



Press Release

April 08, 2021

Henkel Adhesive Technologies launches LinkedIn livestream series "Henkel Expert Talks"

Optimizing EV battery pack assembly and design with experts from Henkel

Düsseldorf – As the automotive industry races towards an electrified future, one of the key roadblocks to progress – cost-effective, large scale battery manufacture – is being rapidly dismantled by breakthroughs in battery design and assembly. In a new LinkedIn livestream series, experts from Henkel Adhesive Technologies share insights from the e-mobility market and the leading edge of battery assembly and design to take on any questions in an open discussion.

As a thought leader within the value chain of this field Henkel has chosen this live format to create an additional platform to enhance and maximize direct and transparent interaction with customers, industry partners and experts around the world, to fuel the discussion on battery technology and production. The 5-part live talk series, which launches on April 13th and will be moderated by Stefan Hoefer, Global Market Strategy Head E-mobility at Henkel Adhesive Technologies, will explore the opportunities and challenges in this area, including improving charging performance, enhancing safety, optimizing assembly efficiency and techniques and solutions for protecting battery components, to give Henkel's thought-leader take on the topics.

The challenge facing the automotive industry is unprecedented: with battery design for large volume commercial application transpiring for the first time. Hence, the ability to cost-efficiently build batteries will be a critical differentiator for auto manufacturers. Battery costs are already dropping, from 1000 US-Dollar per KWH in 2010 to 156 US-Dollar per KWH today¹. By 2030, projected cost could drop to 73 US-Dollar per KWH. In this first LinkedIn

¹ Forbes.com, Low-Cost Batteries Are About To Transform Multiple Industries, December 12, 2019, <https://www.forbes.com/sites/robday/2019/12/03/low-cost-batteries-are-about-to-transform-multiple-industries/?sh=31e7d3401054>

livestream, experts from Henkel Adhesive Technologies describe how these next gains will be achieved and how the industry can take on the primary challenges regarding safety and battery life. Starting April 13th every Tuesday for 5 episodes, the livestreams will provide insights and Q&A sessions on the following topics:

1. Thermal interface materials with Holger Schuh, April 13, 3 PM CEST

Thermal management is the key to safe and efficient battery performance. In this session, Holger Schuh, Global Manager for Automotive Components Thermal Technologies, describes how this challenge can be taken on with best-in-class thermal interface materials. Thermal runaway remains a concern to stay with the limited operating temperature range of battery chemistry and to prevent fires. If just one cell catches fire, it starts a chain reaction and destroys the entire pack. Hence, thermal management is critical. Henkel produces a range of best-in-class thermal interface materials specifically to address thermal management issues in battery packs. In addition to thermal conductivity, these materials offer such benefits as high flow rates to support large volume production, lower assembly force, reliability, and rework ability. To learn more please visit:

<https://www.linkedin.com/events/liveonlinkedin-thermalmanagemen6781239411653918720>

2. Adhesives for Battery Components Assembly with Nicholas Bewick, April 20. 3 PM CEST

The electric vehicle market is expected to reach about one million sales this year. This large volume assembly process requires unique adhesives for quick high-automated assembly, with adaptable cure mechanisms and work time. Henkel is a prominent and respected name in adhesives for a wide range of applications. Nicholas Bewick, Senior Chemist for Automotive Components Bonding Technologies, provides an overview on Henkel's bonding solutions. To learn more please visit: <https://www.linkedin.com/events/6782336658936340480/>

3. Sealants for Battery Gasketing with Matt Boback, April 27, 3 PM CEST

Since the battery is the most expensive component in an electric car, rework ability is a key requirement. Gasketing is used for sealing the battery pack tray to its cover, and to act as a moisture barrier for the modules and the battery management system inside. The Henkel portfolio of gasketing products includes a solution specifically designed for battery pack application, which allows for rework ability while providing sealing capabilities on par with

FIPGs. To learn more about Henkel's gasketing solutions join Matt Boback, Business Development Manager for Automotive Components E-mobility solutions, for this livestream:

<https://www.linkedin.com/events/6782344111509897216/>

4. Surface Treatments for Corrosion Protection with Huimin Cao on May 4, 3 PM CEST

Battery pack frames typically are stamped or extruded piece of aluminium, but this creates a mechanical design challenge, as the process introduces micropores into the structure. These pores can lead to mechanical fractures and ineffective moisture protection. One solution is to impregnate the frames. Henkel is also one of the market leaders in providing impregnation services globally. In this livestream Huimin Cao, Business Development Manager for Automotive Components Surface Treatment Solutions, will describe impregnation services available from Henkel. To learn more please visit:

<https://www.linkedin.com/events/6782344621424025600/>

5. Coatings for Battery Cells & Pack with John McGee, May 11, 3 PM CEST

In this upcoming web series, Henkel will cover all materials applied around the cells and module assemblies. Henkel also makes conductive coatings for cathodes. The unique solutions allow for more charge/discharge cycles and higher charge retention capacity. To learn more about the conductive coatings, join John McGee, Senior Scientific Principal for Automotive Components Coatings, for this livestream. To learn more please visit:

<https://www.linkedin.com/events/liveonlinkedin-coatingsforbatte6782345053449916416/>

Make sure you don't miss our Henkel Expert Talks livestreams series by following Henkel Adhesive Technologies on LinkedIn at <https://www.linkedin.com/showcase/henkel-adhesives>

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.com/press

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Henkel AG & Co. KGaA

The following picture material is available:



HENKEL
EXPERT TALKS

LET'S TALK LIVE, WITH OUR SERIES ON:
Optimizing EV Battery Design & Assembly

>> 5 WEEKS, 5 EPISODES

- THERMAL INTERFACE MATERIALS FOR BATTERY COOLING**
April 13th
- ADHESIVES FOR BATTERY COMPONENTS ASSEMBLY**
April 20th
- SEALANTS FOR BATTERY GASKETING**
April 27th
- SURFACE TREATMENTS FOR CORROSION PROTECTION**
May 4th
- COATINGS FOR BATTERY CELLS & PACKS**
May 11th

FOLLOW HENKEL ADHESIVES TO BE NOTIFIED

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Henkel

The 5-part live talk series will explore the opportunities and challenges in battery technology and production, including improving charging performance, enhancing safety, optimizing assembly efficiency and techniques and solutions for protecting battery components, to give Henkel's thought-leader take on the topics.