



Press Release

March 28, 2018

Peelable TIM formulation enables easy assembly rework

New Liquid GAP FILLER from Henkel Delivers Thermal Control, Automation and Reworkability

Irvine, CA -- Building on the leading BERGQUIST brand thermal management portfolio, Henkel has developed a brand new liquid GAP FILLER material that offers the rare advantage of thermal interface material (TIM) reworkability without sacrifices in thermal conductivity or automation performance. BERGQUIST GAP FILLER TGF 1500RW delivers these three valuable benefits in a single material, extending even greater process flexibility and post-assembly adaptability.

Henkel's new TIM is a one-part, cure-in-place liquid gap filler allowing use with automated dispensing equipment for high-volume manufacturing operations. Because the material is applied as a liquid, it is ideal for miniaturized, high-density assemblies and complex architectures, penetrating small gaps for complete coverage. Once cured, the material provides optimized surface contact and thermal transfer with a 1.5 W/m-K thermal conductivity, and also delivers excellent low and high temperature mechanical and chemical stability.

"In addition to its high throughput and thermal control capabilities, what makes BERGQUIST GAP FILLER TGF 1500RW distinctive among other liquid thermal interface materials is its peelability," explains Doug Dixon, Henkel Adhesive Electronics Global Marketing Director. "Traditional cure-in-place TIMs generally require very high force for disassembly, which often results in permanent damage to components and substrates. The new BERGQUIST TIM, however, peels away

cleanly from contact surfaces to safeguard delicate componentry and preserve product value.”

Supply chain simplification is another advantage of BERGQUIST GAP FILLER TGF 1500RW. Notably, the material facilitates infinite thickness variations and accommodates multiple dimensions, allowing a single material to be used for many products and applications across the manufacturing operation. Conversely, TIMs in pad or film formats are supplied in pre-determined die cut shapes and thickness, with each requiring its own part number. Simplification of inventory complexity adds to cost-efficiency and optimized resource utilization.

“As today’s manufacturers must compete in demanding and dynamic environments where product performance, operational efficiency and profitability are equally prioritized,” says Dixon in summary, “materials like BERGQUIST GAP FILLER TGR 1500RW that deliver thermal transfer performance, enable high volume production, streamline the supply chain and preserve assembly value help assembly specialists achieve their business objectives.”

For more information, visit www.henkel-adhesives.com/thermal.

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

Contact Doug Dixon
Phone 714-368-8068
Email doug.dixon@henkel.com