



Press Release

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High thermal conductivity Bergquist TIM provides volume production benefits and eliminates contamination concerns

Henkel develops silicone-free liquid thermal gap filler with excellent dielectric strength, ideal for high voltage applications

Düsseldorf, Germany – Henkel today announced the commercial launch of Bergquist Gap Filler TGF 3000SF, the latest in the company's line of silicone-free thermal interface materials (TIMs). With significantly higher thermal conductivity than any previous silicone-free liquid formulation in its portfolio and delivering impressive dielectric strength, Henkel's new material extends wider market opportunities and production flexibility to manufacturing operations that require avoidance of silicone outgassing.

Henkel Director of Market Strategy for Power and Industrial Automation, Justin Kolbe, explains that the challenges associated with silicone contamination are well-known and silicone-sensitive devices more prevalent. "As sensors and optical components become prolific within industrial applications, and products such as drives and robotics need to be manufactured for multi-purpose use, sourcing components that pose no risk of silicone contamination is a central reliability criterion," he says. "At the same time, power densities are increasing, footprints are shrinking and controlling for higher thermal loads and voltages while facilitating high-volume, cost-efficient production remain priorities. This is not an easy balance to strike, but one that Bergquist Gap Filler TGF 3000SF achieves."

A liquid, two-part, 3.0 W/m-K silicone-free TIM, Bergquist Gap Filler TGF 3000SF offers high-reliability performance for a variety of applications where silicone sensitivity is a concern. These include industrial automation systems; power conversion technologies such as motor drives and power supplies; automotive infrastructure EV charging devices; and, computers and peripherals, to name a few. With high dielectric strength at ≥ 10 kV/mm and good

volume resistivity, Bergquist Gap Filler TGF 3000SF is suitable for higher voltage applications, while also providing high-reliability thermal performance at operating temperatures ranging from -40° C to 100° C. Exhibiting extremely low assembly stress, the liquid TIM is ideal for use with sensitive components and/or printed circuit boards with intricate architectures.

Productivity is also a central attribute of Bergquist Gap Filler TGF 3000SF. The silicone-free liquid TIM is conducive to mass production environments where fast dispensing is necessary to achieve high UPH objectives; it dispenses at a rate of 1.5 cc/sec. With a 1:1 mixing ratio, the material can be stored at room temperature and is easily processed.

“The silicone-free attributes of this product make it viable for use in almost any environment,” comments Kolbe, noting the opportunity for customers to simplify supply chains through inventory simplification. “This, in addition to its cost-competitiveness and process adaptability, puts Bergquist Gap Filler TGF 3000SF in a distinctive class.”

Though only recently commercialized, the product is already specified for several customer programs and outcomes have been extremely positive. To learn more about Bergquist Gap Filler TGF 3000SF, visit the [product page](#).

About Henkel

Henkel operates globally with a well-balanced and diversified portfolio. The company holds leading positions with its three business units in both industrial and consumer businesses thanks to strong brands, innovations and technologies. Henkel Adhesive Technologies is the global leader in the adhesives market – across all industry segments worldwide. In its Laundry & Home Care and Beauty Care businesses, Henkel holds leading positions in many markets and categories around the world. Founded in 1876, Henkel looks back on more than 140 years of success. In 2020, Henkel reported sales of more than 19 billion euros and adjusted operating profit of about 2.6 billion euros. Henkel employs about 53,000 people globally – a passionate and highly diverse team, united by a strong company culture and shared values. As a recognized leader in sustainability, Henkel holds top positions in many international indices and rankings. Henkel’s preferred shares are listed in the German stock index DAX. For more information, please visit www.henkel.com.

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Bergquist Gap Filler TGF 3000SF is a silicone-free, liquid thermal gap filler that provides high thermal conductivity, a fast dispense rate conducive to mass production environments and high dielectric strength for outstanding electrical performance.