on available patent and non-patent information, and back casting, a method that begins by envisioning the desired future and then working backward to identify and develop the most suitable measures required

#### Net sales trends

das



Major products		
Ceramics	<ul> <li>Zirconia powder</li> <li>Zirconia grinding and dispersion media</li> <li>Colored zirconia</li> <li>Sintered ceramics</li> </ul>	etc.
Zeolite	• Synthetic zeolite(Zeolum®, high silica zeolite)	etc.
Electronic materials and fabricated quartzware Various sputtering targets et		re etc.
Battery materials	<ul> <li>Electrolytic manganese dioxide(EMD)</li> </ul>	etc.

#### **Products Certified as Solutions to Social Issues**

• High-silica zeolite HSZ® purifying catalyst for automobile exhaust

High-silica zeolite HSZ<sup>®</sup> adsorbent for VOC removal device

# **Differentiation Strategies**

### Zirconia: Development of environmentally friendly Zgaia®

By redesigning the zirconia particle structure, Tosoh succeeded in developing the world's first low yttria (Y2O3) additive grade Zgaia 1.5Y-HT-previously not possible with conventional products—achieving high bending strength and fracture toughness. Zgaia 1.5Y-HT can also be sintered at a lower temperature (1,250°C) in contrast to the conventional sintering temperature (1,500°C), thereby contributing to a reduction in CO<sub>2</sub> emissions.

### Silica glass: Secured competitive advantage through collaboration with Tosoh Group (materials + processing)

Tosoh's semiconductor silica business features comprehensive production capabilities-covering materials to fabricated guartzware—which enables the company to promote advanced development materials to customers, obtaining certification, and addressing customer issues in a coordinated manner. We will also intensify our efforts to capitalize on the rising demand for semiconductor growth in different regions, capitalizing on the strength of our global processing operations

#### High silica zeolite: Reducing environmental impact

The widespread adoption of electric vehicles (EVs) faces various challenges-especially for large commercial vehicles that are still dependent on internal combustion engines. In addition, stricter emission regulations are in the planning stages globally. With regard to high silica zeolite, Tosoh is

# SWOT Analysis

<ul> <li>High-performance product range based on proprietary technologies</li> <li>Accumulation and transmission of knowhow and experience accumulated through extensive customer support</li> <li>Global brand recognition</li> <li>Supply stability with multiple production base</li> </ul>	S Strengths
<ul> <li>New demand inspired by the trend toward carbon neutrality</li> <li>Healthcare needs an association with the promotion of investment in health and realization of a health-promoting society</li> <li>Long-term demand for semiconductors</li> </ul>	Opportunities

#### Lineup of High-Performance Products Based on Proprietary Technologies and Global Brand Strength

Regarding zirconia powder, Tosoh's unique hydrolysis method provides a significant quality advantage, and the company has secured the world's top leading market share for zirconia powder, which is used in the production of fine ceramics. The utilization of high-silica zeolite, supported by high-precision material design technology and excellent quality, is prevalent in exhaust gas systems for diesel vehicles, contributing to a global reduction in nitrogen oxide (NOx) emissions. Quartz products, adopted by major semiconductor equipment manufacturers worldwide, demonstrate high-quality materials and precision processing technology. Tosoh sputtering target materials integrate metal melting and powder metallurgy technologies, while the company's battery materials are made possible through our electrolysis technology, enabling the production of high-performance manganese dioxide. Continued global development for both products remains a priority.

continuously introducing next-generation products, underpinned by its extensive track record in catalysts for exhaust gas purification and our partnerships with customers. Based on the company's unique material design and manufacturing technology, the stable purification and durability of our high-silica zeolite have been praised under the Euro 7 emissions regulations as an innovative and responsive technology.

#### Sputtering targets: Develop solution-based business for customers requiring state-of-the-art semiconductors

Tosoh will enhance its technical capabilities to provide advanced solutions, strengthen customer relationships, and broaden its portfolio with differentiated and new product lines. The Tosoh Group possesses technologies for handling various types of metals-including low-melting point, high-melting point, and alloys-as well as ceramics. The company aims to optimize and complement the Group's strengths to enhance customer value.

### Electrolytic manganese dioxide: Continuously launch high-end products

Tosoh is committed to continuously improving its product technologies and constantly delivering world-class, high-performance products. One of the company's strengths is its global supply system centered in two bases in Japan and abroad.

Moreover, there are high expectations for manganese-based raw materials in the energy sector, and new developments are in progress based on existing technologies.



Toward the Realization of **Carbon Neutrality** 

The oxygen ion conductivity of zirconia makes it well-suitable as an electrolyte for environmentally friendly and highly efficient solid oxide fuel cells (SOFCs), which do not emit CO2, and solid oxide electrolyzer cells (SOECs) that efficiently produce hydrogen. Tosoh's goal is to encourage the extensive use of the company's zirconia materials and contribute to carbon neutrality.

Zeolites play a crucial role as adsorbents and catalysts in the recovery of CO<sub>2</sub> and the production of fuels and chemicals from non-fossil fuels. We are actively developing zeolites designed for the recovery of CO2 from industrial exhaust gases, transforming fuel into sustainable aviation fuel (SAF), and producing chemicals using methanol as the key component.

# **CSR Management**

# Basic Concept

Global concern over social issues, such as climate change and human rights, is growing. Also growing is the expectation for corporations to address these issues.

The Tosoh Group understands that business activities to resolve these issues are essential for its sustainability and society's. It is for this reason that CSR activities are central to our operations. Our CSR Basic Policy identifies material issues and addresses the SDGs and other challenges.

Tosoh's CSR initiatives are led by its CSR Committee, chaired by the company president. The CSR Committee is responsible for revising our CSR Basic Policy and for discussing, recommending, and approving CSR targets and KPIs. It also coordinates interdepartmental efforts to promote CSR activities, deliberates on significant reporting items, and formulates policies for information disclosure, which it submits to the Board of Directors for approval.

#### **Promotional Structure**

**Board of Directors** 

#### **CSR** Committee

Chairperson : President

Committee members : Executive vice presidents level and above, Senior general managers (Nanyo and Yokkaichi Complexes), group presidents, chairpersons of each committee, and general managers of head office administrative departments Secretariat : CSR Promotion



# Steps in Identifying Important CSR Issues and KPIs

In fiscal 2022, Tosoh reviewed CSR issues for fiscal years 2023-2025.

#### Step 1

Considering international guidelines ISO 26000\*1 and GRI Standards\*2, as well as the demands of society toward contributing to a sustainable society as well as the Tosoh Group's sustainable growth plan, we identified several candidates as important issues that could be considered both risks and opportunities

\*1 ISO : International Organization for Standardization

\*2 Framework for sustainability reporting by the Global Reporting Initiative, an international nongovernmental organization

#### Step 2

We conducted a quantitative materiality assessment of potential critical internal and external\*3 issues, while considering their impact on society's sustainable development, as well

as Tosoh Group's sustainable growth plan.

\*3 External evaluation: External directors, four investment institutions, CSR consultants, nonprofit corporations, and others

# Step 3

In addition to the importance assessment, we have also identified nine important issues\*4 based on the ideas in 1 to 3 below in consideration of the results of CSR activities through fiscal 2022 and society's expectations of the Tosoh Group.

- 1 Issues of high importance for both the impact on society's sustainable development and the Tosoh Group's sustainable growth plan
- 2 Issues of high importance in terms of impact on society's sustainable development

3 Issues in which the Tosoh Group has been actively involved \*4 See P.35-36 for more details on the nine important CSR issues.

#### Step 4

To resolve the nine issues identified, we have established 24 KPIs that will lead to earning and maintaining stakeholder trust and achieving the sustainable growth of the Tosoh Group.

#### Approval

Deliberation by the CSR Committee and Board of Directors

# **Responsible Care(RC)**

Responsible Care (RC) is a voluntary initiative aimed at ensuring the protection of the environment, safety, and health in all stages of handling chemical substances, from development and manufacturing to distribution, use, consumption, recycling, and disposal. This initiative also involves transparent reporting and active engagement in social dialogue. We recognize that environmental preservation and the assurance of safety and health are fundamental to our business operations. As such, we consistently adhere to our Basic Principles Regarding the Environment, Safety, and Health.

#### Environment, safety, and health basic principles

Based on the recognition of the prime importance of environmental protection and the assurance of safety and health, the Tosoh Group is engaged in continuous RC activities throughout a product's life cycle, from R&D, manufacture, use or consumption, through recycling or disposal. We will contribute to the sustainable development of society through continuous voluntary RC activities and constant innovation in chemistry.

# **RC Promotional Structure**

#### **Promotional Structure**



#### **RC** Committee

Chairperson : Director in charge of Environment, Safety & Quality Control

Committee: General managers, group presidents, senior general managers/general managers, general manager of Corporate Strategy, senior general manager of Research Division, general manager of Purchasing & Logistics, general manager of Production Technology & Planning, general manager of Technology Center

Secretariat : Environment, Safety & Quality Control at headquarters









	Tosoh	Tosoh Group
Ρ	Establish company-wide policies	Establish policies for each company
D	Promote activities	in line with policies
с	Conduct an audit of activities (RC audit)	Confirm activities through environmental and safety patrols
A	Review company-wide policies based on audit results and the activities of each group company	Review each company's policies based on the status of its activities

# **Environmental Protection**

# **Basic Concept**

The following environmental protection action guidelines ensure our compliance with laws and regulations. They also establish voluntary control standards for our management of emissions into air and water. In addition, the guidelines help to steer our transition to a circular economy.

#### Code of Conduct

- •We aim to maximize resource efficiency through energy conservation, resource conservation, and the implementation of the 3Rs (reduce, reuse, recycle), while minimizing the environmental impact of our business activities to contribute to a recycling-oriented society
- •We undertake community-based environmental protection initiatives in the recognition that biodiversity conservation is essential for the sustainable development of society.

We are committed to protecting biodiversity through our business activities and through contributions to local communities to foster society's sustainability. Our efforts are guided by the belief that environmental preservation is essential to achieving coexistence and harmony with the communities surrounding our complexes and laboratories.

### **RC Activity Policy**

- Compliance with laws and regulations (zero
- deviations from regulatory or agreed values) · Compliance with laws and regulations by group
- companies Promotion of Pollutant Release and Transfer
- Register (PRTR) emission reduction
- · Utilization of industrial waste
- Promotion of systematic disposal of polychlorinated biphenyl (PCB)-containing equipment

#### CSR Issues

Strengthening of environmental preservation activities KPIs and targets Major environmental accidents : Zero Fiscal 2024 Results 0 (Achieved)

We are working to address CSR issues through our achievement of the policies and goals of our RC activities.

# **Activity Results**

- (1) Compliance with Laws and Regulations
- · Ensure compliance with agreed values
- · Ensure compliance with laws and regulations
- (2) Compliance with Laws and Regulations at Group Companies
- Improve legal compliance management level

#### (3) Reduce PRTR Emissions

- · Continue reduction of n-hexane as planned at the Yokkaichi Complex
- (4) Effective Use of Industrial Waste
- Reduce industrial waste 75% by fiscal 2026. compared with fiscal 2001
- · Reduce total industrial waste discharge, external disposal
- Maintain recycling rate of 90% or better
- (5) Planned disposal of equipment containing low PCB concentrations
- Undertake planned disposal of applicable equipment

# Fiscal 2024 Initiatives

#### Group company initiatives

To enhance our compliance management, we engage environmental consultants to provide expert guidance to Tosoh Group companies. We also regularly distribute and share updates group-wide on revisions to environmental laws and regulations and have made a comprehensive list of these laws and regulations available on the company intranet.

We are strengthening group-wide information sharing and collaboration through the Tosoh Group's Ankan-Net.\* It facilitates reports on our environmental activities, on trends and revisions in environmental law, and on training in environmental law

Our environment and safety exchange meetings include site visits to group companies with external advisers. Such visits help us verify compliance with environmental laws and regulations, particularly related to industrial waste management.

We will continue our initiatives to ensure Tosoh Group compliance. Our efforts center on raising environmental awareness and environmental protection.

\*The Ankan-Net (safe environment network) is a Tosoh Group organization that promotes RC activities through information sharing and support on safety, environmental protection, and quality management.

# Biodiversity

If not properly managed during the manufacturing process, Tosoh's chemical products could harm the natural environment, including ecosystems. Our entire supply chain, in fact, could affect ecosystems through its use of natural resources, such as minerals, water, and energy-producing fossil fuels in the making of chemical products.

The Tosoh Group is dedicated to ensuring society's sustainability by conserving biodiversity through its business operations and contributions to local communities. To raise employee awareness of that commitment, we have since fiscal 2021 included biodiversity conservation activities in the action guidelines of our Basic Principles Regarding the Environment, Safety, and Health. We also use in-house education and other initiatives to deepen employee understanding of the importance of biodiversity preservation.

#### **Biodiversity conservation initiatives**

The Tosoh Group engages in community-based environmental conservation activities that promote nature positivity, including the revitalization of nature, in support of biodiversity. These efforts fall under the action guidelines of our Basic Principles Regarding the Environment, Safety, and Health and are carried out through voluntary initiatives with local communities.

In 2024, Tosoh joined the Keidanren Declaration of Biodiversity initiative in endorsing the revised Keidanren Declaration for Biodiversity and Guideline from December 2023. This endorsement emphasizes our desire to help ensure an environmentally and economically sustainable society. Our activities include contributing to such global objectives as the Global Biodiversity Framework\*1, the UN's SDGs, 30x30\*2, and Japan's National Biodiversity Strategy.

\*2 30x30 is a worldwide initiative to conserve at least 30% of land and sea as healthy ecosystems by 2030.

#### **Establishment of the Tosoh Sapling Fund**

On April 10, 2024, Tosoh Corporation, Yamaguchi Prefecture, and the Yamaguchi Prefecture Federation of Forest Owners Cooperative Association agreed to establish the Tosoh Sapling Fund. Their agreement promotes the efficient use of residual materials harvested from forests in Yamaguchi Prefecture and supports the reforestation of logged areas.

Tosoh will accept and use fuel chips derived from forest residual materials as fuel for in-house power generation at the Nanyo Complex. In return, the company will contribute funds proportional to the volume of fuel chips received. The Yamaguchi Prefecture Federation of Forest Owners Cooperative Association will use these funds to provide saplings to forest owners for reforestation after logging. The agreement thereby supports the multifunctionality of forests and advances forestry through the recycling of forest resources.

#### Fund organization



Agreement signing ceremony

<sup>\*1</sup> Global Biodiversity Framework

# Safe and Stable Operation

# **Basic Concept**

Our philosophy on environment, safety, and health asserts that "safety takes precedence over everything else." The action guidelines that we have put in place speak to how committed we are to the safety and health of our employees-our most valuable asset-and those of our partners. Our goal is to achieve zero accidents and zero lost work time due to injury.

We assess risks to identify hazards and implement corresponding risk reduction measures following the principle of multiple protective layers. Our pursuit of safety standards involves diverse safety initiatives, often with our partners and a focus on training safety engineering specialists and other vital personnel.

#### **RC Activity Policy**

• Zero Accidents and Injuries Resulting in Lost Time · Promotion of Earthquake and Tsunami

- Countermeasures
- · Maintenance and Improvement of Independent Safety Measures
- · Zero Accidents and Injuries Resulting in Lost Time at Group Companies
- Zero Serious Incidents(Logistics safety)
- Ensure Preventive Logistics Safety

<Important CSR Issues> Safe and stable operation <KPIs and targets> 1. Major security accidents : Zero 2. Major industrial accidents : Zero <Fiscal 2024 Results> 1. Two (not achieved) 2. One (not achieved)

We are working to address CSR issues through our achievement of the policies and goals of our RC activities.

# Activity Results

- (1) Zero Accidents and Injuries Resulting in Lost Time
- · Ensure basic safety behavior
- Improve comprehensiveness of risk assessment
- Undertake efforts to eliminate similar accidents and occupational injuries
- Maintain and improve construction system (2) Promotion of Earthquake and Tsunami
- Countermeasures
- · Ensure earthquake resistance of important

buildings and promote tsunami countermeasures (3) Maintenance and Improvement of Independent Safety Measures

- Actions to be taken under new certification system (ensure smart security technology, cybersecurity countermeasures, and ability to confirm legal compliance)
- (4) Zero Accidents and Injuries Resulting in Lost **Time at Group Companies**
- · Provide guidance to group companies (ensure process safety assessment implementation, environment and safety exchange meetings, and use of Tosoh Group Ankan-Net)
- Continue promotion of tsunami countermeasures
- · Cooperate in business auditing for overseas Group companies
- (5) Zero Serious Incidents(Logistics safety)
- · Conduct bridge resource management (BRM)\* training for time-chartered vessels and safety awareness through voyage and operation diagnoses
- Provide ongoing support for Tosoh Logistics Corporation's efforts to rebuild culture of safety
- (6) Ensure Preventive Logistics Safety
- · Ensure safety of cargo handling operations
- Ensure safety of outsourced work
- Consider risk assessment of logistics processes

\*BRM prevents maritime accidents from human factors by employing all available resources on a ship's bridge

# Fiscal 2024 Initiatives

#### **Explosion at Tosoh SGM Corporation**

In November 2023, an explosion occurred at the Shin-Nanyo Factory of Tosoh Group company Tosoh SGM Corporation resulting in the death of one employee and injury to another.

Tosoh Corporation and Tosoh SGM established a joint accident countermeasures committee to ascertain the cause of the accident. The investigation found that highly flammable hydrogen gas had leaked into the factory and been ignited by static electricity, resulting in the explosion.

The investigation prioritized the prevention of explosions and fires. Its recommended first step was to reconfirm the effectiveness and continuity of measures for preventing explosions and fires at Tosoh Group companies. Where measures are insufficient, we are supplementing them to mitigate risk. We are also establishing systems at each group company to assess safety.

The Tosoh Group has, in light of this latest accident, reaffirmed that safety takes precedence over all else. We will emphasize safety activities to prevent the recurrence of such tradedies.

# **Product Safety and Quality Management**

# Basic Concept

Tosoh's philosophy on environmental, safety, and health embraces efforts to ensure product safety and quality to improve customer confidence. We have therefore established action guidelines that focus on quality control and logistics.

Those guidelines help our quality management system raise quality and ensure the timely, stable, safe provision of quality products and services that reflect customer needs. Our emphasis on the safety of our products sees us comply with product safety laws and regulations from product development through production and disposal. We also disclose to customers and handlers accurate and complete information about the chemical substances in our products and how to securely handle them.

### **RC Activity Policy**

- Reduce Serious Product Complaints to Zero
- · Strengthening Supply Chain Management
- · Confirmation of Quality Control System
- · Reinforcement of Quality Assurance System for Bioscience Division Products
- Zero Occurrence of Maior Nonconformities in
- Compliance with Domestic and International
- Chemical Substance Laws and Regulations Reduce Logistics Complaint and Problem Incidence Rate

### <Important CSR Issues>

- Product safety and quality management <KPIs and targets>
- 1. Major quality issues : Zero
- 2. Occurrence of serious nonconformities
- (chemicals) : Zero
- <Fiscal 2024 Results>
- 1. One (not achieved)
- 2. Zero (achieved)

We are working to address CSR issues through our achievement of the policies and goals of our RC activities.

# **Activity Results**

- (1) Reduce Serious Product Complaints to Zero Lessen product complaints by reinforcing
- cooperation with related departments (2) Strengthening Supply Chain Management
- Strengthen quality control system of outsourced manufacturing sites

- Strengthen management of raw material (including packaging materials) suppliers
- (3) Confirmation of Quality Control System
- Continue Tosoh, Group company quality control survevs
- · Conduct quality control survey follow-up for Group companies
- (4) Reinforcement of Quality Assurance System for Bioscience Division Products
- · Establish legal compliance system in response to revised Pharmaceutical Affairs Agency Law
- Monitor quality assurance system of Bioscience product manufacturing facilities
- (5) Zero Occurrence of Major Nonconformities in **Compliance with Domestic and International Chemical Substance Laws and Regulations**
- · Comply with legal obligations
- Respond to notifications, applications
- (6) Reduce Logistics Complaint and Problem
- Conduct the following four essential activities to achieve an incidence rate of 70 parts per million (ppm): ensure that Tosoh is contacted promptly in the event of issues, confirm once-daily cargo movements against inventory, manage comprehensive work tools in place and perform comprehensive safety check when within customer premises.

# Fiscal 2024 Initiatives

As part of our efforts to bolster quality management, we conducted a quality control survey of the Tosoh Group in fiscal 2024. The Environment, Safety & Quality Control Department at headquarters and the quality assurance section at the Yokkaichi Complex have jointly conducted on-site surveys of Tosoh Group companies since November 2022. The results of these surveys are used to upgrade systems group-wide.

Survey Title : Quality control survey Subjects : Tosoh (Nanyo, Yokkaichi), 25 group companies Objective : Survey inspection systems and data traceability Results and response : No inappropriate incidents were detected at Tosoh or any of the group companies surveyed. We will continue to examine inspection systems and data traceability to eradicate inappropriate incidents. Survey Title : Quality control system survey Subjects : 23 group companies Objectives : To examine vulnerabilities in quality control systems and determine if factors such as data falsification exist that could lead to fraud Results and response : A system that automatically records data would be ideal. Cost-effectiveness, though, compels us to first utilize a double-check system

This survey has heightened awareness of the importance of quality compliance. To improve our system's reliability, we intend to continue the survey.

# **Diversity and Inclusion**

The Tosoh Group recognizes that its employees are fundamental to its corporate value. To achieve sustainable growth and to maintain the trust of stakeholders, we must cultivate self-reliant individuals who can adapt to social changes, embrace diverse values, think independently, and take initiative. Equally important is that we foster an open and rewarding work environment that values diversity and inclusion.

In the interest of developing the self-reliant employees that are its greatest asset, Tosoh is committed to enhancing job satisfaction and to providing appealing workplaces conducive to that end. Job satisfaction includes our promotion of a work-life balance that sees employees prioritize their professional and personal lives equally to fulfill their individual potential in each respect. This is why we are establishing an environment at Tosoh that helps employees thrive at work and outside work, enabling them to contribute their unique characteristics to Tosoh and to their families and others

At Tosoh, employees benefit from ongoing career training that engenders their independence. They also benefit from the career counseling services that we offer to help them achieve their career and lifestyle goals.

The Tosoh Group is dedicated to ensuring a corporate culture that respects individual abilities and independence and diverse and inclusive perspectives. We continue to build on this culture to boost productivity, drive innovation, and sustain our growth.

# **Basic Concept**

Tosoh respects the abilities, experiences, and values of each of its employees and capitalizes on their diverse backgrounds to further its corporate value.

We employ a range of strategies to ensure that every employee experiences job satisfaction in a supportive and conducive work environment.



Easy-to-Work Environment and Job Satisfaction

Akira Takano

General Manager, Human Resources

Vice President

# **Development of Self-Reliant Human Resources\***

Basic policy for human resource development We will develop self-reliant human resources capable of envisioning their aspirations and of responding to changes in the environment and willing to continuously learn and work toward achieving their goals.

Our basic policy for human resource development underpins our transformation of our in-house training. We have shifted from passive training to active, sustained learning and have introduced career education to develop self-reliant employees capable of independent thought and action. Employees first attend rank-based training sessions before undergoing career counseling to clarify career objectives, heighten awareness of work goals, and encourage job satisfaction and personal growth.

Tosoh, in short, promotes employee-centered career development. Employees are encouraged to independently develop the skills they require to the highest degree each individual is capable of. In this way, every employee generates their highest added value to contribute to Tosoh's competitiveness.

### Human resource development conceptual diagram



\* Self-Reliant Human Resources : People who devise tasks and roles and involve others to achieve results in any environment, inside and outside the organization

# Global Human Resources Development

#### Definition of global human resources

Tosoh defines global human resources as people who can use language as a tool to advance their work and expand the company's operations internationally.

In fiscal 2023, we clarified our definition of global human resources and expanded our training programs to ensure that employees could improve their language capabilities. The following fiscal year, 2024, we resumed our study-abroad program, which we'd suspended amid the spread of COVID-19. The program retained its content and sent abroad the same number of students as previously.

Tosoh recognizes that attending a language school or staying with a family overseas does more than improve language skills. It also grants employees invaluable opportunities to interact with people of diverse cultures, ethnicities, and values.

We intend, therefore, to upgrade our global human resource development. Our study-abroad program will allow employees to boost their language skills, deepen their knowledge of the world, and develop the business acumen to expand our operations globally.

# Human Resource Activities Based on Management Strategy

To realize the human resources aims of our medium-term business plan and thereby perpetuate the company's value and growth, we are implementing the following :

#### Diversity promotion

Hiring at Tosoh focuses on personnel with a high level of expertise and diverse experience. This enables our allocation of human resources with an emphasis on growth and priority businesses.

We promote hiring women, doctoral candidates, and others. This fosters a corporate culture that embraces and capitalizes on myriad values, ideas, and expertise-no matter their source or nature-to elevate business operations.

Maintaining and furthering that corporate culture sees us offer unconscious bias and emotion management training programs for our senior managers. These programs engender an organizational environment welcoming of diversity and inclusion.

#### Infrastructure upgrade

We utilize a talent management system to accumulate and analyze our human resources in a timely fashion. Bolstering the accuracy of those endeavors and constructing infrastructure with the flexibility to respond to shifts in human resources strategy is for us a priority.

Our efforts include the introduction of online learning tools that feature more than 8,000 videos. This will lead to a workplace environment where employees can choose to learn required professional development and other skills.

# Internal Recruiting System

In our effort to develop human resources who can think and act independently, we have launched an in-house open recruiting system. It grants employees opportunities to volunteer to challenge for the role of their choice. We believe that this system will do the following :

1. Increase employee motivation

The chance to experience new tasks and departments and to diversify and broaden their perspectives and skills is a significant employee motivator.

#### 2. Facilitate compatibility in personnel transfers

By having employees who are interested in and attracted to the publicly announced job openings, and who believe they can fully utilize their abilities, it is expected that highly suitable personnel placements can be achieved.

# 3. Promote career development

Our in-house open recruiting system encourages self-actualization and provides employees with opportunities to consider, change, and further their careers.

# Work-Life Balance Support System

Tosoh respects the varied lifestyles of its diverse workforce. We promote a workplace environment that encourages a balance between the professional and the personal.

As part of our childcare support, we are promoting better understanding of the work-life balance support system and creating a more user-friendly environment. This is accomplished by implementing measures such as offering a certain number of paid days during childcare leave, displaying internal posters with advice from supervisors, and receiving feedback from male employees who have taken childcare leave.

The care of ill or invalided family members, too, figures prominently in our corporate culture. We've expanded our telecommuting policy to permit employees to work from home, including that of a nurse or other professional caregiver, should they be responsible for overseeing family members who are sick or enfeebled. We also support the retraining of employees who must take extended leaves of absence for this purpose. In this way, we retain employees to the benefit of our corporate value and sustainability.

# Health Management

#### Health declaration

Tosoh believes that the realization of its corporate philosophy is predicated on the physical and mental health of its employees. As such, we make every effort to ensure that our employees work in safe, healthy, comfortable environments.

We host activities at each of our facilities that emphasize physical fitness, lifestyle improvement, and mental health. In fiscal 2024, Tosoh was recognized for those activities for the fifth consecutive year. Japan's Ministry of Economy, Trade and Industry and Nippon Kenko Kaigi named us an Outstanding Corporation under Certified Health and Productivity Management 2024 in the large enterprise category.

# **Respect for Human Rights**

# Basic Concept

Tosoh Group believes that respecting human rights in all of its business activities and throughout its value chain is true to its corporate philosophy. Human rights, therefore, are a focus of our CSR efforts initiatives.

That focus is in line with the global business responses to human rights outlined in the United Nations Guiding Principles on Business and Human Rights, adopted by the UN Human Rights Council in June 2011. The Tosoh Group Human Rights Policy that we announced in April 2023 was approved by the company's CSR Committee and Board of Directors.

Moving forward, we have initiated group-wide human rights due diligence. We are in that respect demonstrating a commitment to upholding human rights in accordance with the UN's guiding principles. External expertise from Japanese law firm Nishimura & Asahi instructs and assists us in our efforts.

# Human Rights Due Diligence

#### Selection of areas to address

The first step of our human rights due diligence was risk identification and assessment. Our research determined the human rights risks to prioritize. It included specific information from international organizations, such as civil society organizations (CSOs), and from cases of risk occurrence. From that, we summarized the risks to human rights that could arise in our operations and value chain. We considered risks specific to our industry, products and services, and geography.

We then conducted risk mapping based on the presumed severity, in scale, scope, and correctability, and likelihood of occurrence of each identified risk. The priority risks that we assessed relate to raw material procurement, manufacturing outsourcing, and plant construction and maintenance.



#### **Future initiatives**

We will instill respect for human rights and identify risks thereto at each of our workplaces. Our particular focus will be on raw material procurement-related human rights risks. As part of our supply chain management, we will interact with our suppliers to ascertain and mitigate risks.



# **CSR Supply Chain Management**

# Basic Concept

As a global company, Tosoh is engaged in various business endeavors around the world, in the course of which it procures large amounts of raw materials. In its procurement activities, the company follows a basic policy that ensures fairness and impartiality, compliance with laws and regulations, and environmental protection.

Expectations for companies to contribute to the sustainable development of society have grown. Companies are expected to tackle such global social issues as human and labor rights, environment and energy, and corporate ethics. To meet these expectations, Tosoh's efforts alone are not enough; it is essential that the entire supply chain works together.

Tosoh has compiled CSR Procurement Guidelines that outline its resolve on social issues and sustainable procurement in its supply chain. We share these guidelines with our suppliers and request their understanding of and compliance with our CSR procurement policies, guidelines, and activities.

#### Basic procurement policy

- 1. Ensuring fairness and impartiality
- In selecting suppliers, we work to ensure fairness and impartiality. We are open to a wide range of domestic and overseas companies and make decisions based on the criteria of economic rationality, such as price, quality, and supply stability
- 2. Complying with laws and regulations We comply with relevant domestic and international laws and regulations and social norms related to purchasing transactions.
- 3. Managing information

We maintain confidentiality in important matters and information obtained in transactions with our business partners and manage such information appropriately.

4. CSR procurement To fulfill our corporate social responsibility, we strive to procure products from suppliers who are committed to compliance with laws and regulations pertaining to environmental protection and safety, human rights, and the work environment.

### **CSR** Procurement Guidelines (revised March 2024)

- 1. Corporate Social Responsibility(CSR)
- 2. Human rights and labor
- 3 Occupational health and safety
- 4 Environment
- Fair trade and corporate ethics
- 6. Quality and safety
- 7. Information security
- 8. Business continuity plan(BCP)
- 9. Local community contributions

# **CSR** Procurement Initiatives

#### Supplier evaluation

From fiscal 2020 to fiscal 2022, Tosoh evaluated its suppliers' purchasing and logistics through its CSR Self-Assessment Questionnaire (SAQ). The results did not identify significant environmental, social, or governance risks. We provided feedback to suppliers on their performance in each area and requested improvement from those with below-average scores.

The publication of the Tosoh Group Human Rights Policy compelled us to revise our CSR Procurement Guidelines and SAQ in fiscal 2024 to center on human rights and labor practices. The guidelines raise awareness of human rights and labor practices throughout our supply chain, while the SAQ broadly identifies and assesses CSR activities related thereto.

Our ongoing assessment and mitigation of human rights-related risks in our supply chain will see us regularly administer the SAQ to monitor supplier activities. We will in addition strengthen trust with our suppliers through increased dialogue and offers to help improve CSR and sustainable procurement practices



#### Average scores by item on the fiscal 2020-2022 CSR SAQ

Number of respondents: 119 Response rate: 56.1%

### **Conflict minerals\* initiatives**

Tosoh is committed to the responsible sourcing of mineral resources. Conflict minerals are those used to fund armed groups, particularly those complicit in human rights violations in conflict zones. We respond promptly and appropriately to requests from customers to investigate conflict minerals and confirm that we are not involved in their use. If we find that any of the minerals we use are linked to conflicts, we immediately stop using them.

\* Tantalum, tin, gold, and tungsten produced in the Democratic Republic of the Congo and neighboring countries that have become a source of funding for armed groups and complicity in human rights abuses in conflict areas.

# **List of Directors and Auditors** (as of June 30, 2024)

# Directors



# Mamoru Kuwada Representative Director and President

FY2024 Attendance at Board of Directors meetings: 15/15

- 1984 Joined the Company 2020 Director and Executive Vice President of the Company Representative Director and President 2022
- of the Company (current)



Toru Adachi Representative Director and Senior Executive Vice President FY2024 Attendance at Board of Directors

meetings: 15/15 Joined the Company Director and Executive Vice President of 2020

(current)

- the Company Representative Director and Executive 2023
- Vice President of the Company Representative Director and Senior 2024 Executive Vice President of the Company (current) President of Taiyo Vinyl Corporation



Toru Doi Director and Executive Vice President

FY2024 Attendance at Board of Directors meetings: 15/15

Joined the Company 2021 Director and Senior Vice President of the Company

2023 Director and Executive Vice President of the Company (current)

![](_page_37_Picture_20.jpeg)

Akihiro Yoshimizu Director and Executive Vice President

- FY2024 Attendance at Board of Directors meetings: 12/12
- Joined the Company 2023 Director and Executive Vice President of the Company (current)

![](_page_37_Picture_24.jpeg)

# Takahiko Kamezaki Director and Executive Vice President

FY2024 Attendance at Board of Directors meetings: 12/12 Joined the Company

Director and Executive Vice President of the Company (current) 2023

# Auditors

FY2024

1086

![](_page_37_Picture_29.jpeg)

![](_page_37_Picture_30.jpeg)

Attendance at Audit & Supervisory

Board meetings: 11/11

# Makoto Okayama Full-time Corporate Auditor (External) Corporate Auditor (External)

	Indeper	ndent board member	Inc
nce at Audit & Supervisory neetings: 11/11	FY 2024 Attenda Board n	4 nce at Audit & Supervisory neetings: 15/15	FY Att Bo
Joined the Company	1983	Joined The Industrial Bank of	19
President of the Company	2011	Executive Officer of Mizuho	19
External Director (Audit and Supervisory member) of	2012	Managing Executive Officer of Mizuho Trust & Banking	20
Lonseal Corporation (current)	2013	Managing Executive Officer of Mizuho Financial Group, Inc. and Managing Executive	20
		Officer of Mizuho Trust & Banking Co. Ltd	20
	2016	Deputy President and Executive Officer of Mizuho Trust & Banking Co., Ltd.	20
	2018	Member of the Board of Directors of the Bank	
	2018	Representative Director and President of Japan Investor	20
		Solutions & Technologies Co., Ltd.	20
	2021	External Full-time Corporate Auditor of the Company (current)	
	2024	Outside Director (Audit and Supervisory Committee member) of WOWOW Inc.	

(current)

# **External Directors**

![](_page_37_Picture_35.jpeg)

#### Yoshihiro Hombo External Director/Independent board member FY2024 Attendance at Board of Directors meetings: 15/15 1979 Joined Mitsui & Co., Ltd. Executive Officer of Mitsui & 2010 Co., Ltd. 2012 Managing Executive Officer of Mitsui & Co., Ltd. Senior Executive Managing Officer of Mitsui & Co., Ltd. 2014 Representative Director and 2014 Senior Executive Managing Officer of Mitsui & Co., Ltd.

- 2017 Representative Director and Executive Vice President of 2018
- Mitsui & Co., Ltd. Director of Mitsui & Co., Ltd. Counselor of Mitsui & Co., Ltd. 2018 2019 Vice President and
- Executive Officer of VALQUA, LTD. 2019 Representative Director resident and COO of
- VALQUA, LTD. External Director of the 2020 Company (current)

Tosoh Report 2024

73

2024 Director and Vice Chairman of VALQUA, LTD, (current)

![](_page_37_Picture_42.jpeg)

#### Mariko Hidaka External Director/Independent board member

FY2024 Attendance at Board of Directors meetings: 15/15

- 1984 Joined Chuo Audit Corporation Registered as a Certified 1987
- Public Accountant Partner of Chuo Audit 2000 Corporation
- Senior Partner of Chuo 2006 Aoyama Audit Corporation
- 2007 Senior Partner of Ernst & Young ShinNihon (currently Ernst & Young ShinNihon
- LLC) External Director of the 2020
- Company (current) Representative of Hidaka 2020 CPA Office (current) 2021
- Outside Audit and Supervisory Board member
- of SBI Sumishin Net Bank, Ltd. (current) External Director (Audit and 2021
  - Supervisory Committee member) of Kyokuto Boeki Kaisha Ltd. (current)

![](_page_37_Picture_54.jpeg)

Yukimasa Nakano

- External Director/Independent board member FY2024 Attendance at Board of Directors
- meetings: 12/12 1982 Joined Onoda Cement Co.,
- Ltd. 2017 Executive Officer of Taiheiyo Cement Corporation
- Managing Executive Officer of Taiheiyo Cement 2020 Corporation
- Senior Executive Officer of 2022 Taiheiyo Cement Corporation Director and Senior 2022 Executive Officer of
- Taiheiyo Cement Corporation
- Director of Taiheiyo Cement 2023 Corporation 2023 External Director of the Company (current)

Yukiko Hashitera

External Director/Independent board member Newly appointed

FY2024 Attendance at Board of Directors meetings: - / -

- 1989 2001
- 2018
- 2024

2024

- External Director of the Company (current)
- (current) Independent Outside
- Joined Ueno Fine Chemicals
- CEO of R-Tech Ueno Ltd. CEO of Phoenixi Co., Ltd.
- Co., Ltd. (current)

![](_page_37_Picture_78.jpeg)

- 2022 2023

![](_page_37_Picture_88.jpeg)

# Tetsuya Teramoto

dependent board member 2024

tendance at Audit & Supervisory ard meetings: 15/15

- 70 Joined Eiken Chemical Co.,
- 96 Director of Eiken Chemical Co., Ltd. Director and Managing 05
- Executive Officer of Eiken Chemical Co., Ltd. 06 Director and Senior
- Managing Executive Officer of Eiken Chemical Co., Ltd. 07 Director, Representative Executive Officer, and CEO
- of Eiken Chemical Co., Ltd Director, Representative )14 Executive Officer, and Chairman of the Board of
- Fiken Chemical Co I td )14 External Corporate Auditor of the Company (current)
- Director and Chairman of the 16 Board of Eiken Chemical Co., Ltd

![](_page_37_Picture_99.jpeg)

# Tsuneyasu Ozaki

Corporate Auditor (External) Independent board member FY 2024

Attendance at Audit & Supervisorv Board meetings: 15/15

1996	Appointed as a public
	prosecutor
2004	Assistant Division Chief,
	Administrative Management
	Bureau of the Ministry of
	Internal Affairs and
	Communications
2005	Resigned as public prosecutor
2008	Registered as an attorney-at-law
	Partner of Nishimura & Asahi
2013	Representative Partner of
	Nishimura & Asahi, Fukuoka
	Branch (current)
2014	External Corporate Auditor of
	the Company (current)
2016	Chairperson, Corporate
	Governance Committee of
	Takada Corporation
2019	External Corporate Auditor of
	CellSource Co., Ltd.
2023	External Director (Audit and
	Supervisory Committee
	member) of CellSource Co., Ltd.
	(current)

# **Corporate Governance**

# **Basic Concept**

In order to continuously enhance corporate value, Tosoh strives to build an efficient organizational structure that can respond quickly to changes in the business environment and to conduct sound corporate management that is fair and

highly transparent. While respecting the purpose and spirit of the Corporate Governance Code, we continuously seek the optimal form of corporate governance for Tosoh.

#### Corporate governance structure(as of June 30, 2024)

![](_page_38_Figure_7.jpeg)

### **External Directors and Auditors**

Tosoh appoints external directors with exceptional experience and insight to oversee corporate governance. These external directors monitor the execution of company business from a neutral and objective point of view. Tosoh has established its proprietary Criteria for the Independence of External Directors and Corporate Auditors, and refers to these criteria when determining whether independence is ensured.

External directors and auditors attend meetings of the Board of Directors and other bodies and receive regular explanations and reports to carry out supervision and auditing.

# Executive officer system

Tosoh introduced the Executive Officer System with the aim of separating management decision-making from supervisory and executive functions, thereby accelerating and streamlining decision-making. Clarification of the roles and responsibilities of business execution has made possible a management structure that can respond to rapid changes in the business environment. As of June 30, 2024, there were 28 executive officers, five of whom were also serving as directors.

# Overview of Bodies and Companywide Committees

#### Board of Directors

Met 15 times in FY2024

Met 15 times in FY2024

Tosoh's Board of Directors consists of nine directors, including four external directors, one of whom is female. In principle, the Board meets at least once a month. Based on laws and regulations, the Articles of Incorporation, and the Board of Directors Regulations, the Board of Directors makes decisions on business planning, strategy, and other important management matters. It also oversees the performance of duties by each director and executive officer. In addition, the board makes decisions concerning appointments, dismissals, and division of duties for executive officers.

#### Audit and Supervisory Board

The Audit and Supervisory Board consists of four auditors, including three external auditors who are familiar with corporate management or have considerable knowledge of legal, financial, and accounting matters. As a general rule, the Audit and Supervisory Board meets at least once a month to audit how the directors execute their duties. Each auditor attends meetings of the Audit and Supervisory Board and other important meetings in accordance with the audit policy and allocation of duties determined by the Audit and Supervisory Board, receives reports from directors and employees regarding the performance of their duties, requests explanations as necessary, inspects important approval documents, and examines

Committee	Overview		
CSR Committee	Chaired by the president, the CSR Committee consists of members of the Executive Board Meeting, the head of the administrative division at headquarters, and chairpersons of company-wide committees, and is responsible for formulating CSR activity policies and managing progress on key CSR issues. The committee reports and deliberates on specific issues related to CSR initiatives and measures.	2 times	
Internal Control Committee	Chaired by an executive vice president of Tosoh Corporation, the Internal Control Committee works to respond to the internal control reporting system for financial reporting under the Financial Instruments and Exchange Act and the internal control system required by the Companies Act. In addition, the committee regularly evaluates and amends the status of the development and operation of internal controls.	4 times	
Compliance Committee	Chaired by an executive vice president of Tosoh Corporation, the Compliance Committee is responsible for establishing the compliance system, formulating various measures such as education, and operating the internal reporting system. The committee also periodically evaluates and amends the status of the compliance promotion plan and the operation of the internal reporting system.	2 times	
RC Committee	Chaired by a senior vice president of Tosoh Corporation, the RC Committee works to establish a system for promoting RC and formulate RC annual policies. The committee also conducts RC audits on a regular basis to understand the activities of each division.	1 time	
Export Supervision Committee	Chaired by the representative director of Tosoh Corporation, the Export Supervision Committee is responsible for formulating various measures for compliance with the Foreign Exchange and Foreign Trade Act, the basic policy stipulated in security export control regulations. The head of the export department is assigned to also serve as the head of the operational business unit.	1 time	
Fair Trade Compliance Committee	Chaired by an executive vice president of Tosoh Corporation, the Fair Trade Compliance Committee is responsible for establishing internal regulations and manuals regarding compliance with the Antimonopoly Act and the Act Against Delay in Payment of Subcontract Proceeds, etc. to Subcontractors, and formulating measures for implementation, while the secretariat ensures that all employees are fully aware of the importance of compliance through internal education and training. The committee also reports and deliberates on specific cases related to compliance with the law and measures to deal with them.	1 time	
CO <sup>2</sup> Reduction and Utilization Promotion Committee	Chaired by the president of Tosoh Corporation, the CO <sub>2</sub> Reduction and Utilization Promotion Committee is responsible for planning and formulating policies on important issues related to CO <sub>2</sub> reduction and effective use from the perspectives of both technology and cost. In addition, the committee regularly reports and deliberates on specific issues related to planning and measures to deal with them.	2 times	
Cyber Security Committee	Chaired by an executive vice president and comprising the heads of the manufacturing, R&D, safety, facilities management, IT, and auditing, the Cyber Security Committee formulates various policies and manages progress related to general cybersecurity. It also regularly reports and deliberates on assessments of specific responses and related countermeasures.	2 times	

the status of operations and assets at headquarters and principal industrial complexes. With regard to subsidiaries, the company communicates and exchanges information with directors and auditors of subsidiaries and receives reports on their operations as necessary. In addition, the Audit and Supervisory Board has established a secretariat in order to strengthen the function of the auditors in the execution of their duties.

#### Nomination and Compensation Advisory Committee

Met 11 times in FY2024

To strengthen corporate governance, Tosoh established the Nomination and Compensation Advisory Committee in June 2019 as an advisory body to the Board of Directors. The committee serves to ensure fair and transparent procedures regarding the nomination and compensation of directors, auditors, and executive officers. The committee consists of six directors, including four external directors, and is chaired by an external director.

### Executive Board Meeting

Met 24 times in FY2024

The Executive Board Meeting consists of seven directors and group heads who also serve as executive officers, and meets once a week in principle. The group deliberates in advance on matters to be discussed at Board of Directors' meetings and on important matters related to the overall management of the Group, and has established a system to facilitate appropriate and efficient management decision-making.

#### **Bolstering and Changes in Corporate Governance**

2000-	2010-	2015-	2020-
<ul> <li>June 2002: Appointment of external auditors(2)</li> <li>May 2003: Establishment of Compliance Committee</li> <li>June 2006: Amendment of term of office of directors from two years to one year</li> <li>June 2009: Establishment of Internal Control Committee</li> </ul>	<ul> <li>June 2014: Appointment of external director(1)</li> </ul>	<ul> <li>June 2015: Increase in number of external directors from one to two</li> <li>June 2016: -Launch of evaluation of effectiveness of Board of Directors</li> <li>Introduction of Executive Officer System</li> <li>June 2018: Establishment of CSR Committee</li> <li>June 2019: Establishment of Nomination and Compensation Advisory Committee</li> </ul>	<ul> <li>June 2020:</li> <li>Increase in number of external directors from two to four</li> <li>Appointment of female external director(1)</li> <li>June 2021:</li> <li>Increase in number of external auditors from two to three</li> <li>Appointment of external managing auditor(1)</li> <li>January 2023:</li> <li>Establishment of the Cybersecurity Committee</li> <li>June 2024:</li> <li>Increase in number of female external director from one to two</li> </ul>

# Analysis and Evaluation of the Effectiveness of the Board of Directors

To ensure objectivity and transparency, Tosoh conducts an analysis and evaluation every year of the effectiveness of the Board of Directors as a whole, with directors and internal auditors being surveyed regarding the composition and operation of the Board, with the advice of a third-party organization.

A summary of the analysis and evaluation results for fiscal 2024 is as follows.

#### Initiatives in fiscal 2024

We held open discussions in February on report themes received from General Affairs on how management should respond to institutional investors' opinions and requests. • The presidents of the Specialty Group and of the Petrochemical Group have attended every board meeting since the July 2023 Board of Directors meeting to explain matters under their charge.

# Evaluation results for fiscal 2024 and future initiatives

#### Evaluation results

The overall result of the analysis and evaluation is that the Board of Directors as a whole is currently fulfilling its roles and responsibilities in an effective manner

The primary reasons the Board of Directors is evaluated as generally fulfilling its roles and responsibilities effectively are as follows:

- 1. Maintaining a balanced composition of internal and external directors diverse in their knowledge, experience, expertise, work history, gender, and more
- 2. Risk management, based on necessary and sufficient reporting and continued monitoring and supervision of business execution, has been appropriate
- 3. Management of the Board of Directors, including the frequency of meetings, scope of agenda, deliberation time, volume of materials, timing of distribution, and related matters, has been appropriate

### **Future initiatives**

While there are opinions that a certain level of discussion has been achieved regarding our response to ESG. CSR initiatives, and business portfolio policies, there are also opinions that further discussion is necessary on efforts to achieve management that is mindful of capital costs and stock prices. The company continues to ponder these issues from

both perspectives.

A changed corporate environment and heightened societal demands on the Board of Directors sees Tosoh request input from its stakeholders on what issues are most in need of being discussed. The issues submitted will be taken up for discussion in order of importance

Tosoh will continue to work tirelessly to implement initiatives based on the results of our analysis and evaluation so as to contribute to sustainable growth and the enhancement of corporate value.

#### Attendance at Board of Directors meetings (FY2024)

Name	Position	Attendance at Board of Directors meetings
lamoru Kuwada	Representative director and president	100% (all 15 meetings)
atsushi Tashiro*1	Representative director and senior executive vice president	100% (all 3 meetings)
oru Adachi	Director and executive vice president	100% (all 15 meetings)
atoru Yonezawa*1	Director and executive vice president	100% (all 3 meetings)
oru Doi	Director and executive vice president	100% (all 15 meetings)
kihiro Yoshimizu*²	Director and executive vice president	100% (all 12 meetings)
akahiko Kamezaki*²	Director and executive vice president	100% (all 12 meetings)
sutomu Abe	External director(Independent board member)	100% (all 15 meetings)
eiichi Miura*1	External director(Independent board member)	100% (all 3 meetings)
oshihiro Hombo	External director(Independent board member)	100% (all 15 meetings)
lariko Hidaka	External director(Independent board member)	100% (all 15 meetings)
ukimasa Nakano*2	External director(Independent board member)	100% (all 12 meetings)
ouji Kawamoto*1	Internal auditor	100% (all 3 meetings)
atoru Yonezawa*2	Internal auditor	100% (all 12 meetings)
lakoto Okayama	External auditor(Independent board member)	100% (all 15 meetings)
etsuya Teramoto	External auditor(Independent board member)	100% (all 15 meetings)
suneyasu Ozaki	External auditor(Independent board member)	100% (all 15 meetings)
Resigned on June	23, 2023 *2 Appointed on June 23, 2023	

# Executive Compensation

#### Policy on compensation

Tosoh employs a compensation system to sustainably improve corporate performance and value and secure excellent human resources. Compensation for directors and corporate auditors is determined within the range of the total amount of compensation resolved at the annual general meeting of shareholders.

In fiscal 2024, the resolution on compensation and other matters regarding the directors of the company was made at the June 21, 2024, annual general meeting of shareholders. It was resolved on that date that the total amount of compensation for directors shall be within ¥670 million per year. This amount is broken down as follows: (1) the cash compensation portion is ¥590 million, of which ¥80 million or less is for external directors, and (2) the stock-based compensation portion is ¥80 million for directors. excluding external directors and excluding salaries and bonuses for directors who also serve as employees. The number of directors at the time of the resolution was nine, including four external directors.

The resolution on compensation and other matters regarding corporate auditors was likewise made at the June 21, 2024, annual general meeting of shareholders. It was resolved on that date that the total amount of compensation for corporate auditors shall be within ¥120 million per year. The number of corporate auditors at the time of the resolution was four, including three external corporate auditors.

Policy for determining the details of individual compensation and other matters regarding directors

Specific details based on the basic policy are as follows:

#### 1.Policy for how to calculate the amount of fixed compensation

Fixed compensation shall be determined for each position. That determination will consider the results of a survey of management compensation levels compiled by an external organization.

### 2. Policy on determining the content of performance indicators related to performance-based compensation and the method for calculating the amount of performance-based compensation

Determining performance-based compensation uses, as a performance indicator, the consolidated ordinary income of the previous fiscal year. Consolidated ordinary income shows the results of the entire business, including ordinary operating activities and financial activities. The amount of compensation will be determined for each position based on a ratio of the fixed compensation results of a survey of management compensation levels compiled by an external organization.

\* The Board of Directors decided at a meeting on April 23, 2024, to introduce two types of performance-based compensation plans from July 2024. One plan will use, as a performance indicator, the annual dividend per share based on the financial results for the previous fiscal year showing shareholder returns. The other plan will use, as a performance indicator, the achievement of KPIs for Tosoh's principal CSR issues for the previous fiscal year to promote contributions to a sustainable society

### 3. Policy on determining the content of nonmonetary compensation (stock-based compensation) and the method of calculating the amount of nonmonetary compensation

The allocation of restricted shares, which is nonmonetary compensation, will be decided for each position by comprehensively considering various matters, such as the degree of contribution.

# 4. Policy on determining the ratio of the amount of fixed compensation, performance-based compensation, and nonmonetary compensation to the amount of individual compensation and other matters for directors

The ratio of fixed compensation, performance-based compensation, and nonmonetary compensation (stock compensation) to the amount of individual compensation and other matters shall be determined for each position in consideration of the survey results of the management compensation levels compiled by an external organization. External directors, moreover, shall receive only fixed compensation because of their role and independence.

### 5. Policy on determining the timing or conditions for compensating directors

Fixed compensation and performance-based compensation are paid monthly. Fixed compensation is based on the position held in the current fiscal year, and performance-based compensation is based on performance in the previous fiscal year. Both are paid monthly as compensation for the current fiscal year. Restricted share compensation, which is a nonmonetary compensation, allots restricted shares annually in accordance with an allotment agreement. A transfer restriction will be removed upon retirement.

# 6.Policy on how to determine the content of individual compensation and other matters for directors other than the above

Individual compensation and other matters for directors will be decided by the Board of Directors based on a report of the company's Nomination and Compensation Advisory Committee, the majority of whose members are independent external directors.

# Method of determining compensation for corporate auditors

In view of their role and independence, corporate auditors receive fixed compensation only in an amount to be determined by the Board of Auditors.

# Activities of the Board of Directors and the Nomination and Compensation Advisory Committee

Activities in the process of determining the amount of compensation for directors and officers in fiscal 2024 included three meetings of the Board of Directors and eight meetings of the Nomination and Compensation Advisory Committee. The Board of Directors reviews the remuneration system for directors and revises remuneration packages based on the Nomination and Compensation Advisory Committee report.

#### Total executive compensation in FY2024

Officer	Total amount of remuneration	Total a and othe	Number			
classification	compensation (millions of yen) Basic Basic b compensation		Performance- based compensation	Non-monetary compensation	officers	
Directors (external directors in parentheses)	361 (48)	236 (48)	102 (–)	22 (–)	12 (5)	
Auditors (external auditors in parentheses)	69 (45)	69 (45)	-	-	5 (3)	

\* The above figures include three directors and one auditor who retired at the conclusion of the General Meeting of Shareholders held on June 23, 2023.

# **Diversity of Board Members**

To secure people capable of management and oversight across all divisions of the company, a comprehensive range of factors are taken into account in the selection of directors and corporate auditors. These include job performance; work experience; leadership; personality; abilities; and expertise in areas such as corporate planning, manufacturing and research, sales, and finance and accounting.

Tosoh also appoints several independent external directors and external corporate auditors who have considerable experience, proven track records, and wide-ranging

insight. These outside corporate executives, academics, and legal and other professionals provide management oversight by making important corporate decisions for and by offering advice that contributes to the Tosoh Group's sustainable growth and enhanced corporate value.

# Internal Control

Tosoh believes establishing an internal control system is essential for effective corporate governance. Thus, we have enacted the Basic Policy for Establishing an Internal Control System through a resolution of the Board of Directors. The company is working to comply with the internal control reporting system for financial reporting under the Financial Instruments and Exchange Act and the internal control system development required by the Companies Act. The company regularly assesses its internal control system and operations and corrects issues as they arise.

### Directors and auditors' expertise, experience, and background

			Experience and Expertise								
Board Members		Corporate Management	Finance and Accounting	Legal, Compliance and Risk Management	Sales and Marketing	Manufacturing, R&D, and Technology	Internationality and Diversity	Human Resources and Labor	Environment and Society	Career	
	Mamoru Kuwada	Representative director President	•			•	•		•	•	Mamoru Kuwada has extensive experience in areas such as manufacturing, production engineering, construct exercises strong leadership in directing and overseeing the management of the Tosoh Group.
	Toru Adachi	Representative director Senior executive vice president	•	•	•	•			•		Toru Adachi has considerable experience in accounting, finance, corporate planning, and business managem expansion of the Tosoh Group's business operations.
	Toru Doi	Director Executive vice president	•		•		•			•	With formidable experience in areas such as research, legal affairs and patents, and environmental safety an and expansion of the Tosoh Group's business operations.
	Akihiro Yoshimizu	Director Executive vice president	•				•			•	Akihiro Yoshimizu's extensive experience in manufacturing, production technology, and facilities managemen maintaining safe, stable production and to achieving innovations in the Tosoh Group's production technology.
Directors	Takahiko Kamezaki	Director Executive vice president	•		•	•		•			Takahiko Kamezaki has extensive experience in areas such as sales, overseas operations, and business adn and expansion of the Tosoh Group's business.
	Yoshihiro Hombo	External director Independent board member	•	•		•		•	•		Yoshihiro Hombo was appointed to the Board of Directors of the company in June 2020 after serving as a rep officer of Mitsui & Co. Hombo possesses extensive experience in areas such as sales, overseas operations, t Tosoh Group from an objective perspective.
	Mariko Hidaka	External director Independent board member	•	•				•	•		Mariko Hidaka is a certified public accountant and a former senior partner of EY Ernst & Young ShinNihon LL June 2020. Hidaka has a broad knowledge base in areas such as accounting, auditing, and corporate manage perspective.
	Yukimasa Nakano	External director Independent board member	•	•		•		•			Prior to his appointment as an external director of the Tosoh Group in June 2023, Yukimasa Nakano served a Corporation. He has extensive experience in areas such as accounting, sales, business supervision, and corp
	Yukiko Hashitera	External director Independent board member	•		•		•	•	•		Yukiko Hashitera is the CEO of Phoenixi Co., Ltd., and an external director of Nissha Co., Ltd. She was appo Hashitera has extensive experience in areas such as R&D, quality assurance, and human resource developm
Aud	Satoru Yonezawa	Internal auditor	•	•	•			•			Satoru Yonezawa has extensive experience in areas such as accounting, finance, overseas operations, and b Group directors in the performance of their duties from a neutral and fair perspective.
itor & Sup	Makoto Okayama	External auditor Independent board member	•	•	•	•					Prior to his appointment as an external auditor of the Tosoh Group in June 2021, Makoto Okayama served as Banking Co., Ltd., and as a representative director of Japan Investor Solutions & Technologies Co., Ltd.
ervisory B	Tetsuya Teramoto	External auditor Independent board member	•		•	•	•				Tetsuya Teramoto served as a director, as a representative executive officer, as president, and then as chain corporate auditor of the Tosoh Group in June 2014.
oard	Tsuneyasu Ozaki	External auditor Independent board member			•	•			•		Tsuneyasu Ozaki served in the Special Investigations Department of the Tokyo District Public Prosecutors Of Ozaki registered as an attorney in 2005 and serves as a representative attorney at Nishimura & Asahi LPC's Tosoh Group in June 2014.

\*This is not a comprehensive representation of the skills of the directors and auditors

# Political Cross-shareholdings

Tosoh holds shares in its business partners to maintain and develop business relationships. Every year, the Board of Directors confirms the rationale of these holdings and whether their benefits are commensurate with the cost of capital. As a result of these reviews, the Board of Directors considers the sale of stocks unlikely to be profitable, improve future business relationships, or enhance corporate value.

ction projects, and business and facilities management. He

ent. He has made contributions to the continuation and

d quality assurance, Toru Doi has contributed to the continuation

t enables him to contribute to

ninistration. This enables him to contribute to the continuation

presentative director, executive vice president, and executive business supervision, and corporate management. Viewing the

\_C. She was appointed an external director of the Tosoh Group in ement support. Viewing the Tosoh Group from an objective

as a director and senior executive officer of Taiheiyo Cement porate management.

inted to the Tosoh Group's Board of Directors in June 2024. nent

business management. Appropriately, Yonezawa audits Tosoh

a deputy president and executive officer of Mizuho Trust &

man of the board of Eiken Chemical Co., Ltd. He was appointed a

ffice in 1996 following his appointment as a public prosecutor. Fukuoka Branch. He was appointed a corporate auditor of the

# Message from External Directors

![](_page_41_Picture_3.jpeg)

**Yoshihiro Hombo External Director** 

# **Reaffirm the Significance of Dual Management** in a Challenging Environment

China's continued expansion of its petrochemical facilities is forcing Japanese chemical manufacturers to deal with an ethylene supply glut. Tosoh was one of the first chemical companies in Japan to shift to dual management. We have a solid commodity revenue base, but specialties make us resilient to changing market conditions. Although we do not anticipate achieving the goals of our medium-term business plan, we feel that we are steadily approaching our overall objective.

As geopolitical risks increase globally, the world is heading toward a temporary return to fossil fuels, to nationalism, to fragmentation. Dizzying changes to the global environment make it evident to me that the vision and time for sustainability are also changing. Once a goal is established, there is a tendency to stubbornly adhere to its pursuit, for better or worse. I believe in flexibility, in resetting goals, for example, that benefit all stakeholders

All business decisions involve risk. A goal at Tosoh is to enable the Board of Directors to overcome risk and to determine whether initiatives are worth it. As external directors, we strive to point out risks and to encourage the company to undertake initiatives for which it and its stakeholders are best suited.

![](_page_41_Picture_9.jpeg)

Mariko Hidaka **External Director** 

# Sharpen the External Dissemination of Information

Recent frenetic changes in our external operating environment make it difficult for Tosoh to achieve the targets of its medium-term business plan. All the more admirable is the company's calm in moving forward with investment projects with a long-term perspective rather than a superficial one.

The Board of Directors believes, however, that Tosoh must communicate its interim and year-end results and its forecasts for the final year of its medium-term business plan and for future performance in an easy-to-understand, concrete manner. The company has extensive internal public relations, but its appeal to the outside world is understated. And that needs to be addressed given Tosoh's broadening investor base and imperative to hire capable personnel. We must elevate in volume and quality the information that we disseminate externally, ensuring that we provide only careful, clear explanations of what we do and achieve.

In fiscal year 2025, meanwhile, Tosoh's Nomination and Compensation Advisory Committee has resolved to introduce performance-based compensation linked to nonfinancial information. It often takes time to quantify the effects of our investments, our R&D, and our human capital initiatives, so the committee discussed at length what performance indicators should be used. I believe that this has resulted in a well-balanced system.

I believe, too, that improvements in Tosoh's plants and understanding have fostered progress for women in its workplaces over the past several years. More women have been hired for career-track positions, and systems have been implemented to ensure that their numbers increase. I am confident that the Tosoh Group will benefit from establishing workplaces that are comfortable not just for women but for all employees. I also look forward to an environment where the youngest employees play heightened roles.

# Expect Steady Efforts Toward Vision 2030

The atmosphere at Board of Directors' meetings is frank and open. Explanations and discussions of technical details regarding R&D, facility renovations, and other issues are conducted and conveyed carefully.

Among these discussions is the topic of increasing the capacity at manufacturing facilities for the thin-film deposition materials (sputtering targets) used in semiconductors and elsewhere. Discussions have led to high hopes for this project. This is an area of swift technological innovation and fierce competition, but I am confident in Tosoh's prospects for success

Numerous factors, meanwhile, make Tosoh's achievement of its medium-term business plan's target for operating income challenging. The company is nevertheless making steady progress, in R&D and facility capacity expansion, toward its Vision 2030 goal of achieving ¥100 billion in operating income in the Specialty business. My hope is that Tosoh will rise to the challenges of its next medium-term business plan.

Those challenges include sustainability. To tackle carbon neutrality, Tosoh is introducing facilities for biomass power generation and the capture and conversion of CO2. Optimizing how to utilize human capital is yet another challenge where positive progress is visible. Tosoh has implemented an internal recruitment and a fellow system.

Tosoh is steadily revitalizing its workplace environments with new and renewed R&D facilities and a relocated headquarters. I expect this to give rise to a concerted, company-wide effort toward Vision 2030.

# Look to Generate Value through Sustainable Growth

I made a career change to management in my 30s when the pharmaceutical firm I was working for spun off the business unit where I was a drug development researcher. In 2018, I founded Phoenixi Co., Ltd., a company that operates a social incubator in support of businesses working to resolve social issues.

I want to leverage my experience to contribute to Tosoh's governance and sustainability. My hope is to detect medium- to long-term changes in the company's business environment.

My first encounter with Tosoh occurred as I paged through a testing equipment catalog while in a university laboratory. The company's offerings of highly advanced methods of analysis sparked my interest in knowing more about Tosoh and such technologies

Upon being appointed to the company's Board of Directors, I was surprised to learn that Tosoh manufactures a diverse lineup of various grades of chemical products indispensable to society. I was also impressed with Tosoh's early awareness of the circular economy approach. The company has long used manufacturing process by-products to develop high-value-added products.

Corporate sustainability is generally understood to entail the development of three values of lasting duration: economic, social, and environmental. Corporations, moreover, must also cultivate further value to survive, especially if they operate globally. The Board of Directors is of the belief that it is necessary to share a vision with employees of how to realize both the crucial three values and the continual generation of

additional value. We all must work in unison to implement that vision and to assess our efforts. Our goal is to deepen an understanding of Tosoh among employees and to have them share in the company's innovation and development of human resources using the experience of their careers, ultimately for Tosoh's sustainable value.

![](_page_41_Picture_35.jpeg)

Yukimasa Nakano External Director

![](_page_41_Picture_39.jpeg)

Yukiko Hashitera External Director

# Compliance

# Basic Concept

The basic policy of the Tosoh Group is to ensure compliance, pursue profits through fair competition, and continue to be a useful entity for society at large. The basis of the Group's compliance activities is for all employees and each and every officer to practice compliance sincerely, fairly, and ethically. Expectations for us to fulfill our corporate social responsibility are greater than ever. So we will unite as a group to further promote compliance activities.

# Tosoh Group Code of Conduct

In March 2004, Tosoh initiated compliance action guidelines and in April 2014 introduced the Tosoh Group Code of Conduct to unify and raise compliance awareness group-wide. The Code of Conduct prohibits all forms of corruption. respects human rights, and describes how to deal with important matters that must be observed in conducting business activities

Based on the acknowledgment by top management that compliance is the foundation of the Tosoh Group's management and should take precedence over all other interests, all employees and officers of the Tosoh Group are obliged to comply with the Tosoh Group Code of Conduct.

In formulating the Tosoh Group Human Rights Policy in April 2024, certain items were tailored to satisfy international requirements.

# **Promotional Structure**

Tosoh believes that practicing compliance, which means following the established rules, not only protects employees from accidents and other disasters, but also strengthens the management structure of the entire Tosoh Group. To this end, the company has established a promotion system to ensure

#### Promotion Structure Overview

![](_page_42_Figure_12.jpeg)

that employees are aware of the importance of compliance and are able to practice it

The contents of Compliance Committee discussions are reported to the Board of Directors

# Consultation Hotlines

To prevent or quickly correct compliance violations, the company has established Hotlines for the purpose of swiftly recognizing and responding to actual or potential violations. Tosoh has established three consultation desks: internal, external, and an auditor's desk. Directors and employees of Tosoh and its domestic and overseas Group companies, temporary employees, and people who are employed on a contract basis may choose to submit reports or request consultations to any of these desks. Tosoh employees are given a Hotline Pocket Card to make it more convenient to avail themselves of the service at any time.

Consultations are accepted regarding general corrupt practices such as violations of laws and regulations, harassment, human rights violations, and bribery. The company confirms the facts, investigates, and takes action, whether the consultation initiated under a real or an anonymous name. For guidance and supervision, the details of each consultation are reported to the auditor

The company has established internal rules for the protection of the consultants in investigating and responding to consultation matters, and takes all necessary precautions. Moreover, it has set up a contact point on our Japanese website for inquiries that can be consulted from outside the company. Furthermore, consultation services have been established at Group companies in Japan and abroad, creating a Group-wide system that facilitates consultation

In fiscal 2024, the company received 50 consultations (four reports from overseas), but none of the cases were serious enough to affect the company's business activities.

In terms of content, many consultations were related to alleged incidents of harassment. In each case, consultants take necessary actions such as collecting facts and cautioning parties involved, and then following up with them to clarify the situation

# Internal Audit

The Audit Office is dedicated to conducting internal audits of operations and other activities to improve and strengthen internal controls at Tosoh and its Group companies. It also conducts internal compliance audits to evaluate the promotion systems and operational status of Tosoh and its Group companies. Audit results are reported to the president and corporate auditors as appropriate.

# Cybersecurity

# Basic Concept

Tosoh recognizes that the protection of its technical and management information; its supplier and group company information; and its business activity and supply chain information to ensure security, guality, and environmental standards is a social responsibility and a vital management issue. It maintains the sustainable development of the company and is deemed so essential that Tosoh has established an information security policy.

### Information security policy (excerpts)

- Tosoh provides ongoing training to ensure that each of its employees recognizes the significance of information security in their daily work and complies with the rules on information security
- The company conducts risk assessments for information assets and implements countermeasures according to the level of risk.
- The Tosoh Group has established the following cybersecurity policy to ensure the implementation of its information security policy: 1. Obligation to adopt antivirus software
- 2. Obligation to prohibit the connection of unauthorized devices
- 3. Obligation to provide notification in the event of a cyber incident

# Promotion Structure

Tosoh has established IT Strategy and Supervisory under the supervision of the director in charge of information security management, to promote information security measures throughout the Tosoh Group. Moreover, with the aim of promoting robust cyber security not only in information systems but also in production and R&D, related divisions cooperate under the Cyber Security Committee and report to the Board of Directors as appropriate.

#### **Promotion Structure Overview**

![](_page_42_Figure_35.jpeg)

# Security Countermeasures

The leak, loss, or damage of plant control and other mission-critical systems, of research content and results, and of confidential and personal information and deviations from environmental, security, and guality standards can result in supply chain interruptions and damage to public trust and our competitiveness. To prevent this, we are using various cybersecurity frameworks and particularly the Cybersecurity Management Guidelines issued by Japan's Ministry of Economy, Trade and Industry. The company is also formulating response policies and strengthening its group-wide risk management.

### Security education for employees

As part of our employee education activities, Tosoh holds regular briefings at the Nanyo and Yokkaichi Complexes on compliance with the Information Security Policy. The briefings further serve to alert employees on warning and protection measures through incident case studies. This information is intended not only for Tosoh Corporation employees but also for employees of Group companies. The aim is to heighten awareness of the entire supply chain and of case studies based on the latest trends and other information.

### Conduct targeted attack e-mail drills

The company conducts attack e-mail drills to allow employees to experience the threat of cyberattacks and to raise awareness of information security. This is a hands-on training program that delivers simulated targeted attack e-mails to all employees to enhance their ability to respond appropriately in a genuine attack situation. Since attack e-mails are becoming more and more sophisticated every year, the company continuously trains each employee to act appropriately.

# Addressing risks in the supply chain

With cybersecurity risks on the rise, we recognize the need to address risks within the supply chain, including group companies, to ensure adequate security and provide our clients with safe and stable products and services.

To that end, we are working to improve security measures for the entire supply chain by understanding our current security measures and risks at domestic and overseas group companies, bolstering our efforts, and sharing information.

# Participation in working groups

The environment surrounding information security changes on a daily basis. Tosoh participates in industry association working groups to keep abreast of the latest information. Information obtained through this process is shared with relevant departments and incorporated into in-house training to bolster the company's security measures.

# **10-year summary(consolidated)**

	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
Business Results										
Net Sales	809,683	753,736	743,028	822,857	861,456	786,083	732,850	918,580	1,064,376	1,005,640
Petrochemical	223,746	175,436	161,747	174,768	183,926	159,140	131,386	177,185	206,101	183,615
Chlor-alkali	294,333	279,849	279,684	335,023	337,377	297,356	274,862	361,623	406,388	359,508
Specialty	174,855	174,531	175,880	187,116	197,422	185,042	180,593	226,219	270,795	259,642
Engineering	75,745	84,184	86,566	84,824	98,918	101,496	106,207	116,294	138,113	156,972
Ancillary	41,003	39,734	39,149	41,124	43,811	43,047	39,801	37,257	42,977	45,901
Operating income	51,397	69,444	111,216	130,580	105,739	81,658	87,819	144,045	74,606	79,845
Petrochemical	6,920	11,608	20,072	22,521	13,392	10,299	7,703	15,655	12,115	10,730
Chlor-alkali	8,321	17,987	47,926	66,620	45,996	28,198	41,519	69,522	(10,661)	3,591
Specialty	29,981	32,700	35,382	33,899	35,348	27,885	23,538	43,535	52,316	37,904
Engineering	3,330	4,576	5,145	4,868	8,303	12,740	11,988	12,280	17,962	24,722
Ancillary	2,843	2,570	2,689	2,671	2,698	2,534	3,069	3,051	2,873	2,896
Ordinary income	60,197	65,814	113,094	132,256	113,027	85,963	95,138	160,467	89,983	95,920
Profit Attributable to Owners of Parent Company	62,297	39,675	75,664	88,795	78,133	55,550	63,276	107,938	50,335	57,324
Earnings Per Share *2 (yen)	103.97	62.61	116.56	273.49	240.62	171.03	197.89	339.23	158.14	180.07
Financial Position										
Total Assets	764,205	734,770	782,623	852,803	878,194	886,591	982,776	1,087,667	1,194,251	1,289,949
Current Assets	430,275	415,682	448,014	500,620	500,759	482,079	552,517	642,278	707,625	755,154
Fixed Assets	333,930	319,087	334,608	352,182	377,434	404,512	430,258	445,389	486,625	534,795
Liabilities	443,421	361,045	334,287	324,736	298,692	276,931	321,096	327,943	400,052	431,182
Current Liabilities	318,170	259,850	247,886	254,552	242,253	220,223	263,620	269,878	336,312	358,763
Fixed Liabilities	125,250	101,195	86,400	70,184	56,439	56,708	57,476	58,064	63,740	72,419
Net Assets	320,783	373,724	448,335	528,066	579,501	609,660	661,679	759,724	794,198	858,766
(including equity capital)	288,959	340,157	413,210	490,824	540,836	567,546	615,570	708,916	738,803	794,516
Cash Flow										
Cash Flow from Operating Activities	54,106	99,884	115,715	115,429	77,511	99,923	95,106	108,615	(16,239)	116,974
Cash Flow from Investment Activities	(34,114)	(27,916)	(34,723)	(43,129)	(63,310)	(70,335)	(46,352)	(43,525)	(78,729)	(59,943)
Cash Flow from Financing Activities	(20,718)	(50,826)	(68,829)	(51,744)	(26,962)	(23,964)	1,585	(57,852)	50,171	(31,221)
Free Cash Flow	19,991	71,967	80,992	72,300	14,200	29,588	48,753	65,089	(94,968)	57,030
Key Indicators										
Equity ratio (%)	37.8	46.3	52.8	57.6	61.6	64.0	62.6	65.2	61.9	61.6
Operating Income Ratio (%)	6.3	9.2	15.0	15.9	12.3	10.4	12.0	15.7	7.0	7.9
Return on Equity(ROE) (%)	24.5	12.6	20.1	19.6	15.1	10.0	10.7	16.3	7.0	7.5
Return on Assets(ROA) (%)	8.1	8.8	14.9	16.2	13.1	9.7	10.2	15.5	7.9	7.7
Net Debt-to-Equity Ratio (times)	0.7	0.4	0.1	0.0	0.0	(0.0)	(0.0)	(0.1)	0.1	0.0
Capital Expenditures	33,149	27,923	37,755	39,494	64,829	61,134	50,627	48,034	79,239	61,418
Depreciation and Amortization	32,789	31,788	27,407	29,755	31,308	32,057	37,534	37,579	40,583	42,726
R&D Expenses	12,877	13,743	14,370	15,502	16,643	18,244	19,483	19,896	21,425	21,986
Interest-Bearing Debt *1	271,714	199,748	140,257	108,543	101,072	97,318	128,611	95,944	182,963	183,136
Number of Employees	11,594	12,037	12,292	12,595	12,955	13,336	13,631	13,858	14,266	14,394
Number of Consolidated Companies	106	107	107	106	105	107	106	109	109	107
Total Number of Shares Outstanding *2 (thousands)	601,161	650,161	650,161	325,080	325,080	325,080	325,080	325,080	325,080	325,080
Number of Shareholders	32,597	34,274	27,596	29,464	32,057	32,446	29,006	33,420	52,656	79,827
Dividend Per Share *2 (ven)	10.00	14.00	24.00	56.00	56.00	56.00	60.00	80.00	80.00	85.00
Dividend Payout Ratio (%)	9.6	22.4	20.6	20.5	23.3	32.7	30.3	23.6	50.6	47.2
Foreign Stock Owners Ratio (times)	26.19	25.53	32.35	36.24	31.40	30.91	31.73	30.95	28.82	25.26
Price Earnings Ratio (times)	5.8	7.6	8.4	7.6	7.2	7.2	10.7	5.3	11.4	11.5
				·						

\*1 Including lease obligations.
 \*2 For fiscal 2018, figures account for the one-for-two reverse stock split of common shares executed on October 1, 2017.

# (millions of yen)

# Company Overview(as of March 31, 2024)

# **List of Group Companies**

# Europe Companies

### Specialty (Organic Chemicals) Delamine B.V.

# Specialty (Bioscience)

Tosoh Europe N.V. Tosoh Bioscience GmbH Tosoh Bioscience Ltd. Tosoh Bioscience S.r.I. Tosoh Bioscience S.A. Tosoh Europe International N.V.

# Specialty (Advanced Materials) Tosoh Hellas Single Member S.A.

Logistics, trading companies, services, etc. Tosoh Europe B.V.

![](_page_44_Picture_10.jpeg)

# **Company Overview**

Name	Tosoh Corporation						
Date of Incorporation February 11, 1935							
Headquarters 2-2-1, Yaesu, Chuo-ku, Tokyo 104-8467, (registered head office) 4560 Kaisei-cho, Shunan-shi, Yamaguch 746-8501							
Paid-in capital	¥55.2 billion						
Sales	¥1,005.6 billion (fiscal 2024 consolidated)						

# Asia 29 companies

#### Chlor-alkali

Mabuhay Vinyl Corporation MVC Properties Inc. Philippine Resins Industries, Inc. Philrex Properties, Inc. PRII Properties, Inc. Tosoh (Guangzhou) Chemical Industries, Inc. PT. Standard Toyo Polymer Tosoh Polyvin Corporation Tosoh (Ruian) Polyurethane Co., Ltd. Tosoh (Shanghai) Polyurethane Co., Ltd.

#### Specialty (Bioscience)

Tosoh Bioscience (Shanghai) Co., Ltd.

#### Specialty (Advanced Materials)

Tosoh Advanced Materials Sdn. Bhd. Tosoh SMD Korea, Ltd. Tosoh SMD Taiwan, Ltd. Tosoh SMD Shanghai Co., Ltd. Tosoh Quartz Co., Ltd. Tosoh Quartz Korea Co., Ltd. Tosoh Namhae Silica Corporation

#### Engineering

Organo (Suzhou) Water Treatment Co., Ltd. Organo (Thailand) Co., Ltd. Organo (Vietnam) Co., Ltd. Organo Technology Co., Ltd. PT Lautan Organo Water Organo (Asia) Sdn. Bhd.

#### Logistics, trading companies, services, etc.

Tosoh Logistics Warehouse Co., Ltd. Tosoh Asia Pte. Ltd. Tosoh India Pvt. Ltd. Tosoh China Holdings Co., Ltd. Tosoh (Shanghai) Co., Ltd.

Business [Petrochemical Group] Olefins, polymers [Chlor-alkali Group] Chlor-alkali, urethane, cement [Specialty Group] Organic chemicals, bioscience, advanced materials [Engineering Group] [Ancillary Group]

Employees 14,394 (consolidated), 3,875 (nonconsolidated)

Affiliated companies 107 (60 domestic, 47 overseas)

# Japan

# Petrochemical

Hokuetsu Kasei Co., Ltd. Sankyo Chemical Industry Inc. Rensol Co., Ltd. Toyo Polymer Co., Ltd. Acepack Co., Ltd. Shinomura Chemical Industry Co., Ltd. Hiyoshi Chemical Industries Co., Ltd. Yokkaichi Oxyton Co., Ltd.

#### Chlor-alkali

Tohoku Tosoh Chemical Co., Ltd. Minamikyushu Chemical Industry Co., Ltd. Taiyo Vinyl Corporation Lonseal Corporation Taihei Chemicals Ltd. Plas-Tech Inc. Tokuyama Sekisui Co., Ltd. Asia Industry Co., Ltd. Nippon Miractran Co., Ltd.

# Specialty (Organic Chemicals)

Tosoh Finechem Corporation MANAC Chemical Partners Co.,Ltd.

#### Specialty (Bioscience)

Tosoh Techno-System, Inc. Tosoh AIA, Inc. Tosoh Hi-Tec, Inc.

### Specialty (Advanced Materials)

Tosoh Hyuga Corporation Tosoh Ceramics Co., Ltd. Tosoh Zeolum, Inc. Tosoh Speciality Materials Corporation Tosoh SGM Corporation Tosoh Quartz Corporation Tosoh Silica Corporation Rin Kagaku Kogyo Co., Ltd.

# **COMPANIES** (including Tosoh)

# Engineering

Organo Corporation Organo Plant Service Corporation Organo Food Tech Corporation Organo Eco Tech Corporation Organo Acty Corporation Tohoku Denki Tekko Co., Ltd. Tohoku Maintenance Industry Co., Ltd.

Yorin Corporation Seiwakouki Co., Ltd. Sanwa Construction, Co., Inc. Tosoh Kasumi Engi Inc. Izumi Sangyo Co., Ltd.

# Logistics, trading companies, services, etc.

Tosoh Logistics Corporation Kouun Industry Co., Ltd. Keiyo Koun Co., Ltd. Yokkaichi Koun Corporation Yamaguchi Koun Corporation Koun Marine Co., Ltd. Toho Unyu Co., Ltd. Hyuga Unyu Co., Ltd. Kansai Kaiun Co., Ltd. Hososhima Port Cargo Co., Ltd. Toho Acetylene Co., Ltd. Tosoh Nikkemi Corporation Kyoei Industries Co., Ltd. **Tosoh Information Systems** Corporation Tosoh General Services Co., Ltd. Tosoh Analysis and Research Center Co., Ltd. Kasumi Kyodo Jigyo Nihon Kaisui Chemica Co., Ltd

![](_page_44_Picture_45.jpeg)

Specialty (Organic Chemicals) Tosoh Specialty Chemicals USA, Inc.

Specialty (Bioscience) Tosoh Bioscience, Inc. Tosoh Bioscience LLC

#### Specialty (Advanced Materials) Tosoh SMD, Inc. Tosoh Quartz, Inc.

Engineering Organo USA, Inc.

#### Logistics, trading companies,

services, etc. Oriental Marine Corporation Tosoh America, Inc. Tosoh USA, Inc.

# Stock Information(as of March 31, 2024)

### Stock Information

Total number of authorized shares	Common shares: 900,000,000
Total number of issued shares	Common shares: 325,080,956
Number of shares per unit	100
Number of shareholders	79,827

![](_page_45_Figure_5.jpeg)

# **Major Shareholders**

Shareholder name	Shares held (thousands)	Percent of total (%)
The Master Trust Bank of Japan, Ltd. (Trust Account)	51,050	16.03
Custody Bank of Japan, Ltd.(Trust Account)	22,793	7.16
JPMorgan Securities Japan Co., Ltd.	7,217	2.27
Mizuho Bank, Ltd.	7,046	2.21
Sumitomo Mitsui Trust Bank, Limited	6,702	2.10
Nippon Life Insurance Company	6,683	2.10
BNYMSANV Non-Treaty Account	6,013	1.89
Mitsui Sumitomo Insurance Company, Limited	5,624	1.77
Tosoh Employee Shareholding Association	5,595	1.76
The Norinchukin Bank	4,992	1.57

\*Tosoh Corporation holds 6,633 thousand shares of treasury stock but is not included in the major shareholders listed above.

\*Treasury stock is not included in the calculation of shareholding ratios.

# Share Price and Trading Volume Trends

![](_page_45_Figure_11.jpeg)

# **External recognition**

# ESG Investment Index

Tosoh is included in the following ESG investment indexes as of September 30, 2024.

- FTSE4Good Index Series
- FTSE Blossom Japan Index
- FTSE Blossom Japan Sector Relative Index
- MSCI Japan ESG Select Leaders Index
- Morningstar Japan ex-REIT Gender Diversity Tilt Index (GenDi J)
- Sompo Sustainability Index
- S&P/JPX Carbon Efficient Index
- iSTOXX MUTB Japan Platinum Career 150 Index

![](_page_45_Picture_23.jpeg)

![](_page_45_Picture_24.jpeg)

FTSE4Good FTSE Blossom Japan

FTSE Blossom Japan Sector Relative Index

#### 2024 CONSTITUENT MSCI NIHONKABU ESG SELECT LEADERS INDEX

![](_page_45_Picture_28.jpeg)

![](_page_45_Picture_29.jpeg)

\*Tosoh's inclusion in the MSCI Indexes and use of the MSCI logo, trademark, service mark or index name does not constitute sponsorship, advertising, or promotion of Tosoh by MSCI or its affiliates. MSCI and the MSCI index names and logos, which are the exclusive property of MSCI, are trademarks or service marks of MSCI or its affiliates.

# **Evaluation of ESG Initiatives**

- CDP2023 "B" in climate change and water security
- Achieved EcoVadis Bronze Medal Sustainability Rating
- Tosoh named Outstanding Corporation under 2024 Certified Health and Productivity Management Organization
- Recognition Program
- Platinum Kurumin Certification

![](_page_45_Picture_38.jpeg)

# Participation in Initiatives

- United Nations Global Compact
- GX League
- Challenge Zero Declaration
- Japan Clean Ocean Material Alliance (CLOMA)
- Keidanren Declaration for Biodiversity
- Promoting development of workplaces enabling work and nursing care
- White Logistics promotion activities
- Declaration of Partnership Building

![](_page_45_Picture_48.jpeg)

# **TOSOH CORPORATION**

CSR Promotion 2-2-1, Yaesu, Chuo-ku, Tokyo 104-8467, Japan