



## Press Release

May 19, 2017

Henkel meets aerospace industry challenges with advanced innovations

### Safety, fuel efficiency and faster production

Düsseldorf – Henkel offers a wide range of products and solutions for the aerospace industry. Together with our customers, our experts develop groundbreaking innovations and customized products that generate competitive advantages and create sustainable value for an industry which expects high growth rates in the upcoming years.

For example, the innovative product Loctite EA 9394 Aero is a highly resilient adhesive mainly used inside Airbus wings where it fulfills a number of different functions: It ensures optimal adhesion of the relevant components and fills the tiniest irregularities in materials as well as cracks. Its fluid consistency also compensates for uneven tension, which constantly affects wings.

The demand for increased fuel efficiency and range in airplanes is on the rise, and making aircraft lighter is a central focal point for manufacturers. Lightweight composites are being used more and more instead of traditional aluminum: Every kilogram saved reduces kerosene consumption, reducing the aircraft's ecological footprint and lowering operating costs. However, these materials call for surface coatings that not only produce a smooth finish, but also protect against lightning strikes. This is because composites are non-metallic and cannot dissipate the energy from lightning strikes. Normally, manufacturers have to use a two-step process for surface coating – one for the adhesive layer, then another step to add a copper or aluminum mesh to disperse energy from lightning.

Henkel's high-impact surfacing film – Loctite EA 9845 LC Aero – not only fills voids and pin holes for a smooth surface that is easily paintable, but it also integrates the adhesive layer and copper mesh into one, ready-to-use film. The film packs a mighty punch: It reduces production time, eliminates waste from scrap mesh and lowers costs while improving the overall quality of the aircraft's surface. It also produces a 30-percent saving in weight compared to conventional films. The North American based aerospace manufacturer Textron Aviation, which also produces the famous Cessna airplanes, is the first to use this new product.

"It's the latest advanced technology to emerge from our research and development efforts, allowing us to help specific industries meet the challenges they face as they



**LOCTITE BONDERITE TECHNOMELT TEROSON AQUENCE Ceresit**



innovate with new materials and processes,” says Chuck Evans, Henkel Corporate Senior Vice President for Aerospace. “We expect our one-step film soon to become the standard for composite surface finishing.”

### **Leveraging Henkel’s automotive and aerospace expertise**

Aircraft manufacturing still requires a lot of manual work, which makes ramping up production in times of booming aviation challenging. Manufacturers, of course, don’t sit idly: They increasingly use robots and automate production as far as possible. With extensive expertise in the fully-automated automotive production and over five decades of serving the aerospace industry, Henkel works closely with machine manufacturers to develop customized adhesives to the exact parameters of the machines used in production.

### **Keeping planes in flight with maintenance and repair**

Maintenance, repair and overhaul (MRO) covers all airframe, engine and component services related to ensuring aircraft safety and airworthiness. It’s crucial in ensuring a safe and reliable fleet for airline operators.

With the increasing use of composites, new challenges arise: Various types of damage in these complex structures call for high-performance adhesive technologies. Under the Loctite brand, Henkel offers advanced, ready-to-use adhesive solutions designed to meet such demands. These include products for bonding, potting and filling, laminating and wet lay-up, out-of-autoclave processing, and specialty repair. The Loctite composite repair solutions are available to manufacturers, MRO companies, and airlines – covering aircrafts’ entire life cycles.

Under the Bonderite umbrella brand, Henkel offers solutions for various other MRO tasks. One example: During their service lives, aircrafts go through many repaint and repainting cycles. Paint removers, cleaners, deoxidizers, brighteners, and conversion coatings by Henkel help get the job done safely and reliably. Particularly handy tools for MRO are Touch-N-Prep Pens. For engine maintenance, Henkel provides metal pre-treatment, cleaning, and compressor washing solutions.

### **Product in spotlight: Bonderite M-CR 1132/871 Aero Touch-N-Prep**

The Touch-N-Prep pens Bonderite M-CR 1132 AERO and M-CR 871 Aero are designed for easy and safer repair of clean, bare, or previously painted aluminum surfaces. The high-density acrylic tip of the Touch-N-Prep pen can be modified with a single-edge razor blade to form any shape. The design of the Touch-N-Prep pen allows repair of hard-to-reach places or the underside of aircraft. This innovative application method controls the amount of coating applied to the surface. This optimized application method greatly reduces the amount of chemical used and generates no secondary waste associated with other repair methods.



### **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](http://www.henkel.com)

**Photo material is available at <http://www.henkel.com/press>**

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Henkel has a long-standing partnership with Airbus built on its exceptional technological expertise and innovative strengths. The photo taken in the Airbus assembly hall in Hamburg shows Guido Adolph from Henkel (right) discussing the optimal application of our 2C adhesive, Loctite EA 9394, with Andre Aldag, who heads up the Manufacturing Engineering team at Airbus.



Loctite EA 9394 Aero is a highly resilient adhesive that is mainly used for bonding inside the Airbus wings.