

# Overview of Business Domains

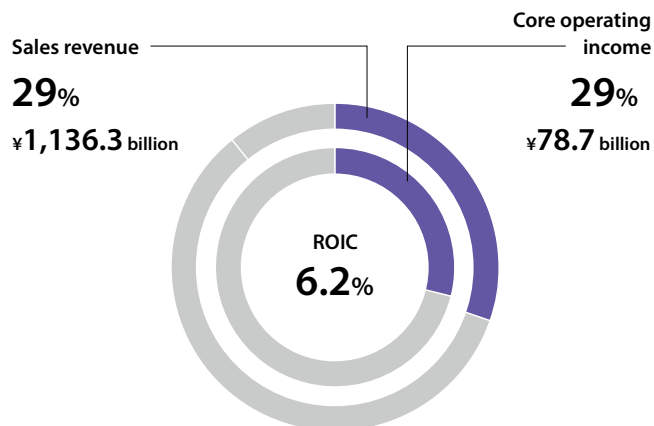
Note: The figures for each segment are based on the results for fiscal 2021.

## Performance Products Domain

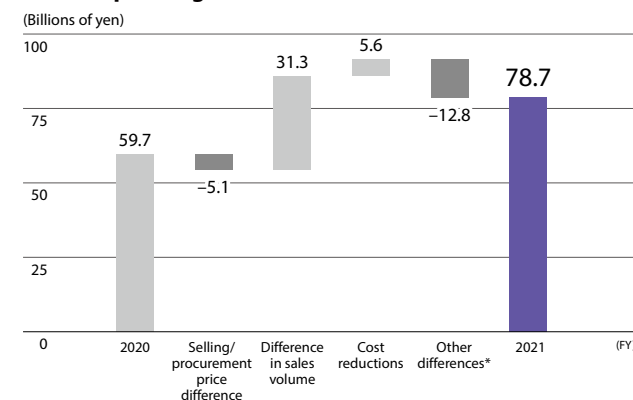
- Polymers & Compounds
- Films & Molding Materials
- Advanced Solutions



We will seek to achieve differentiation and advanced functions by collaborating creatively across the Group on a diverse range of products and technologies to offer varied solutions to different target markets.



### Performance Products: Factors underlying the YoY change in core operating income



\* Includes differences in inventory valuation and gains/losses on equity-method investments

### Performance Products segment

Sales revenue amounted to ¥1,136.3 billion, a year-on-year increase of ¥141.7 billion, and core operating income to ¥78.7 billion, an increase of ¥19.0 billion.

The Polymers & Compounds subsegment posted a rise in sales revenue due to increased sales to the automotive industry and other sectors and an improvement in market conditions for certain polymer products.

The Films & Molding Materials subsegment also posted growth in sales revenue. This was due to an increase in sales volume on recovering demand, particularly for molding materials

in the automotive industry and other sectors, coupled with a strong performance in the first half-year by some film products, especially optical films for electronic displays.

In the Advanced Solutions subsegment as well, increased sales volume due to the recovery in economic activity contributed to growth in sales revenue.

Core operating income in this segment also grew despite the rise in raw material prices, which was counterbalanced by factors such as the overall growth in the volume of sales, particularly to the automotive industry.

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## Performance Products Domain

<p><b>Polyester Films business</b></p> <ul style="list-style-type: none"> <li>Strong market position and ability to provide solutions in advanced polyester film applications</li> </ul> <p><b>High-Performance Films business</b></p> <ul style="list-style-type: none"> <li>Technological capability to add various functions to create gas-barrier, porous, and multilayer films, etc.</li> </ul> <p><b>High-Performance Engineering Plastics business</b></p> <ul style="list-style-type: none"> <li>Global network of facilities capable of handling operations from plastic production to molding and processing</li> </ul> <p><b>Carbon Fiber and Composite Materials business</b></p> <ul style="list-style-type: none"> <li>Vertically integrated value chain spanning from carbon fibers to intermediate base materials and composite materials</li> </ul> <p><b>Semiconductors business</b></p> <ul style="list-style-type: none"> <li>High-level purification and quality management technologies to monitor microscopic particulate contamination</li> <li>Cleaning services for semiconductor manufacturing equipment components</li> </ul> <p><b>Battery Materials business</b></p> <ul style="list-style-type: none"> <li>Electrolytes: Ability to develop functional additives that create high-performance batteries</li> </ul>	<p>Strengths</p> <p><b>S</b></p>	<p><b>Polyester Films business</b></p> <ul style="list-style-type: none"> <li>Ability to respond to short-term fluctuations beyond the expected range</li> </ul> <p><b>High-Performance Films business</b></p> <ul style="list-style-type: none"> <li>Concentrated mainly in the domestic market</li> </ul> <p><b>High-Performance Engineering Plastics business</b></p> <ul style="list-style-type: none"> <li>Vulnerable to social, economic, and currency risks in various regions</li> </ul> <p><b>Carbon Fiber and Composite Materials business</b></p> <ul style="list-style-type: none"> <li>Impact of exchange rate fluctuations due to high ratio of overseas revenues</li> </ul> <p><b>Semiconductors business</b></p> <ul style="list-style-type: none"> <li>Distinctive products yet to gain full recognition within the semiconductor industry</li> </ul> <p><b>Battery Materials business</b></p> <ul style="list-style-type: none"> <li>Dependence of raw material supply chain on China</li> </ul>	<p>Weaknesses</p> <p><b>W</b></p>
<p><b>Polyester Films business</b></p> <ul style="list-style-type: none"> <li>Increasingly sophisticated and complex market needs</li> </ul> <p><b>High-Performance Films business</b></p> <ul style="list-style-type: none"> <li>Supply of high-performance products to global market</li> </ul> <p><b>High-Performance Engineering Plastics business</b></p> <ul style="list-style-type: none"> <li>Rising demand from the aircraft, semiconductor, and medical equipment industries</li> </ul> <p><b>Carbon Fiber and Composite Materials business</b></p> <ul style="list-style-type: none"> <li>Increasing demand for automobile parts, wind turbine blades, and pressure vessel materials</li> </ul> <p><b>Semiconductors business</b></p> <ul style="list-style-type: none"> <li>Increasing demand for new materials in response to rapid market expansion and microwiring and multilayering of circuits</li> </ul> <p><b>Battery Materials business</b></p> <ul style="list-style-type: none"> <li>Rapidly growing market</li> </ul>	<p>Opportunities</p> <p><b>O</b></p>	<p><b>Polyester Films business</b></p> <ul style="list-style-type: none"> <li>Shrinking optical film market due to disruptive innovations</li> </ul> <p><b>High-Performance Films business</b></p> <ul style="list-style-type: none"> <li>Declining demand forecast in the domestic market in medium term</li> </ul> <p><b>High-Performance Engineering Plastics business</b></p> <ul style="list-style-type: none"> <li>Shrinking market due to growing adoption of 3D printers and other new technologies</li> </ul> <p><b>Carbon Fiber and Composite Materials business</b></p> <ul style="list-style-type: none"> <li>Intensifying competition due to improving product quality in emerging countries</li> </ul> <p><b>Semiconductors business</b></p> <ul style="list-style-type: none"> <li>Strong pressure to localize production</li> </ul> <p><b>Battery Materials business</b></p> <ul style="list-style-type: none"> <li>Profit squeeze due to sharp rise in raw material prices</li> </ul>	<p>Threats</p> <p><b>T</b></p>

## Focus Expansion of the semiconductor-related business Helping to build the infrastructure of the digital society

We are strengthening our offer of products and services in the semiconductor business to deliver new value to the semiconductor industry.

In October 2018, we acquired Cleanpart Group GmbH, a leading company in the provision of precision cleaning and coating services to semiconductor manufacturers and other business operators in Europe and the United States. This gives us the capability to deliver semiconductor precision cleaning services on a global basis, in addition to our existing operations in Japan and Asia.

In April 2020, we centralized the Mitsubishi Chemical Group's semiconductor-related business and at the same time established a global organization free of restrictive corporate structures. This has allowed us to work as one team on an integrated range of semiconductor-related products and services under a system that provides one-stop support to our customers worldwide. Meanwhile, we are driving the creation of synergies with the semiconductor-related businesses and technologies of Gelest, Inc., which we acquired in October 2020.

In our new management policy, "Forging the future," we identify the semiconductor business as one of our focus businesses that we will work to strengthen and expand.

### Semiconductor manufacturing process and main MCG Group products and services

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### Performance Products Domain

#### Polyester Film

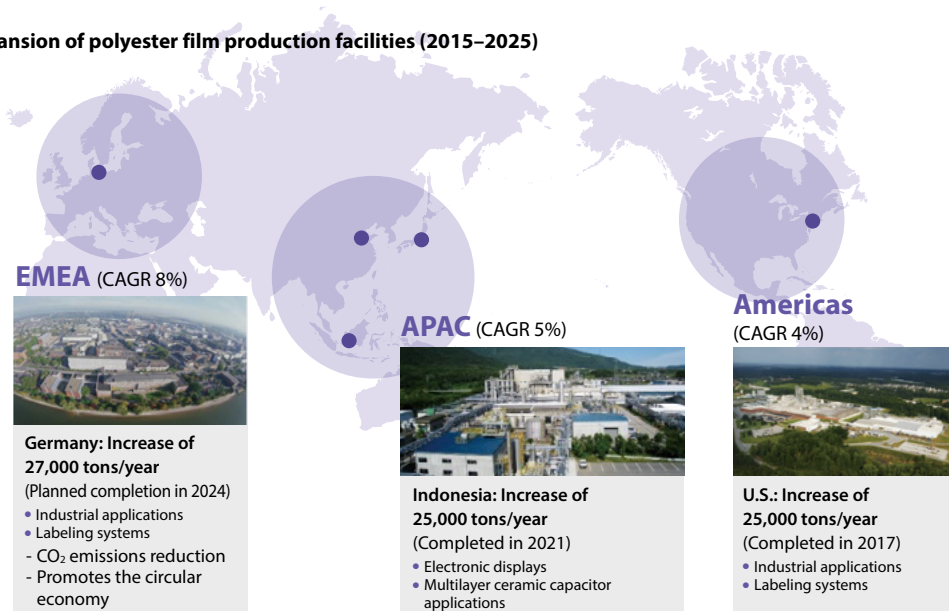
##### Strategy for expansion as the leading company

We manufacture polyester films at five sites in Japan, China, Indonesia, the United States, and Germany for supply to a range of applications, including as optical materials, particularly for electronic displays; as industrial materials for electronic components, automotive parts, and medical equipment; and as packaging materials for food and other products. In October 2021, anticipating robust expansion of demand for polyester films, we decided to establish a new manufacturing line in Germany with a yearly production capacity of 27,000 tons, among the world’s largest in the field of high-performance polyester film.

The new facility will incorporate the latest energy-saving technology and other measures designed to expand production capacity, while at the same time reducing the plant’s overall CO<sub>2</sub> emissions. Additionally, we will put in place a system to enable polyester film collected from customers and consumers to be reused as raw material, thus accelerating initiatives to achieve a circular economy.

We will continue to engage in active business development matched to demand in each region, thus contributing to fulfilling the SDGs and realizing a circular economy.

#### Expansion of polyester film production facilities (2015–2025)



#### High-Performance Engineering Plastics

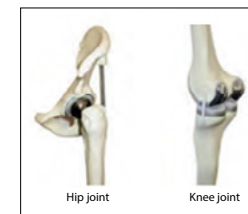
##### Product rollout to respond flexibly to a wide range of medical needs

Progressive population aging in developed countries, and rapid population growth in emerging countries, are expected to result in significant expansion of the global medical market going forward. With our focus on this growing medical market, we are rolling out products to respond flexibly to diverse medical needs.

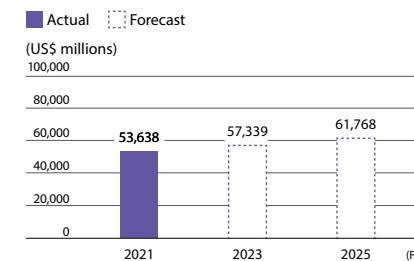
For instance, our high-performance engineering plastics business, which operates from sites in 17 countries worldwide, has for many years supplied the ultra-high molecular weight polyethylene materials *Chirulen* and *Extrulen* to implant manufacturers around the world for use as artificial joint materials.

We will target growth in the high-performance engineering plastics business by combining the wide range of technologies and experience available within the MCG Group.

#### Biocompatible high-performance engineering plastics



#### Orthopedic implant market



Based on ORTHOWORLD, "The Orthopaedic Industry Annual Report" (published in June 2022)

#### Finding solutions for a sustainable future

#### Bioengineering plastic *DURABIO*—increasingly used in vehicle manufacturing

To meet bio-based polymer demand in the mobility, optics, agriculture, and food packaging markets, we offer a range of solutions that contribute to the circular economy. Among these are bioengineering plastics, which are made with plant-based raw material; biopolyester, which uses renewable resources and is also biodegradable; and polyvinyl alcohol, which combines biodegradability with strong barrier properties.

The bioengineering plastic *DURABIO* not only boasts the physical properties required in automotive interior finish materials (namely, shock resistance and chemical resistance) but has also won acclaim for its use of plant-based raw materials. As a result, it is increasingly used in automotive parts and materials, including for Toyota Motor Corporation’s MIRAI range. By developing the applications of *DURABIO*, we will make ongoing contributions to environment-friendly vehicle manufacture.



New model of Toyota’s MIRAI range