

Evonik Corporation Rohacell® 51 FX Polymethacrylimide (PMI) Rigid Foam Plastic

Category: Other Engineering Material, Composite Core Material, Polymer, Thermoset, Polymethacrylimide

Material Notes:

Description: ROHACELL® is produced by thermal expansion of a co-polymer sheet of methacrylic acid and methacrylonitrile. During the foaming process the copolymer sheet is converted to PMI - PolyMethacryllmide. Alcohol is used as a blowing agent, thus ROHACELL® contains no fluorinated carbon hydrates and is halogen free. It has a very homogeneous cell structure and isotropic properties. Specific Notes for this Material: ROHACELL® FX is a closed-cell rigid foam plastic based on PMI (polymethacrylimide) which does not contain any CFCs. The fields of application for ROHACELL® FX are the construction of wind turbine blades and railcar structures. Curing temperature up to 130C (266F). Curing pressure up to 0.2 MPa (30 psi). Sandwich components using ROHACELL® FX as a core material can be realized in a single work step (=cocuring). Other commonly used techniques such as SCRIMP are applicable. ROHACELL® FX is easy to shape. Thermoformability is another advantage of the core material. Information provided by degussa.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Evonik-Corporation-Rohacell-51-FX-Polymethacrylimide-PMI-Rigid-Foam-Plastic.php

Physical Properties	Metric	English	Comments
Density	0.0521 g/cc	0.00188 lb/in ³	DIN 53420, ISO 845, ASTM D 1622

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	0.800 MPa	116 psi	DIN 53455, ISO 527-2, ASTM D 638
Elongation at Break	9.0 %	9.0 %	DIN 53455, ISO 527-2, ASTM D 638
Modulus of Elasticity	0.0350 GPa	5.08 ksi	ISO 527-2, ASTM D 638
Compressive Strength	0.400 MPa	58.0 psi	DIN 53421, ISO 844, ASTM D 1621
Poissons Ratio	0.25	0.25	Calculated
Shear Modulus	0.0140 GPa	2.03 ksi	DIN 53294, ASTM C 273
Shear Strength	0.400 MPa	58.0 psi	DIN 53294, ASTM C 273

Thermal Properties	Metric	English	Comments
Maximum Service Temperature, Air	180 °C	356 °F	Heat Distortion Resistance; DIN 53424

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