



Press Release

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New Henkel solution saves energy and improves etching performance

Rethinking aluminum alkaline etching: Bonderite C-AK 24600 boosts efficiency and sustainability

Düsseldorf – Henkel presents an innovative solution for more efficiency and sustainability in alkaline etching of aluminum for architectural applications: Bonderite C-AK 24600 can save energy or increase etching performance, depending on the system configuration. Specifically, the user can either increase the etching rate while maintaining the same application temperature, or reduce the temperature while maintaining the same etching performance.

The first step in aluminum pretreatment is typically alkaline etching. This creates a rough surface to ensure adhesion and performance of the subsequent conversion coating. Traditionally, users achieve the highest etching performance at a higher temperature – and consume a lot of energy. This is where Henkel's new product Bonderite C-AK 24600 comes in: It allows the application temperature to be reduced by up to 7 °C, depending on the system configuration, while still achieving the required etching rate. Conversely, the user can increase the etching rate at the same temperature.

Compared to standard products, the new etchant provides a 30% higher etching rate at 43 °C and a 17 % higher etching rate at 50 °C in fresh baths. In older baths, the performance increase is 45 % at 43 °C and 27 % at 50 °C. This improved efficiency significantly reduces energy consumption and the CO2 footprint. Based on a 7 °C temperature reduction in the alkaline etching stage, this results in a saving of more than 0.5 tons of CO2 in natural gas per cubic meter of bath.

Application examples illustrate the benefits: In one case, the required etching rate of 1.5 g/m² could be achieved at a temperature 5 °C lower, resulting in immediate energy savings. In another case, the product enabled a higher etching rate of 2 g/m² without increasing the operating temperature.

“Bonderite C-AK 24600 shows how innovation in the chemical industry can help reduce environmental impact and increase efficiency in the production chain,” says Cristina Acedo, Senior Product Development Manager at Henkel. “We are enabling our customers to achieve their sustainability goals, such as energy savings, or in other words, to achieve more with less. This was not possible with previously available products because they required a higher temperature to achieve the desired 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

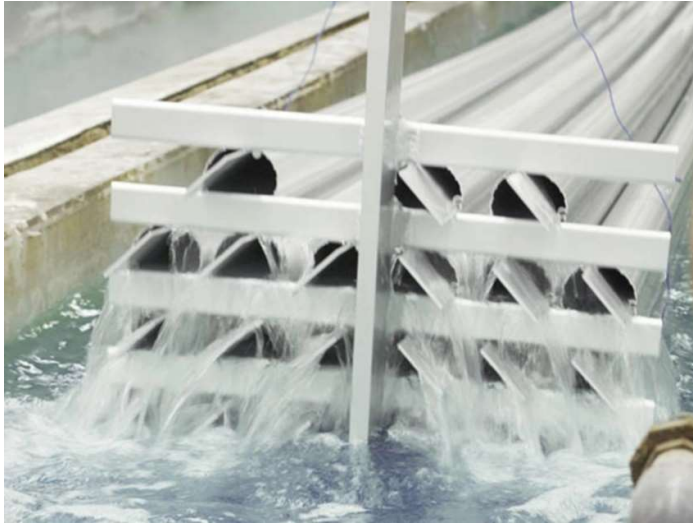
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In alkaline etching of aluminum for architectural applications, Bonderite C-AK 24600 can save energy or increase etching performance, depending on the system configuration.



Innovation in the chemical industry can help reduce environmental impact and increase efficiency in the production chain.