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Press release

Henkel Wins Pair of *Circuits Assembly* NPI Awards for New Product Innovations

Material Leader's Latest Solder and Thermal Management Solutions Take Home Top Honors

April 4, 2014 – During a special ceremony at last week's APEX event in Las Vegas, Nevada, The Electronics Group of Henkel won NPI Awards for both its high-reliability solder system – LOCTITE MULTICORE HF 212 flux medium and 90iSC alloy – and LOCTITE TAF 8800 thermal absorbent film. Hosted by *Circuits Assembly* magazine, the NPI Awards evaluate competitive products against one another using very stringent criteria that assess innovation, compatibility, cost effectiveness, design, speed/throughput improvements, ease of use, and maintainability and reparability. The Henkel materials solutions emerged as clear winners in the categories of solder materials and adhesives.

“Winning one NPI Award is validation enough, but earning two such prestigious prizes in a single year is rare and incredibly gratifying,” proudly states Henkel Global Marketing Director, Doug Dixon. “These honors just serve to further illustrate Henkel's commitment to innovation and development of meaningful materials that advance modern electronics products.”

Henkel's 90iSC lead-free alloy delivers processability much like a traditional SAC alloy, but temperature cycling performance that is superior to SAC and consistent with or better than conventional SnPb solders. When applied in high operating temperature environments like those found in automotive applications, SAC alloys generally have not delivered on the demanding reliability requirements. The 90iSC lead-free alloy overcomes SAC's shortcomings and matches or exceeds SnPb's reliability attributes. The alloy has a wide temperature cycling range from -40°C to 155°C, optimized creep resistance at high temperature, vibration and drop test performance comparable to SAC and other lead-free alloys, and has printing and reflow behavior consistent with alternative lead-free materials, making it an ideal drop-in replacement. When combined with the LOCTITE MULTICORE HF 212 flux system which exhibits minimal hot slump, extremely low voiding, and provides excellent solderability over a wide range of surface finishes, the solder system delivers a high-reliability, halogen-free formula for today's most demanding applications.

In the adhesives category, Henkel's LOCTITE TAF 8800 thermal absorbent film was awarded the top NPI honor. The film effectively absorbs, spreads, insulates and dissipates IC-generated heat in common handheld devices. Most often the cause of high skin (external housing) temperature, excessive heat from the device CPU can result in user discomfort. LOCTITE TAF 8800 is designed slowly dissipate thermal energy generated by ICs, thereby allowing the device to maintain a lower skin temperature through heat regulation that manages the inherent temperature rise and fall of CPU processing. The film is so versatile that a variety of heat-spreading layer constructions could be incorporated to create both thinner and thicker solutions with multi-axis contourability to allow for orientation over or under components. This offers a vast improvement over conventional solutions, which are often brittle and cannot bend to accommodate various device architectures.

“These materials address two of the most critical and challenging areas of electronics manufacturing – thermal control and reliability,” says Dixon in conclusion. “The Henkel team is grateful that the NPI judging panel has recognized the materials' significance and awarded them these distinct honors.”

For more information on 90iSC, LOCTITE MULTICORE HF 212 or LOCTITE TAF 8800, log onto www.henkel.com/electronics

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 47,000 people and reported sales of \$21.8 billion and adjusted operating profit of \$3.3 billion in fiscal 2013. Henkel's preferred shares are listed in the German stock index DAX.

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