



Press Release

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The Mobility Alliance designed to drive lightweighting in automotive

Henkel and RLE International highlight their combined expertise at AEE 2019

Düsseldorf, Germany – Henkel and RLE International have joined forces to help OEMs and tier 1 suppliers in the automotive industry leverage weight savings of up to 50 percent with hybrid structural body parts. Collaborating under the moniker of The Mobility Alliance, the partners will highlight the lightweighting potential of high-performance structural foam established in comprehensive engineering design and crash simulation studies. Results will be on display at Booth 108 in Hall 12 during the Automotive Engineering Expo 2019 in Nuremberg, Germany, June 4 and 5.

Lightweighting remains a continuing challenge for automotive manufacturers. Even one tenth of a millimeter in body part thickness can save a lot of weight and add to the overall fuel efficiency or battery reach of a vehicle. However, on most modern cars these parts have already become so thin that further reductions may compromise buckling strength and rigidity, resulting in insufficient crash protection.

In several studies targeted at optimizing the performance of existing and future vehicle concepts, The Mobility Alliance has proven that the combination of innovative hybrid structural design using advanced material science and engineering expertise can still enable significant weight savings while maintaining structural integrity and safety.

“Our encompassing joint approach from concept to launch and series production ensures the security, efficiency and sustainability of all development, engineering and material processes,” explains David Caro, Head of Global Engineering, OEM Design, Automotive & Transportation at Henkel. “Customers are granted access to best-in-class material science and extensive engineering know-how, resulting in new levels of lightweighting at minimized turnaround times.”

The structural foam behind the hybrid designs is a commercially available epoxy based Teroson EP material from Henkel that delivers high strength and stiffness at extremely low weight. Several OEMs are already using it to replace traditional steel reinforcements in various lightweight structural parts.



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"The service package offered by The Mobility Alliance comprises full engineering and optimization of each component for all crash load scenarios at one of six dedicated development centers around the world," adds Tobias Wigand, Technical Unit Leader for Advanced Material Concepts at RLE International. "Final parts can then be manufactured for on-time delivery at sites located close to customers."

The crash simulations performed in the studies adhered to strict international automotive standards, including offset and small overlap frontal crash, side/pole crash, rear impact and roof crush testing according to European and U.S. NCAP, IIHS and FMVSS specifications, respectively. The optimized hybrid designs using Henkel's Teroson EP structural foam passed all these tests within the limits of deformation and intrusion, while offering overall weight savings of up to 50 kg per car vs. conventional all-metal components.

Henkel and RLE International's experts will be available at AEE 2019 in Nuremberg to explain and discuss the innovative approach of The Mobility Alliance in greater detail at Booth 108 in Hall 12.

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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 2018, Henkel reported sales of around 20 billion euros and adjusted operating profit of around 3.5 billion euros. Henkel employs around 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.

About RLE International

RLE International Group, with global headquarters in Overath near Cologne, Germany, is a world leading development, technology and consultation service provider to the international engineering industries. With 2,000 skilled employees in engineering design and state-of-the-art facilities in seven countries, worldwide, RLE provides advanced mobility concepts, EE solutions and engineering services across the entire value chain of customers. Learn more at www.rle.international. As part of a strategic alliance to drive and support new solutions in automotive engineering.



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The following illustration material is available at www.henkel.com/press.

The Mobility Alliance



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