



Press Release

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10.0 W/m-K Thermal Interface Material Addresses 5G Challenges

Henkel Expands Line of High Thermal Conductivity *BERGQUIST GAP PAD*® for High Power Applications

Irvine, California – Henkel today announced the expansion of its award-winning thermal interface materials (TIMs) portfolio with the addition of a product developed to address the high-power density challenges associated with new 5G telecom infrastructure and consumer mobility designs. *BERGQUIST GAP PAD* TGP 10000ULM is a formulation that provides exceptionally high thermal conductivity of 10.0 W/m-K within an ultra-low modulus, low assembly stress formulation. The combination of these characteristics makes the material one of the highest performing TIMs available in the market today.

“Because more functional, miniaturized telecom infrastructure components are required for 5G connectivity, higher power densities will be the norm,” explains Wayne Eng, Henkel Global Head of Market Strategy, Telecom and Datacom. “High-end routers, servers, switches and base band units continue to pack more capability into already small footprints. High thermal conductivity solutions are a necessity to dissipate the resulting heat for assurance of system reliability and optimal performance.”

Well-known for their high compliance, surface conformability and low stress, *BERGQUIST GAP PAD* materials have long been employed for telecom and datacom applications to effectively minimize the adverse impact of heat on device operation and lifetime. Henkel, addressing current and future market requirements, developed the latest *GAP PAD* to manage the challenging thermal loads inherent with increased power densities.

BERGQUIST GAP PAD TGP 10000ULM and a soon-to-be-released 12.0 W/m-K product are soft, high compliance pads that conform to irregular surfaces, filling small gaps to enable interface wet out and optimal thermal transfer. The unique filler technology and low modulus formulations unite high thermal conductivity with low assembly stress, minimizing component damage while offering robust heat removal from critical components. With 10.0 W/m-K thermal conductivity capability, the new

LOCTITE TECHNOMELT BONDERITE.

 Schwarzkopf

 Dial

 RIGHT GUARD

 Snuggle

 Persil

 all

 Purex

BERGQUIST GAP PAD offers telecom infrastructure designers the freedom to integrate high power devices with confidence.

For more information about Henkel's *BERGQUIST* thermal interface material products, visit www.henkel-adhesives.com.

About Henkel in North America

In North America, Henkel operates across its three business units: Adhesive Technologies, Beauty Care, and Laundry & Home Care. Its portfolio of well-known consumer and industrial brands includes Schwarzkopf® hair care, Dial® soaps, Right Guard® antiperspirants, Persil®, Purex® and all® laundry detergents, Snuggle® fabric softeners, as well as Loctite®, Technomelt® and Bonderite® adhesives. With sales of around 6 billion US dollars (5 billion euros) in 2018, North America accounts for 25 percent of the company's global sales. Henkel employs approximately 9,000 people across the U.S., Canada and Puerto Rico. For more information, please visit www.henkel-northamerica.com.

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 2018, Henkel reported sales of around 20 billion euros and adjusted operating profit of around 3.5 billion euros. Henkel employs around 53,000 people globally – a passionate and highly diverse team, united by a strong company culture, a common purpose to create sustainable value, 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.

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

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