

Bedford Plastics Glass Reinforced Vinylester Structural Fiberglass Profiles

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Vinyl Ester , Vinyl Ester Sheet Molding Compound

Material Notes:

Flame retardant grade; see details in the property table. Pultrusion results in the production and supply of one of the worlds strongest and most durable products available today. The pultruded products feature: High Strength Corrosion Resistant to many chemicals Light Weight - Weighs nearly 80% less than a steel profile of similar dimension Electrically Non-Conductive Non-Metallic Lower Life Cycle Cost Non-Leaching. Environmentally Friendly Dimensional Stability Information provided by Bedford Plastics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Bedford-Plastics-Glass-Reinforced-Vinylester-Structural-Fiberglass-Profiles.php

Physical Properties	Metric	English	Comments
Density	1.72 - 1.94 g/cc	0.0620 - 0.0700 lb/in ³	ASTM D792
Water Absorption	<= 0.45 %	<= 0.45 %	24 hrs; ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Barcol	45	45	ASTM D2583
Tensile Strength, Ultimate	48.3 MPa	7000 psi	Crosswise; ASTM D638
	207 MPa	30000 psi	Lengthwise; ASTM D638
Tensile Modulus	5.52 GPa	800 ksi	Crosswise; ASTM D638
	17.2 GPa	2500 ksi	Lengthwise; ASTM D638
Flexural Strength	68.9 MPa	10000 psi	Crosswise; ASTM D790
	207 MPa	30000 psi	Lengthwise; ASTM D790
Flexural Modulus	5.52 GPa	800 ksi	Crosswise; ASTM D790
	12.4 GPa	1800 ksi	Lengthwise; ASTM D790
Compressive Strength	103 MPa	15000 psi	Crosswise; ASTM D635
	207 MPa	30000 psi	Lengthwise; ASTM D635
Compressive Modulus	6.89 GPa	1000 ksi	Crosswise; ASTM D635
	17.2 GPa	2500 ksi	Lengthwise; ASTM D635
Shear Modulus	3.10 GPa	450 ksi	
Shear Strength	31.0 MPa	4500 psi	Short Beam Shear; ASTM D2344
	68.9 MPa	10000 psi	Punch Shear; ASTM D732

Impact, Notched Mechanical Properties	2.14 J/cm Metric	4.00 ft-lb/in English	Crosswise ASTM D256 Comments
	13.3 J/cm	25.0 ft-lb/in	Lengthwise; ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	8.00 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	4.44 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	Lengthwise; ASTM D696
Flame Spread Index	≤ 25	≤ 25	Tunnel Test; ASTM E84

Electrical Properties	Metric	English	Comments
Dielectric Constant	5.0 @Frequency 60 Hz	5.0 @Frequency 60 Hz	Perpendicular to Laminate Face; ASTM D150
Dielectric Strength	1.38 kV/mm	35.0 kV/in	Lengthwise; ASTM D149
	7.87 kV/mm	200 kV/in	Perpendicular to Laminate Face; ASTM D149
Arc Resistance	120 sec	120 sec	Lengthwise; ASTM D495

Descriptive Properties	Value	Comments
Flammability	Nonburning	ASTM D635

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