

# AeroSHARK

Cutting emissions with  
sharkskin technology

AeroSHARK is a durable, bionic film that successfully mimics sharkskin to optimize airflow, delivering significant fuel savings and CO<sub>2</sub> reductions. By applying this innovative sharkskin technology, the global fleet of long-haul aircraft could save billions of euros.

Together with BASF, one of the world's leading chemical and coating manufacturers, Lufthansa Technik developed a surface technology featuring a barely perceptible ribbed texture of small protrusions called riblets. Applied to the fuselage and engine nacelles in the direction of airflow, these riblets optimize aerodynamics and reduce friction—proven to cut emissions and fuel consumption by about one percent in the current expansion stage.

AeroSHARK has also proven resilient under the demanding environmental conditions aircraft face every day: from high speeds and extreme temperature and pressure differences to intense ultraviolet radiation at high altitudes and exposure to chemical agents such as de-icing fluids on the ground.

Example Calculation:



**The expected fuel reduction on each Boeing 777-300ER equals per annum:**



**The expected fuel reduction on each Boeing 777F equals per annum:**



**365t**  
fuel savings



**1,150t**  
emission reduction



**>€ 310,250**  
cost savings

**350t**  
fuel savings

**1,100t**  
emission reduction

**>€ 297,500**  
cost savings



**Lufthansa Technik**