54 Materials

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# Medical / Healthcare



#### **Business Overview**

The Life Sciences business includes the manufacture and sale of chiral (optical isomer) columns<sup>-1</sup> (in which we have a large share of the global market) and separation services, which are used to analyze and acquire optical isomers in the development and manufacturing processes of pharmaceuticals. We are also working to expand our business domain into the biotechnology field. In the Healthcare business (Cosmetics and Health Foods), we aim to contribute to improving people's QOL<sup>-2</sup>, and are developing high-quality cosmetic ingredients, marine-biodegradable spherical cellulose acetate particle (BELLOCEA®), and unique functional food ingredients produced from natural materials using extraction technologies and bioconversion technologies.

\*1 Chromatographic columns for separation of optical isomers (used for separation of active pharmaceutical ingredients, etc.) \*2 QOL: Stands for Quality of Life and refers to not only physical wealth but also mental quality of life

Life Sciences Chromatographic columns/stationary phases (chiral columns and ach		Main Products
		Chromatographic columns/stationary phases (chiral columns and achiral columns), chiral reagents, separation services/ purification services, analytical services, synthesis services, reagents for genetic analysis research, new drug delivery devices
	Healthcare	Cosmetic ingredients (Polyglycerols, Polyglycerin derivatives, spherical cellulose acetate particles (BELLOCEA®), etc.), functional food ingredients (FLAVOCELL (S-Equol), URORICH®, ASTOROHOP®, Konjac ceramide, Lactobionic acid (Lactose ferment), etc.)

#### Daicel Group's Strengths

#### [Life Sciences]

A leading company in optical isomer separation technologies

Separation technology developed over many years since the commercialization of chiral columns in 1982, and a global network of pharmaceutical companies and researchers.

#### [Life Sciences]

Special Medical Materials business

We promote business synergies through collaboration between medical businesses within the Group, such as Polyplastics' POM and COC (have superior functionality and are used as medical materials) and the Life Sciences SBU's Actranza® Lab (a new needle-free drug delivery device).

#### [Healthcare]

Unique manufacturing technology

In Cosmetics, it is possible to produce colorless, transparent polyglycerols with few byproducts and high water solubility. In Health Foods, we utilize our proprietary anaerobic fermentation technology\* to manufacture with biotechnology intestinal metabolites that some people cannot produce in their body. \*Fermentation technology in the absence of oxygen

#### **Our Business Environment**

#### Opportunities

- ■Increased activity in the development of new gene therapeutics and vaccines, triggered by vaccines for the novel coronavirus
- Growth of the cosmetics market in Asia and recovery in domestic demand of inbound tourism
- Increasing demand for biomass and biodegradable raw materials in the cosmetics industry
- Growth of the functional health foods market due to increasing health consciousness

#### Risks

- ■Uncertainty over the Chinese economy
- Impacts on the pharmaceutical industry from cuts to scientific research budgets and changes in healthcare policy in the U.S.
- Replacement with new ingredients in healthcare products

#### Performance Targets, Capital Expenditures, Depreciation and Amortization

	FY20:	25/3 Results	
Net sales	Operating income	Capital expenditures	Depreciation and amortization
14.4 billion yen	0.3 billion yen	0.9 billion yen	1.1 billion yen

\* The FY2026/3 plan does not factor in the effects of U.S. tariff measures.

	FY20	)26/3 Plans*	
Net sales	Operating income	Capital expenditures	Depreciation and amortization
15.5 billion yen	0.3 billion yen	1.5 billion yen	1.0 billion yen

#### Business Environment and Progress of the Mid-Term Management Strategy

BUSINESS STRATEGY

VISION AND

#### ■Life Sciences

INTRODUCTION

DAICEL GROUP'S

The Group operates its optical isomer separation business centered on chiral columns, which holds the world's top share, worldwide, primarily in Japan, the U.S., France, China, and India. The chiral column business continues to perform strongly, and in India and China where the generic pharmaceutical market is expanding rapidly, growth comes not only from sales of columns used for analysis and separation of optical isomers in the field of small-molecule drugs, but also from separation, purification, and synthesis services tailored to the needs of pharmaceutical companies. These services are expanding their target areas beyond small-molecule drugs to include mid-sized molecule drugs such as peptide drugs and oligonucleotide drugs, which are expected to serve as next-generation drugs, and we are working to further develop this business.

Currently, we are also strengthening regulatory approval and marketing efforts for launching of novel drug delivery devices suited for the administration of DNA and mRNA vaccines in the field of large-molecule drugs. This device utilizes the ONE TIME ENERGY® control technology accumulated in our Safety Business to deliver fluids into specific tissues at high speeds without the use of needles. The precise depth control that is difficult to obtain with conventional injection systems enables us to not only effectively deliver fluids the inside of the skin where there are many immune cells, but also to deliver fluids into cells, which is expected to allow for effective gene expression. As a first step, we are currently seeking regulatory approval of medical device in Japan as a subcutaneous drug delivery devices, targeting a market that has already achieved significant scale, and submitted a regulatory application in February 2025 for subcutaneous delivery device. We will establish a track record in Japan at an early stage and prepare for overseas expansion in Europe and the U.S., which are at the forefront of advanced therapeutics.

#### Entry into the Regenerative Medicine Field (Exosomes) Using Separation, Purification, and Assembly Technologies



Automatic purification equipment for exosome

The medical and pharmaceutical market has evolved from small-molecule drugs to mid- to large-molecule drugs, and in recent years, the gene therapy and regenerative medicine markets have been growing rapidly. With a focus on exosomes, which are small vesicles secreted from cells that play an important role in intercellular communication and are expected to be applied to the diagnosis and treatment of various diseases, we are working on the development of an automated purification equipment for exosomes. This combines our strengths in separation and purification technologies with assembly and processing technologies, and we are focusing on the future expansion of exosomes, which are expected to be the next regenerative medicine technology after iPS cells. In FY2026/3, we showcase prototypes at trade shows and aim to launch the product for R&D purposes by the end of the fiscal year.

#### Business Environment and Progress of the Mid-Term Management Strategy

#### ■Healthcare

As a next-generation business, this business has focused on the strengthening of its revenue base with existing products and creation of new materials. As a result, we captured strong inbound demand for both cosmetic and health food ingredients, and recent sales have been strong. In particular, sales rose for our flagship Polyglycerols (which is highly regarded for its quality and appearance as a raw material for high-performance surfactants for cosmetics due to its low impurity content, colorlessness, transparency, and high water solubility) and for FLAVOCELL (functional ingredient: equal, a functional food ingredient that supports women's well-being during menopause by exerting estrogen-like effects).

In addition, three new products were launched in FY2025/3. BELLOCEA® BS7, a cosmetic texture enhancer made from biodegradable cellulose acetate, is gaining attention as an alternative material to address the issue of microplastic beads in cosmetics. P-PGLE MO04/MO06 (polyglyceryl oleate) is a surfactant that can impart viscosity without the need for thickening agents, making it suitable for makeup cleansing applications. In health food ingredients, we launched ASTROHOP® (functional ingredient: 8-prenylnaringenin, hereinafter referred to as 8PN), which promotes the uptake of amino acids into muscles, potentially prevents muscle atrophy, and is expected to prevent sarcopenia.

Looking ahead, we will focus on increasing sales of FLAVOCELL, which enjoys strong demand, while in cosmetic ingredients, we will enhance our product lineup through the creation of additional sustainable materials, and in health food ingredients, we will develop and promote new products centered on intestinal metabolites to cultivate businesses that will become pillars of our revenue.

#### $Contributing \ to \ Better \ Aging \$ \ with \ ASTROHOP \$, Leveraging \ Intestinal \ Bacteria \ Library \ and \ Anaerobic \ Fermentation \ Technology$

Leveraging the Company's extensive intestinal bacteria library and proprietary anaerobic fermentation technology, ASTROHOP®, launched in FY2025/3, is a product in which xanthohumol, a compound found in hops, is fermented with selected strains of intestinal bacteria under oxygen-free conditions. This produces 8PN, a metabolite normally produced in the human gut, in tank culture efficiently. 8PN is a health food ingredient expected to prevent muscle atrophy resulting from aging, promote muscle mass recovery, and enhance the uptake of amino acids into muscles. Even in small amounts, it demonstrates functionality, making it easy to be incorporated into various forms such as supplements, beverages, and foods, while continuous consumption allows it to spread throughout the body, potentially enhancing its functionality further.



ps, the raw materi for 8PN

Japan's aging population is steadily increasing, with the gap between average life expectancy and healthy life expectancy standing at 8.48 years for men and 11.64 years for women'2. In addition, the leading causes for requiring care among those aged 65 and older are sarcopenia and frailty, which are associated with aging, malnutrition, inactivity, and conditions such as fractures or falls, joint diseases, and age-related weakness. To cope with these issues, 8PN is expected to have effects on both aspects of nutrition and exercise by promoting amino acids uptake into muscles and preventing muscle atrophy. It contributes to achieving "Better Aging®," where the gap between average life expectancy and healthy life expectancy is narrowed, and enables people to age in a way that is favorable to each of them.

DAICEL REPORT 2025

<sup>\*1</sup> Refers to decrease in muscle mass and muscle strength resulting from aging \*2 Excerpted from 2022 data provided in the 2025 edition of the Annual Report on the Ageing Society

STRENGTHS INTRODUCTION **BUSINESS STRATEGY** GOVERNANCE RESOURCES **BUSINESS STRATEGY** 

## Smart



#### **Business Overview**

Our Smart Business provides materials and solutions mainly for the electronics market. The Functional Products business handles cycloaliphatic epoxies for which we use a globally unique manufacturing method and caprolactone derivatives. Based on our organic synthesis technology cultivated over many years, these products enjoy wide adoption in EV motor insulators and next-generation displays, and they are also used for semiconductor substrates. The Advanced Technology business manufactures high-performance polymers for photoresists and solvents for electronic materials used in the semiconductor manufacturing process as well as functional films with the anti-glare characteristics and strength required for various displays ranging from smartphones and tablets to in-vehicle displays.

Main Businesses	Main Products
Functional Products  Cycloaliphatic epoxies, caprolactone derivatives, optical lenses	
Advanced Technology Polymers for photoresists, solvents for electronic materials, high-performance films	

#### Daicel Group's Strengths

Daicel Group's Strengths	
Provision of market-oriented solutions that meet customer and market needs	Provides the electronics market with a variety of solutions and value from materials to components by leveraging material design such as synthesis and compounding as well as processing technologies including coating, printing, and resin molding.
Achievement of the world's largest market share for cycloaliphatic epoxies through our unique manufacturing methods	Produces high-quality cycloaliphatic epoxies using the world's only distinctive manufacturing method. Cycloaliphatic epoxies are high quality and high performance, with a manufacturing method that does not contain chlorine, which corrodes and cracks metals, and is applicable to electronic materials and mobility materials for EV motor insulators, etc.
Continuation of stable supply and response to increasingly sophisticated demands	Possesses the technical capabilities and stable supply capacity to continuously meet the high level of quality requirements of the semiconductor industry. Based on the relationship of trust built through this track record, we can develop products in close contact with our customers and respond to new, increasingly sophisticated, requirements.

#### **Our Business Environment**

#### Opportunities

- Semiconductor market expansion due to the full-fledged arrival of the IoT, Al. and 5G era
- Expansion of the display market with the spread of new technologies such as high resolution, high durability, bendability and foldability, and curved surface structures
- Popularization of EVs
- Switch to fluorine- and silicon-free materials due to PFAS regulations

#### Risks

- In the semiconductor materials market, lower prices due to the emergence of overseas products, and restrictions on available markets due to intensifying trade friction between the U.S. and China
- Shrinking domestic market due to customers' overseas relocation of development and production sites
- The European Chemicals Agency's moves to tighten regulations on epoxy

#### Performance Targets, Capital Expenditures, Depreciation and Amortization

Net sales	Operating income	Capital expenditures	Depreciation and amortization
37.3 billion yen	-0.8 billion yen	2.3 billion yen	2.8 billion yen

	F
Net sales	Operati incom
40.5 billion yen	1.4

\* The FY2026/3 plan does not factor in the effects of U.S. tariff measures

#### Uncertainty over the Chinese economy

Y2026/3 Plans\*

Capital

4.0

Depreciation

#### Business Environment and Progress of the Mid-Term Management Strategy

#### **■**Functional Products

DAICEL GROUP'S

VISION AND

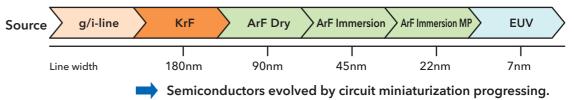
Our cycloaliphatic epoxies are a unique product with distinctive features, and we will leverage these strengths to advance into new markets and differentiate our offerings. The product offers superior heat resistance compared to competing materials and has low viscosity for excellent processability. Furthermore, thanks to Daicel's unique manufacturing process, the product contains few impurities and no chlorine, which can cause malfunctions in electronic devices, making it widely used in electrical materials that require high reliability and durability. Taking advantage of this strength of the Company, we will expand sales in existing markets such as those for electronic materials and LCD panels, while also developing applications for heavy electrical equipment and power modules to expand sales in new markets. We will also work to expand our business by introducing cycloaliphatic epoxies into the semiconductor market together with our Advanced Technology business.

We will work to increase sales of caprolactone derivatives in existing markets for urethane applications and paint protection film for automobiles. In Europe and the U.S., meanwhile, we will aim to increase our market share by developing new applications in addition to existing markets.

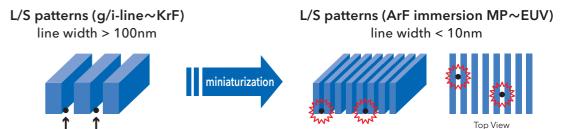
#### ■ Advanced Technology

We intend to capture demand in the semiconductor market, which is projected to grow 10% annually, and strengthen our semiconductor-related business to meet the needs for cutting-edge technologies. Specifically, in the field of solvents for electronic materials, we will capture demand and increase sales in the semiconductor market, which has been on a recovery trend since FY2025/3. We also plan to increase sales of polymers for photoresists to meet growing demand for Al applications. Furthermore, although our polymers for resist are mainly used for immersion ArF, the adoption of EUV exposure is expanding because it offers narrower line widths (nodes) than immersion ArF due to improvements in performance backed by the miniaturization of circuits. To respond to these needs, we are advancing the development of polymers for resist for EUV in collaboration with customers. Taking advantage of the stringent semiconductor-grade quality control and stable supply enabled by our integrated production starting from monomers, we will also focus on introducing new products aligned to the needs of customers.

#### Semiconductor technology evolution



#### Highering chemicals associated with miniaturization of semiconductors (illustration)



Impurities (e.g. Metal) If the line width is wide, it is not a defect factor Increased risk of defects caused by impurities →High purity chemicals are required

#### Looking Ahead

#### Capture growth trends in the semiconductor market, provide competitive products, and expand our business

Currently, we provide solvents for electronic materials and polymers for resist for the front-end semiconductor manufacturing process. Moreover, we will introduce our products into the back-end process of advanced semiconductor manufacturing and aim to have our products adopted throughout the entire semiconductor manufacturing process.

In the front-end process, the Company provides high boiling point solvents used for resist solvents and thinners, which are essential in the photolithography process of semiconductor manufacturing. Our PGMEA (MMPGAC) is among the best in the domestic semiconductor photoresist industry in terms of market share. In order to further expand our business, we believe it is important to quickly enter the back-end process of advanced semiconductor manufacturing, and in the rapidly evolving semiconductor industry, quickly responding to customer needs will lead to strengthening our competitiveness in the future. We will further expand our business by introducing cycloaliphatic epoxies, photoresists, etc. into the back-end process and broadening our product lineup utilizing our technologies.

# Safety



#### **Business Overview**

The main products of the Safety Business are automobile airbag inflators (gas generation devices), which protect the lives of occupants and pedestrians by inflating airbags within milliseconds after a collision. Our automobile airbag inflators are highly regarded as the key component of airbag systems. The instantly activated driving force/propulsive force developed for inflators is named ONE TIME ENERGY®, and is being used in applications other than airbags. Pyro-Fuse, which can safely and instantaneously interrupt high voltage and large currents in an emergency, is one example, and is expected to be deployed in various industries where automation is advancing due to the spread of electric vehicles (hereinafter "EVs") and AI.

Main Businesses	Main Products
Mobility	Automobile airbag inflators
Industry	Pyro-Fuse, gas generators for seat belt pretensioners (PGG)

#### Daicel Group's Strengths

Inflator technology accumulated over the years	After launching automobile airbag inflators in 1988, we commenced fully integrated production beginning with gas generant and have won people's trust and contributed to their safety ever since.
Toyota Production System meets DAICEL Production Innovation	For excellent quality and productivity, we applied the Toyota Production System to our production system, which is based on the DAICEL Production Innovation methodology.
Image Analysis System	We use an image analysis system developed together with Hitachi, Ltd. to realize product quality assurance by "all point management," instead of "representative management." Through adept quality control, we build strong trust-based relationships with customers.

#### **Our Business Environment**

Opportunities

- Growth of automobile production in emerging countries
- ■Growing need for enhanced automotive safety performance
- ■Rise of Chinese EV manufacturers
- Advancement and popularization of technologies such as EVs and renewable energy aimed at achieving carbon neutrality

#### Risks

- Impact of the change in the U.S. administration
- ■Uncertainty over the Chinese economy
- Changing function and performance needs as self-driving and other active safety technologies evolve
- Slowdown in the growth of the EV market

#### Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2025/3 Results				
Net sales	Operating income	Capital expenditures	Depreciation and amortization	
97.6 billion yen	3.9 billion yen	11.0 billion yen	7.1 billion yen	

	FY2026/3 Plans*			
Net sa	ales	Operating income	Capital expenditures	Depreciation and amortization
101		6.4 billion yen	12.0	8.0 billion ven

#### Business Environment and Progress of the Mid-Term Management Strategy

We currently operate our business in automobile airbag inflators, which is one of the Group's flagship products, around the globe, with production sites in Japan, China, Thailand, India, the U.S., and Poland. In particular, we are focusing on the Indian and Chinese markets, which experience increases in the number of automobiles produced and in the number of airbags equipped in an automobile. The number of automobile production units is expected to grow by approximately 6% globally by 2030 (compared to 2024)\*, and in the Indian and Chinese markets in particular, the number of side-impact airbags is expected to continue to increase in addition to front-impact airbags due to stricter safety standards for automobiles. Against this backdrop, the Group began mass production of front-impact inflators at a production base in India in October 2023, and mass production of side-impact inflators in September 2024. We are also continuing to expand production lines at our sites in China to strengthen our production capacity and capture the growing demand for airbags.

In addition, during the current Mid-Term Management Strategy period, we have been working to improve profitability and strengthen competitiveness by consolidating production sites and integrating inflator models (cataloging) that were different by vehicle type. On the other hand, at our site in the U.S., although we consolidated production from two sites into one. Since the onset of the coronavirus pandemic, however, labor costs have risen sharply due to accelerated inflation and employee retention rates have declined, and improving productivity and profitability has become a key challenge. To address the challenge, in FY2025/3, we strengthened collaboration between the head office, each site, and customers, and worked to improve work efficiency through appropriate personnel allocation, and autonomation, and other measures. As a result, profitability improved in the fourth quarter of FY2025/3 due to productivity improvements. We will continue to improve productivity in FY2026/3 and aim for further improvements in business performance. In addition, we will promote local procurement of parts and raw materials imported from overseas at our U.S. site to develop a structure under which we can flexibly respond to additional U.S. tariffs and reinforce competitiveness.

\*Growth rate in the number of automobiles produced according to S&P

#### Looking Ahead

We are developing and manufacturing pyro-fuses that instantly cut off electric current, capitalizing on the technology and high reliability we have cultivated in the field of automobile airbag inflators. Currently, automobile manufacturers are accelerating the development of larger-capacity and higher-voltage batteries to extend the driving range of electric vehicles and enable high-speed charging. Under these circumstances, demand for our products is growing as devices that can instantly and reliably cut off the current to prevent electric shock and secondary accidents to passengers in the event of a traffic accident or malfunction. In Europe, we have received orders for high-voltage pyro-fuses for EVs and plan to begin mass production by FY2026/3. In the future, we will strengthen our marketing efforts and focus on expanding sales while closely monitoring the EV strategies of automakers in various countries.

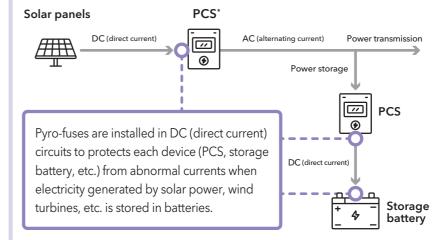


Pyro-Fuse

In addition to automotive applications, demand for pyro-fuses is growing for renewable energy power generation and manned eVTOLs (electric vertical takeoff and landing aircraft). In terms of renewable energy power generation, in recent years, China has been forging ahead with its action plan for carbon dioxide peaking before 2030 and is accelerating development plans such as solar and wind power generation. Moreover, with the increase in battery voltage and capacity is renewable energy power generations and energy appears to page 100 per 100 pe

in renewable energy power generation systems, power conditioners, and energy storage systems, the need for pyro-fuses as a measure against fires caused by overcurrent is rapidly increasing. We will conduct market research for industrial applications and focus on development with the aim of creating new businesses through co-creation with customers. We also plan to start production of pyro-fuses for manned eVTOLs by FY2026/3. Manned eVTOLs, which contribute to alleviating severe traffic congestion and reducing environmental impact, are currently attracting significant attention and have high growth potential over the medium to long term. We will work to increase orders in the future, capitalizing on our ONE TIME ENERGY® technology refined in the automotive field.

#### Expected application areas for renewable energy power generation



<sup>\*</sup> PCS stands for Power Conditioning System, which is a device that converts DC power into AC power.

# Cut off current in emergencies to prevent fires, etc. (1) Circuit malfunction/overcharge (2) Short circuits

DAICEL REPORT 2025

 $<sup>^{\</sup>star}$  The FY2026/3 plan does not factor in the effects of U.S. tariff measures

# **Materials**



#### **Business Overview**

The Materials Business provides a wide variety of materials to a wide range of industries. We are the only manufacturer in Japan of acetic acid, which has a wide variety of applications, and have built an acetyl chain (Please refer to the next page for details.) centered on acetic acid that consists of chemicals made from acetic acid, cellulose acetate, which is made from wood and cotton fiber-derived cellulose and acetic anhydride, and acetate tow, which is spun from this. We have the highest share of triacetyl cellulose (TAC), which is used for LCD optical films, in the world and a high share of acetate tow in global terms. Besides these products, we manufacture and sell various chemical products based on our organic synthesis technology developed over many years. Our distinct odorless grade of 1,3-butylene glycol (1,3-BG), an ingredient for cosmetics, is highly regarded.

Main Businesses	Main Products		
Acetyl	Acetic acid, acetic anhydride, acetate tow		
Chemical	Cellulose acetate for LCD optical films (TAC), cellulose acetate, 1,3-butylene glycol (1,3-BG), ethyl acetate and other organic solvents, ketene derivatives, ethylamine		

#### **Daicel Group's Strengths**

Optimized plant operation
through DAICEL Production
•
Innovation

Achieved energy and resource savings, high quality, and stable supply in the manufacturing process through optimized plant operation that greatly reduced wastage and loss.

DAICEL Production Innovation https://www.daicel.com/en/daicel-production-innovation/

#### Acetic acid recycling system that supports the acetyl chain

As a system that supports the acetyl chain, in addition to manufacturing acetic acid which sits at the core of this chain, established a recycling system whereby we recover, refine, and reuse acetic acid byproducts from customers and our Group plants.

#### Technical support that leverages our technological capabilities

Offers global technical support in response to customer needs regarding cellulose acetate and acetate tow, leveraging our accumulated property control for cellulose, a natural material, and processing technologies.

#### **Our Business Environment**

Opportunities

Risks

- Expectations for biomass materials and marine biodegradable materials
- Increase in demand for various products due to economic growth
- ■Increased demand for heated tobacco products

- Uncertainty over the Chinese economy
- Fluctuations in raw material and fuel prices
- Rise of competing manufacturers, especially in emerging countries

#### Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2025/3 Results					
Net sales	Operating income	Capital expenditures	Depreciation and amortization		
183.4 billion yen	29.6 billion yen	11.5 billion yen	19.9 billion yen		

FY2026/3 Plans\* Capital Operating Depreciation 23.0 24.0 181.5 18.0

#### \* The FY2026/3 plan does not factor in the effects of U.S. tariff measures

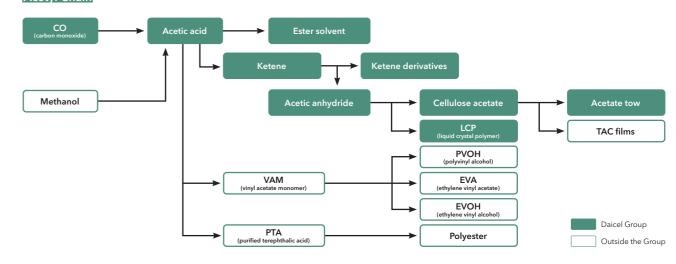
#### Business Environment and Progress of the Mid-Term Management Strategy

For acetate tow, the main product of the Acetyl business and primarily used in cigarette filters, we have increased production volume through measures such as debottlenecking and secured strong demand with the aim of expanding supply capacity and strengthening the supply chain under the Mid-Term Management Strategy, thereby contributing to revenue growth.

However, issues arose at the new acetic acid raw material plant, a carbon monoxide (CO) plant, which began operations in February 2024, affecting production in FY2025/3. The CO plant switched its raw material from asphalt to coal as part of a plant renewal due to aging, and the change in the coal's production origin led to the issues. The Company has implemented measures to address these issues and expects to resolve them by FY2026/3. As the next step, we will continue to operate stably and reap proportional cost benefits from switching raw materials to strengthen our competitiveness.

This will further strengthen Daicel's acetyl chain and continue to support future growth as a foundation business.

#### **Acetyl Chain**



#### ■Chemical

In cellulose acetate, our main product, we are working to improve profitability through production process changes and develop new applications such as CAFBLO®. Triacetyl cellulose (TAC) for optical films used as a raw material for protective films and retardation films for liquid crystal displays, faces intensifying competition from other materials. However, TAC's share in the retardation film market remains strong, and we will maintain our share in the TAC market by expanding sales to overseas TAC film manufacturers.

Sales of 1,3-BG, that is used mainly as a cosmetic raw material, is strong both in Japan and overseas. Our odorless grade for unscented basic skincare products is particularly well regarded, and we aim to steadily maintain our market share in FY2026/3 as well. We will continue to expand sales in overseas markets and aim for further growth.

Page 39: Taking on New Market Development for the Biodegradable Plastic CAFBLO® in a Task Force Team

#### **Looking Ahead**

#### Acetate tow Contributing to the improvement of ROIC for the entire Daicel Group

Although demand for acetate tow, which is mainly used in cigarette filters, continues to decline in developed countries, it is growing in emerging and developing countries due to population growth and economic development, resulting in steady growth overall. In addition, factors such as the increasing adoption rate of cigarette filters in emerging markets, the trend toward longer filters, and the growing demand for heated tobacco products have contributed to a well-balanced supply and demand situation for acetate tow.

In this environment, we are strengthening stable business relationships with major customers through multi-year contracts, while increasing sales volume through capacity expansion without additional investment, such as debottlenecking, and operating at full production and full sales capacity. We will also integrate the production at three sites — Toyama Filter Tow Co., Ltd., which was made a wholly owned subsidiary in April 2025 in addition to existing Daicel Aboshi Plant and Ohtake Plant — and establish an optimal production system that can respond quickly to changes in the market environment to further stabilize production and reduce costs.

#### Cellulose acetate Enhancing quality and productivity and improving profitability through process conversion

By converting the manufacturing process for cellulose acetate, which is the principal raw material for acetate tow and one of our key products, we will reduce environmental impact and costs and improve quality and productivity, while also promoting an asset-light approach, including the reduction of raw-material and product inventory.

Cellulose acetate, which is made from natural pulp, has faced issues such as low reactivity attributable to raw materials and the formation of impurities. By improving the pre-processing and post-processing steps in production, we will resolve these issues and improve quality and productivity, integrate raw material types, reduce inventory, and strengthen the profitability of the entire business.

BUSINESS STRATEGY STRENGTHS MATERIALITY BUSINESS STRATEGY GOVERNANCE RESOURCES

# **Engineering Plastics**



#### **Business Overview**

Polyplastics, our Group company, accounts for a large portion of sales in this business. Polyplastics is a leading manufacturer of engineering plastics with special features such as mechanical strength, heat resistance, and chemical resistance, contributing to making automobiles lighter and more electrified, and to the higher performance of electronic devices. Daicel Miraizu Ltd. (hereinafter "Daicel Miraizu") offers a diverse range of commercial products to various industries, including water-soluble polymers that are drawing attention for use in lithium-ion batteries for EVs, whose adoption has been accelerating in recent years, as well as AS resins with a wide range of applications from daily necessities to automobiles.

Main Businesses	Main Products	
Polyplastics	Polyacetal (POM), polybutylene terephthalate (PBT), polyphenylene sulfide (PPS), liquid crystal polymer (LCP), cyclic olefin copolymer (COC)	
Daicel Miraizu	Water-soluble polymers (CMC), barrier films for packaging, AS resin	

#### Daicel Group's Strengths

# Ability to develop new applications and group synergies

As a group of engineering plastics experts, we work with customers to develop applications that meet the needs of key industries (e.g., electrical and automotive industries) and society as they change with the times. In addition, we provide optimal solutions across the group by combining the extensive product lineups of Polyplastics, Daicel Miraizu, and Polyplastics-Evonik\*.

### Expansion of technical solutions system in major regions

Polyplastics' Technical Solution Centers in the major regions of Japan, China, Taiwan, Thailand, the U.S. and Germany are linked together. This makes them able to provide uniform solutions worldwide for everything from material formulation and design to support for molding and processing.

# Sophisticated manufacturing technologies and quick delivery with uniform quality

Promotes the further sophistication of production by combining manufacturing technologies for engineering plastics that we have accumulated for over 50 years with DAICEL Production Innovation. Polyplastics leverages a network of 32 sites in 11 countries and globally provide these technologies with uniform quality and quick delivery.

#### **Our Business Environment**

#### Opportunities

- Proliferation of electric vehicles and autonomous driving technology
- Changes in infrastructure, devices, and services due to Al and nextgeneration communications
- Higher expectations for biomass materials and growing interest in the circular economy

Switch to fluorine- and silicon-free materials due to PFAS regulations

#### Risks

- Uncertainty over the global economy
- Soaring raw material prices and procurement concerns due to greenflation
- ■Rise of competing manufacturers, especially in emerging countries
- Various tighter regulations in Europe, including environmental ones
- Changing supply-demand balance due to rapid economic fluctuations

#### Performance Targets, Capital Expenditures, Depreciation and Amortization

FY2025/3 Results					
Net sales	Operating income	Capital expenditures	Depreciation and amortization		
248.0 billion ven	27.0	43.3	9.5		

\* The FY2026/3 plan does not factor in the effects of U.S. tariff measures

# Net sales Operating Capital expenditures 256.0 billion yen Depreciation and amortization 12.5 billion yen

#### Progress of the Mid-Term Management Strategy and Future Initiatives

As Japan's first specialized manufacturer of engineering plastics, Polyplastics has supported worldwide manufacturing for more than half a century. During the current Mid-Term Management Strategy period, we have focused on expanding supply capacity and sales, and enhanced our competitiveness in the global market.

#### ■Polyacetal (POM)

Polyacetal (POM) is widely used as a material for automobiles, home appliances, industrial equipment, among others. Demand remains strong particularly in the Chinese market, and we export from plants in Japan and Malaysia as well to meet the demand. In light of this situation, we are currently increasing production capacity in China. In FY2025/3, we ceased operations at our existing plant (annual production capacity of 60,000 tonnes) in accordance with the environmental policy of the Nantong Economic and Technological Development Area in China,

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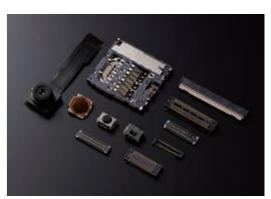
A new plant commenced operations at DP Engineering Plastics (Nantong) Co., Ltd. (China) in November 2024

and commenced operations at our new plant (annual production capacity of 90,000 tonnes) in the first phase in November 2024. Furthermore, we plan to expand production in the second phase (annual production capacity of 60,000 tonnes) in FY2027/3. This will make it possible to respond to steadily growing domestic demand in China, improve lead times, reduce transportation costs, and build a production system that can better meet customer needs.

The next stage of our global expansion strategy will focus on strengthening our approach to Chinese automobile manufacturers and developing the medical field. At our sites in China, we have assigned staff to provide technical support and develop resin formulations to respond to the rapid development pace of Chinese automobile manufacturers, and are strengthening our design-in activities by developing a structure enabling close cooperation with customers. As a result, we have seen higher evaluations from customers recently, and the number of cases leading to orders is increasing. We are also focusing on the medical field as a new area, and our efforts have begun to bear fruit, as a major European medical-device manufacturer has adopted our products in theirs. Based on this track record, we will continue to expand sales in the medical field.

#### ■Liquid Crystal Polymer (LCP)

Liquid crystal polymers (LCP) are mainly used in electronic components such as PCs, smartphones, and server connectors, boasting the top global market share. Previously, production was conducted at our Fuji Plant in Japan. To ensure we capture future demand growth, we established a new plant (annual production capacity of 5,000 tonnes) in Taiwan, which began operations in February 2025. Driven by market growth in major applications such as electronic devices and Al servers, global sales volume of LCP is expected to increase significantly. Furthermore, we will utilize the excess capacity created at the Fuji Plant to strengthen the development of new polymers in order to capture future growth opportunities. In addition, LCP low dielectric properties and high flow properties have been highly evaluated, and recently, its adoption has increased in GPU (graphics processing unit) sockets and cooling fans for Al servers, leading to a rapid increase in demand. In addition to existing markets, we will actively expand sales of Al servers, which are expected to grow further in the future, and provide solutions with higher added value.



Connectors using LAPEROS® LCP

#### ■Cyclic Olefin Copolymer (COC)

In Europe, where there is a high level of concern for environmental conservation, governments in various countries are strengthening regulations on plastic waste, and in the recycling of beverage PET bottles, it is necessary to separate the different resins, such as the bottle and label. Polyplastics' cyclic olefin copolymer (COC) is used as a label material with low specific gravity that maintains printability and shrinkage characteristics as well as adhesion. Labels made from COC float in water, enabling easy separation from the bottle due to the difference in material density, thereby contributing to improved recycling rates. As demand for COC for PET bottle labels has been growing rapidly in recent years, we plan to commence operations at a new plant (annual capacity of 20,000 tonnes) in Germany by FY2027/3. We will strive to achieve stable supply of high-quality products through increased production and further expand sales mainly for environmentally friendly packaging materials such as PET bottle labels, thereby contributing to the improvement of PET bottle recycling rates.



Contributing to the improvement of PET bottle recycling rates

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<sup>\*</sup> Polyplastics-Evonik Corporation is a joint venture between Polyplastics and Evonik Industries AG of Germany, an equity-method affiliate of the Company