

Electronics and Innovative Products

Message from the Division Head

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Executive Officer
Head of Electronics & Innovative Products

The markets that our division is involved in, such as semiconductors and xEVs, are constantly changing due to global circumstances. In this environment, we will deepen our understanding of customer needs, identify technology trends, and leverage our strengths in inorganic/organic composite technologies, thermal management technologies, and high-frequency response technologies, to provide optimal materials to the market on time.

There is no doubt that reducing environmental impact is a challenge that needs to be addressed by society as a whole. Our division will contribute to achieving a better society by providing high-performance materials that help reduce environmental impact.

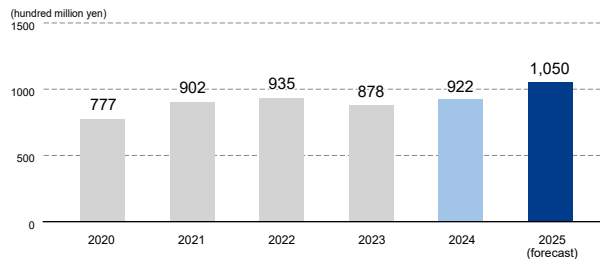
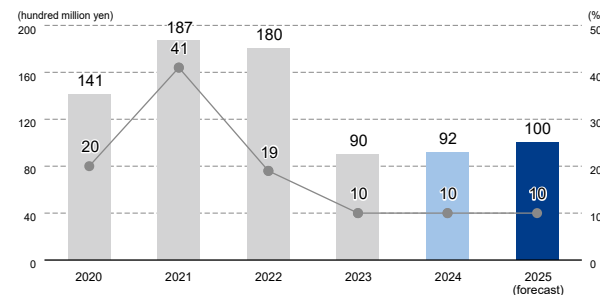
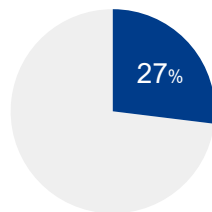
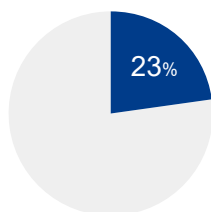
Last year, to achieve the Management Plan “Mission 2030,” we launched SNECTON as a core product and decided to invest in mass production plant facilities. We will release new products equipped with three elements – “Specialty”, “Megatrends”, and “Sustainability” – and foster them to be core business to support Denka business.

Strategies for Achieving the Goals of the Management Plan “Mission 2030” (Strategies toward 100% “Three-Star Businesses”)

Strategic areas and markets	[Key products]	[2024 results]	[2026 plan]	[Division Goals for 2030]
Next-generation high-speed communication	● Spherical alumina ● Low dielectric tangent silica ● Low dielectric organic insulating resin (SNECTON)	● Launched SNECTON (low dielectric organic insulating resin) for copper-clad laminates and interlayer insulation materials for high-speed communication devices ● Decided to invest in the construction of SNECTON production plant at Chiba Plant ● Launched UV-curable heat-resistant temporary bonding adhesive (TBM) as a material for manufacturing processes for power semiconductors	● Started up Acetylene Black plant in Thailand and expanded production capacity for LiB and high-voltage cable applications, which are growth markets ● To maintain and strengthen our position as the world's No.1, we have fully launched enhanced silicon nitride production facilities for ceramic balls for EV motor bearings and ceramic circuit board applications ● Promote the establishment of SNECTON as the de facto standard in related markets with the full-scale launch of next-generation high-speed communications	● Continuous on-time development and delivery of optimal materials aligned with megatrends fields ● Establishing a dominant presence with specialty products and making our materials the de facto standard in markets where our technology stands out ● Achieve a sustainable society via our ESG/SDGs management
xEVs and renewable energy	● Acetylene black ● Spherical alumina ● Silicon nitride powder ● Silicon nitride substrates	● Expanded production capacity by starting operation of the heat dissipation sheet plant at Shibukawa Plant ● Entered into a joint venture agreement for the fullerene (carbon material) business and acquired 50% of the shares of Frontier Carbon Corporation, which manufactures and sells fullerene, from Mitsubishi Corporation ● Decided to withdraw from the Caralyan tape business and others (Ofuna Plant)	● Market entry and achievement of high thermal conductivity grade with HITPLATE ● Achievement of new emitter types for semiconductor production and inspection equipment	

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Net Sales Trends and Outlook

Trends and Outlook for Operating Income/
Operating Income RatioPercentage in Overall Net Sales
(FY2024)Percentage in All Employees
(FY2024)

SWOT Analysis

- A diverse product lineup capable of meeting a broad range of customer needs (various ceramic materials, high-performance organic materials)
- Intelligence capabilities stemming from strong market share commanded by our products
- A broad range of essential technologies, including high-temperature control, nitriding, spherical shaping, and calcining technologies

Strengths S O Opportunities

Weaknesses W T Threats

- Growing financial burden attributable to capital expenditure due to rapid market expansion
- Dispersion of development technology capabilities due to a large number of product types
→ Optimization of portfolio

- Growing importance of communication and the progress of high-speed communication due to the spread of AI, IoT and autonomous driving systems
- Trend for low-carbon society, including xEV and renewable energy

- Possible emergence of novel material serving as a game changer
- A major shift in technological development trends due to factors such as the growing need for environmental solutions
- An increase in the number of competitors due to the entry of newcomers from emerging nations
- A drop in price competitiveness due to increased tariff costs

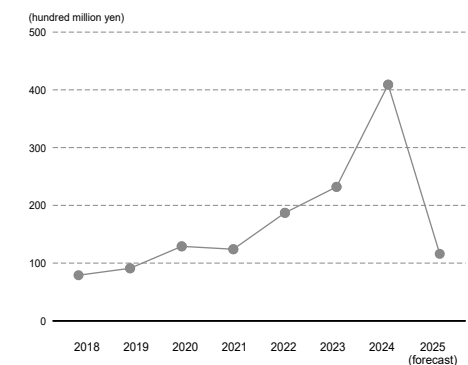
“Investment” for Further Growth

- Portfolio review: Focus capital investment and personnel allocation on key products
- Development of fields related to SNECTON: Develop markets in derivative fields of strong products

“Cash Generation” through Strengthening of Existing
Business Operations

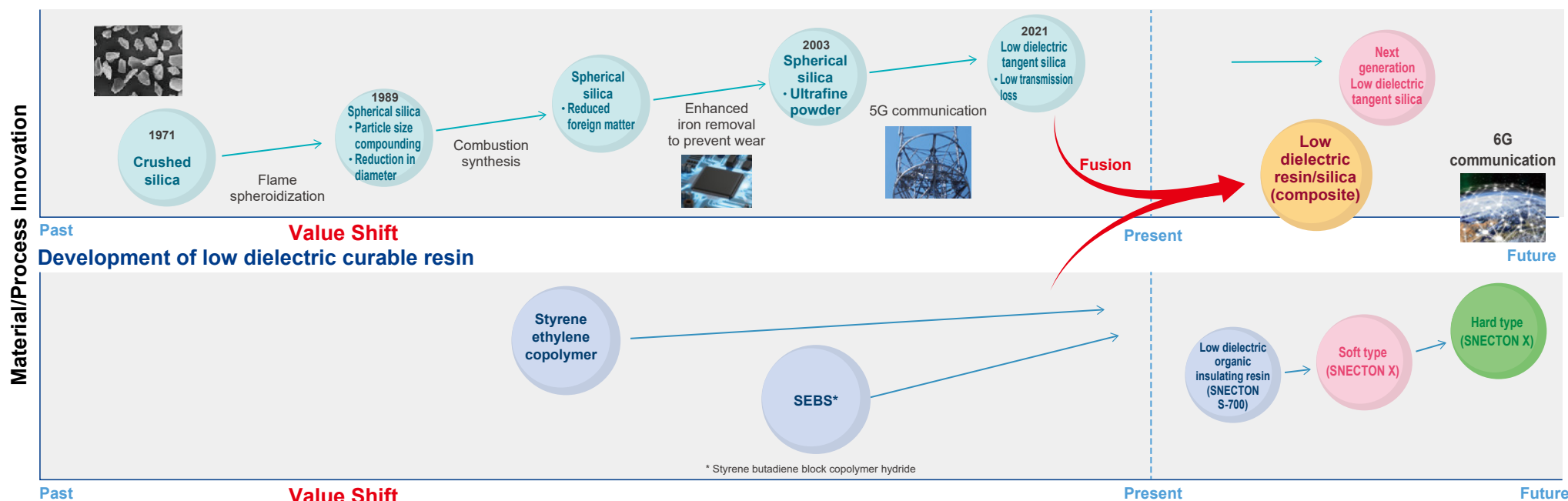
- Strengthening of electronic substrate business: Review the system from the ground up to improve profitability (Ceramic substrates, metal substrates)

Investment Value Trends



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Development of Spherical Silica



Contributing to Society through Business

● Low-dielectric organic insulating material “SNECTON” + low dielectric tangent / low transmission loss silica filler

With the rapid evolution and expansion of generative AI and the remarkable spread of next-generation high-speed communications (5G/6G), the development of supporting infrastructure such as data centers and communication base stations is progressing. The high-speed communication circuit boards that support these technological innovations are crucial. In high-speed communications, it is extremely important to suppress transmission loss, where electrical signals are converted to heat during transmission. The low-dielectric organic insulating resin “SNECTON,” developed utilizing Denka’s coordination polymerization technology, is drawing attention as a material capable of overcoming this issue.

SNECTON possesses class-leading excellent dielectric properties and crosslink ability, and also achieves high durability due to its adhesion to copper foil and low water absorption. High-speed communication circuit boards comprise “soft resin” + “hard resin” + “various materials such as fillers and glass cloth.” SNECTON is available in both “soft type” and “hard type” grades, and, by fusing with silica fillers and various heat-dissipating fillers that already boast a high market share, Denka can propose optimal formulations to customers with its combined organic and inorganic technologies.

