



MEDIA RELEASE

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NMB Launches Thermalbyte at the National Innovation and Commercialisation Expo 2026 (NICE 2026)

Hybrid graphene-based thermal management solution designed for next-generation electronics and semiconductor applications

Kuala Lumpur, 1 September 2026 – NMB (NanoMalaysia Berhad), an implementing agency under the Ministry of Science, Technology and Innovation (MOSTI) has officially launched Thermalbyte, a graphene-based die attach paste developed to improve heat dissipation and reliability in high-performance electronics, in collaboration with Vgmatix Sdn Bhd. The launch took place at the National Innovation and Commercialisation Expo 2026 (NICE 2026) at the Kuala Lumpur Convention Centre (KLCC) and was witnessed by the Deputy Minister of Science, Technology and Innovation, YB Dato' Dr Haji Mohammad Yusof Apdal.

In modern electronics, inefficient thermal management can lead to overheating, performance degradation, and reduced device lifespan. Thermalbyte addresses this challenge by enabling more efficient heat dissipation and improved reliability in high-performance devices.

The product demonstrates thermal conductivity of over 300 W/mK for sintered paste, making it suitable for applications in semiconductor packaging, power electronics, telecommunications equipment, and high-performance computing systems. Engineered as a high-performance thermal interface material, Thermalbyte features a hybrid filler system that enables efficient heat transfer while maintaining semi-conductive electrical resistivity. The non-corrosive material is designed to minimise thermal resistance across contact surfaces, including rough or irregular interfaces, ensuring long-term stability and reliability in demanding electronic environments.

NMB's Chief Executive Officer, Dr Rezal Khairi Ahmad, said: "This innovation demonstrates how nanotechnology can translate into real industrial value. Through this collaboration with Vgmatix, we are strengthening Malaysia's capability in advanced materials manufacturing while addressing real challenges faced by the electronics and semiconductor industries. Thermalbyte also supports Malaysia's growing semiconductor ecosystem and reinforces the country's position within high-value manufacturing sectors."

The global market for thermal management materials continues to expand rapidly alongside the growth of consumer electronics, electric vehicles, data centres and high-performance computing systems. The thermal conductive paste market was valued at approximately USD500 million in 2023 and is projected to grow significantly by 2032 (USD800 million), driven by increasing demand for high-performance electronics and advanced cooling solutions across multiple industries.

The product targets the electronics and semiconductor packaging industries, including applications in processors, telecommunications equipment, automotive electronics and other high-power systems requiring efficient heat management. Effective thermal management not only improves device performance and reliability but also enables the development of smaller, more powerful electronic technologies. The material can be applied through various industrial processes including spatula application, brushing, screen printing, or automated dispensing systems, depending on manufacturing requirements.



Through collaborations such as this, NMB continues to facilitate the commercialisation of advanced nanotechnology innovations, strengthen Malaysia's industrial capabilities in high-performance materials, and create opportunities for economic growth and technology leadership.

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