

Press Release

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Game Changing Solder at PCIM 2015

Henkel to Showcase Thermal Management Expertise

The upcoming PCIM (Power Conversion Intelligent Motion) event in Nuremberg, Germany is the ideal venue for Henkel to highlight the latest addition to its portfolio, Bergquist thermal solutions. Acquired in late 2014, The Bergquist Company is the market leader in thermal management materials and the portfolio is now a core component of the Henkel value solution for its global electronics customers. From Hall 9, Booth 520 over May 19-21, the Henkel team will showcase several of its innovative thermal products, along with the company's recently-introduced game changing solder paste and leading semiconductor materials.

Market-Leading Thermal Management

Effectively managing the thermal load of power devices will be a central theme at this year's PCIM and Henkel's T-Clad insulated metal substrates offer a robust solution. Developed by Bergquist, T-Clad substrates are ideal for higher watt-density applications where high currents are the norm. The materials' ability to minimize thermal impedance and efficiently conduct heat makes T-Clad a more effective thermal management substrate material than conventional printed circuit boards. Applications such as motor controls for battery-driven vehicles, LED lighting and power conversion all benefit from the use of T-Clad to facilitate thermal management.

Throughout the three days of PCIM, the Henkel booth will host live demonstrations of Gap Filler material deposition on board dispensing partner RAMPF's DC-CNC250). Also a Bergquist innovation, Gap Filler materials are thermal interface formulations provided in a liquid medium for greater flexibility and manufacturing automation as compared to traditional film-based products. Available in a range of formulas that provide thermal conductivity levels from 1 to 4 W/m-K, Gap Filler materials provide the ability to control thickness, adapt for device topography and eliminate assembly stress for sensitive components. The use of liquid Gap Filler products also enables



manufacturers to more fully automate the thermal interface application process, thereby increasing throughput and lowering overall cost.

In addition to talking to the Henkel team at the stand, show delegates who are interested in learning more about Gap Filler products should attend a technical presentation at 11:40 a.m. on May 19th. Mr. Holger Schuh, Henkel Product Manager and Application Engineer, will deliver a presentation entitled “Thermally Conductive, Cure-in-Place Gap Filler as an Optimal Solution for High Efficient Cooling” at the Exhibitor Forum 7-260.

Along with these advanced materials, Henkel will showcase Sil-Pad, Gap-Pad Bond-Ply, Hi-Flow and Liquid-Bond thermal solutions throughout the PCIM event, in addition to the successful Loctite phase change heat transfer pastes Loctite TCP 4000PM and newly-introduced Loctite TCP 7800NC for higher temperature operation. Both materials are designed for stencil printing an integrated layer on power modules with the lowest thermal resistance.

Game Changing Solder Paste and Semiconductor Materials

Henkel will also use PCIM as an opportunity to introduce its latest solder paste development, Loctite GC 10, to the European electronics community. The first-ever temperature stable solder paste, Loctite GC 10 offers manufacturers outstanding performance and cost savings throughout the logistics and operations chains. Stable at 26.5°C for one year and at temperatures of up to 40°C for one month, Loctite GC 10 eliminates the need for cold-packed, overnight shipping and on-site refrigerated storage. On the line, the stability of the material dramatically extends print abandon times and stencil life, delivers a start-up time of zero and provides consistent print transfer efficiency. Reflow performance is also exceptional with an expanded reflow window and increased activity for better results with soak temperatures between 150°C and 200°C.

Alongside the company’s next-generation solder paste, Henkel will highlight semiconductor materials specifically formulated for the needs of power devices. Loctite Ablestik ABP 8064T is a high-performance die attach paste with 20 W/mK thermal conductivity. It has excellent stability at high temperatures and can be a suitable replacement for soft solders in medium power applications. Mold compounds are also an area where Henkel has a strong innovation portfolio. At PCIM, visitors are invited to learn more about Loctite Hysol MG 15F-MOD2 C high Tg (245°C) mold compound, which is compatible with emerging silicon carbide (SiC) technology and is designed for use with high voltage and high power device applications.

For more information, visit www.henkel.com/electronics and www.bergquistcompany.com. To schedule an appointment at PCIM, send an e-mail to J.Stamm@bergquistcompany.eu.

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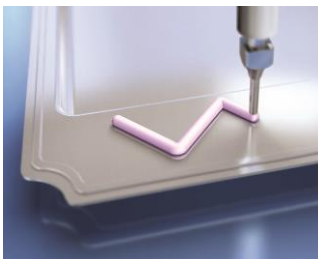
Henkel operates worldwide with leading brands and technologies in three business units: Laundry & Home Care, Beauty Care and Adhesive Technologies. Founded in 1876, Henkel holds globally leading market positions, both in the consumer and in the industrial businesses, with well-known brands such as Persil, Schwarzkopf and Loctite. Henkel employs almost 50,000 people and reported sales of 16.4 billion euros and adjusted operating profit of 2.6 billion euros in fiscal 2014. Henkel's preferred shares are listed in the German stock index DAX.

Photo material is available at <http://www.henkel.com/press>

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The following material is available:



Gap Filler material deposition