



## Press Release

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High-performance Material Raises Device Reliability within Challenging Environments

# High Operating Temperature Underfill from Henkel Delivers Protection for Aero and Auto Electronics

Irvine, CA – Anticipating the requirements for next-generation high-reliability electronics applications, Henkel Corporation today announced the development of LOCTITE® ECCOBOND® UF 1173. The protective underfill material, which has been formulated with health and safety top-of-mind, does not contain any reportable REACH SVHCs\*, is not CMR classified and delivers outstanding performance under high operating temperature environments.

“The miniaturization trend is now firmly part of the automotive and aerospace sectors, particularly for advanced driver assistance system (ADAS) technologies such as cameras, radars and lidars; as well as aerospace, satellite and UAV applications,” says Henkel Global Market Segment Head for ADAS and Safety, Vinod Partha. “The use of fine-pitch array devices such as BGAs and CSPs within these systems has increased dramatically, making interconnect protection a critical component for long-term reliability and performance. LOCTITE ECCOBOND UF 1173 provides this essential protection in a formulation that can withstand the high operating temperatures induced by smaller, higher functioning devices within challenging operating conditions.”

Henkel’s new underfill system improves on older-generation materials, not only with its prioritization of health and safety, but also from a performance and processing perspective. LOCTITE ECCOBOND UF 1173 is a one-component underfill that can be jet or needle dispensed, flows fast in and around tight interspaces and cures quickly to form void-free interconnect protection from shock, drop and vibration. Importantly, the novel underfill exhibits high glass transition (T<sub>g</sub>) temperature capability of 155°C and a low coefficient of thermal expansion (CTE) to ensure robust protection performance even under stressful conditions.

“Proper function of ADAS automotive systems and aerospace technologies is not a matter of convenience; reliable operation is integral to fail-safe performance,” explains Doug Katze, Henkel Global Market Segment Manager, Aerospace. “If a solder joint on a BGA cracks due to stress, failure of the component and the system’s function are the potential result. LOCTITE ECCOBOND UF 1173 protects devices from stress-related failures, while complying with current health standards and offering the ability to cope with operating temperatures as high as 155°C. This material is a boon for system reliability when harsh environments are the norm.”

For more information about LOCTITE ECCOBOND UF 1173 or any of the company’s electronic protection materials, visit [www.henkel-adhesives.com/electronics](http://www.henkel-adhesives.com/electronics).

*\*As per current, June 2018 REACH SVHC documentation.*

### **About Henkel in North America**

Henkel operates across its three business units – Adhesive Technologies, Beauty Care and Laundry & Home Care – in North America. Its portfolio of well-known consumer and industrial brands includes Schwarzkopf® hair care, Dial® soaps, Right Guard® antiperspirants, professional hair care brand Sexy Hair®, Persil®, Purex® and all® laundry detergents, Snuggle® fabric softeners as well as Loctite®, Technomelt® and Bonderite® adhesives. North America is an important region for Henkel: With sales of around 5.8 billion US dollars (5.2 billion euros) in 2017, North America accounts for 26 percent of the company’s global sales. Henkel employs more than 9,000 people across the U.S., Canada and Puerto Rico. For more information, please visit [www.henkel-northamerica.com](http://www.henkel-northamerica.com).

### **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 2017, Henkel reported sales of 22.6 billion US dollars (20 billion euros) and adjusted operating profit of around 3.9 billion US dollars (3.5 billion euros). Combined sales of the respective top brands of the three business units – Loctite, Schwarzkopf and Persil – amounted to 7.2 billion US dollars (6.4 billion euros). Henkel employs more than 53,000 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 [www.henkel-northamerica.com/press](http://www.henkel-northamerica.com/press)

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