

Material Compatibility Evaluation

for Aviation

The compatibility of materials and substances used in aircraft is an essential component of today's high level of aviation safety. Lufthansa Technik has developed a multitude of tailored testing programs to confirm and ensure the compatibility of these substances prior to field use.

During aircraft operation and maintenance, repair, and overhaul (MRO) activities, aircraft are exposed to a variety of substances, including cleaning agents and lubricants. In order to ensure compliance with the relevant aircraft specifications and regulations, it is essential that these agents and operational substances are tested for any harmful effects they may have on specific aviation materials.

Lufthansa Technik's Central Laboratories provide comprehensive evaluations to confirm the compatibility of substances and agents for surface treatment, cleaning, or machining. With a wide range of tailored evaluation programs available from Lufthansa Technik, producers, suppliers, and users can verify that the agents in question do not impair or compromise the airworthiness of the aircraft and its components.

Benefits

Tests in compliance with specific Lufthansa, Boeing, Airbus, ASTM and other standards

Upfront evaluation to avoid safety relevant risks and fleet-wide damage

Detailed and comprehensive evaluations

Tailored testing programs with individual materials



Lufthansa Technik

Testing for Seamless Compatibility

We offer a wide range of tests for multiple aviation fluids.¹

Aviation cleaning agents

The testing programs are designed for each type of aviation cleaning agent:

- Aircraft interior
- Aircraft exterior
- Solvents, alkaline, acidic and neutral cleaners (wipe on, immersion, spray application)
- Other special agents

Compatibility examination includes tests on the following features:

- Stress corrosion cracking
- Total immersion corrosion
- Hydrogen embrittlement
- Evaporation residue
- Effects on coated and painted surfaces

Cooling fluid and lubricants

Evaluation of the material compatibility of:

- Water-soluble lubricants
- Non-water-soluble lubricants
- Machining fluids
- Cutting oils

Compatibility examination includes tests on the following features:

- Hydrogen embrittlement
- Intergranular attack
- Sandwich corrosion
- Long-term aging at elevated temperature

Other aviation substances

Lufthansa Technik is able to test and evaluate special substances, such as:

- Disinfectants
- Disinfection media
- Any aviation substance

On request

¹ Test duration depends on product and test range (max. ~2 months)

Contact us about your special requirements!

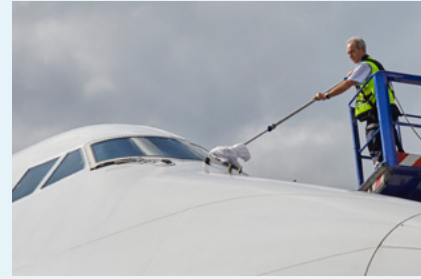
If your task or material compatibility test requirement is not listed, please contact our expert team. Together we will find an approach that addresses your specific needs. If appropriate, we can also extend the investigations by calling in Lufthansa Technik's Inflammability Test Center and/or Aircraft Fluid Laboratory. Please send your samples firmly sealed and sufficiently labeled.

Contact

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Aircraft exterior cleaning



SEM analysis of material after exposure



Various aircraft interior equipment to be cleaned



DryFogTraffic – Cabin Decontamination

