

Press Release

August 29, 2018

BERGQUIST® Brand Liquid and Pad Thermal Interface Materials Improve Performance, Lifetime and Reliability of Li-Ion Automotive Battery Systems

Highlights Thermal Henkel Management Solutions at The Battery Show North America 2018

Irvine, CA - Henkel's BERGQUIST® brand of thermal management materials is the market leader in versatile, reliable and cost-effective heat dissipation solutions across nearly all electronic market segments. In the automotive space, specifically lithiumion (li-ion) battery systems, Henkel's thermal interface materials (TIMs) are driving new capabilities with better performance and reliability. Henkel will be exhibiting its latest TIM products, as well as its connecting and protecting materials in booth 311 from September 11 – 13 at The Battery Show North America 2018.

"The capability of lithium-ion battery systems is central to the advancement of electric vehicle (EV) technology," says Pankaj Arora, Henkel Corporation Market Segment Head for Automotive Electronics, E-Mobility. "As new, higher-voltage batteries are being designed for faster charging, longer distances and more intense peak performance, considerations for thermal management are essential for long-term reliability and extended battery life. Our liquid and pad TIM materials are providing critical gap filling for thorough heat transfer technology at the module, pack and chassis level to enable thermal management and ensure dependable performance and reliability."

While Henkel's line of BERGQUIST GAP PAD® TIMs is extensive, one material that li-ion battery manufacturers consistently rely on is BERGQUIST GAP PAD 1450. This soft, compliant TIM with excellent wet-out characteristics conforms to various surface topographies to effectively transfer heat away from battery cells. Its soft, stress-limiting construction is ideal for fragile assemblies, and its permanent liner limits puncture resistance, improves handling and allows simple rework when required.











Increasingly, automotive electronics and li-ion battery specialists are integrating BERGQUIST liquid gap filler TIMs, which are optimized for high-speed dispensing and intricate gap filling to manage the thermal load generated from multiple modules assembled into the battery pack, hood or chassis. Henkel invites The Battery Show delegates to learn about silicone-free gap filler materials and other Henkel solutions for battery packs and e-Mobility electronics. High thermal performance, reduced outgassing, room temperature curing and optimized rheology for improved dispensing are all integrated into the newest BERGQUIST silicone-free, liquid TIM.

In addition to leading-edge materials, Henkel technical experts will share their broad application and material science knowledge during two paper sessions:

- September 13, 2018, 11:15 AM 11:30 AM, Onyx Ballroom Thermal interface materials maximize heat transfer and minimize thermally-induced stress on batteries. Managing the thermal load helps improve automotive safety, battery life span and performance while lowering cost. Find out more about effective thermal control during "The Building Blocks of Thermal Interface Materials for Automotive Power Conversion & Power Storage Systems" presentation by Mark Amberg, Henkel Business Development Manager for E-Mobility & Thermal Technology.
- September 13, 2018, 2:00 PM 2:25 PM, Open Tech Forum -- Eugene Chung, Henkel E-Mobility Business Development Manager, will deliver a presentation entitled "Boosting Performance & Efficiency of New Energy Vehicles Through Advanced Adhesive Technology", during which he will speak about the impact of advanced adhesive technologies on battery life improvement and long-term performance, protection of critical electronics, weight reductions and cost-efficiency.

To learn about Henkel's complete line of automotive power storage solutions, download a brochure here or visit www.henkel-adhesives.com/electronics.

About Henkel in North America

Henkel operates across its three business units – Adhesive Technologies, Beauty Care and Laundry & Home Care – in North America. Its portfolio of well-known consumer and industrial brands includes Schwarzkopf® hair care, Dial® soaps, Right Guard® antiperspirants, professional hair care brand Sexy Hair®, Persil®, Purex® and all® laundry detergents, Snuggle® fabric softeners as well as Loctite®, Technomelt® and Bonderite® adhesives. North America is an important region for Henkel: With sales of around 5.8 billion US dollars (5.2 billion euros) in 2017, North America accounts for 26 percent of the company's global sales. Henkel employs more than 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 2017, Henkel reported sales of 22.6 billion US dollars (20 billion euros) and adjusted operating profit of around 3.9 billion US dollars (3.5 billion euros). Combined sales of the respective top brands of the three business units – Loctite, Schwarzkopf and Persil – amounted to 7.2 billion US dollars (6.4 billion euros). Henkel employs more than 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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