

Lufthansa Group: “shark skin” to be certified for the Airbus A330

- **Lufthansa Technik in final certification phase for AeroSHARK on an Airbus aircraft for the first time**
- **Discover Airlines provides A330-300 for testing**
- **Targeted certification will enable AeroSHARK on A330-200 and -300 models**
- **Strategic partnership with Mastercard in the area of sustainability**

The AeroSHARK “shark skin” is coming to Airbus aircraft: An A330 from Discover Airlines will be the first Airbus aircraft worldwide to be equipped with the innovative technology. Initially for flight testing—Lufthansa Technik entered the final phase of supplemental type certification for its drag-reducing surface film on the Airbus A330-200 and -300 at the end of August. Before and after the modification at Elbe Flugzeugwerke in Dresden, the aircraft will undergo test flights over several weeks. To this end, the long-haul jet will be taken out of regular service until the end of October.

AeroSHARK is supported by Mastercard in the current project phase. As part of a strategic partnership between Mastercard and the Lufthansa Group, both companies are jointly driving innovations intended to contribute to more efficient and more sustainable aviation.

Working together for greater efficiency in long-haul travel

Grazia Vittadini, Chief Technology Officer Lufthansa Group, says: “AeroSHARK is an excellent example of how innovations from the Lufthansa Group can make concrete contributions to greater efficiency and lower emissions. With the planned certification for the Airbus A330, we are tapping into the potential of another significant portion of the global long-haul fleets. The innovation alliance between Lufthansa Technik, Discover Airlines, and Mastercard demonstrates once again how strong partners can drive progress together.”

The AeroSHARK technology, developed by Lufthansa Technik and Surventis (formerly BASF Coatings), is based on the structure of shark skin. The special surface film, modeled after nature, reduces drag during flight, thereby lowering fuel consumption and CO₂ emissions. AeroSHARK is the only so-called riblet technology on the market approved for commercial aviation—currently certified for the Boeing 777F, the B777-300ER, and the B777-200ER. Following its certification for the Boeing 777, the certification process is now focused on the Airbus A330—the world’s second-most-delivered long-haul aircraft model, which will continue to shape existing fleets for many years to come.

Plans to expand to additional aircraft models and aircraft surfaces

Every modification to an aircraft must meet the highest standards of safety, reliability, and performance. The path to certification is correspondingly demanding: it requires technical expertise, operational resources, and robust financing. For the Supplemental Type Certificate (STC) for AeroSHARK on the A330-300 and -200, Lufthansa Technik is undergoing the relevant process with the European Union Aviation Safety Agency. This includes extensive

technical documentation, ground and flight tests, as well as final in-service validation during flight operations.

In addition to the certification currently being sought for the A330ceo, Lufthansa Technik and Surventis are also working to expand the next generation of AeroSHARK material to additional aircraft surfaces—such as wings and tail surfaces. This could double the potential savings. See the press release from July 30, 2026.

Background on AeroSHARK: inspired by sharks, developed for aviation

AeroSHARK is a functional surface film with microscopically fine grooved structures modeled after shark skin. Shark skin features fine grooves aligned in the direction of flow, known as riblets. These reduce frictional drag and improve flow characteristics in water. AeroSHARK applies this effect to aviation: The surface film features riblets only about 50 micrometers high, precisely aligned with the airflow. It is applied to an aircraft's fuselage and engine cowlings, reducing drag during flight. The technology cuts fuel consumption and CO₂ emissions on every flight—currently by about 1 percent.

As of August 2026, the Lufthansa Group has already equipped 22 aircraft with AeroSHARK. Every day, the Lufthansa Group's AeroSHARK fleet saves around 19 metric tonnes of kerosene and about 60 metric tonnes of CO₂. Airlines outside the Lufthansa Group are also already using the innovative film to increase the fuel efficiency of their long-haul aircraft.

About Lufthansa Technik:

The Lufthansa Technik Group is one of the leading providers of technical aircraft services in the world. Certified internationally as a maintenance, production and design organization, the company employs around 23,000 people in locations around the globe. Lufthansa Technik offers the full range of services for commercial, VIP and special mission aircraft. The portfolio includes maintenance, repair, overhaul and modification of airframes, engines, components and landing gears, as well as the manufacture of innovative cabin products and digital fleet support.

About Discover Airlines:

Discover Airlines is the Lufthansa Group's leisure airline in Germany, flying travelers from Frankfurt and Munich to the most beautiful holiday destinations in the world. A cutting-edge product tailored to the needs of leisure travelers and the crew's welcoming service, make flying with Discover Airlines a real pleasure. Since the summer of 2021, Discover Airlines has complemented the Lufthansa Group's offering in the growing segment of leisure travel. Guests benefit from an end-to-end booking process and seamless transfers at the Frankfurt and Munich hubs as well as at many global destinations of the Lufthansa Group and its partner airlines. Discover Airlines is headquartered in Frankfurt, currently operates a fleet of 33 aircraft and employs around 2,200 people. The flights can be booked on discover-airlines.com, via all booking channels and websites of the Lufthansa Group, and in travel agencies.

About Mastercard:

Mastercard strengthens the economy and supports people in more than 200 countries and territories worldwide. Together with its customers, the company works toward a sustainable economy where everyone can succeed. Mastercard offers a wide range of digital payment options that make transactions simple, secure, smart, and easily accessible.

Mastercard's technologies and innovations, partnerships, and networks form a unique combination of products and solutions that help consumers, businesses, and governments reach their full potential.

About Surventis (formerly BASF Coatings):

For more than 130 years, Surventis has combined science and passion to prepare, protect, and seal metal and plastic surfaces across a wide range of industries, to paint new vehicles in vibrant colors, and to repair them with precise color matching. Through brands such as Chemetall®, Glasurit®, and R-M®, Surventis works side by side with more than 42,000 customers in over 140 countries to develop solutions for their most complex surface-related challenges. The company employs approximately 10,700 people, generated revenue of around 3.9 billion euros in 2025, and is headquartered in Münster, Germany. Surventis is owned by funds managed by Carlyle; BASF continues to hold a 40 percent stake.

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