



Press Release

November 07, 2025

Henkel expands its pioneering range of thermal management solutions with the launch of Loctite SI 5643 and Loctite SI 5637

Henkel launches new thermal potting solutions for electric vehicle components

Düsseldorf – In today's rapidly evolving electric vehicle market, OEMs and suppliers face growing pressure to reduce costs, enhance performance, and optimize component designs. A key strategy gaining momentum is component integration – often referred to as 'x-in-1 integration' – in which multiple powertrain components, such as the e-motor, inverter, on-board charger, and DC-DC converter, are combined into a single compact unit. This approach delivers significant benefits in terms of system efficiency, weight reduction, and space optimization. However, it also presents new engineering challenges, particularly in managing heat dissipation and ensuring long-term reliability at higher power densities.

As a leading design and innovation partner in the automotive industry, Henkel is helping OEMs and suppliers overcome these challenges through its portfolio of high-performance thermal potting materials – now expanded with the dual launch of Loctite SI 5643 and Loctite SI 5637. These two new thermal potting solutions are optimized for crucial EV power conversion components such as on-board chargers and inverters, offering different levels of thermal conductivity to address a wide range of design needs.

Both Loctite SI 5643 and Loctite SI 5637 are two-component, fast curing, low viscosity thermally conductive silicone potting compounds for high performance power electronics. Thanks to their exceptional fast-flowing characteristics, they provide pourable, self-levelling potting solutions capable of filling small gaps, providing outstanding physical protection to sensitive components while delivering exceptional heat transfer for thermal management.

Due to their very low Shore hardness and flexibility, both products protect electrical and electronic components against vibration without adding mechanical stress during thermal cycling.

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"At Henkel we are enabling the transition toward zero-emission mobility. The launch of Loctite SI 5643 and Loctite SI 5637 further strengthens our pioneering role in creating E-Mobility solutions developed in close partnership with OEMs, battery manufacturers and automotive suppliers to meet emerging challenges in areas such as thermal management," comments Matthias Brachmann, Business Development Manager E-Mobility Power Conversion and E-Drive Systems at Henkel.

With a global footprint, expert innovation teams, unique centers of excellence such as the Battery Engineering Centers, and an extended network of dispensing equipment partners, Henkel has made a strategic commitment to grow its portfolio of e-mobility solutions.

"Thanks to the collaborative relationships with our automotive customers, Henkel is addressing the industry's biggest challenges through the development of advanced materials helping our customers to realize next-generation power electronics and EV battery designs. We are proud of these contributions and are expediting the successful transition to zero-emission mobility." concludes Tobias Knecht, Global Head of Market Strategy, E-Mobility at Henkel. "The pace at which innovative products like Loctite SI 5643 and Loctite SI 5637 can progress from laboratory to assembly lines is a testament to our commitment to this vital sector."

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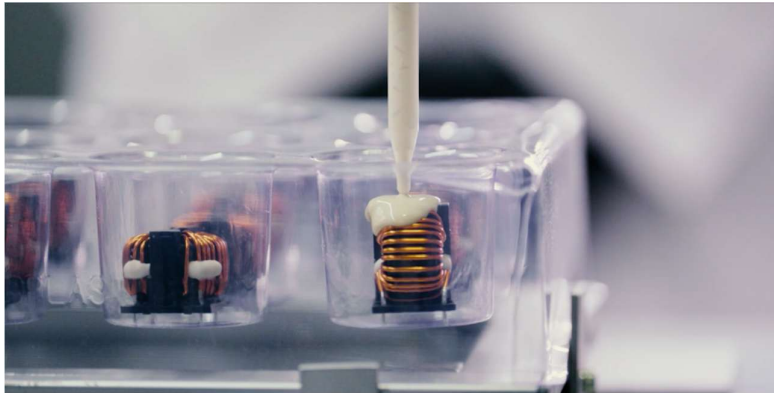
About Henkel

With its brands, innovations and technologies, Henkel holds leading market positions worldwide in the industrial and consumer businesses. The business unit Adhesive Technologies is the global leader in the market for adhesives, sealants and functional coatings. With Consumer Brands, the company holds leading positions especially in laundry & home care and hair in many markets and categories around the world. The company's three strongest brands are Loctite, Persil and Schwarzkopf. In fiscal 2024, Henkel reported sales of more than 21.6 billion euros and adjusted operating profit of around 3.1 billion euros. Henkel's preferred shares are listed in the German stock index DAX. Sustainability has a long tradition at Henkel, and the company has a clear sustainability strategy with specific targets. Henkel was founded in 1876 and today employs a diverse team of about 47,000 people worldwide – united by a strong corporate culture, shared values and a common purpose: "Pioneers at heart for the good of generations." More information at www.henkel.com

Photo material is available at www.henkel.com/press

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Automated dispensing of Loctite SI 5643.



Graphic illustration of an integrated power conversion unit featuring thermal potting applications.