



Press Release

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LOCTITE® ABLESTIK® ABP 8068TD Provides High Thermal Capability with No Requirement for Die Back-Side Metallization

Henkel Expands Semi-Sintering Die Attach Portfolio, Launches Versatile Material Ideal for Power Package Applications

Irvine, CA – The latest in its line of semi-sintering die attach materials, Henkel today announced the commercialization of LOCTITE® ABLESTIK® ABP 8068TD, a high thermal die attach paste developed for use in applications where no die back-side metallization (BSM) is required, although can be used if desired. The adaptability of the material gives semiconductor companies a high thermal conductivity die attach option for bare silicon (Si) die integration and is particularly well-suited for high power applications.

Henkel's Semiconductor Packaging Market Strategy Manager, Raj Peddi, explains LOCTITE ABLESTIK ABP 8068TD's importance for the power sector, and the application flexibility it enables. "This material allows packaging specialists to satisfy the requirement for high heat dissipation in applications where bare silicon die are used, particularly in situations where back-side metallization processes are cost- or process-prohibitive," he says. "Because the material is compatible with different die – whether metallized or not – it provides more design and manufacturing opportunities for OSATs and power device developers."

Addressing the challenges associated with the use of conventional high-lead solder, the thermal conductivity limitations of traditional die attach materials and the

processing complexities of pure silver sintering products, Henkel developed and launched its semi-sintering die attach paste platform in 2017. Applied and processed in the same way as standard die attach adhesives, the unique chemistry of Henkel's semi-sintering materials allows the formation of an interpenetrating network of silver (Ag) and resin which enables excellent interface contact, high thermal conductivity and good thermal cycling reliability.

LOCTITE ABLESTIK ABP 8068TD extends the benefits of semi-sintering to a wider variety of power packages using different types of die and lead frame finishes. The material has bulk thermal conductivity of 50 W/m-K and was evaluated across several standard testing regimens with bare Si die and Ag-metallized die of various dimensions, up to 5.0 mm x 5.0 mm; as well as on copper (Cu), Ag and pre-plated (PPF) lead frame finishes. Consistent with other Henkel semi-sintering adhesives, LOCTITE ABLESTIK ABP 8068TD exhibited excellent workability, good dispensing performance, no resin bleed out on any of the tested lead frames, strong adhesion to all surfaces, and long open (2.0 mm x 2.0 mm die @ 2 hrs.) and stage times (2.0 mm x 2.0 mm die @ 24 hrs.). The reliability of LOCTITE ABLESTIK ABP 8068TD is also notable, as it achieves MSL 3 on most tested die finish/lead frame combinations, and MSL 1 for several Ag-BSM and bare Si die/lead frame pairings.

“Already proven in volume production, LOCTITE ABLESTIK ABP 8068TD delivers another high-thermal, package-level solution for devices integrating bare Si and/or metallized die, including QFNs, SOTs, and LGAs, among others,” reveals Peddi. “This is an important development for the power package sector.”

For more information about LOCTITE ABLESTIK ABP 8068TD BSM-optional semi-sintering adhesive, [contact the Henkel technical team](#).

About Henkel in North America

In North America, Henkel operates across its three business units: Adhesive Technologies, Beauty Care, and Laundry & Home Care. Its portfolio of well-known consumer and industrial brands includes Schwarzkopf® hair care, Dial® soaps, Persil®, Purex®, and all® laundry detergents, Snuggle® fabric

softeners as well as Loctite®, Technomelt® and Bonderite® adhesives. With sales of around 6 billion US dollars (5 billion euros) in 2020, North America accounts for 27 percent of the company's global sales. Henkel employs approximately 9,000 people across the U.S., Canada and Puerto Rico. For more information, please visit www.henkel-northamerica.com, and on Twitter [@Henkel_NA](https://twitter.com/Henkel_NA).

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 2020, Henkel reported sales of more than 19 billion euros and adjusted operating profit of about 2.6 billion euros. Henkel employs about 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.

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