



Press release

Irvine, California, November 13, 2007

PowerstrateXtreme™ Dispensable from Henkel Delivers Benefits of Phase Change Materials in a Liquid Product

Keeping pace with the industry's increasing need for more capable and versatile thermal management materials, Henkel today announced the launch and commercial availability of its latest thermal product, PowerstrateXtreme™ Dispensable (PSX-D).

With performance characteristics consistent with that of Henkel's PowerstrateXtreme film products, PSX-D is a phase change material in liquid form that offers many of the usability and throughput advantages of thermal greases without the drawbacks inherent with some thermal grease applications. By definition, phase change materials remain solid at room temperature but become liquid when exposed to heat. In the liquid state, these materials wet the surfaces and fill the surface irregularities with thermally conductive particulates, thus providing better thermal performance. Historically, phase change materials have been supplied in pad or film form, which is acceptable for certain applications but not for those that require an extremely thin layer of material or those that necessitate very high throughput rates as films are generally applied manually.

As a paste medium, Henkel's PSX-D alleviates the challenges associated with phase change films and the shortcomings of thermal greases by incorporating phase change performance into a liquid product. Because the material is a paste, PSX-D's thickness can be adjusted depending on the requirement, offering manufacturers considerable flexibility as only one material – not various films of different thicknesses – must be procured. The material also delivers process adaptability, as PSX-D can be stenciled, needle dispensed, screen printed or manually applied onto a heat sink or other surfaces, eliminating the need for additional equipment investment and improving throughput.

Adhesin

Bonderite

Hysol



LOCTITE



technomelt



Once the PSX-D compound is applied, it cures and dries to a solid phase change material. When heated to the phase change temperature, the material flows and conforms to the surface irregularities of the heat sink and component. Upon flow, air is expelled from the interface by volumetric expansion of the phase change compound, thermal impedance is reduced, and the material performs as a highly efficient thermal transfer material.

“This material truly is the best of both worlds,” says Jason Brandi, Henkel electronics group global product manager for TIM2 thermal materials. “Many people want the benefits of phase change materials but prefer the application versatility that a grease can provide. Now, engineering professionals don’t have to make that choice. Henkel has invested tremendous resource into the development and testing of PSX-D and we are confident it will provide the ease of use and performance benefits long sought after by electronics specialists.”

PowerstrateXtreme Dispensable has been optimized as a TIM2 material for use between microprocessors, IGBT, FBDIMM/Memory, GPU, multichip modules, ASICs and their active heat sinks. The material is also re-workable and repeatable making it especially cost-effective for both lidded and bare die processor applications.

For more information on PowerstrateXtreme Dispensable or any of Henkel's advanced thermal management materials, call the company's headquarters at 949-789-2500 or log onto www.henkel.com/electronics.

About Henkel

For more than 130 years, Henkel has been a leader with brands and technologies that make people's lives easier, better and more beautiful. Henkel operates in three business areas - Home Care, Personal Care, and Adhesives Technologies - and ranks among the Fortune Global 500 companies. In fiscal 2006, Henkel generated sales of 12.740 billion euros and operating profit of 1,298 million euros. Our 52,000 employees worldwide are dedicated to fulfilling our corporate claim, "A Brand like a Friend," and ensuring that people in more than 125 countries can trust in brands and technologies from Henkel.

Contact

Henkel Corporation

Doug Dixon

Phone: 949-789-2500

Fax: 949-785-2595

doug.dixon@us.henkel.com

www.henkel.com/electronics