



Press Release

June 29, 2017

One-stop process portfolio for all needs in metal surface treatment

Bonderite Solutions from Henkel Help Automotive Suppliers to Leverage the Growth Potential in Lightweighting Metals

Düsseldorf, Germany – As a leading company in metal surface treatment processes, Henkel Adhesive Technologies offers a diversified range of Bonderite solutions for OEMs and suppliers seeking to cut weight and improve sustainability with advanced new alloys and multi-metal materials.

Faced with tighter regulatory demands and growing consumer awareness of better fuel efficiency and reduced emissions, automotive manufacturers are increasingly moving from traditional steel sheet or galvanized alloys to mixed and very light metals that offer significant weight savings. In 2016, BENSELER-Group, a leading tier 1 supplier to many European car manufacturers, opened a new plant in Germany dedicated to cathode dip coating (CDC) of automotive body parts and structural components. With a capacity for coating approximately 1,000 square meters of metal surface per hour, the plant relies on various processes that were engineered by Henkel to address major cost, performance and sustainability issues in metal pretreatment.

Aluminum components are taken through deoxidizing and chromium-free conversion using Bonderite M-NT 2040, which is based on a revolutionary phosphate-free Henkel technology focused on multi-metal and light metal substrates. The final step for the steel parts before immersion coating is a special tri-cationic zinc phosphating treatment. Both techniques serve to activate the substrate and create an ideal surface for subsequent priming and excellent corrosion protection.

The comprehensive Bonderite portfolio includes innovative nickel-free, chromium-free and zinc-free processes for virtually any metal substrate. This offers customers a “total solutions” package of coating chemistry and expertise across the entire value chain before, during and after pretreatment. Recent developments include highly specialized formulations, such as Bonderite M-NT 160/161 for magnesium/zirconium and M-NT 400 for aluminum/titanium.



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In addition to M-NT TecTalis, there is also a new M-ZN Two Step Process available for combinations of steel or galvanized steel with aluminum.

With the development of Bonderite M-NT 160/161, Henkel has underscored its unique position as a surface treatment specialist of light metals. The advanced process can not only be used in the conversion step of magnesium/aluminum hybrid substrates, but is also the only solution world-wide to provide magnesium parts ready for painting at the end of the very same day. Depending on component size and complexity, successful conversion can be achieved within 15 to 180 seconds. At ambient temperatures of 15 to 30°C, the non-chromate process forms a layer on the substrate that improves paint adhesion while offering enhanced corrosion protection.

In addition, customers running extensive metal surface treatment operations can also take advantage of Henkel's unique Lineguard process control equipment, which is available in modular hardware and software configurations. Lineguard features state-of-the-art PLC, sensor and HMI technology adapted and seamlessly integrated to provide a total system solution tailored to each customer's individual needs, from chemical pretreatment and pumps to automated process data acquisition and comprehensive documentation.

Together with Henkel's global capabilities, this creates a very cost-effective "one face to the customer" approach. Suppliers like BENSELER-Group can benefit from this comprehensive offering and gain a competitive edge in surface treatment as they leverage the lightweighting opportunities opened by new alloys and multi-metal materials throughout automotive and other important industries.

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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 2016, Henkel reported sales of 18.7 billion euros, adjusted operating profit of 3.2 billion euros. Its three top brands, Persil (detergent), Schwarzkopf (hair care) and Loctite (adhesive) generated more than 6 billion euros in combined sales. Henkel employs more than 50,000 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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The following material is available:



Lightweight brake disk shield made of aluminum, surface treated by BENSELER-Group in a chromium-free Henkel Bonderite process. (Photo: © BENSELER-Group, PR030)

Henkel's Metal Solutions Value Chain



Henkel's Bonderite solutions cover the entire value chain before, during and after pretreatment of single-metal as well as multi-metal substrates. (Graphic: © Henkel, PR030)

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