



PARTICLE FOAMS FOR AIRCRAFT APPLICATIONS

HIGH POTENTIALS AND CHALLENGES

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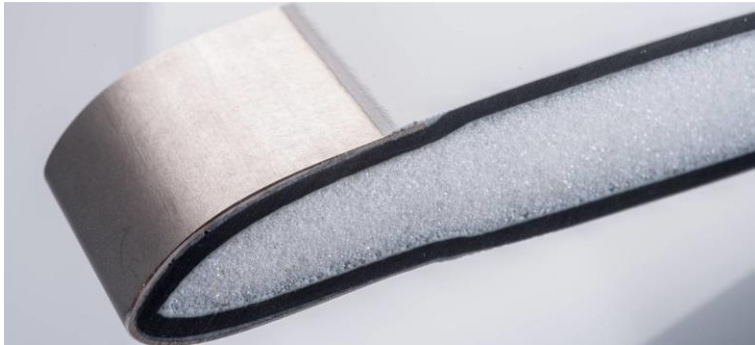


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Evonik's Foams Product Portfolio for the Aviation Industry

The backbone ROHACELL® and our two new Aircraft Particle Foam Solutions

ROHACELL®



- ROHACELL® is the backbone of Performance Foams business since more than 50 years – qualified EN9100
- Core material with superb heat resistance and creep compression strength.

ROHACELL® Triple F



- ROHACELL® Triple F is our solution for demanding structural exterior applications!
- Geometries that are complex and challenging to produce can be foamed directly inside a mold, with the possibility to include inserts.

ROHAFORM®



- ROHAFORM® is the world's first inherently fire-resistant bead foam for structural purposes
- ROHAFORM® opens us the way into demanding aircraft interiors applications for the first time

ROHACELL® Triple F – the solution for structural Aircraft applications

Requirements & Challenges in the exterior

Withstand the aerodynamic loads

Good chemical resistance

High lightweight potential

Sustainable

High thermomechanical performance

Complex shapes

High impact resistance

Low resin uptake

Function integration

No buckling

Processable with common production techniques

Main challenge: Can a particle foam cored sandwich part pass the bird strike test?

Best in class: ROHACELL® Triple F

Evonik's particle foam solution for structural aircraft exterior applications

Benefits of ROHACELL®

- **Excellent structural performance and pressure resistance of up to 3,5 MPa**
- Freedom of design and function integration
- Low resin-uptake and high compressive creep resistance
- **Compatibility with fast curing processes (curing temperatures up to 180 °C)**



Source: Volocopter

ROHAFORM® – the solution for fire critical applications at the highest level

Requirements & Challenges in the interior

Low heat release

Function integration

High lightweight potential

Good chemical resistance

Low smoke density

High thermomechanical performance

Sustainable

Complex shapes

No toxic combustion gases

High impact resistance

Processable with common production techniques

Low resin uptake

Main challenge: **Can a particle foam cored sandwich part pass the OSU test?**

Best in class: ROHAFORM®

Evonik's particle foam solution for structural aircraft interior applications

Benefits of ROHAFORM®

- **Excellent FSTH performance and low flammability**
- Freedom of design and function integration
- Low resin-uptake and high lightweight construction potential
- Structural performance at temperatures up to 180 °C
- **100 % recyclable**



Boundaries only exist in people's heads



**NOTHING IS PERFECT.
THERE IS ALWAYS
ROOM FOR
IMPROVEMENT.**

Making the world lighter with sustainable foams and lightweight designs

Thank you and please feel free to contact me via LinkedIn

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