



## Press Release

November 8, 2017

Advances in wafer-level packaging, high thermal semi sintering die attach and MEMS sensor assembly among materials innovations on show

### Next-generation semiconductor materials the centerpiece of Henkel Semicon Europa presence

In addition to showcasing its broad portfolio of die attach pastes and films, new package-level EMI solutions, underfills and encapsulants, Henkel will use Semicon Europa 2017 to share its latest semiconductor materials developments designed to enable advanced automotive and industrial MEMS sensors, RF and power device assembly, and CMOS image and biometric sensor applications. While Henkel's display in Hall B1, Booth 1567 will provide visitors with various samples of parts assembled using the company's high-performance materials, in-depth information on developmental products will be communicated in a series of papers and presentations being delivered by Henkel technology experts.

As part of the Advanced Packaging Conference, Henkel Technical Advisor Tony Winster will present a paper entitled "Conductive Die Attach Adhesives – Effect of Aging at 200°C and its Correlation with Chemical Base" on Tuesday, November 14 at 4:00 p.m. Recognizing that today's automotive electronic components have higher heat dissipation than previous generation components and are subjected to harsher environments, the work aimed to study the impact of these conditions on die attach adhesives within sensor components. A range of silver-filled conductive die attach adhesives of varying base chemistries was evaluated in an effort to provide material selection recommendations for optimal in-use performance.



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Also part of the Advanced Packaging Conference track and being presented on November 14, 2017 at 5.15 p.m. is a paper from Henkel Senior Scientist Jay Chao called “Ultra-Low Warpage Liquid Compression Molding (LCM) Development for Advanced Wafer-Level Packaging”. As today’s devices have become smaller and thinner and move to wafer-level processing, the demands on semiconductor packaging materials are more pronounced. This is especially true for thinner wafers, where CTE mismatches between the encapsulant and the silicon wafer can lead to serious warpage issues. Mr. Chao’s work explored the use of novel, REACH-compliant liquid compression molding (LCM) materials and processes that provide warpage control for fan-out wafer-level packaging (FO-WLP) designs and WLCSP applications that require five- or six-side protection.

Covering a wider application spectrum in his November 14, 11:00 a.m. TechLOUNGE presentation, Ruud de Wit, Henkel EIMEA Semiconductor Steering Unit Head is slated to present a high level overview of liquid, film and B-staged materials innovations for today’s most demanding products, including:

- Advanced semiconductor packaging materials
- High conductivity semi sintering die attach pastes, Insulated Metal Substrates (IMS) and package-level EMI shielding for RF and power device assembly
- Ultra-low and stable modulus materials <1 MPa for MEMS sensor assembly
- Low outgassing and low temperature cure materials for CMOS image and biometric sensor packaging

To register to attend any of Henkel’s paper sessions, visit [www.semiconeuropa.org/node/1351](http://www.semiconeuropa.org/node/1351).



Show delegates may attend the TechLOUNGE presentation free of charge and are invited to visit Henkel in Hall B1, Booth 1567 to learn more about the company's full range of semiconductor assembly solutions.

For more information, please visit: [www.henkel-adhesives.com/electronics](http://www.henkel-adhesives.com/electronics).

#### **About Henkel**

Henkel operates globally with a well-balanced and diversified portfolio. The company holds leading positions with its three business units in both industrial and consumer businesses thanks to strong brands, innovations and technologies. Henkel Adhesive Technologies is the global leader in the adhesives market – across all industry segments worldwide. In its Laundry & Home Care and Beauty Care businesses, Henkel holds leading positions in many markets and categories around the world. Founded in 1876, Henkel looks back on more than 140 years of success. In 2016, Henkel reported sales of 18.7 billion euros, adjusted operating profit of 3.2 billion euros. Its three top brands, Persil (detergent), Schwarzkopf (hair care) and Loctite (adhesive) generated more than 6 billion euros in combined sales. Henkel employs more than 50,000 people globally – a passionate and highly diverse team, united by a strong company culture, a common purpose to create sustainable value, and shared values. As a recognized leader in sustainability, Henkel holds top positions in many international indices and rankings. Henkel's preferred shares are listed in the German stock index DAX. For more information, please visit [www.henkel.com](http://www.henkel.com)

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

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Henkel AG & Co. KGaA

**The following material is available:**



Package-level EMI shielding solutions