



Press Release

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Novel Thermal Management Coatings Aid in Reducing Operational Heat in Cloud and Hyperscale Data Center Optical Transceivers

Micro-Thermal Interface Material Coatings from Henkel Land Award Win, Portfolio Expansion Underway

Irvine, CA – Henkel Corporation (Henkel), a leader in material solutions for telecom and datacom systems, today announced that its BERGQUIST® microTIM mTIM 1000 series micro-thermal interface coatings are the recipient of a *Circuits Assembly* magazine 2021 NPI Award. A judging panel of practicing engineers evaluated all entrants across various criteria including cost-effectiveness, design, performance, innovation and compatibility with existing technology; Henkel's microTIM product was named the winner in the thermal interface materials category.

As data centers embrace the 400 GbE standard -- and soon move to 600 GbE or even 800 GbE – to manage greater data bandwidth demands, the heat generated by higher-capacity pluggable optical modules (POMs) has to be efficiently dissipated to ensure optimal performance. Traditional thermal interface materials such as thermal pads or tapes are not practical, as they are easily scraped off or damaged with module insertion and removal. And, using no heat dissipating interface at all – just metal-to-metal contact between the module and riding heat sink – is not a satisfactory solution for higher-power (≥ 15 W) modules.

Henkel's BERGQUIST® microTIM mTIM 1000 series micro-thermal interface coatings provide a robust thermal management solution for next-generation POMs in cloud and hyperscale data centers and data center interconnect applications.

Applied on the riding heatsink, the durable microTIM coatings can withstand numerous module insertions and pulls with no degradation in performance. In testing, Henkel's microTIM innovation had a significant impact on heat reduction: Evaluation demonstrated that a high-power density POM that requires 15 W power dissipation will operate approximately 5.0°C cooler with the microTIM coating versus no coating and a metal-to-metal interface. With as many as 32 POMs per networking line card, this is significant heat reduction for improved operational performance.

Henkel's microTIM coatings are the first such market innovation to address this challenge and the initial success has fostered further development with a second-generation material set to launch mid-2021. Offering the same heat-dissipating benefits as the original formulation, the new material can be applied either on the heat sink or directly on the module.

Henkel, winner of multiple industry awards for its thermal portfolio, is a global leader in thermal management solutions and is grateful to *Circuits Assembly* for offering the NPI Award platform to recognize true industry innovation. For more information about BERGQUIST® microTIM mTIM 1000 series POM solutions or any of Henkel's award-winning thermal materials, visit the company's [thermal management materials resource](#).

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](#).

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.

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

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