

Press Release

February 18, 2019

Thermal Management and Underfill Materials Earn Distinctions in Competitive Awards Contests

Henkel Innovations take Top Honors at IPC **APEX EXPO Event**

Irvine, CA – At last month's IPC APEX EXPO event in San Diego, CA, Henkel Corporation's BERGQUIST® GAP PAD® TGP 7000ULM thermal interface material (TIM) and LOCTITE® ECCOBOND® UF 1173 underfill were selected as winning products in the Circuits Assembly magazine NPI Awards contest. The new underfill formulation was also chosen as one of five stand-outs in the IPC APEX EXPO Innovation Awards program.

"Henkel's technology development initiatives are focused on delivering products that raise reliability, prioritize sustainability and optimize the performance of nextgeneration electronic devices and systems," says Juan Serrano, Henkel Global Marketing Director, noting that the award-winning materials push past the boundaries of current requirements. "We are honored to have our work recognized with these prestigious accolades and excited about what the new technologies will deliver for our customers."

Sponsored by *Circuits Assembly* magazine, the NPI Awards contest enlists a panel of practicing engineers to evaluate products on a variety of criteria including innovation, cost-effectiveness, reliability, performance and user-friendliness, among others. This year, BERGQUIST GAP PAD TGP 7000ULM won the NPI Award in the TIM category and LOCTITE ECCOBOND UF 1173 topped the competitive underfill category.

BERGQUIST GAP PAD TGP 7000ULM is a high thermal conductivity (7.0 W/m-K) TIM with an ultra-low modulus to ensure low assembly stress. The award-winning material, which is ideal for challenging datacom and telecom applications, is supplied in soft, custom-sized pads and offers high conformability to rough or irregular surfaces to fill intricate gaps for maximum thermal transfer and improved device reliability. Likewise, LOCTITE ECCOBOND UF 1173 provides reliable device protection even in challenging conditions. This novel Henkel underfill protects fine-

LOCTITE TECHNOMELT BONDERITE. Schwarzkopf Dig + sexyhair. Persil





pitch array devices with a highly-filled formulation that delivers an exceptionally high glass transition temperature (Tg) of 160°C and solder-like low coefficient of thermal expansion (CTE). Importantly, LOCTITE ECCOBOND UF 1173 has been developed with health and safety top-of-mind; the formulation contains no reportable REACH-defined substances of very high concern (SVHCs*) and is not classified as carcinogenic, mutagenic or toxic to reproduction (CMR).

In addition to its NPI Award, LOCTITE ECCOBOND UF 1173 was one of only five products selected to receive an IPC APEX EXPO Innovation Award based on its innovation, manufacturing impact and value to the customer. Commenting on the winning products during opening remarks at the IPC APEX EXPO Keynote address, IPC president and CEO John Mitchell said: "The IPC APEX EXPO Innovation Awards allow us to celebrate the innovators and forward thinkers who are changing the technological landscape of the electronics industry. The innovative submissions directly indicate the strength of the electronics industry and its ability to respond to new challenges resulting from emerging technologies in the electronics marketplace."

BERGQUIST GAP PAD TGP 7000ULM and LOCTITE ECCOBOND UF 1173 are representative of Henkel's forward-looking approach to product development and the company's commitment to enabling customers' advanced technology roadmaps. To learn more, visit <u>www.henkel-adhesives.com/electronics</u>.

*As per current, June 2018 REACH SVHC documentation.

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 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 <u>www.henkel-northamerica.com/press</u>.

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