



Press Release

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Battery Show Europe – latest developments in the advanced battery and automotive industries

Henkel showcases smart materials and processes for safer, cooler, and faster-to-charge batteries

Düsseldorf – Henkel will be attending the Battery Show 2021 in Stuttgart from November 30th to December 2nd, presenting its latest innovations in Thermal Interface Materials, Thermal Propagation Prevention, Adhesives and Gasketing, and Conductive Coatings at booth 366 in Hall 4.

“As a leading partner to the automotive industry Henkel is proud to be accelerating the journey towards electrification by enabling better, safer and more cost-effective battery technologies,” says Frank Kerstan, Head of Sales and Business Development e-Mobility Europe. “At the Battery Show Europe, we will be showcasing our comprehensive technology portfolio and breadth of material, equipment and process know-how.”

In advance of the Battery Show, Henkel held a technical web-seminar on November 11th. It provides an advanced look at the Thermal Propagation Prevention solutions being presented at the exhibition – in specific, epoxy- and water-based fire protective Coatings, Pottings and Foam Technologies. In these areas, Henkel is currently expanding its product portfolio with innovative, sustainable new solutions. To get a sneak peak of Henkel’s Thermal Propagation Prevention portfolio watch this web-seminar on-demand [here](#).

At the Henkel booth, experts will also hold a product showcase about ‘*Thermal Interface Materials and Thermal Propagation Prevention solutions for safer and more efficient EV Battery Systems*’. During this showcase on November 30th at 14:00 CET, visitors can get detailed and vivid insights regarding the latest Innovations in battery technologies.

Thermal Interface Materials

Thermal Interface Materials are essential for safe and efficient battery performance in charging and discharging cycles. At the same time, scalable technologies suitable for mass production are becoming increasingly important. „We recently launched a two-component Silicon-free Gap Filler Bergquist TGF 2010 APS with a thermal conductivity of 2 watts per meter Kelvin (W/mK.) This OEM-approved product is serving a production volume of more than 1,000 battery packs per day,“ explains Marvin Romberg, Manager Business Development Power Storage at Henkel Adhesive Technologies. Henkel is also sharpening its portfolio by adding two new silicone-free and electrically non-conductive Gap Fillers, Bergquist TGF 3015 TGF with 3 W/mK and Bergquist TGF 2020 APS with 2 W/mK. A notable innovation as well is the new 1-component silicone-free Gap Filler Bergquist TLF 2010, with a very low compression force.

Henkel additionally widened its portfolio of thermal adhesives with Loctite TLB 9310 APS. This polyurethane-based adhesive provides a thermal conductivity of 3 W/mK and was designed specifically for battery cell-to-pack designs suitable for large-scale production.

Thermal Propagation Prevention

“When it comes to fire protection, meeting regulatory requirements for passenger safety is essential” explains Manfred Kosche, Senior Sales Manager e-Mobility OEMs Europe at Henkel. “Hence we recently launched a new fire protection coating for battery lids. Loctite EA 9400 is a two-component epoxy technology that forms a thermal insulating layer which slows the heating of the battery lid. The coating can be applied to the inside or outside of the battery lid and has excellent adhesion to metal or e-painted metal,“ he elaborates further.

With Loctite FPC 5060 Henkel also offers a sustainable water-based alternative for inner battery covers. Additionally, Fermapor HS Foams can be used for filling battery packs with polyurethane-based 2-component rigid foam. Thanks to its flame-retardant properties, the UL-94 V0-approved rigid foam blocks heat transfer from cell to cell, preventing a thermal chain reaction. Henkel's automation solution enables fully automatic, unlimited dispensing at defined potting points of the cavities between the battery cells.

Adhesives and Gasketing

The integrity of battery packs and their protection from harsh external environments are essential to an electric vehicle performance. Henkel will showcase its comprehensive range of innovative adhesive and gasketing products. Henkel's Technomelt PS 8226 EV is an EU REACH compliant, pressure sensitive hotmelt adhesive, designed for battery cell-to-cell

bonding. This Tier-1 approved material can help Henkel's automotive customers to increase the level of automatization, which usually results in higher accuracy and cost- and time savings.

Serviceable sealants will also play an important role at the Battery Show: "Loctite ESB 5100 is a great example for that. It has been designed amongst others for aluminium cases for battery packs that allow customers to re-open their components. It is a high quality non-reactive sealant with very high tackiness and shows a self-healing effect," explains Marvin Romberg. Another technology to seal battery components is the 2-component sealing foam Fermapor K31 made of polyurethane or Fermasil made of silicone with UL-94 V0 approval allowing the housing to be repeatedly opened and re-closed for maintenance purposes. With both Loctite ESB 5100 or Fermapor K31 batteries are protected against moisture, corrosion, and dust.

Conductive Coatings

A key challenge for market success is to improve the charging and discharging performance of lithium-ion battery cells. For this purpose, Henkel has developed specific conductive coatings. They reduce the internal electrical resistance and increase the adhesion of the active material to the cathode for lithium iron phosphate (LFP) and lithium nickel manganese cobalt (NMC) battery cells. This has a significant effect on the battery cells' charging performance.

At the Battery Show Europe, Henkel will help the visitors to find the right solutions for their possible design and production needs.

To learn more about the event and Henkel's contribution and presence there, please visit: <https://www.thebatteryshow.eu>

About Henkel

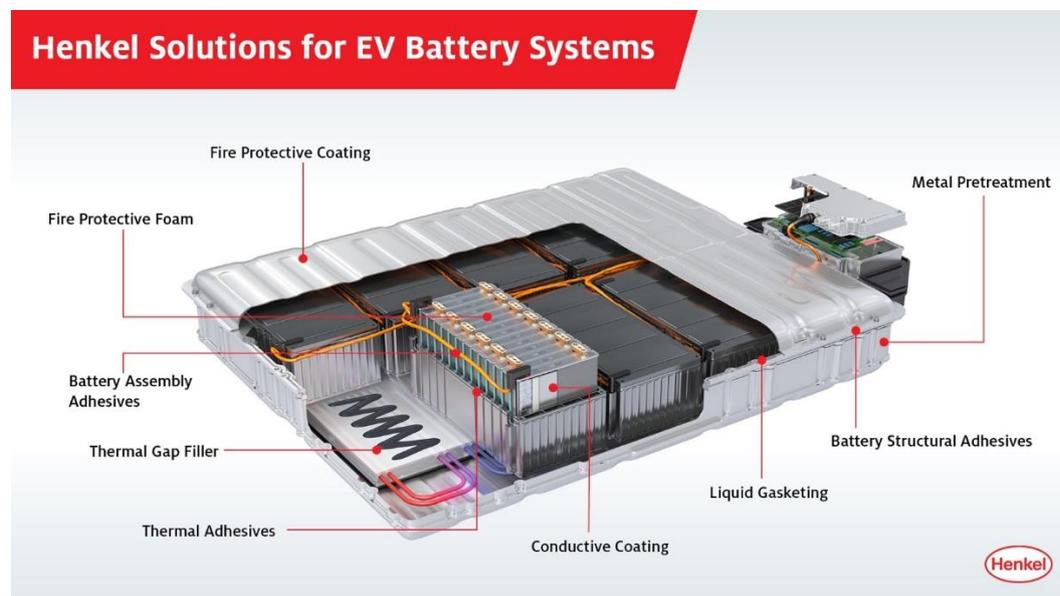
Henkel operates globally with a well-balanced and diversified portfolio. The company holds leading positions with its three business units in both industrial and consumer businesses thanks to strong brands, innovations and technologies. Henkel Adhesive Technologies is the global leader in the adhesives 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 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.com/press

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Henkel AG & Co. KGaA



Henkel's comprehensive solutions portfolio and deep application know-how enables the optimization of EV battery systems' safety, cost efficiency, and lifetime performance.



Henkel solutions like the Thermal Gap Filler - Bergquist TGF 2010 APS are optimized for not only in performance but also for their application processes.