



## Press Release

July 29, 2024

Significant savings potential due to shortened process

### **All-in-one: Henkel combines metal passivation and pretreatment in a single step for sustainable efficiency**

Düsseldorf – The goal of Henkel Adhesive Technologies' latest product innovation was to achieve more sustainability and greater process efficiency in color coating processes. With Bonderite M CR 1405, the surface treatment experts have developed an RoHS-compliant (restriction of the use of certain hazardous substances) agent that provides coils with passivation and pretreatment properties as well as excellent corrosion resistance in a single pretreatment step.

The classic treatment of metal surfaces uses two different lines: one for pretreatment and one for passivation. With the conventional process, the parts go either directly to the user or on to the painting line. The rust preventive (RP) oil used before painting must be removed in the subsequent cleaning and rinsing stage. If a passivation coat is applied, a single rinse prior to the subsequent application of paint is sufficient.

Henkel's new development enables users to substantially shorten their process. Bonderite M CR 1405 has unique properties as it can be used as a passivation for bare substrates and pretreatment for painted substrate. After passivation, the coils are either sent directly to the end user or on for painting. Bonderite M CR 1405 has good recoatability and coils passivated with this product can be used on the color coating line without a cleaning step and can only be rinsed with hot water to remove any contamination. This results in major savings with respect to energy and water usage, since the cleaner that has now been eliminated is typically used in large tanks at temperatures between 60 and 70 degrees Celsius. The absence of chemical cleaning agents also means that wastewater pollution is significantly lower.

This combination is made possible by a newly developed product: As a chromium III-based passivation pretreatment, Bonderite M CR 1405 combines both processes. "Normally, when

paint is applied to a passivated coil without subsequent treatments, insufficient paint adhesion and corrosion resistance is achieved. Conversely, pretreatment used as passivation usually fails within one day," says Gerko Odink, Senior Manager PD Metals EU at Henkel Adhesive Technologies. "We have an agent here that combines the best of both worlds and is compatible with both chromium-based and chromium-free primers."

As this is a chromium III-based product, it meets users' performance expectations for high corrosion protection while also being RoHS-compliant. This directive prohibits the use of hexavalent chromium in Europe. "We are closing the gap between legislation and performance by using a bridging technology that meets the requirements for architectural applications, for example," says Gerko Odink. Testing on galvanized and Galvalume substrate shows blank corrosion resistance of more than 96 hours. The salt spray test shows resistance of 800 hours with a chromium primer and 500 hours with a chromium-free primer.

By reducing the number of process steps and the associated energy and water consumption, the new product is in line with Henkel's long-standing commitment to sustainability. "Enabling safer, cleaner and more efficient processes is at the heart of our business," says Volker Mansfeld, Vice President Industry EIMEA at Henkel Adhesive Technologies. "Together with our customers, we strive to rethink design and processes to identify opportunities for sustainable innovation and defossilization of the industry while delivering the highest performance."

#### **About Henkel**

With its brands, innovations and technologies, Henkel holds leading market positions worldwide in the industrial and consumer businesses. The business unit Adhesive Technologies is the global leader in the market for adhesives, sealants and functional coatings. With Consumer Brands, the company holds leading positions especially in laundry & home care and hair in many markets and categories around the world. The company's three strongest brands are Loctite, Persil and Schwarzkopf. In fiscal 2023, Henkel reported sales of more than 21.5 billion euros and adjusted operating profit of around 2.6 billion euros. Henkel's preferred shares are listed in the German stock index DAX. Sustainability has a long tradition at Henkel, and the company has a clear sustainability strategy with specific targets. Henkel was founded in 1876 and today employs a diverse team of about 48,000 people worldwide – united by a strong corporate culture, shared values and a common purpose: "Pioneers at heart for the good of generations." More information at [www.henkel.com](https://www.henkel.com).

**Photo material is available at [www.henkel.de/presse](https://www.henkel.de/presse)**

Contact Caroline Sach  
Phone +49 211 797-3479  
Email [caroline.sach@henkel.com](mailto:caroline.sach@henkel.com)

Svenja Meurer  
+49 2602 950 99-15  
[svm@additiv.de](mailto:svm@additiv.de)

Henkel AG & Co. KGaA

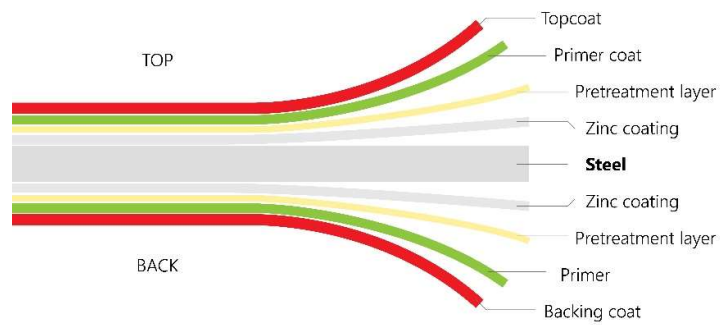
additiv • A brand of additiv pr GmbH & Co. KG.

Follow us on Twitter: [@HenkelPresse](https://twitter.com/HenkelPresse)

Henkel AG & Co. KGaA



With Bonderite M CR 1405, Henkel has developed an RoHS-compliant agent that provides coils with passivation and pretreatment properties as well as excellent corrosion resistance in a single pretreatment step,



Bonderite M CR 1405 has unique properties as it can be used as a passivation for bare substrates and pretreatment for painted substrate.