

Sumitomo Chemical's Semiconductor-Related Business

Semiconductor manufacturing process and our products

Sumitomo Chemical has established state-of-the-art product design and evaluation technologies, building on the organic synthesis expertise developed through its fine chemicals business. We offer photoresists that support the miniaturization of advanced semiconductors, along with ultrapure chemicals, and we are also focusing on expanding performance chemicals required for advanced and back-end processes. Through these efforts, we provide a diverse lineup of high-quality products for semiconductor manufacturing.

Photoresist

Deepening proprietary core technologies, Strengthen global supply and development structure

semiconductor chemical

Establish world-class business scale with supply capabilities built

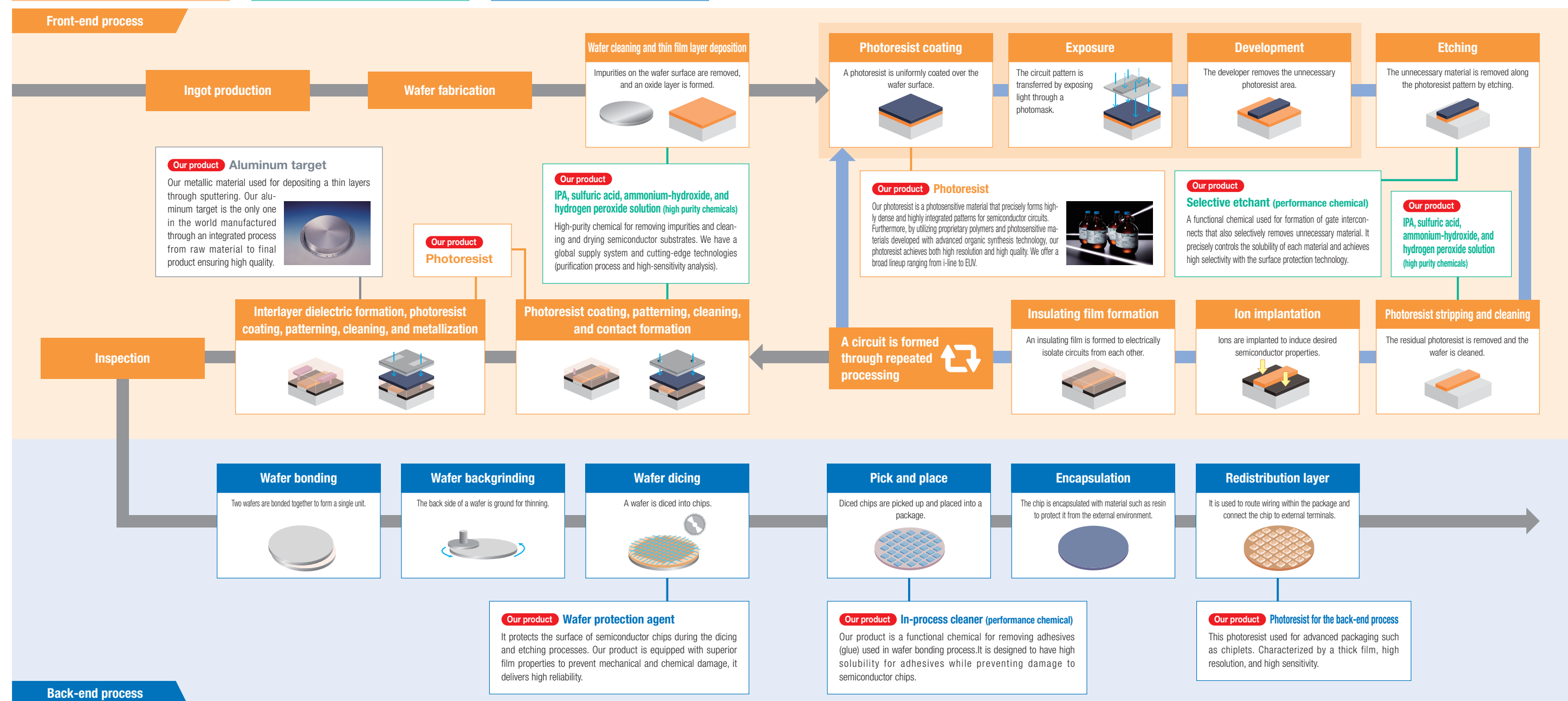
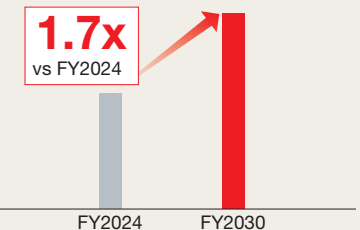
Semiconductor back-end materials

Enter back-end process material market leveraging our know-how in front-end process materials and proprietary performance materials and processing technologies.

Semiconductor Business environment

The silicon semiconductor market will continue to grow in a stable fashion, driven by expanded AI applications, further advances in IoT, and the spread of autonomous driving and smart mobility. Should become an even larger market. Increased demand for new technologies such as 3D to drive greater sophistication and diversification in materials technologies and needs.

Semiconductor market size



Growth strategy for the key products

Photoresist

For cutting-edge photoresists, we will deepen core technologies and strengthen the global supply and development structure.

Deepening core technologies

Control technology for dissolution rate contrast

Material design and synthesis capabilities



Strengthen global supply and development structure

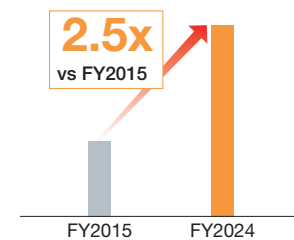
proactively commit ourselves to upfront investments in cutting-edge fields in line with the advancement of semiconductors.

Contributing to higher functionality as a top runner

Since steady demand growth is expected for immersion ArF photoresists, in which we possess world-leading technological capabilities, as well as thick-film i-line photoresists for high aspect ratio applications, we will further advance our technologies.

At the same time, we will focus on developing products for next-generation EUV photoresists, such as our proprietary organic molecular resists, and work to further expand our cutting-edge photoresist-related business.

Photoresist sales



Next-generation EUV photoresist

We will design and mass-produce resist materials at molecular size to support ultra die shrink of semiconductors.

We will also accelerate development of next-generation platform by concentrating R&D resources.

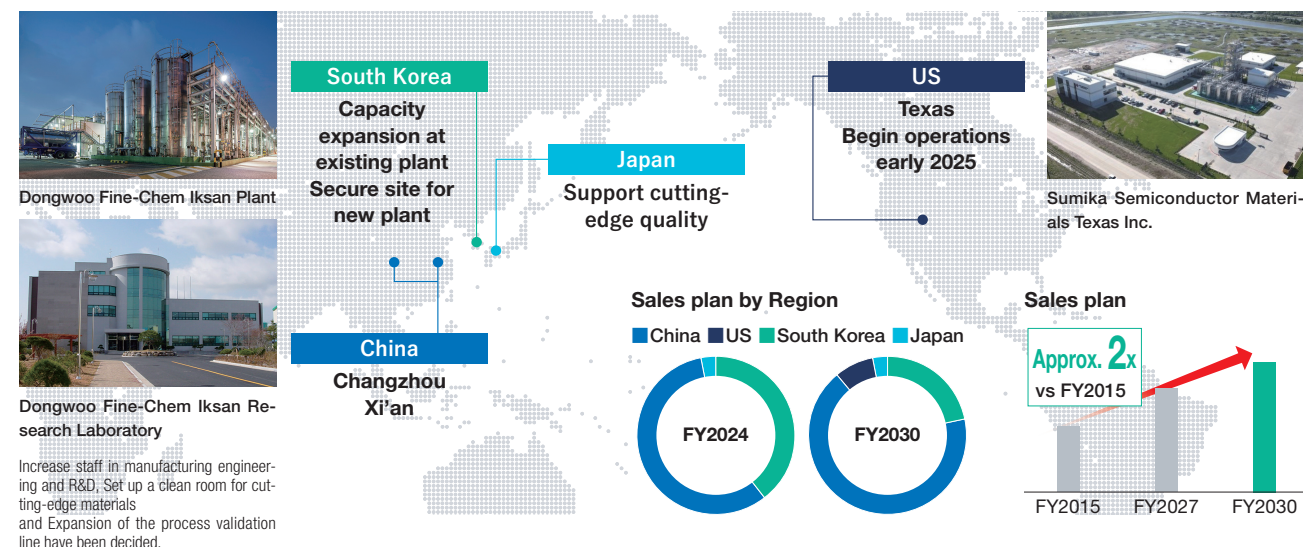
	Next-generation (high NA)	Existing type
Platform	Made from organic molecules	Main ingredient is polymer
Size	Molecule size: < 1 nm	Polymer: < several nm

Strengths	Metal-free	Molecule size: < 1 nm	High development contrast design
	Affinity with existing processes		Achieve die shrink

Target market share **20%** share by volume in cutting-edge resist

High-purity chemicals

We have established world-class business scale with supply capabilities built from upfront investments. Also, we are strengthening process technology and evaluation and analysis infrastructure to ensure the stable supply of high-quality products tailored to cutting-edge technologies.



Established a two-site supply system in Japan and S.Korea

Positioning of each plant

Kasugade: mother plant; accumulation and global deployment of manufacturing technology know-how
South Korea (Iksan): supply site for Korean customers; stable supply through dual-site operations



1997
Building of a new plant at the South Korean subsidiary, Dongwoo Fine-Chem

2015
Expansion of production capacity ArF photoresist: fivefold between 2010 and 2020

1983
Launch of the g-line photoresist



2023
Addition of a cutting-edge photoresist manufacturing line in the Osaka area

1989
Launch of the i-line photoresist (world's first mass produced i-line photoresist)

2009
Building of a new plant of immersion ArF photoresists in the Osaka area

2024
Building of a new research/mass production evaluation building in the Osaka area

2030
Further enhancement of the evaluation system

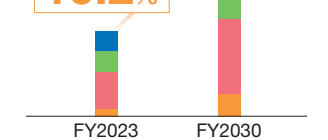
Stable supply of a rich product lineup for various light sources over 40 years

2025-26
Expansion of the cutting-edge photoresist evaluation facility in the Osaka area

Photoresist market demand forecast

■ EUV photoresists
■ ArF photoresists
■ KrF photoresists
■ g/i-line photoresists

CAGR
10.2%



Semiconductor back-end materials

As the formation of cutting-edge back-end markets begin against the backdrop of major technological innovations in semiconductor processes, we will make a market entry leveraging our know-how in front-end process materials, proprietary performance materials, and processing technologies.

Market trends

Device die shrink and complexity progresses.	Major front-end device makers lead process development
Heat generation increases substantially. Greater need for energy efficiency.	Increased importance of thermal management

We will bring together our elemental technologies to accelerate development and commercialization.

Sumitomo Chemical's strengths

Photoresist	Performance chemicals	High-purity chemicals
High precision	High-purity precision and trace amount analysis	
Functional molecular design		Quality management *Impurities at the ppt level management technologies
Photosensitive material design	Process suitability	



Key materials	Cutting-edge inorganic materials Highly thermal conductive filler (alumina) Ultrafine particle processing	Performance materials Functional resin design
Core technologies	Display films Roll to Roll precision lamination and coating Cutting-edge optical inspection technologies	

We aim to generate **10%** of total semiconductor material sales after FY2030.