

Henkel at the SMT Hybrid Packaging 2013 in Nürnberg

## Highly reliable solutions for microelectronics

— Innovative electronic materials must fulfill several key goals at once. They have to deliver consistently reliable technical performance in harsh environments, while also improving the sustainability profile and cost-effectiveness of production operations. These requirements are essential especially in the automotive industry. To meet them, Henkel has developed highly reliable adhesives, solder materials and underfills innovations, which will be debuted at SMT trade show in Nürnberg from April 16 to 18.

— “Electronics specialists, and especially those in the automotive industry, are increasingly calling for very rugged adhesives that perform reliably even in the toughest conditions,” explains Tom Adcock, Global Product Manager for Electronics Assembly adhesives at Henkel. “We developed our Loctite Ablestik ICP 4000 portfolio of silicone-based ECA adhesives specifically for electronic sensors which are being located ever closer to sources of heat and vibrations in cars.”

— Remaining flexible when exposed to vibrational energy, the Loctite Ablestik ICP 4000 series adhesives are capable of surviving extreme vibration over extended periods of time while retaining their high bond strength and conductivity. They are also superior to traditional epoxy materials with respect to their ability to withstand heat. At temperatures up to 200 degrees Celsius, these single-component, silver-filled silicone adhesives have a low contact resistance.

### Fail-safe bonds and more cost-effective assembly processes

Further innovations in single-component electrically conductive adhesives are designed to ensure fail-safe bonds, simplify assembly processes, and reduce production costs. With Loctite Ablestik ICP 3540, Henkel has succeeded in developing a versatile epoxy adhesive that is especially suited for automotive



applications. It is capable of attaching dies as well as other components in one process step and can be used on both organic and ceramic substrates. This not only saves time but significantly reduces operating costs. Moreover, the adhesive shows no signs of delamination even under large dies, nor any wicking with very small package sizes such as 0402. This new material enhances Henkel's existing portfolio of versatile and reliable adhesives for more cost-effective production processes.

### **Halogen-free product range offering highly reliable performance**

Henkel's halogen-free products – from fluxes and solder pastes to underfills – provide solutions that perform convincingly even in the most demanding production environments. The perfectly matched products in this portfolio enable optimal adaptation to customer-specific production requirements, all from the same provider.

Halogen-free and lead-free, the solder paste Loctite Multicore HF 200 features a particularly impressive high print speed capability. With its humidity resistance and low voiding, the product has already proven its worth in numerous soldering processes, including applications in handheld devices. The market-leading lead-free flux system Loctite Multicore LF 318 shows excellent humidity resistance and a broad processing window for both reflow and printing processes. This halide-free product offers outstanding solderability in different types of reflow processes as well as on different surface finishes.

The two solder pastes Loctite Multicore HF 200 and Loctite Multicore LF 318 are compatible with the lead-free solder alloys that Henkel offers for demanding high-temperature applications, among others. This powerful portfolio ensures highly reliable results for a large spectrum of soldering processes.

During the SMT Hybrid Packaging from April 16 to 18, 2013, Henkel experts will be available in Hall 9, Stand 353, to discuss the company's broad range of products and services. For more information, log on to [www.henkel.com/electronics](http://www.henkel.com/electronics).

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 47,000 people and reported sales of 16,510 million euros and adjusted operating profit of 2,335 million euros in fiscal 2012. 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:**



Henkel has developed highly reliable adhesives, solder materials and underfills innovations.