



FLEXIRAMICS®

Nanomats for Aerospace

A breakthrough heat shielding product has been developed by using flexible ceramic nanofibers (Flexiramics) that exceeds the newest emerging performance requirements. Flexiramics is a fire-resistant and lightweight ceramic non-woven nanofiber mat with highly insulating properties. It's lightweight makes it attractive for use in multilayer insulation systems. Please feel free to contact us

Properties	
Physical	
Chemical composition	α -Al ₂ O ₃ , YSZ, contact Eureka for other compositions
Microstructure	Non-woven nanofiber mat
Size	10 x 10 cm (A4 and larger in development)
Density	0.1 to 0.8 g/cm ³ 5-20 g/m ²
Thickness	20 to 100 μ m, contact Eureka for other thicknesses
Porosity	90 to 96%
Fiber diameter	250 to 1000 nm
Mechanical	
Young's Modulus	0.5 to 1.5 MPa (in-house characterization)
Tensile Strength	0.1 to 0.3 MPa (in-house characterization)
Bending Radius	0° (i.e. fully flexible)
Thermal	
Thermal Conductivity	0.033 W/m-K
Weight loss	≤ 1% at 900°C
Optical	
Color	White
Chemical resistance	
	Typically similar to bulk ceramics of same composition (under investigation)

