

# Business Results for FYE 3/2024

May 10th, 2024

STELLA CHEMIFA CORPORATION

Securities code: 4109



# Index

## 【Business Results】

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## 【Reference Material】

(Corporate Profile • Introduction of Our Business)

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# Performance Highlights

## [FYE 3/2024 Results]

- ◆ Shipment volume of Semiconductors declined year on year as a result of the impact of the deterioration of market conditions although selling price rose.
- ◆ Sales of Energy increased year on year due to overseas shipments of Enriched Boron (Boron-10).
- ◆ Domestic purchase price of anhydrous hydrofluoric acid (AHF) is about the same level as the same period last year. (Price decreased in the overseas subsidiary.)

We will continue initiatives for procurement from outside China.

## [FYE 3/2025 Forecast]

- ◆ Semiconductor market conditions are recovering, and Semiconductor shipment volumes are expected to increase in stages.
- ◆ Energy expects further increases in shipment volumes of Enriched Boron due to demand for new nuclear facilities overseas.
- ◆ Price of anhydrous hydrofluoric acid (AHF) is assumed to rise due to supply and demand trends and the impact of foreign exchange rates.

# Financial Summary

(million yen)	FYE 3/2023	FYE 3/2024	Increase/ Decrease	Percentage Increase/ Decrease
Sales Revenue	35,382	30,446	-4,936	-14.0
Gross Profit	7,410	6,446	-964	-13.0
Operating Profit	3,514	2,722	-792	-22.5
Ordinary Profit	4,347	3,064	-1,283	-29.5
Profit Attributable to Owners of Parent	2,280	1,845	-435	-19.1
Earnings Per Share (yen)	186.03	153.48	-32.55	
Dividend (yen)	60	154	94	
ROE (%)	5.4	4.2	-1.2	

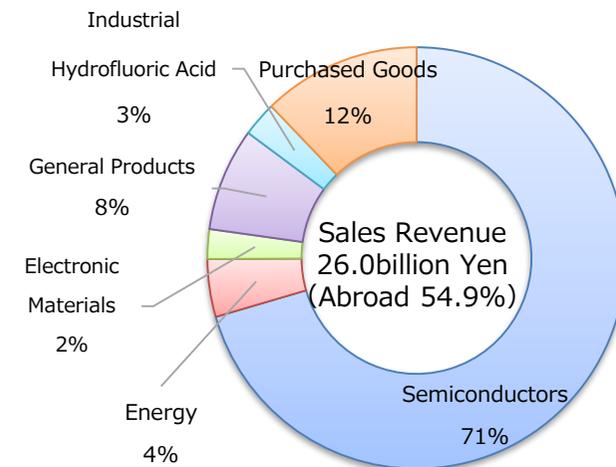
# Sales Revenue and Operating Profit by Business Segment

(million yen)	Sales Revenue				Operating Profit			
	FYE 3/2023	FYE 3/2024	Increase/ Decrease		FYE 3/2023	FYE 3/2024	Increase/ Decrease	
			Amount	%			Amount	%
High-Purity Chemical Business	30,707	26,019	-4,687	-15.3	2,961	2,167	-793	-26.8
Transportation Business	4,504	4,252	-252	-5.6	533	548	15	2.9
Other	170	174	3	2.1	30	18	-12	-39.3
Eliminations and Corporate	-	-	-	-	-11	-13	-2	-
Total	35,382	30,446	-4,936	-14.0	3,514	2,722	-792	-22.5

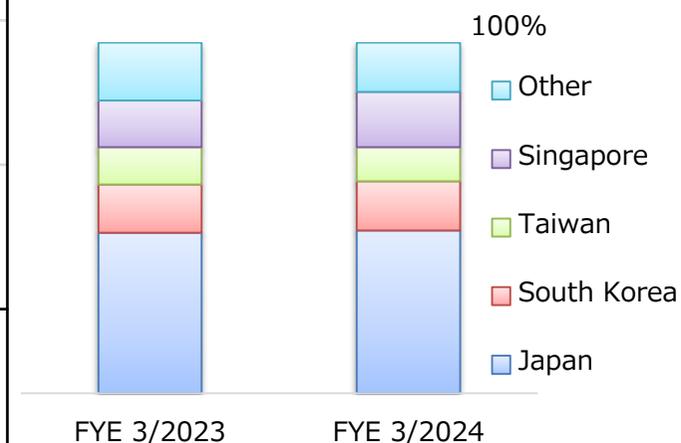
# Sales Revenue of High-Purity Chemical Business (Breakdown)

(million yen)	FYE 3/2023	FYE 3/2024	Increase/Decrease	Percentage Increase/Decrease
Semiconductors	19,049	18,341	-708	-3.7
Energy	996	1,152	155	15.6
Electronic Materials	1,032	592	-439	-42.5
General Products	2,514	2,060	-454	-18.1
Industrial Hydrofluoric Acid	1,739	696	-1,043	-60.0
Purchased Goods	5,375	3,177	-2,198	-40.9
Total	30,707	26,019	-4,687	-15.3

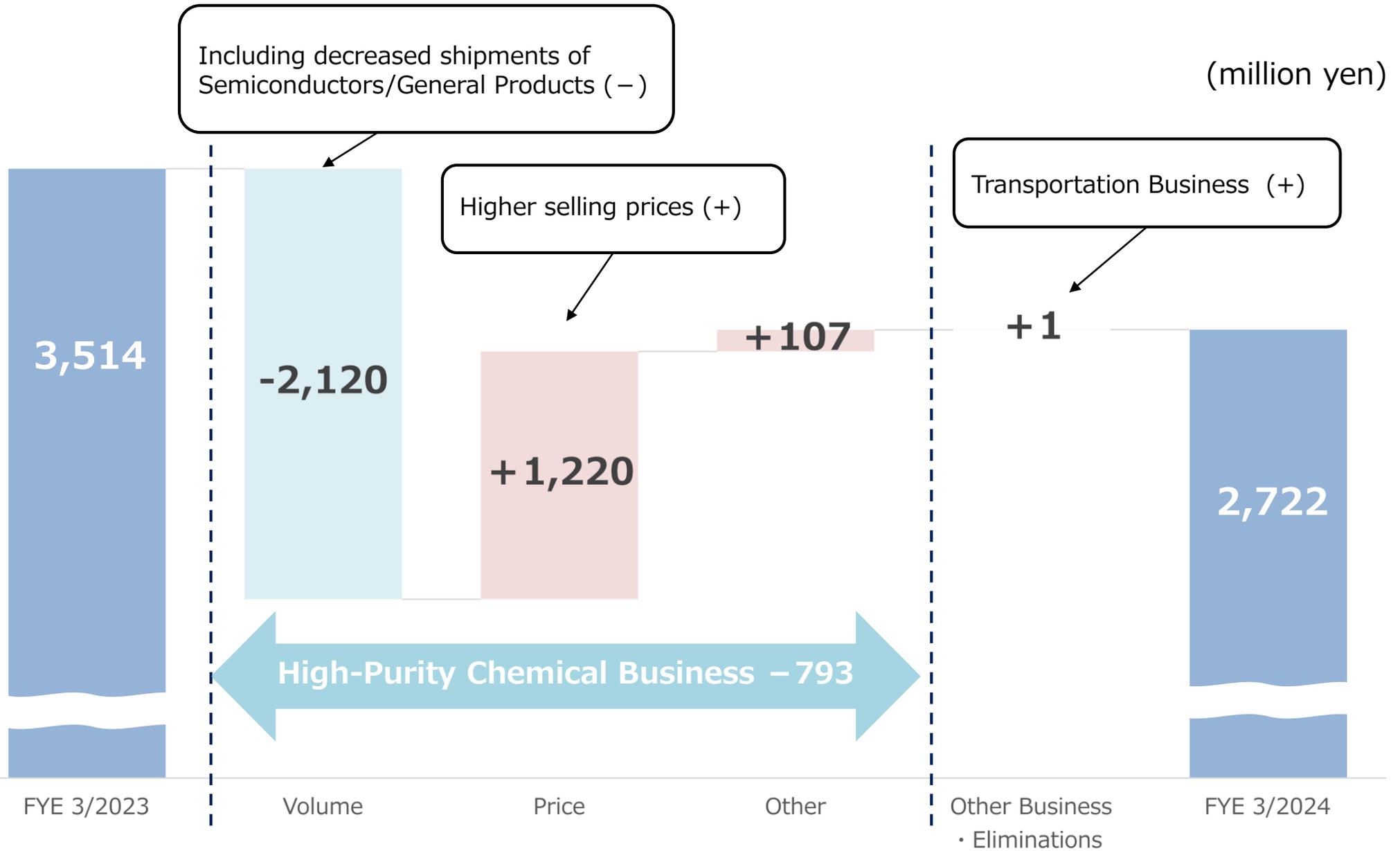
Sales Revenue Constituent Ratio of High-Purity Chemicals



Semiconductors Shipping Ratio by Country

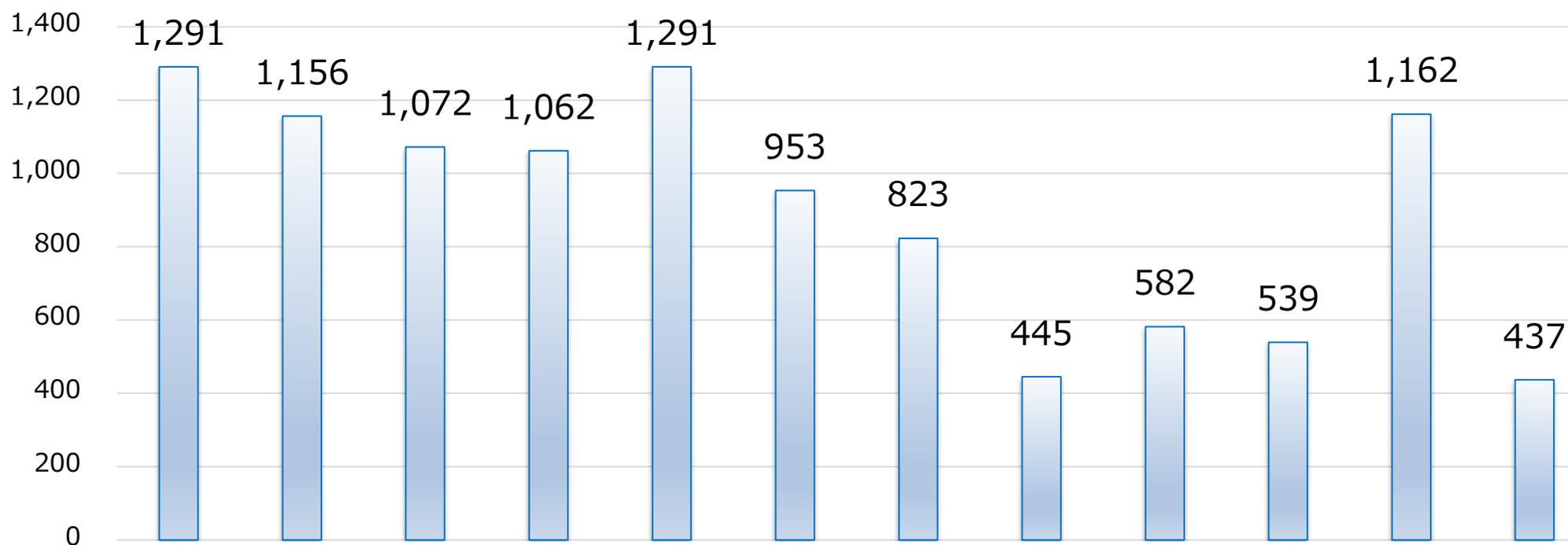


# Analysis of Operating Profit (Year on year)



# Change of Quarterly Operating Profit

(million yen)

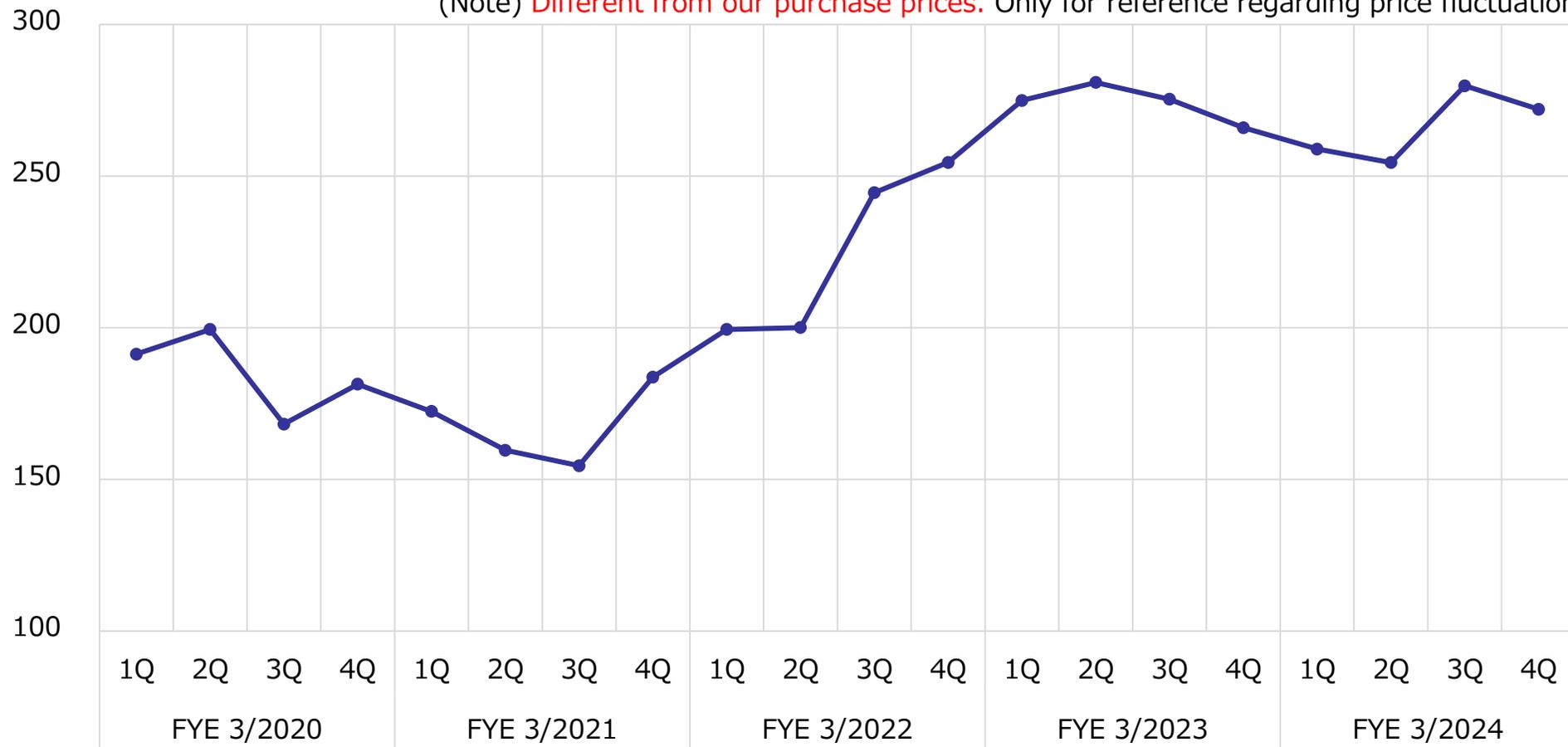


	FYE 3/2022				FYE 3/2023				FYE 3/2024			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Sales Revenue	8,896	9,212	9,015	10,171	9,764	9,854	8,651	7,112	7,298	7,199	8,813	7134
Operating Profit	1,291	1,156	1,072	1,062	1,291	953	823	445	582	539	1,162	437
Operating Profit Margin	14.5%	12.5%	11.9%	10.4%	13.2%	9.7%	9.5%	6.3%	8.0%	7.5%	13.2%	6.1%

# Transitions in **Import Trade Statistics (China)** Value of Hydrofluoric Acid(HF)

( yen/kg )

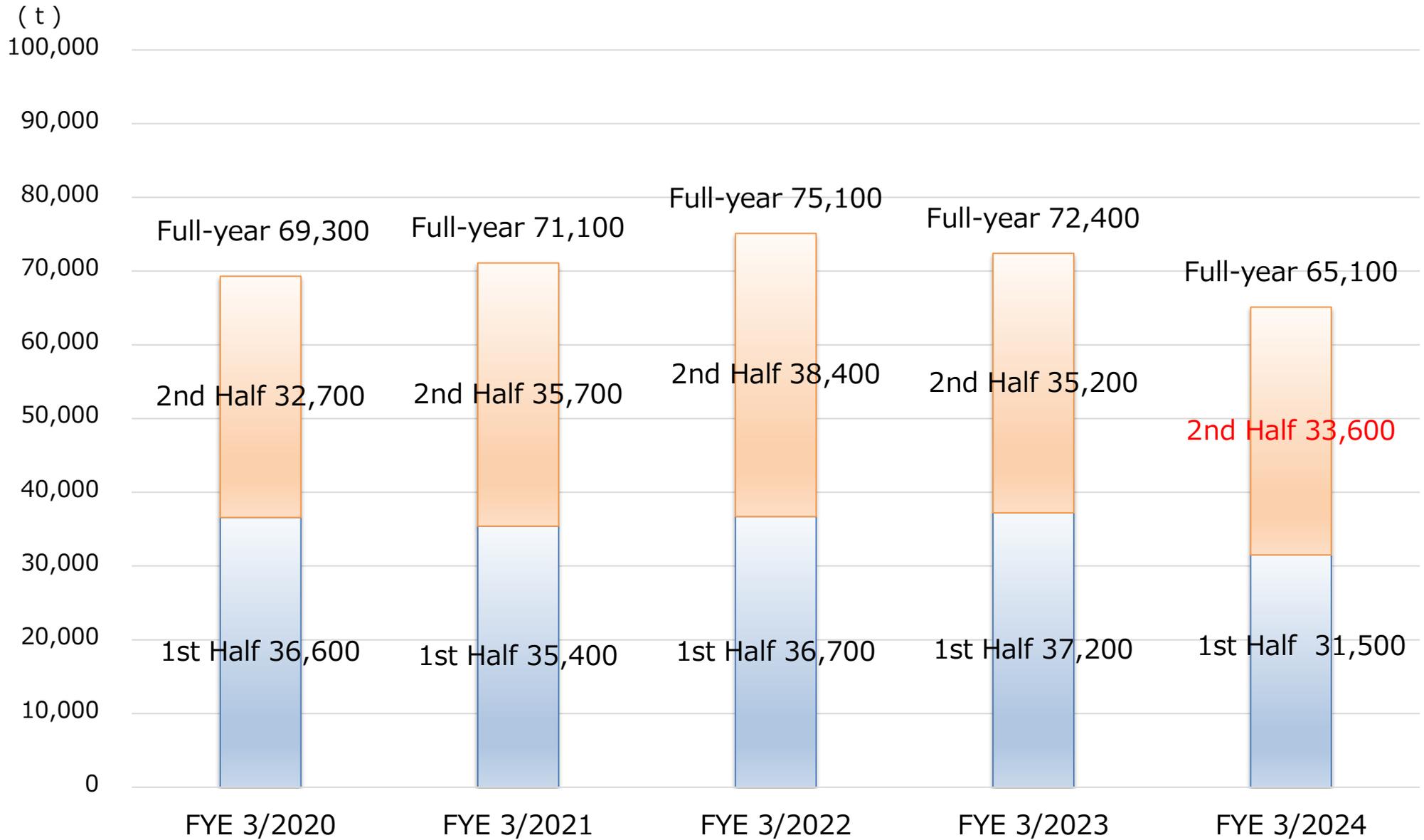
(Note) **Different from our purchase prices.** Only for reference regarding price fluctuations.



(yen/kg)	FYE 3/2020	FYE 3/2021	FYE 3/2022	FYE 3/2023	FYE 3/2024
Average Price	186	168	225	274	266

Source: Prepared by our company based on the Ministry of Finance's "Trade Statistics of Japan" (<http://www.customs.go.jp/toukei/info/>)

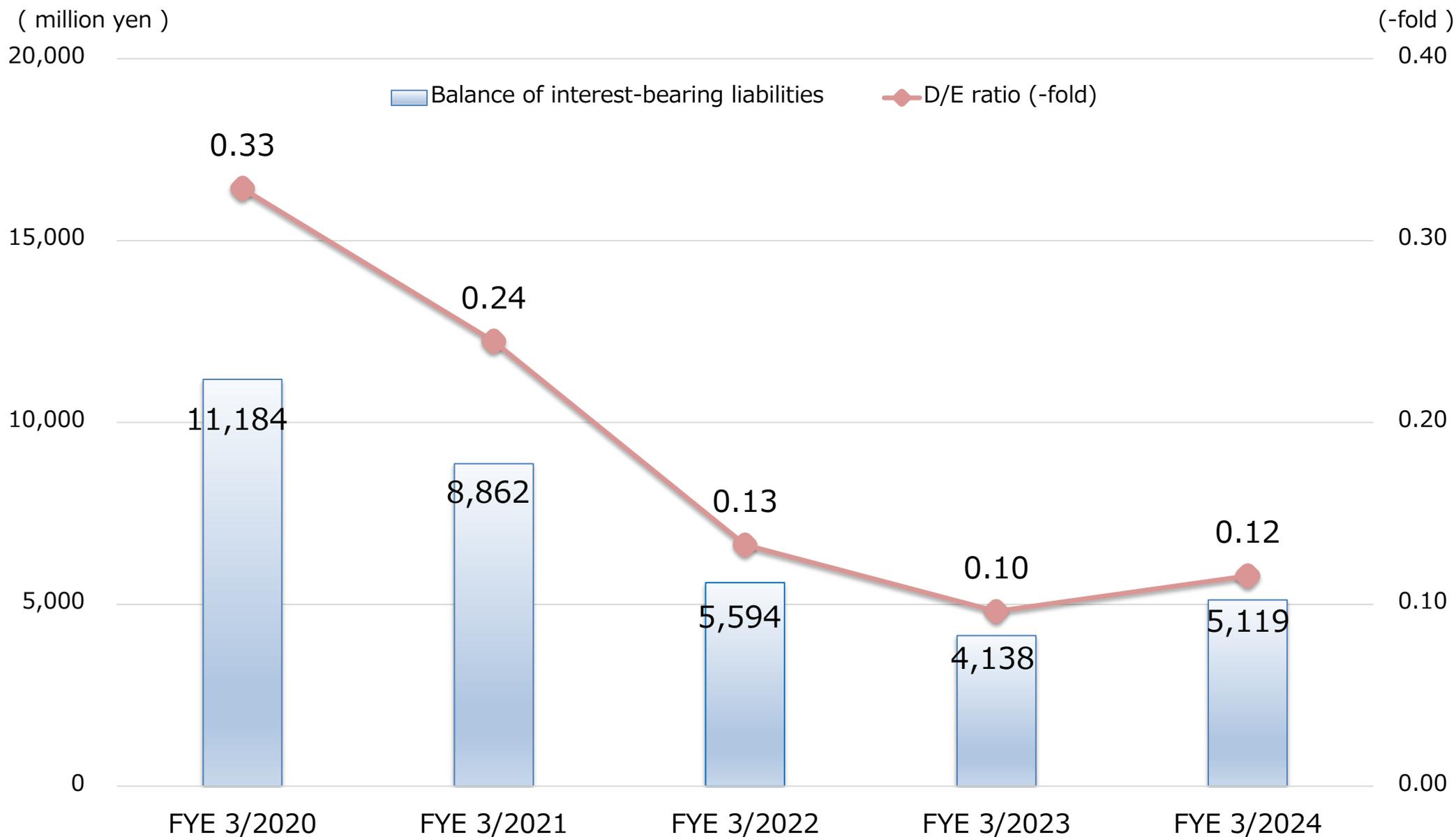
# Change of Shipping Volume of High-Purity Hydrofluoric Acid (Semiconductors)



# Balance Sheet

(million yen)	FYE 3/2023 End-of-Year	FYE 3/2024 End-of-Year	Increase/ Decrease	Percentage Increase/ Decrease
Assets	<b>55,471</b>	<b>58,618</b>	<b>3,146</b>	<b>5.7</b>
Cash and deposits	15,097	16,225	1,127	7.5
Operating receivables	7,110	6,801	-309	-4.4
Inventory assets	5,496	5,476	-20	-0.4
Property, plant, and equipment	22,625	25,426	2,801	12.4
Intangible assets	261	149	-111	-42.6
Liabilities	<b>12,309</b>	<b>14,116</b>	<b>1,807</b>	<b>14.7</b>
Operating liabilities	3,590	3,093	-497	-13.9
Interest-bearing liabilities	4,138	5,119	980	23.7
Net Assets	<b>43,162</b>	<b>44,501</b>	<b>1,339</b>	<b>3.1</b>
Equity capital	42,875	44,261	1,386	3.2
Liabilities and Net Assets	<b>55,471</b>	<b>58,618</b>	<b>3,146</b>	<b>5.7</b>

# Interest-Bearing Liabilities and D/E Ratio



# Statement of Cash Flows

## Capital Expenditures, Depreciation & Amortization, Research & Development Expenses

(million yen)

<b>(1) Consolidated Statement of Cash Flows</b>	<b>FYE 3/2023</b>	<b>FYE 3/2024</b>
Cash Flows from Operating Activities	5,634	6,542
Cash Flows from Investing Activities	-3,281	-5,831
Free Cash Flows (Operating CF + Investment CF)	2,353	710
Cash Flows from Financing Activities	-3,717	-141
Net Increase (Decrease) in Cash and Cash Equivalents	-810	1,118
Cash and Cash Equivalents, Beginning of Period	15,538	14,728
Cash and Cash Equivalents, End of Period	14,728	15,846
<b>(2) Capital Expenditures, Depreciation &amp; Amortization, Research &amp; Development Expenses</b>	<b>FYE 3/2023</b>	<b>FYE 3/2024</b>
Capital Expenditures	5,408	5,708
Depreciation & Amortization	2,593	2,768
Research & Development Expenses	660	698

# Financial Forecast

(million yen)	FYE 3/2024 Actual	FYE 3/2025 Forecast	Increase/ Decrease	Percentage Increase/ Decrease
Sales Revenue	30,446	34,500	4,053	13.3
Operating Profit	2,722	3,650	927	34.1
Ordinary Profit	3,064	3,550	485	15.8
Profit Attributable to Owners of Parent	1,845	2,600	754	40.9

Earnings Per Share (yen)	153.48	216.16	62.68
Dividend (yen)	154	170	16
ROE (%)	4.2	5.8	1.6

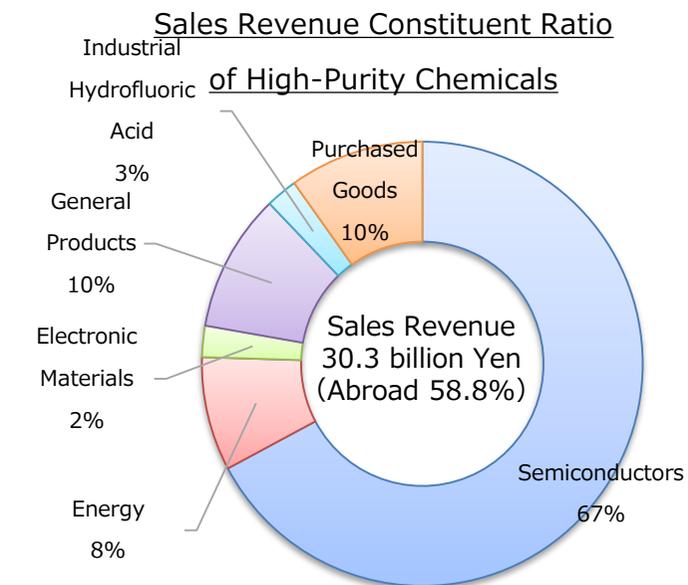
Capital Expenditures	5,708	6,900	1,191	20.9
Depreciation & Amortization	2,768	3,050	281	10.2
Research & Development Expenses	698	750	51	7.4

# Forecast on Sales Revenue and Operating Profit by Business Segment

(million yen)	Sales Revenue				Operating Profit			
	FYE 3/2024 Actual	FYE 3/2025 Forecast	Increase/ Decrease		FYE 3/2024 Actual	FYE 3/2025 Forecast	Increase/ Decrease	
			Amount	%			Amount	%
High-Purity Chemical Business	26,019	30,300	4,280	16.5	2,167	3,220	1,052	48.5
Transportation Business	4,252	4,080	-172	-4.0	548	420	-128	-23.5
Other	174	120	-54	-31.1	18	20	1	7.1
Eliminations and Corporate	-	-	-	-	-13	-10	3	-
Total	30,446	34,500	4,053	13.3	2,722	3,650	927	34.1

# Forecast on Sales Revenue of High-Purity Chemical Business (Breakdown)

(million yen)	FYE 3/2023 Actual	FYE 3/2024 Actual	FYE 3/2025 Forecast	Increase / Decrease (25/3 Forecast -24/3 Actual)	Percentage Increase / Decrease
Semiconductors	19,049	18,341	20,360	2,018	11.0
Energy	996	1,152	2,510	1,357	117.9
Electronic Materials	1,032	592	690	97	16.4
General Products	2,514	2,060	3,050	989	48.0
Industrial Hydrofluoric Acid	1,739	696	700	3	0.6
Purchased Goods	5,375	3,177	2,990	-187	-5.9
<b>Total</b>	<b>30,707</b>	<b>26,019</b>	<b>30,300</b>	<b>4,280</b>	<b>16.5</b>



# Shareholder Return

## **[New Shareholder Return Policy (Released on May 9<sup>th</sup> ,2023)]**

The company recognizes that providing stable and continuous dividend payments, giving comprehensive consideration to factors including its financial condition and profit level is an important issue for management.

Further, in addition to balancing growth investments and shareholder returns, in order to improve capital efficiency, the company will aim for a **total return ratio of 100%** with an applicable period (FYE 3/2024 and FYE 3/2025).

Retained earnings will be allocated to capital investment and R&D investment, and will be proactively utilized for future business development to enhance corporate value.

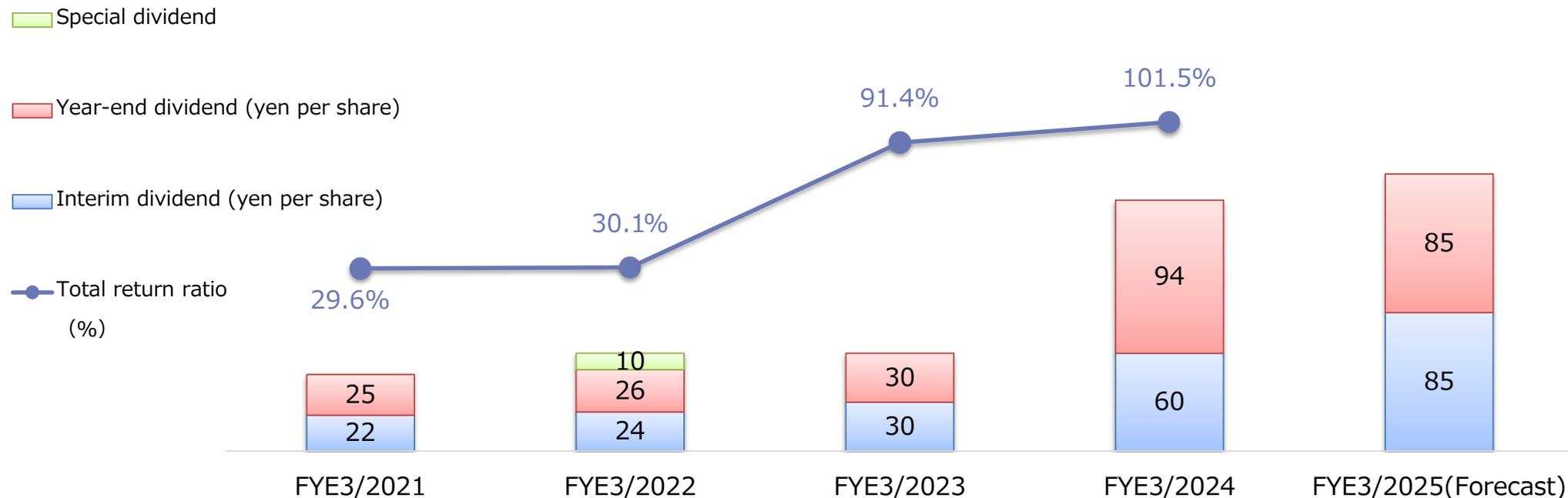
# Shareholder Return

## [Dividend paid and dividend forecast]

◆ FYE3/2024 ● Annual dividend: 154 yen per share

◆ FYE3/2025 ● **Annual dividend forecast : 170 yen per share** (Released on May.10th, 2024)

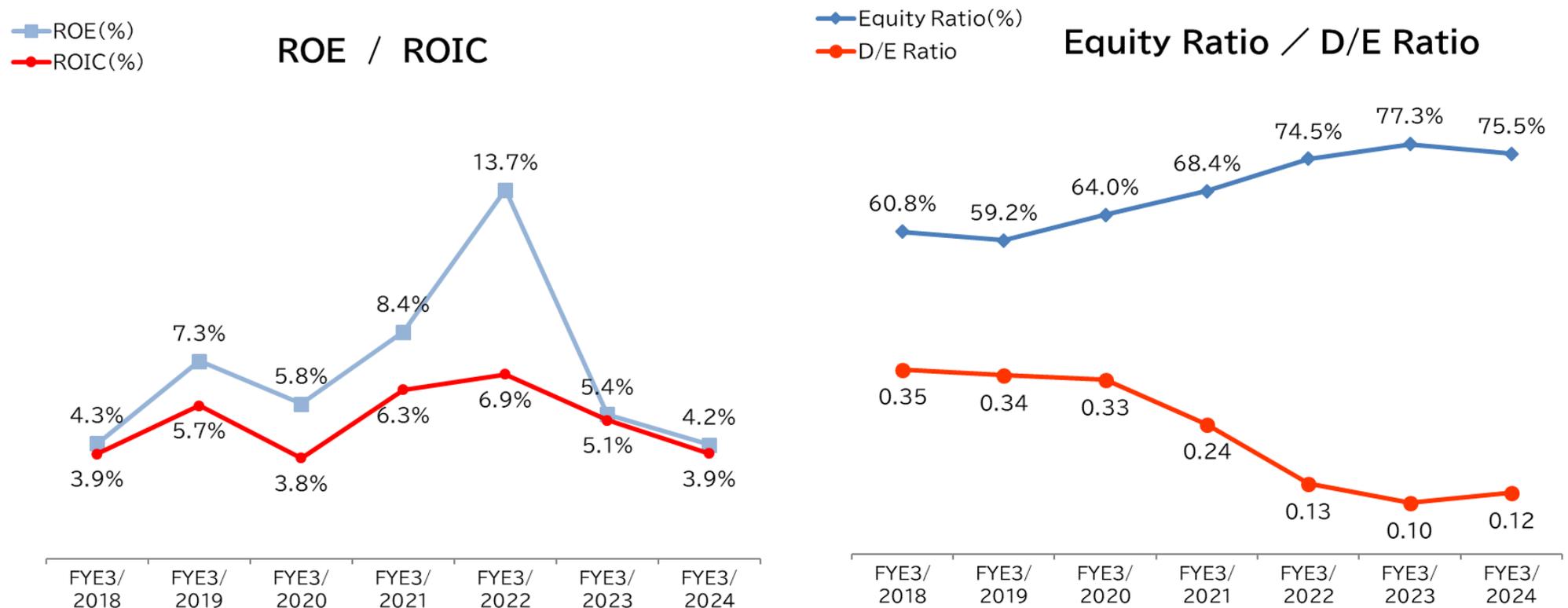
※The Company aims to achieve a total return ratio of 100% through dividends and share repurchases, but the specific amounts and allocations will be determined based on future business forecasts, stock price trends, and other factors.



# About the Action to Implement Management that is Conscious of Cost of Capital and Stock Price

## [Profitability · Capital structure]

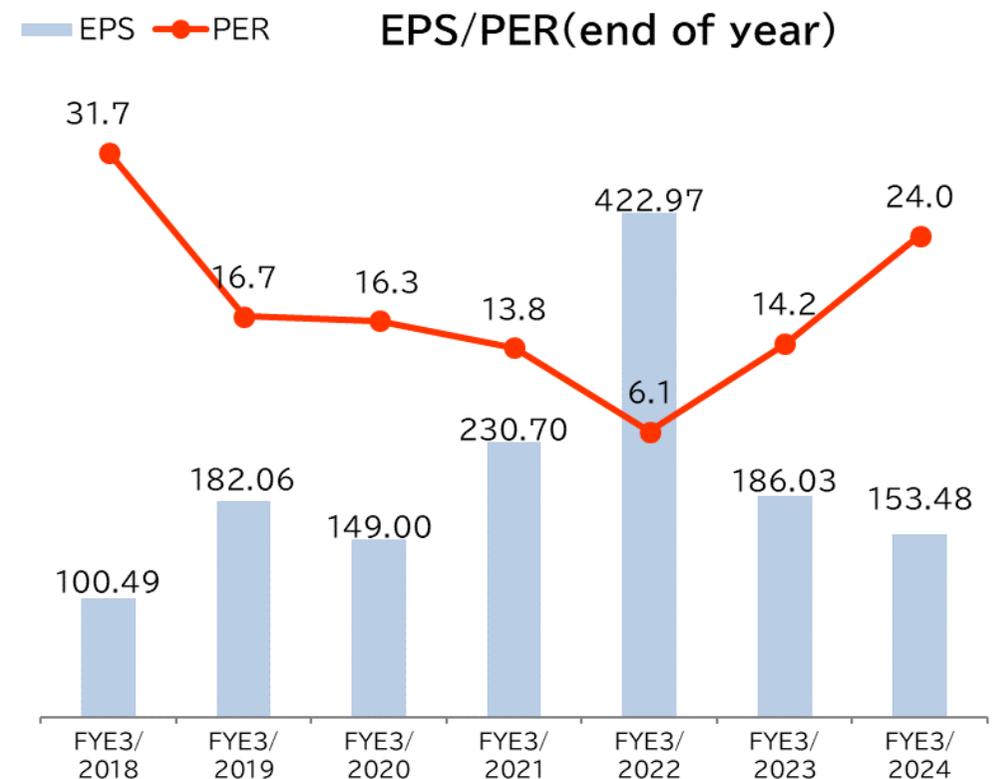
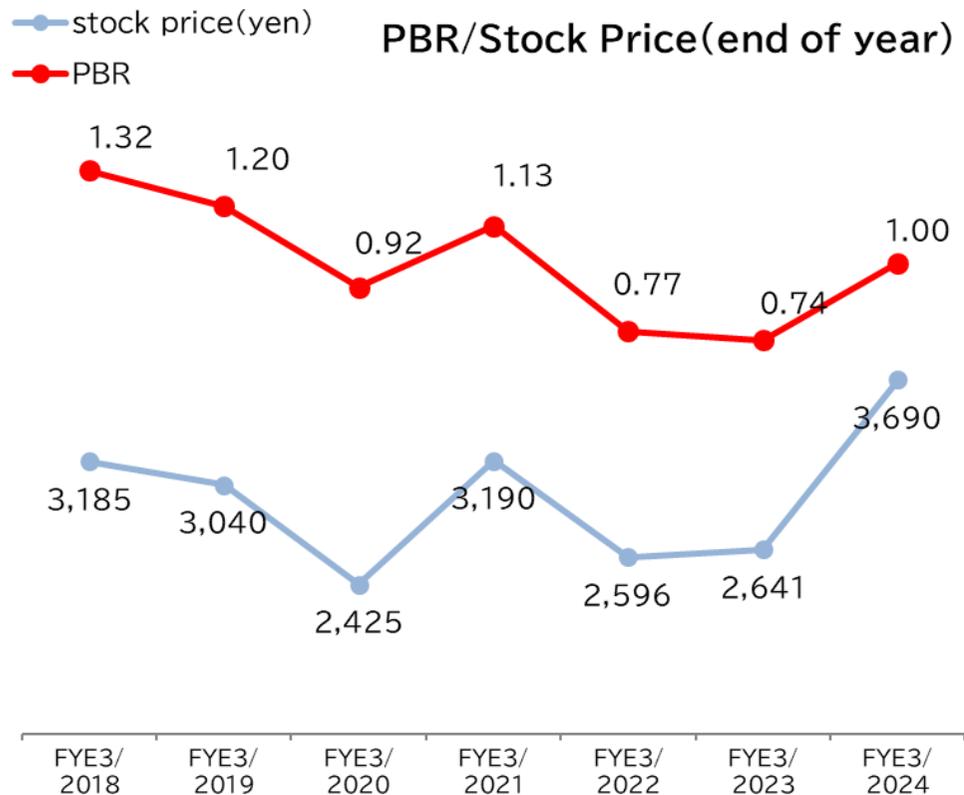
- ◆ Despite efforts to curb the increase in equity capital in line with the 100% total return policy, profit margins declined mainly due to the sluggish semiconductor market.
- ◆ D/E ratio reversed and increased as a result of curbing the increase in equity capital and increasing interest-bearing debt.



# About the Action to Implement Management that is Conscious of Cost of Capital and Stock Price

## [Stock Price · PBR · PER]

- ◆ Stock price rose on the back of the new shareholder return policy and the increase in TOPIX, and PBR recovered to 1.0.
- ◆ As stock price rose, PER increased to 24.0.



# Reference Material

(Corporate Profile • Introduction of Our Business)

# Corporate Profile

(as of March 31, 2024)

Corporate Name	STELLA CHEMIFA CORPORATION	
Head Office	Meiji Yasuda Seimei Osaka Midosuji Bldg. 10F, 4-1-1 Fushimi-machi, Chuo-ku, Osaka City, Osaka	
Founded/Established	February 1916 / February 1944	
Capital Fund	4,829,782,512 yen	
Representatives	Representative Director, President and Chief Executive Officer: Aki Hashimoto Representative Director, Senior Managing Director (Products Management Group): Kiyonori Saka	
U R L	<a href="https://www.stella-chemifa.co.jp/english/">https://www.stella-chemifa.co.jp/english/</a>	
Number of Employees	293	
Sales Department	Osaka Sales Department (Chuo-ku, Osaka city, Osaka) Tokyo Sales Department (Chiyoda-ku, Tokyo)	
Production bases	Sanpo Factory (Sakai-ku, Sakai City, Osaka) Izumi Factory (Izumiotu City, Osaka) Kitakyushu Factory (Yahatanishi-ku, Kitakyushu City, Fukuoka)	
R & D base	Next Generation Materials Research Lab (Sakai-ku, Sakai City, Osaka : Located within Sanpo factory premises)	

# Subsidiaries & Associates

## At home (3 companies)

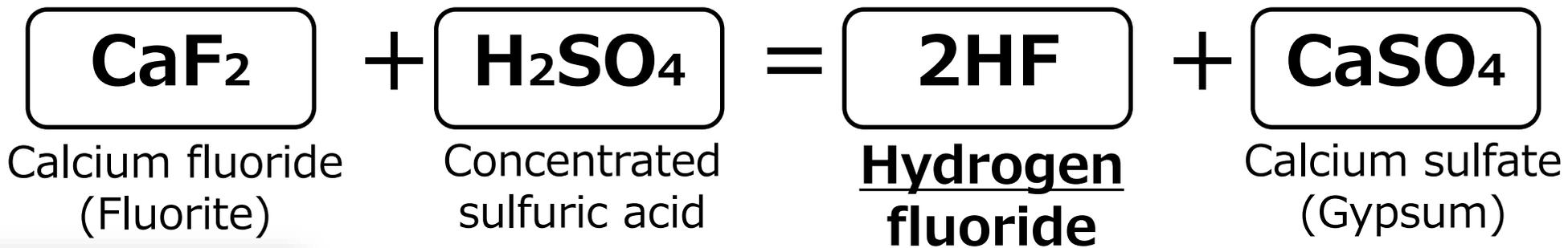
Transportation Business	BLUE EXPRESS, Inc.	Sakai-ku, Sakai City, Osaka
Other Business	BLUE AUTO TRUST Co., Ltd.	Sakai-ku, Sakai City, Osaka
Medical Business	STELLA PHARMA CORPORATION	Chuo-ku, Osaka city, Osaka

## Abroad (6 companies)

High-Purity Chemical Business	STELLA CHEMIFA SINGAPORE PTE LTD	Singapore
Transportation Business	STELLA EXPRESS (Singapore) PTE LTD	Singapore
High-Purity Chemical Business	Blue Express (Shanghai) International Trade Inc.	China
Transportation Business	Blue Express (Shanghai) International Freight Forwarding Co., Ltd.	China
High-Purity Chemical Business	Zhejiang Blue Star Chemical Co., Ltd.	China
High-Purity Chemical Business	Quzhou BDX New Chemical Materials Co., Ltd.	China

# Introduction of Our Business

## Manufacture and applications of hydrogen fluoride



\*There are five main grades of fluorite purity, and for semiconductor applications, high quality fluorite with a purity of 97% or higher is required.

Concrete materials, etc.

Reaction and refinement using our proprietary technology

Treatment of surface such as stainless steel

Raw materials such as alternatives for CFCs

Chemicals for etching and cleaning for semiconductors

Materials for secondary batteries

Enriched Boron

Reaction catalyst  
Other products

# Introduction of Our Business

## High-Purity Chemical Business

Semiconductors	<ul style="list-style-type: none"><li>• Manufacture and sale of chemicals for etching and cleaning in the semiconductor and LCD panel manufacturing processes</li></ul>
E n e r g y	<ul style="list-style-type: none"><li>• Manufacture and sale of enriched boron (boron 10) used for energy related facilities and cancer therapy (BNCT)</li><li>• Development of materials to improve the performance of lithium-ion secondary batteries</li></ul>
E l e c t r o n i c M a t e r i a l s	<ul style="list-style-type: none"><li>• Manufacture and sale of tantalum production aids for tantalum capacitors</li><li>• Manufacture and sale of raw materials for camera and stepper lenses</li><li>• Manufacture and sale of R&amp;D products in the small-quantity production stage</li><li>• Manufacture and sale of raw materials for production of phosphors and phosphors used for LEDs</li></ul>
General Products	<ul style="list-style-type: none"><li>• Manufacture and sale of a range of chemicals and catalysts for the manufacture of pharmaceutical intermediates, etc.</li><li>• Manufacture and sale of toothpaste additives to prevent tooth decay and gingivitis</li><li>• Manufacture and sale of other fluorine compounds</li></ul>
I n d u s t r i a l Hydrofluoric Acid	<ul style="list-style-type: none"><li>• Manufacture and sale of hydrofluoric anhydride, raw materials for CFCs and fluoropolymers</li><li>• Manufacture and sale of chemicals used for acid cleaning of stainless steel and slimming of LCD panels</li></ul>
Purchased Goods	<ul style="list-style-type: none"><li>• Sales of purchased goods</li></ul>

# Introduction of Our Business

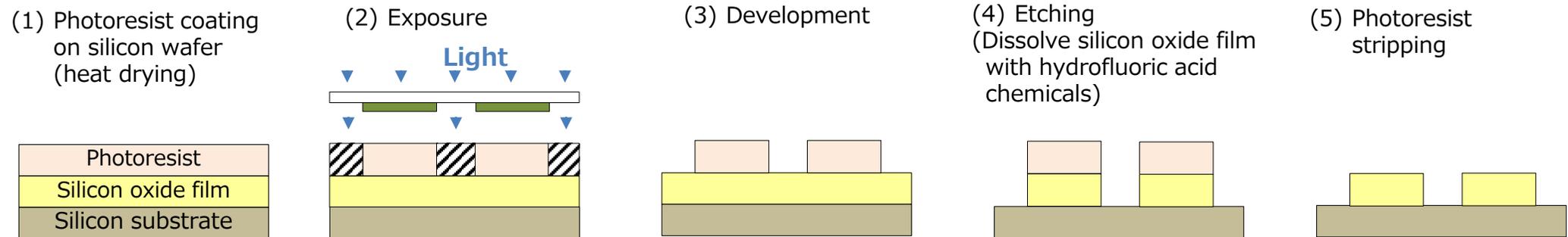
- Semiconductors -

## Ultra-High Purification Technology

- Impurity levels of less than 1 ppt ( $1 \times 10^{-12}$ ) are controlled by ultra-purification and ultra-cleaning technologies
- Mass production of ultra-pure chemicals for ultra-high integrated circuit

<p>Ultra High Purity Hydrofluoric Acid</p>	<ul style="list-style-type: none"> <li>• Hydrofluoric acid (HF) is the only chemical capable of etching out silicon oxide film</li> <li>• Chemical solutions are indispensable to the semiconductor manufacturing process and require ultra-high purity</li> <li>• In particular, dilute hydrofluoric acid is used in a number of semiconductor processes</li> </ul>
<p>Ultra High Purity Buffered Hydrofluoric Acid</p>	<ul style="list-style-type: none"> <li>• Mixed aqueous solution of hydrofluoric acid (HF) and ammonium fluoride (<math>\text{NH}_4\text{F}</math>)</li> <li>• Mainly used in processes such as etching and cleaning of insulation films</li> <li>• Chemicals with etch rates ranging from tens of <math>\text{\AA}/\text{min}</math> to thousands of <math>\text{\AA}/\text{min}</math> can be produced</li> </ul>

## Example of Application (Photolithography Process)



# Introduction of Our Business

- Semiconductors -

## Examples of the company's products

Product name (Semiconductors)	Description
Ultra-high-purity hydrofluoric acid	Chemical solutions used in the wet etching and wet cleaning of silicon wafers in the manufacture of semiconductors, FPDs, solar cells and MEMS
Ultra-high-purity buffered hydrofluoric acid	Mixed aqueous solution of ultra-high purity hydrofluoric acid and ammonium fluoride solution
BHF	A chemical mixed with 50% hydrofluoric acid and 40% ammonium fluoride solutions
LL BHF	BHF with various functionalities made possible by adding a surfactant
LAL BHF	BHF that contains a surfactant has enabled it to achieve extended service life and given other advantages by optimizing the concentration of ammonium fluoride at 17% to 20%, about half the concentration of ammonium fluoride contained in conventional BHF.
Ex-LAL BHF ※New products	Surfactant-containing BHF (buffered hydrofluoric acid) with ammonium fluoride concentration reduced to 5% or less and crystal precipitation in equipment suppressed
HSN BHF ※New products	Similar to LAL BHF, a chemical solution that allows silicon oxide film etching with high selectivity with respect to a silicon nitride film while having merits such as longer life

# Introduction of Our Business

- Semiconductors -

## Production capacity of High Purity Hydrofluoric Acid for Semiconductors

Kitakyushu Factory



Kitakyushu City, Fukuoka

**30,000 t /year**

Sanpo Factory



Sakai City, Osaka

**65,000 t /year**

STELLA CHEMIFA  
SINGAPORE



Singapore

**10,000 t /year**

**105,000 t /year**

\* As a comprehensive manufacturer of fluorine compounds, we use our own technology to do everything from manufacturing to filling.

# Introduction of Our Business

- Energy -



Enrichment plant  
(Izumiotsu City, Osaka)

## Enriched Boron (Boron-10) and its features

- Natural boron is made up of two isotopes, boron-10(20%) and boron-11(80%)
- Developed technology to enrich boron-10 to over 99%
- Established mass production technology of enriched boron for the first time in Japan(2000)
- Boron-10 has an extremely high capacity to absorb neutrons, and further enriching it can increase its ability to absorb neutrons.

## Production capacity

Products		Production Capacity
Enriched Boron	$^{10}\text{B}$	6t / year

(\* When converted to the following items)

Enriched Boric Acid	$\text{H}_3^{10}\text{BO}_3$	36t / year
Enriched Potassium tetrafluoroborate	$\text{K}^{10}\text{BF}_4$	75t / year

# Introduction of Our Business

- Energy -

## Applications of Enriched Boron Compounds

- Excess reaction control of pressurized-water reactors by dissolving into primary cooling water
- Neutron-absorbing material of spent nuclear fuel transportation and storage containers
- Material of control rods of nuclear reactors and rack material of spent nuclear fuel pools
- Water source for facilities responding to specific major accidents, etc.
- Raw material for cancer treatment drugs (BNCT: Boron Neutron Capture Therapy)

## Advantages of Using Enriched Boric Acid

- (1) Improvement of corrosive environment in nuclear reactors  
Required  $^{10}\text{B}$  concentration can be secured at 1/5 of natural products.  
Operation at low concentration is possible, and corrosion in facilities can be reduced.
- (2) Reduction of storage costs  
Heating and heat retention are required to maintain the dissolution of boric acid water.  
Enriched boric acid realizes the reduction in concentration, and reduces the problem of heat retention.  
In addition, the storage tank can be made smaller.
- (3) More reliable control  
In the event of an emergency stop, more reliable control is possible, and since boric acid is harmful to the human body and the environment, the reduction of overall amount of boric acid is an advantage.

# Introduction of Our Business

- Energy -

## Materials for lithium-ion secondary batteries

- Materials to improve the performance of lithium-ion secondary batteries
- High-temperature endurance • High conductivity • Increased capacity • Low resistance • Flame retardance

## Lithium Hexafluorophosphate

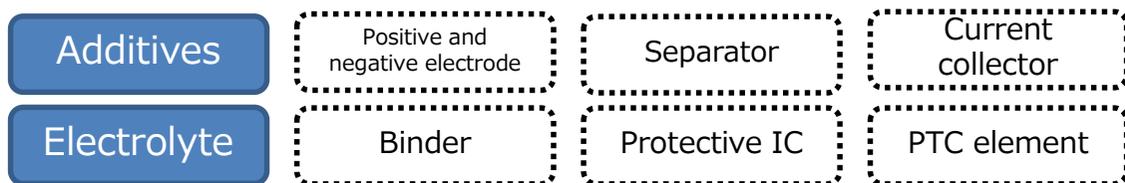
- High-purity electrolytes for lithium-ion secondary batteries

\* Manufacture and sale at our affiliate company in China (Quzhou BDX New Chemical Materials Co., Ltd. )



Izumi Factory's manufacturing building (Izumiotsu City, Osaka)

Example of materials used in lithium-ion secondary batteries



Quzhou BDX New Chemical Materials Co., Ltd. (China)

# Introduction of Our Business

- General Products -

## Tin Fluoride

- The GMP inspection by the USFDA for tin fluoride, an active ingredient of OTC anticaries drugs, was completed, and we obtained official approval.
- We sell “tin fluoride” mainly in Europe and the US as a GMP-compliant product



Izumi Factory's manufacturing building  
(Izumitsu City, Osaka)



- \* We expect to see big demand mainly in Europe and the US, where there is strong interest in dental health and beauty.

⇒ We are also developing new applications other than toothpaste  
(e.g., hoof sterilization)

# Introduction of Our Business

- New Initiatives(semiconductors) -

## Chemicals for semiconductors

### Technological trends in advanced semiconductors by application

<b>Logic</b>	<ul style="list-style-type: none"><li>• Shift from FinFET to GAA nanosheet structure</li><li>• Demand for addressing changes in constituent materials due to structural changes</li></ul>
<b>NAND</b>	<ul style="list-style-type: none"><li>• Going beyond 200 layers in 3D-NAND</li><li>• Demand for even higher aspect ratio of the structure and processing technology to realize such a structure</li></ul>
<b>DRAM</b>	<ul style="list-style-type: none"><li>• Demand for technology to increase integration density through further miniaturization of 2D planes and 3D stacking</li></ul>

### Our response (selection of development and concentration of resources on it)

- Focus on logic and DRAM to move forward with the development of functional chemical solutions required for technological innovation by application
- Continue to focus on initiatives aimed at reducing and guaranteeing nano-sized particles to adapt to the manufacture of cutting-edge semiconductor devices

# Introduction of Our Business

## - New Initiatives(Energy) -

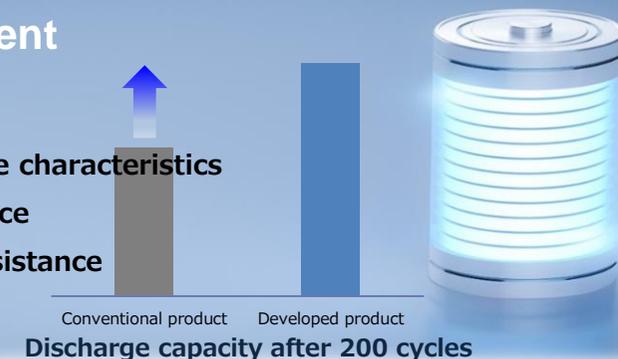
### Development of an electrolyte additive for lithium-ion secondary batteries

- Successfully applied to high-capacity, nickel-based positive electrode materials
- Realized control of deterioration in response to high voltages and high temperature loads

● **Began sample work in March 2024**

### Characteristics of the additive under development

- ✓ Improvement of cycle characteristics
- ✓ Reduction of resistance
- ✓ High temperature resistance

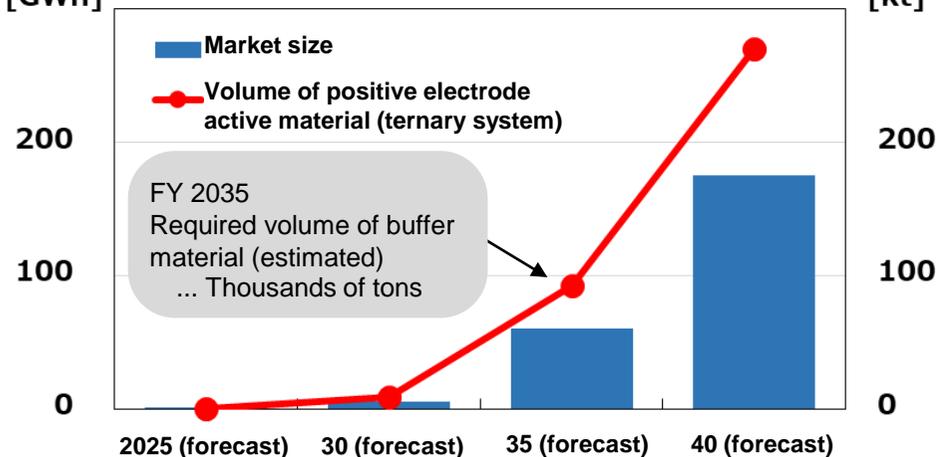


### Development of a material for all-solid-state batteries

- Achieved low internal resistance by facilitating electrode reactions at the positive electrode active material-electrolyte interface for high performance

● **Began sample work in March 2024**

[GWh] Trend in Market Size of Sulfide All-Solid-State Batteries [kt]

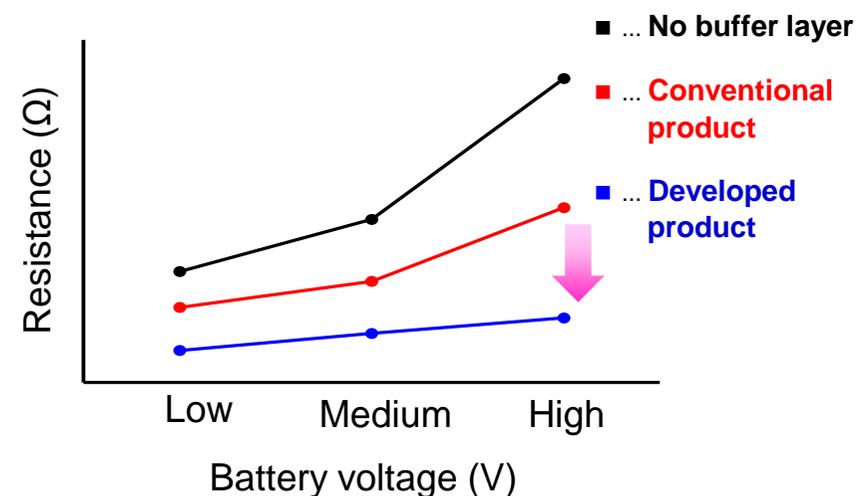


Source: Fuji Keizai Co., Ltd. "2022 next-generation battery technology and market overview"

### Buffer material



Coating of buffer material on active material surface



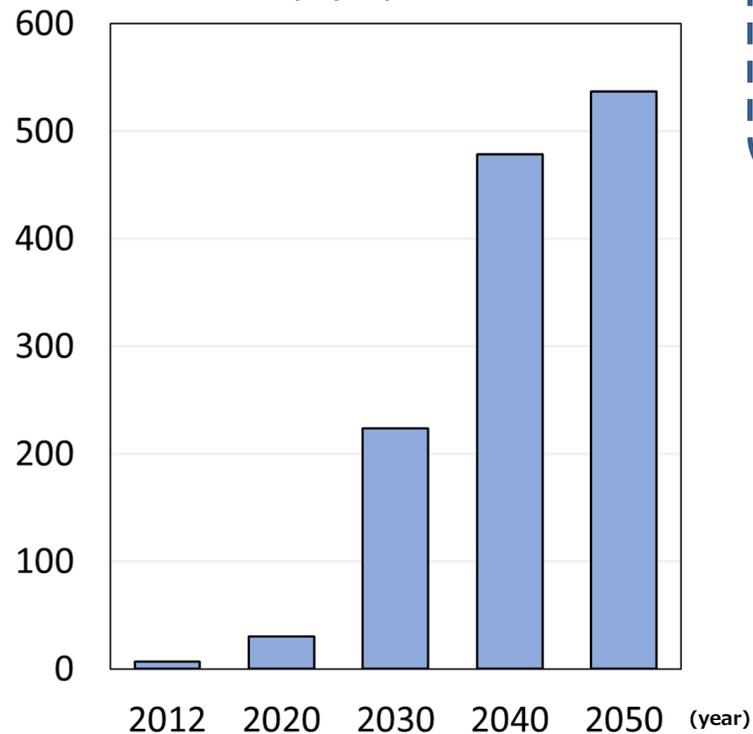
# Introduction of Our Business

## - New Initiatives(Cell Culture vessel) -

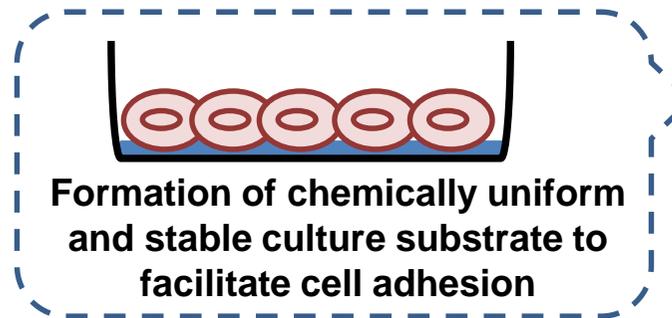
### Cell culture vessel

- Applied our unique surface processing technology to develop cell culture plates and currently promoting sample work at research institutions, etc.
- Expanded our plate lineup in response to requests from users
- Installed test production facilities in the Next-Generation Materials Research Lab with a view to strengthening sample work and full-scale sales

Forecast of the future size of the market for cultivation containers including plates and flasks (Japan)  
(100 million yen)



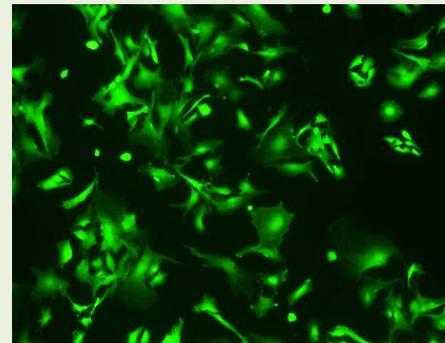
Excerpted from Ministry of Economy, Trade and Industry, "Forecast of the future size of the market for regenerative medicine peripheral industries"



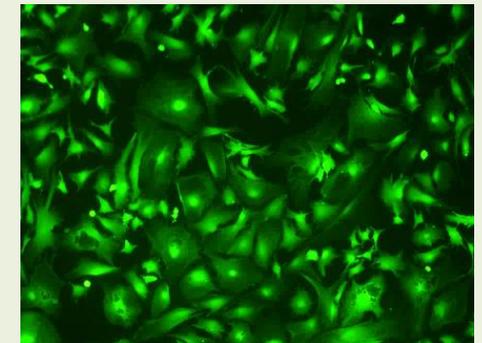
Lineup of cell culture plates

### Cell culture evaluation (cells: green)

General product



Product developed by our company



Works well even for weakly adherent cells

# Introduction of Our Business

- New Initiatives(Electronic Materials1) -

## Phosphor-related Materials

- A phosphor is a substance that absorbs light energy from the outside, converts it into light of another wavelength, and emits it.  
(Examples of applications: LED/LCD backlights, displays, etc.)
- Our LSA-61A is a red phosphor that is efficiently excited by blue light and emits a sharp red light.



**Fluoride phosphor  
(LSA-61A)**



Phosphors have an advantage over OLEDs due to superior stability.



Adoptions of fluoride phosphors with high color-rendering properties for high-end model lighting are picking up pace.

### ◆ Working to improve durability, a focus of increasingly high-performance mini-LED and lighting applications

- ✓ The durability of the red phosphor was **improved by 50%** compared with our conventional prototype.
- ✓ Currently promoting sample work



**Our red phosphor passed initial evaluations by some users and will undergo evaluations for their product implementation.**

# Introduction of Our Business

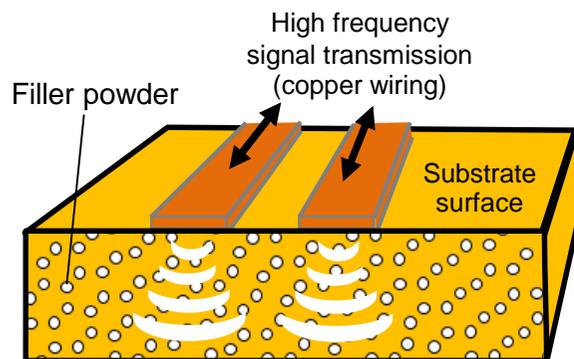
- New Initiatives(Electronic Materials2) -

## PCB Materials (Low Dielectric Constant Materials)

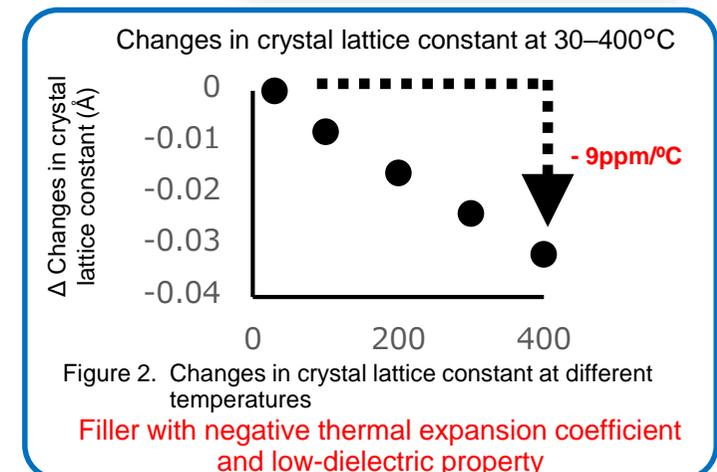
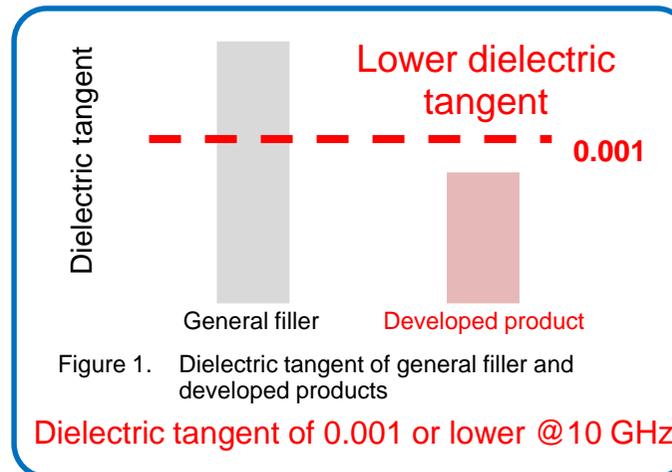
- Low-dielectric-constant materials contribute to 5G and other high-speed communications infrastructure.
- Our products are used as additives (fillers) for substrate materials such as resin.
- The higher the frequency, the more easily radio waves are attenuated and the harder it is for them to reach the intended target. To overcome this problem, there is a need to develop materials that can handle higher frequencies.

We developed fillers with the following features to reduce transmission loss

- Low-dielectric-tangent filler
- Filler with negative thermal expansion coefficient and low dielectric property



Filler for the suppression of transmission loss



Working to get customer evaluations on the developed product as a substrate material for high-frequency wave use

# Introduction of Our Business

## - New Initiatives(Electronic Materials3) -

### High-performance fluoride materials (nanomaterials)

- **CNP-P** : fluoride nanoparticle dispersion solution with low refractive index for antireflection film
- **CNP-PS1** : Developed product that helps improve film strength (under evaluation by customers)

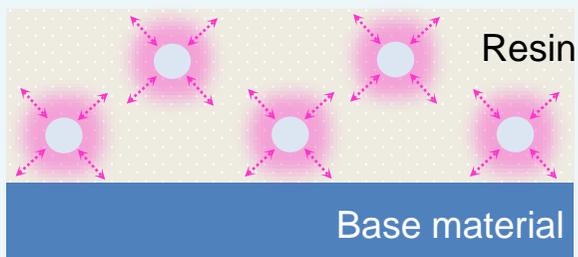
### Examples of target applications



- Film for electronic devices
- Foldable tablet
- Car cockpit, etc.

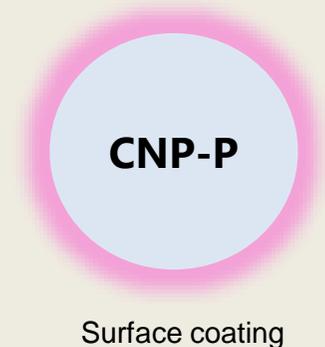
### Focusing on film durability (Q3 to year-end)

Filler tightly binds to resin in antireflection film



- ✓ **Increased film strength**
- ✓ Fluoride nanoparticles
- ✓ Low refractive index
- ✓ Chemical resistance

### 【CNP-PS1】



Surface coating

# Introduction of Our Business

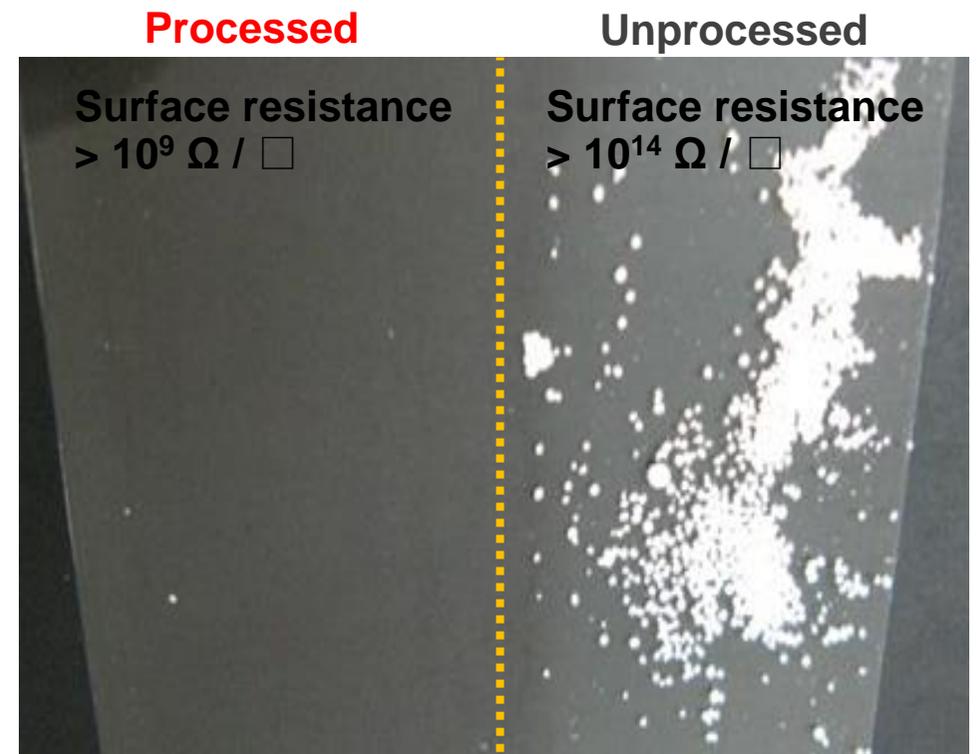
- New Initiatives(Electronic Materials4) -

## Antistatic agent

- Antistatic agents are additives that prevent the accumulation of static electricity when mixed with plastics and fibers.
- Using our ionic compound synthesis technology, we developed two types of highly pure material (liquid and solid) that provides excellent antistatic performance.
- **Currently preparing sample work**



The company's developed product (AS series)



Antistatic testing with the company's developed product

Antistatic agents are used in a wide range of industries, including packaging, electronics, textiles, and automobiles, because the buildup of static electricity in plastics and fibers can lead to malfunctions of electronic equipment or fires due to dust adhesion and discharge.

# Introduction of Our Business

- Other product examples -

(Product information)



## Optical Material-Related

- ◆ Calcium Fluoride
- ◆ Aluminum Fluoride
- ◆ Lithium Fluoride
- ◆ Strontium Fluoride
- ◆ Barium Fluoride
- ◆ Magnesium Fluoride
- ◆ Lead Fluoride

## Reactive Catalyst-Related

- ◆ High Purity Boron Trifluoride
- ◆ Boron Trifluoride Diethyl Ether
- ◆ Boron Trifluoride Dimethyl Ether
- ◆ Boron Trifluoride n-Butyl Ether
- ◆ Boron Trifluoride Tetrahydrofuran
- ◆ Boron Trifluoride Phenol
- ◆ Boron Trifluoride Monoethyl Amine
- ◆ Boron Trifluoride Piperidine
- ◆ Triethylamine 3HF

## Surface Treatment, Alternatives for CFCs-Related

- ◆ Anhydrous Hydrofluoric Acid
- ◆ 55% Hydrofluoric Acid

## Nuclear Energy-Related

- ◆ <sup>10</sup>B Enriched Potassium Fluoroborate
- ◆ <sup>10</sup>B Enriched Boric Acid

## Other Products

- ◆ Potassium Fluorosilicate
- ◆ Fluoroboric Acid
- ◆ Tin Fluoroborate
- ◆ Copper Fluoroborate
- ◆ Lead Fluoroborate
- ◆ Zinc Fluoroborate
- ◆ Sodium Fluoroborate
- ◆ Potassium Fluoroborate
- ◆ Ammonium Hydrogenfluoride
- ◆ Sodium Fluoride
- ◆ Potassium Fluoride
- ◆ Ammonium Fluoride
- ◆ Potassium Hexafluorozirconate
- ◆ Potassium Hexafluorotitanate
- ◆ Refined Calcium Fluoride
- ◆ Potassium Hexafluorophosphate

## Newly-Developed Products

- ◆ Detergents Contributing to Increase in Chemical Lifetime
- ◆ Detergents Suppressing Etching of Silicon Nitride Film
- ◆ Battery-Related (Electrolytes for Sodium Ion Batteries - Sodium Hexafluorophosphate, Additives for Lithium-Ion secondary Batteries, Material for all solid state Lithium-ion secondary battery)
- ◆ Various Fluoride Nanoparticles Dispersant (Magnesium, Lithium, Ytterbium, Calcium, CNP-P)
- ◆ Phosphor materials
- ◆ Nuclear Energy Industry
- ◆ 5G/6G (Information Communication Systems), Printed Circuit Board
- ◆ Special-Purpose Inorganic Fluorine Compounds
- ◆ Fluorinated Carbon Nano-Tubes
- ◆ Antistatic agent

# Introduction of Our Business

- Transportation Business -

## BLUE EXPRESS, Inc.

### Transportation Business



(HP URL)

T r a n s p o r t	Land transport · Marine transport · Rail transport
Customs Clearance	Customs clearance · Loading and Unloading
W a r e h o u s i n g	Providing multi-functional warehouses fully equipped with the latest systems
Container services	Supplying large and pressurized containers that meet ISO specifications, medium-size IBC pressurized containers, as well as IBC containers with UN specifications, and also offering services for cleaning, repairing and leasing the containers

Customs clearance sites	Shipping terminals	Overseas Bases
Ohama Office	Sendai Office	Singapore
Osaka Office	Kanto Office	China
Yokohama Office	Yokohama Office	
	Shimizu Office	
	Nagoya Office	
	Ohama Office	
	Kobe Office	
	Kitakyushu Office	



# Introduction of Our Business

## - Transportation Business -

### Equipment (as of Jan, 2024)

- \* Tractors(142)
- \* Container Semitrailers(364)
  - 20FT chassis
  - 35FT chassis
  - 40FT chassis
  - chassis for container
  - Wings Semitrailers
- \* Tank Trailer(10)
  - Tank trailers
  - High Pressure Gas Trailers
- \* 4~15-Ton Wings Trucks(6)
- \* Temperature Controlled Wings Trucks(4)
- \* 1~15-Ton Flatbed Bodies(12)
- \* Container Carrier(18)
- \* Tank Trucks(19)
  - Dedicated Trucks
  - Tank Trucks for High Pressure Gas
- \* Tank containers(516)
  - ISO Tank Containers (Teflon Lined)
  - ISO Tank Containers (Reefer)
  - JR Tank Containers (Teflon Lined)
- \* Portable Tank (Teflon Lined)(24)

### List of vehicle types



# Introduction of Our Business

## - Transportation Business -

### Initiatives aimed at the improvement of corporate value

#### 1. Promoting initiatives focusing on profitability

- Revision of low-price transactions: Revising the rates to ones commensurate with costs and revising the transactions themselves
- Acquisition of new projects: Actively responding to inquiries, identifying potential demand of existing shippers, collaborating with other departments, etc.

#### 2. Construction of stable business foundations

- We recruit with an eye on the future while looking at our age composition, and cultivate managers and senior employees systematically.
- We use external training to promote the acquisition of skills and qualifications.
- We secure vehicles and containers by type matched to needs.

#### 3. Continued strengthening of the compliance system

- We prevent dangerous driving and overwork by using drive recorders and digital tachographs, and reviewing operational management work.
- Enhancement of employee education, promotion of the understanding of related laws and regulations, etc.

#### 4. Handling of the 2024-problem in logistics

- Establishment of an internal system for the “Standards for improvement of the work hours, etc., of automobile drivers (revised in April 2024)”

# Introduction of Our Business

## - Transportation Business -

### TOPICS

#### [1] Completion of new office building (Head Office)



- A new building has been built on the premises of Ohama Office (Sakai City, Osaka Prefecture). (Completed in August 2023)
- The old office building was demolished to maintain the site for efficient operation.

#### [2] Completion of new facilities (Yokohama Office)



- Heating facilities for ISO tank containers for dangerous goods, 8 of which can be heated simultaneously, were completed at Yokohama Office. (Started operation in August 2023)

# About PFAS

# About PFAS

## ■ What are PFAS?

PFAS stands for **per-** and **polyfluoroalkyl** substances and is a general term for chemical substances that contain at least one **carbon-fluorine** bond (**organo**fluorine compounds).

## ■ What are the characteristics of PFAS?

Chemical resistance: Strong resistance to solvents, acids, bases, etc.

Heat resistant: Hard to burn

Water and oil repellent: Repel water and oil

Electrical insulation: Can be used as an insulating material due to a low dielectric constant

and more.

Applications include fluorine coating, Teflon coating, photoresists (photosensitive material), wire coating material, battery material (separator), artificial blood vessels, catheters, protective equipment, etc.

## ■ What are the environmental risks associated with PFAS?

PFAS are virtually indestructible in nature due to their characteristically strong atomic bonds and therefore will remain and continue to accumulate in the environment. It is believed that PFAS may affect human health in various ways if taken into the body. However, there are thousands of kinds of PFAS, and the potential toxicity associated with many PFAS and whether or not they are toxic remains unknown.

## ■ Does Stella Chemifa handle PFAS?

Our main products, such as hydrofluoric acid, are **inorganic** fluorine compounds that do not have a carbon-fluorine bond, and **we do not manufacture products that fall under the PFAS category.**

## ■ How will tighter PFAS regulations affect Stella Chemifa?

As noted above, our products are not PFAS so we are not directly affected by PFAS regulations. However, if any of our suppliers' products are subject to PFAS regulations, they may affect our company. Additionally, if any of the manufacturing facilities and components used by our company or suppliers are subject to PFAS regulations, they may affect our company.

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