

In the Fine Chemicals Business, Kumiai Group is applying its advanced organic synthesis technology cultivated in the agricultural chemicals business. The Fine Chemicals Business includes four subsegments, which are the chlorination business, advanced chemicals business, expanded polystyrene business, and specialty chemicals business, and is engaged in a wide range of businesses in various fields that support the foundations of our daily lives. We are contributing toward achieving the SDGs and a recycling-based society through the development and supply of fine chemical products used in infrastructure and advanced technologies for a safe and prosperous life.

Managing Executive Officer,  
Head of Chemical & Specialty Products Sales Division

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## Opportunities, Threats, Strengths, and Weaknesses

<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>Increasing demand in advanced fields such as pharmaceuticals, fine chemicals, and semiconductors</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>Crude oil prices and exchange rate fluctuations</li> <li>Geopolitical risks and U.S.-China economic friction, etc.</li> </ul>
<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>Advanced organic synthesis technology cultivated through the manufacture of active ingredients for agricultural chemicals</li> <li>Integrated research and development system from compound discovery to development of new products</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>Positioned upstream in the value chain and affected by customer development trends, demand, and inventory situations</li> </ul>

## Business Environment

### Chlorination Business

In the chlorination business, the core of the Fine Chemicals Business, competition in the terephthaloyl chloride (TPC), isophthaloyl chloride (IPC), and aramid markets is intensifying due to the rise of foreign manufacturers offering inexpensive products. In addition, demand has been slowing because of the global market downturn, including the slowing tempo of China's economy. However, TPC and IPC are raw materials for aramid fibers, which are widely used in the automotive, aerospace, and telecommunications industries, and are indispensable for building social infrastructure. Moreover, as infrastructure networks need to be enhanced in line with global low-carbon considerations, increased safety awareness, and the progress of IoT, the aramid fiber as well as the TPC and IPC businesses that meet these requirements are expected to grow steadily over the medium to long term. We will maintain our focus on quality improvement and cost reduction with a view to

expanding our shares of growing markets.

### Advanced Chemicals Business

In the context of what is widely viewed as the fourth industrial revolution, digital technologies typified by high-speed communications and artificial intelligence (AI) are rapidly evolving, and our living environment is being transformed drastically. Despite the impact since 2022 of the global economic downturn and declining consumer demand, continued growth of the semiconductor field, which is the bedrock of our digital society, can be expected. The value of the global semiconductor market reached 574.0 billion dollars in 2022, having roughly doubled in size in a decade. We will continue developing our business in growth fields such as materials for semiconductors and other electronic applications, in line with the progress of AI, self-driving cars, and other technologies.

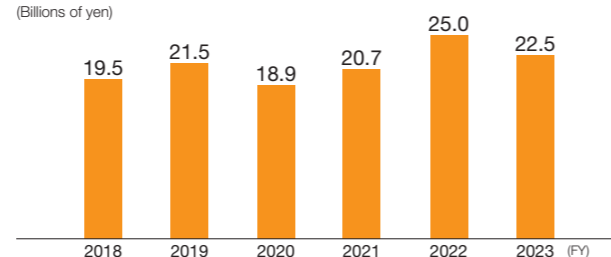
## Business Contents

Kumiai is engaged in R&D, manufacturing, and sales of fine chemicals used in various aspects of daily life by applying advanced organic synthesis technology cultivated over many years. Because many of Kumiai Group's fine chemical products are ingredients and materials, the "Kumiai" name is not evident in the market. However, our products are applied in everyday items such as smartphone circuit boards, aircraft and automobile parts, and waterproof materials for roads and buildings. In addition to the development and sales of Kumiai products, we conduct custom manufacturing, including manufacturing process development. Kumiai Group's Fine Chemicals Business is broadly divided into four categories, operating in wide-ranging fields.

- Chlorination business (chlorotoluene and chloroxylylene derivatives as materials for intermediates for agricultural chemicals and pharmaceuticals, dyes and polymer materials)
- Advanced chemicals business (bismaleimides as raw materials for resins with high heat resistance, urethane-related products, custom manufacturing)

- Expanded polystyrene business (packaging materials for agricultural products and electrical appliances, home appliance parts, building materials, ground settlement prevention measures)
- Specialty chemicals business (raw materials used in disinfectants for medical equipment, environmental hygiene agents used in wet wipes and for disinfecting hot spring baths, and stripping and coating agents used to manufacture toilet paper)

Fine Chemicals Business Sales  
(Billions of yen)



## Business Strategy

### Targets for the Period Covered by the Medium-Term Business Plan

Since the business integration with Ihara Chemical Industry in 2017, we have been working to develop the Fine Chemicals Business as the second pillar alongside the agricultural chemicals business. The Fine Chemicals Business recorded net sales of 25.0 billion yen in FY2022. The sales target is 28.5 billion yen under the Medium-Term Business Plan whose final year is FY2026 and will be at least 30.0 billion yen under the next Medium-Term Business Plan. To achieve these targets, we believe that in addition to further sales expansion in existing businesses, it is essential to create new businesses and vigorously invest in growth areas, utilizing M&A and capital alliances as well. In particular, we are emphasizing business development in the field of semiconductors and other electronic materials. Nowadays, given the rapid progress of digital technology, semiconductors that support the digital society are undoubtedly indispensable for our world, and explosive growth in demand is expected in the future. By identifying new markets and needs and providing high-quality products and services that leverage our proprietary technologies, we will grow the Fine Chemicals Business into the second pillar alongside the agricultural chemicals business and contribute to the realization of a safe, secure, and prosperous society.

resin raw materials and the shift to higher-value-added products further downstream so as to acquire new customers and expand business domains.

### Action 2

#### Initiatives for the Custom Manufacturing Business

Regarding the custom manufacturing business for fine chemicals, Kumiai has been applying its long-cultivated organic synthesis technology in R&D, manufacturing, and sales of fine chemicals. Under the new Medium-Term Business Plan, we will vigorously address themes for custom manufacturing in the semiconductor field, which requires the most stringent specifications in the electronic materials field, with the aim of expanding business domains. Moreover, geopolitical risks and economic friction between the U.S. and China have heightened, as reported in the media. In this context, the country/region of production has become an important factor in selecting a production base. Being alert to such international situations while enhancing our technology and development capabilities, we will vigorously tackle custom manufacturing in cutting-edge fields.



### Action 1

#### Expansion of Existing Businesses

##### 1. Bismaleimides (BMIs)

Demand for BMIs, for adding heat resistance and toughness to resins used in laminates and composite materials, remains robust, and demand for products with high heat resistance, high strength, low dielectric constant, and other attributes is further increasing. Under the new Medium-Term Business Plan, we intend to leverage Kumiai Group's extensive portfolio of BMIs to develop new BMI derivatives and cultivate new customers and applications. Regarding the production system, construction of a new multi-plant capable of producing BMIs is scheduled for 2025, to strengthen our capacity to meet growing demand.

##### 2. Amine Curing Agent

We have been manufacturing and selling diamine curing agents for urethane and epoxy resins. We intend to expand the product lineup to include curing agents responsive to environment, health, and safety (EHS) considerations, for which demand is expected to grow, and products targeting the electronic materials field. In addition to the development of EHS-conscious urethane systems and novel diamines, we will promote applications to more profitable, high-value-added products, including polyamides, polyimide and other high-performance materials, in order to maximize sales of diamines.

##### 3. Chlorination Business

Chlorotoluene derivatives, our main products, are used in the pharmaceutical and agricultural chemical fields, as well as for facial cleansers, and chloroxylylene derivatives are used as raw materials for functional resins and fibers. In particular, demand is expected to remain buoyant in the telecommunication infrastructure and automobile-related fields for IPC and TPC, which are mainly used as the principal raw materials for aramid fibers, and we will continue to focus on expanding sales and profits of IPC and TPC. Furthermore, we will promote custom manufacturing of functional

### Action 3

#### Establishment of the New Material Research Laboratory, Discontinuous Initiatives

The New Material Research Laboratory was established within the Chemical Research Institute (ShIP) to create new products. This is an open lab where not only Kumiai's researchers but also researchers of Group companies collaborate. The aim is to develop innovative products by combining expertise through cross-organizational initiatives of Kumiai Group. Furthermore, in order to satisfy the quality and speed required by customers in cutting-edge fields, we will actively consider M&A and capital alliances, in addition to investments within the Group. We will devote ourselves to strengthening the foundation of the Fine Chemicals Business through discontinuous initiatives for developing new products and winning new contracts for custom manufacturing, etc., in order to expand business from a medium- to long-term perspective.

