

Press Release

September 14, 2018

Thermal Adhesive Film with High Performance Supplied in Pre-cut Formats for Simplified Processing

New Assembly Film from Henkel Raises the Bar on Reliability, Provides Strong Adhesion at **High Temperature**

Irvine, CA – Henkel Corporation has announced the development of a high performance assembly film designed for applications where extreme reliability is required. The material, LOCTITE® ABLESTIK® CF 3366, is an epoxy-based, silverfilled film adhesive that provides high thermal and electrical conductivity, delivering excellent heat dissipation capabilities for robust thermal management. Leapfrogging other commercial assembly films, the new Henkel material has been designed to address today's miniaturization trends, increasing power density demands and high operating temperature environments.

"Over the past decade, electronic parts have become smaller, more complex and higher functioning," says Doug Katze, Global Market Segment Manager Defense & Aerospace for Henkel. "Miniaturization is happening across the board – not only in the well-known consumer and handheld markets, but also in sectors such as aerospace and automotive, pushing the limits of already harsh environments. Our new assembly film accounts for these dynamics, delivering excellent adhesion performance at very high temperature."

Henkel's LOCTITE ABLESTIK CF 3366 was formulated to overcome what is a common shortcoming of less thermally capable materials. When tested against another industry film, both LOCTITE ABLESTIK CF 3366 and the alternative film showed good adhesion strength at room temperature. As both materials were subjected to higher operating temperatures, the alternative film lost as much as 75% of its adhesion strength, while LOCTITE ABLESTIK CF 3366 maintained its original adhesion strength up to temperatures as high as 175°C. For applications that encounter extreme conditions, LOCTITE ABLESTIK CF 3366 offers strong adhesion

LOCTITE TECHNOMELT BONDERITE. Schwarzkopf Dig + sexyhair. Persil 🗿



to facilitate reliable RF ground plane performance even during long-term exposure to elevated temperatures.

The new Henkel assembly film has curing capability at temperatures as low as 125°C, providing a void-free bondline with uniform adhesion and controlled thickness. LOCTITE ABLESTIK CF 3366 can be custom cut into highly complex shapes and patterns to accommodate almost any assembly dimension, delivering a precise quantity of adhesive where required. As compared to thermal pastes, assembly films offer a cleaner, more sustainable, low cost-of-ownership, process-friendly solution.

"Henkel's new assembly film is ideal for high-reliability applications such as aircraft, unmanned aerial vehicles (UAVs), communications, cybersecurity infrastructure, or anywhere assemblies will be exposed to elevated temperature conditions," concludes Katze. "LOCTITE ABLESTIK CF 3366 offers the performance and peace-of-mind manufacturers of mission-critical applications require."

For more information, visit <u>www.henkel-adhesives.com/electronics</u> or call +1-952-820-6569.

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 <u>www.henkel-northamerica.com</u>.

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.

Photo material is available at <u>www.henkel-northamerica.com/press</u>

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