

Press Release

Henkel Liqui-Form® 3500 One-Part Gel a Breakthrough for Thermal Interface Materials

March 1, 2016 – Henkel Adhesive Technologies today announced an addition to its line of Bergquist Liqui-Form® Thermal Interface Materials (TIMs) with the market introduction of *Liqui-Form 3500*. A one-part, thermally conductive, liquid formable gel, *Liqui-Form 3500* combines high thermal conductivity with process flexibility and excellent reliability.

Designed to provide a balance between dispensability, low component stress and reworkability, *Liqui-Form 3500* delivers high conductivity of 3.5 W/m-K in a formulation that accommodates modern manufacturing environments. The viscosity of the material is exceptionally stable and is maintained during storage, processing and within the application.

“In many cases, *Liqui-Form* gels are an ideal replacement for traditional thermal interface pads,” explains Jerry Schmitz, *Liqui-Form* Product Line Manager. “With assemblies that have numerous small parts, manually placing multiple pads is cumbersome, labor-intensive and can introduce unnecessary mechanical stress during final assembly. In applications with high value boards requiring end-of-line rework, *Liqui-Form 3500* is quickly removed with a wipe and a final clean. The inherently low adhesion stress minimizes risk of damage when disassembling the part, allowing manufacturers to preserve the integrity of the printed circuit board assembly.”

As *Liqui-Form 3500* is pre-cured and has a higher viscosity than conventional thermal greases, it does not suffer from material migration – or “pump out” – over time, which contributes to its long-term reliability. In addition, the material has low volumetric expansion and stability in continuous use at temperatures as high as 200°C. Industry-leading low ionics is also a unique characteristic of *Liqui-Form 3500*, significantly reducing the threat of any potential electrical issues.

Liqui-Form products greatly simplify the procurement process and inventory management. The ability to source a single material as opposed to numerous thermal interface pads streamlines the BOM, saves time and lowers cost. Because these one-part formulations are fully cured, there is no mixing, refrigeration or post-curing required, allowing manufacturers to integrate *Liqui-Form* materials into their processes with high confidence.

“*Liqui-Form* 3500 is a win-win for electronics manufacturers,” notes Schmitz in summary. “Highly thermally conductive, compatible with automated dispensing processes for excellent throughput, easily reworkable and a single material solution, *Liqui-Form* 3500 addresses today’s demanding requirements – and then some!”

For more information on Henkel's line of *Liqui-Form* products, visit www.henkel-adhesives.com/thermal.

Henkel in North America

Henkel markets a wide range of well-known consumer and industrial brands in North America, including Dial® soaps, Purex® laundry detergents, Right Guard® antiperspirants, got2b® hair gels, and Loctite® adhesives. Visit www.henkelna.com for more information.

About Henkel

Henkel operates worldwide with leading brands and technologies in three business areas: Laundry & Home Care, Beauty Care and Adhesive Technologies. Founded in 1876, Henkel holds globally leading market positions both in the consumer and industrial businesses with well-known brands such as Persil, Schwarzkopf and Loctite. Henkel employs about 50,000 people and reported sales of \$21.8 billion and adjusted operating profit of \$3.4 billion in fiscal 2014. Henkel's preferred shares are listed in the German stock index DAX.

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