

Message from Business Group Management

Polymers & Compounds / MMA

Making our MMA offerings even more competitive and expanding the scale of our P&C business to contribute to the Group's growth

Hitoshi Sasaki

Executive Vice President
Head of Polymers & Compounds / MMA



Leveraging our rapid decision-making to manifest a competitive edge in the market

Since the Mitsubishi Chemical Group announced the new management policy, "Forging the future," in December 2021, our new management team, myself included, has held numerous discussions on our vision for the Group's organization, functions, and roles. As the business environment in which we operate undergoes dramatic change, we have shifted to a leaner management system and a "One Company, One Team" culture with a flat organizational structure in order to better respond to the expectations of all our stakeholders around the world. I believe that this has not only accelerated decision-making but also helped us to make steady progress toward global standards in terms of improved process objectivity and transparency.

From a business perspective, the current surge in energy prices is driving a similar rise in global resource prices. Given that our business environment features such risks that directly impact the entire supply chain, I think our absolute priority is to ensure that our competitive edge of the P&C/MMA business is demonstrated, so that we can contribute to sustained growth.

Constant optimization of manufacturing processes

Our MMA business is unique worldwide in its capability in all three main MMA manufacturing methods, and we have a 30% or higher share of the world's production capacity. This makes us a core business for the MCG Group. We must constantly optimize our manufacturing processes to maintain this competitive edge and ensure earnings stability. Over the near term, we will improve the efficiency of our production systems at all 11 manufacturing sites worldwide in response to the procurement environment for key raw materials. We are considering the construction of a new MMA monomer plant in the United States that uses the cost-competitive ethylene method (Alpha technology), as we believe this will cement our position as a leading company in this field. Over the medium to long term, we will maintain our competitive edge by switching to a more energy-efficient process mix, while developing new catalysts to improve profitability and grow our business.

As we work toward becoming carbon neutral, we will proceed with verification testing on our PMMA chemical recycling plant. We have finished verification testing on pilot

facilities and are now preparing to construct the plant itself, with operations scheduled to start during fiscal 2024.

Scaling up our business offering of distinctive products

The P&C business handles a range of distinctive products that contribute to the building of a circular economy, such as lighter-weight and higher-performance materials, materials that render coating processes unnecessary, biodegradable materials, and materials that dramatically extend the shelf life of food products. We aim to effectively expand our business scale through globally centralized management of the wide-ranging technology platforms and technology applications that our Group has built up, and business development of these applications in growth markets and fields. As part of moves to implement this growth model, we made the decision in July 2022 to increase production capacity for the ethylene vinyl alcohol copolymer resin *SoarnoL* at our U.K. plant, targeting operations from July 2025. Global demand is rising for *SoarnoL* as a food packaging material, as it exhibits excellent gas-barrier properties. When used in food packaging, *SoarnoL* helps preserve food flavor and quality and reduces food waste. We expect solid growth for *SoarnoL* in the future.

The MCG Group will continue to develop solutions that contribute to market and customer sustainability and products with irreplaceable properties. We will scale up our business in growth markets around the world by utilizing our global production and marketing systems.

Message from Business Group Management

Advanced Solutions

Delivering new value and building a strong position to drive the Group

Johei Takimoto

Executive Vice President
Head of Advanced Solutions



Delivering new value, accelerating growth

Advanced Solutions aims to deliver new value in the fields positioned as strategic focus markets in the Mitsubishi Chemical Group's new management policy, "Forging the future." Our goal is to create performance product lineups that satisfy the needs of all stakeholders and grow the business.

To achieve this, we are transforming into a market-oriented organization capable of rapidly developing a deep understanding of changes in cutting-edge markets and the diverse value demanded by customers. We will also upgrade our technology platforms further to deliver innovation, a key strength of the MCG Group, and will be disciplined in our portfolio management to build a strong, unique position in the market.

Globally leveraging our technological capabilities and market understanding

We are developing products and services in a number of different growth markets, including mobility, life science, and electronics.

In the mobility field, we are developing materials for internal and external fittings to support the ongoing social evolution of Connected, Autonomous, Shared, and Electronic (CASE) and higher-performance products such as EV battery materials.

In the life science field, we are working globally on products and system businesses to support more advanced medical care and more sustainable eating habits.

In the electronics field, we are delivering products and services to meet the varied needs of customers who are looking to upgrade information processing technologies, including display parts and materials and precision cleaning services for semiconductor makers. The semiconductor industry is expected to expand further, so we are working to create synergies with the semiconductor businesses and technologies owned by Gelest,

Inc., a U.S. manufacturer of organic and inorganic hybrid chemicals that we acquired in October 2020. By combining Gelest's technologies with our business resources and customer networks, we expect to contribute more than ever to future social challenges and market needs as healthcare evolves and advances are made in the infrastructure of the digital society.

We aim to develop highly profitable business structures by leveraging the technological capabilities and market understanding we have built up in various businesses thus far, and by actively pursuing R&D and business development and allocating business resources for use in flexible strategic partnerships in growth markets.

Leading the way in strategy execution for sustained growth

To continue to grow our Group's performance products over the medium to long term, we will take a leading role in strategy execution and management that brings together the strengths from across our entire organization, under the "One Company, One Team" culture with a flat organization. We will also maximize the individual skills that our employees bring to the table and develop a strong culture where we all work together toward a common goal.

Note: From July 2022, Films & Molding Materials have been included as part of Advanced Solutions

Message from Business Group Management

Petrochemicals / Coal Chemicals

Accepting the significant decision made in the new management policy and shaping the future of this business

Yoshihiro Ikegawa

Executive Vice President
Head of Petrochemicals & Coal Chemicals business



In the Petrochemicals business, we will focus increasingly on markets that utilize general-purpose petrochemical product functions and accelerate our strategy to boost profitability. While we anticipate some short-lived pain, including drawing the line at unprofitable areas, those businesses that survive this difficult selection process will be targeted for aggressive business expansion. We will also focus our efforts on the development of unique products by synergizing with bio-based technologies. We plan to launch on the domestic market first and tackle the development of overseas projects over the longer term, using green hydrogen as a raw material for chemical products.

Global development of SAKAIDE COKE

In the Coal Chemicals business, we have products such as carbon black and needle coke that are produced from the tar that forms during the manufacturing process for coal, a key material used in the steel industry. The coke supplied under the SAKAIDE COKE brand is known for its highly uniform and stable quality and enjoys a correspondingly strong reputation with steel manufacturers, not just in Japan but also worldwide. To generate solid earnings from these strengths, we are restructuring to

optimize our sales portfolio and production systems to meet the changing structures of the domestic steel industry. In fiscal 2021, we changed our business model to export-oriented operations. Based on our assumption that companies will restrict new investment in CO₂-generating businesses and withdraw from their coke businesses where they also utilize the material themselves, we expect demand for the MCG Group's coke to rise further in the future. We also expect increasing demand for needle coke that is used as electrode material for electric furnaces, in light of plans to construct many more such furnaces in the drive to achieve carbon neutrality.

We will make the most of the strengths of our product offerings and also develop a full understanding of what society needs and what our Petrochemicals and Coal Chemicals businesses can offer, so that we can better shape our businesses for the future.

Strategic rationale

Challenges

- Domestic market has limited growth potential
- National energy policy is transitioning toward carbon neutrality and the basic chemical industry must embrace decarbonization
- High probability of increasing energy costs in Japan driven by CO₂ reduction efforts
- Cyclical businesses

Required solutions

- Consolidated domestic basic chemical value chain brings sustainability benefits to society
 - ▶ Integrate resources to develop sustainable businesses and technologies (i.e., CO₂ recycling, chemical recycling, and bio-chemicals)
 - ▶ Basic chemical products are indispensable from a national economic security perspective
 - ▶ Increase efficiency

Executing the carve-out in fiscal 2023

The new management policy, "Forging the future," announced by the Mitsubishi Chemical Group in December 2021, put forward a plan to carve out the Petrochemicals and Coal Chemicals businesses in fiscal 2023.

As the world begins the huge undertaking of becoming carbon neutral by 2050, the MCG Group has already worked hard across its global business operations to respond to climate change and reduce GHG emissions. I accept this monumental decision that forms part of our goal to achieve a further increase in corporate value and sustained growth. As a major player in the chemical industry, we will lead the consolidation of the basic chemical industry in Japan, and will resolutely implement this decision by restructuring through a carve-out and future exit from these businesses.

Leveraging product performance and uniqueness to achieve growth in domestic and overseas markets

For all our current businesses, we see the changing business environment as an opportunity for growth.

Message from Business Group Management

Pharma

As a core business in the Group, we will build a pharmaceutical business with a strong presence.

Hiroaki Ueno

Executive Vice President
Head of Pharma



Executing management plans with a sense of determination and speed

In the Pharma business, we are enhancing our drug discovery capabilities cultivated over many years and are developing a stronger presence as a core business in the Mitsubishi Chemical Group and as a pharmaceutical company that supports the health of people around the world.

We are restructuring for growth in order to achieve the goals set out in the new management policy, "Forging the future." By building up our management foundations and reallocating management resources, we aim to achieve a recovery in earnings and further growth.

Concentrated investment in focus fields and focus markets

Japan and the United States are positioned as our focus markets, and we are developing our business with a focus on these two countries. In Japan, we are working in the focus fields of immuno-inflammation, diabetes and kidney diseases, the

central nervous system, and vaccines. In June 2022, we launched *DYSVAL* for tardive dyskinesia. Previously, there were no treatment options available for this disease. We are working to promote the appropriate use of *DYSVAL* and provide healthcare professionals and patients with this long-awaited treatment option. We also aim to expand our presence in the diabetes field, building on our experience with *TENELIA*, *CANAGLU*, and *CANALIA* and adding Eli Lilly Japan K.K.'s *MOUNJARO* to our diabetes lineup following approval in September 2022. In the United States, we have positioned the central nervous system as a focus field and aim to expand sales following the addition of *RADICAVA ORS* to our amyotrophic lateral sclerosis (ALS) franchise in June 2022. We also have a number of global late-stage trials underway for multiple development programs, and we aim to advance these through to commercialization. We are working to contribute to the health of people around the world by providing "Creating hope for all facing illness."

Strengthening all value chains for future growth

In all value chains in the Pharma business, we are working to deliver precision medicine*¹ and develop around-the-pill solutions*² for those diseases where there are still unmet medical needs. We have started a number of initiatives to maximize the value of our pharmaceutical products.

In our research divisions, we have started to investigate how to increase the speed and accuracy of our drug discovery efforts and are exploring new compounds using our existing drug discovery technologies combined with AI-driven drug discovery methods. In our development divisions, we have initiated application development programs to deliver around-the-pill solutions for early diagnosis or the management of drug compliance, and we have also initiated programs to make drug development more efficient through the use of real-world data. In our manufacturing divisions, we are looking at issues such as new materials for drug packaging, in order to reduce our environmental impact and energy use as we move toward a low-carbon economy. In our sales divisions, we have started using DX tools to provide information in a more efficient way. Finally, by integrating our corporate divisions, we have brought together a broad range of knowledge and are looking into how to apply this to staff development and improved digital literacy. Our goal is to move our business forward as an integrated Group, including generating synergies through greater collaboration between the Group companies.

*1 Providing the appropriate healthcare to the appropriate patient at the appropriate time, taking account of the differences in people's genes, environment, and lifestyles

*2 An approach that takes drug therapies as the starting point to offer solutions ranging from prevention to prognosis, to contribute to improving the QOL of patients and their families

Message from Business Group Management

Industrial Gases

Strengthening business resources while working toward carbon neutrality

Toshihiko Hamada

Representative Director, President, CEO
Nippon Sanso Holdings Corporation



Moving forward with five key strategies

The Nippon Sanso Holdings Group operates the Mitsubishi Chemical Group's Industrial Gases segment, and our philosophy is "Proactive. Innovative. Collaborative. Making life better through gas technology." Based on this, we aim to create social value through innovative gas solutions that increase industrial productivity, enhance human well-being, and contribute to a more sustainable future.

To put this philosophy into practice while growing our business further, we are currently implementing the NS Vision 2026 medium-term management plan, which runs from fiscal 2022 to fiscal 2025. When drawing up this plan, we took into consideration changes in the external environment that are happening now, in terms of (1) climate impact, (2) economic uncertainty, (3) geopolitical instability, (4) development of a digital society, and (5) diversification of thinking and lifestyles. We then defined five strategies aimed at sustained growth from a medium- to long-term perspective.

Five key strategies in the NS Vision 2026 medium-term management plan

- Sustainability management
- Exploring new business to achieve carbon neutrality
- Total electronics
- Operational excellence
- DX initiatives

[Nippon Sanso Holdings' medium-term management plan](#)

Collaborating to create value in decarbonized domains

I think that in order to fully execute these key strategies, we must create value by collaborating with a range of stakeholders inside and outside our organization, and going beyond the four regions (Japan, the United States, Europe, and Asia and Oceania) and the thermos business in the Nippon Sanso Holdings Group. This is consistent with our philosophy, Proactive. Innovative.

Collaborative. The technology development capabilities, know-how, expertise, and experience that we have in gas solutions—and that the MCG Group has in the chemical and pharmaceutical domains—are highly compatible with initiatives to achieve carbon neutrality. Starting with the key strategy of exploring new business to achieve carbon neutrality, I believe that we can generate huge synergies from the programs positioned as a priority in fiscal 2022, such as providing more environmental solutions and exploring global HyCO* projects for a hydrogen society.

* Hydrogen (H₂) and carbon monoxide (CO) are separated from natural gas using steam methane reforming (SMR) equipment. The HyCO business provides large-scale supply of H₂ and CO to customers in oil refining and petrochemical industries by way of a pipeline.

Helping as "The Gas Professionals" to increase the MCG Group's corporate value

This process of collaborating as "One Company, One Team" to create new value provides the perfect opportunity for every single employee in the Nippon Sanso Holdings Group to demonstrate their fighting spirit as "The Gas Professionals." This is also a great chance to adopt a broader perspective and tackle new challenges. The MCG Group is currently implementing a bold restructuring of its business portfolio to achieve sustained growth, and we consider this an opportunity for dramatic progress. We will pull together to boost corporate value across the entire MCG Group, while strengthening the Nippon Sanso Holdings Group's unique business resources, including our industrial gas and thermos technologies, our global and diverse human capital, and our business sites.