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NEWS RELEASE

## **Mitsui Kinzoku Builds a Pilot Production System for Negative Thermal Expansion Materials**

Mitsui Kinzoku Company, Limited (President: Takeshi Nou; “Mitsui Kinzoku”) is pleased to announce that it has decided to build a pilot-scale production system by FY2026 to further strengthen efforts to commercialize negative thermal expansion materials developed by its Engineered Powders Division.

Negative thermal expansion materials contract as temperature rises. When incorporated into resins, metals, glass, and other matrices, they help suppress thermal expansion and enable precise tuning of the coefficient of thermal expansion (CTE). The technology poses promising applications in a range of industrial fields including semiconductors and sensors. In particular, due to the growing amount of heat generated in AI data centers and the increasing sizes of semiconductor packages, defects such as warping due to differences in the thermal expansion properties of different materials have emerged, and ensuring reliability has therefore become a pressing issue. Against the backdrop of these structural issues, negative thermal expansion materials are expected to expand in the medium-to-long-term as a promising growth area in thermal management-related markets.

To date, Mitsui Kinzoku has entered into patent license agreements with Nagoya University and the Institute of Science Tokyo, with over 50 companies having evaluated samples. During that process, we have seen growing market needs and progress in recognition from customers. In response, we have decided to rapidly implement a pilot-scale production system in Omuta, Fukuoka Prefecture, in order to build a system that can ensure a stable supply and swiftly respond to customer needs.

Looking ahead, we will explore increases in production to meet further growth in demand, adequately cater to market needs, and speed up activities aimed at the early launch of full-scale operations and commercialization.

Mitsui Kinzoku will contribute to the realization of a sustainable society by implementing its vision for 2030, “Building new businesses — and the future — with our material intelligence,” based on its purpose, “We promote the well-being of the world through a spirit of exploration and diverse technologies.”

(Reference)



Photo: Negative thermal expansion material

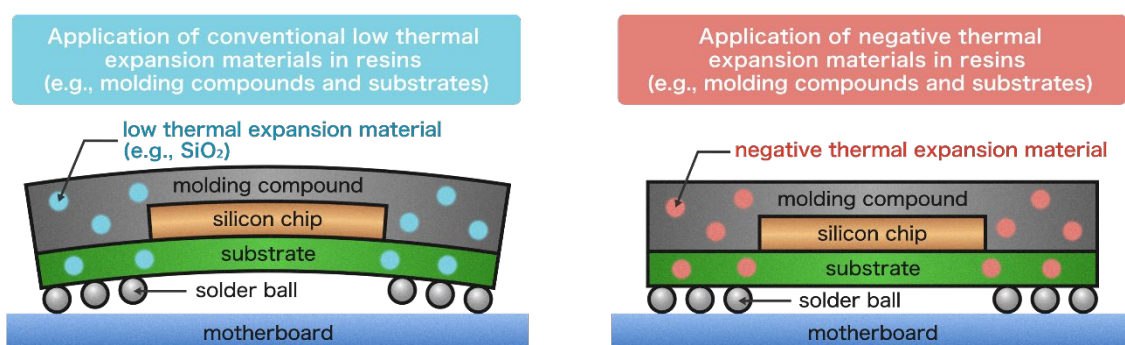


Figure: Illustration of negative thermal expansion material application and overview of effects

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