

3A Composites Core Materials AIREX® T92.100 Easy Processing Structural Foam

Category : Other Engineering Material , Composite Core Material , Polymer , Thermoplastic

Material Notes:

AIREX® T92 is a closed-cell, thermoplastic and recyclable polymer foam with very good mechanical properties and price / performance ratio. It has a good resistance to fatigue, is chemically stable, UV resistant and has negligible water absorption. It is thermally stable during high temperature processing and post curing without after expansion or out-gassing. T92 is designed for easy use with all resin systems and processing technologies. AIREX® T92 is ideally suited as a core material for a wide variety of lightweight sandwich structures subjected to static and dynamic loads and/or exposed to elevated temperatures during manufacturing. Characteristics Easy to process with all types of resin and lamination processes High process temperature up to 150°C (302°F) Excellent fatigue strength High compression and shear properties Very low variance of mechanical properties Excellent chemical stability Good adhesion (skin-to-core bond) Excellent long term thermal stability up to 100°C (212°F) No water absorption No after expansion, no out-gassing Applications Wind energy: Blades (shear webs & shells), nacelles Marine: Hulls, decks, superstructures, bulkheads, transoms, interiors stringers Industrial: Cover, containers, local reinforcements, x-ray tables, sporting goods

Order this product through the following link:

http://www.lookpolymers.com/polymer_3A-Composites-Core-Materials-AIREX-T92100-Easy-Processing-Structural-Foam.php

Physical Properties	Metric	English	Comments
Density	0.105 g/cc	0.00379 lb/in ³	average; ISO 845
	0.102 - 0.112 g/cc	0.00368 - 0.00405 lb/in ³	typical range; ISO 845

Mechanical Properties	Metric	English	Comments
Tensile Strength	>= 1.50 MPa	>= 218 psi	perpendicular to plane; ASTM C297
	2.30 MPa	334 psi	average; perpendicular to plane; ASTM C297
Elongation at Break	>= 10 %	>= 10 %	shear; ISO 1922
	15 %	15 %	average; shear; ISO 1922
Tensile Modulus	>= 0.0900 GPa	>= 13.1 ksi	perpendicular to plane; ASTM C297
	0.110 GPa	16.0 ksi	average; perpendicular to plane; ASTM C297
Compressive Strength	>= 1.20 MPa	>= 174 psi	perpendicular to plane; ISO 844
	1.40 MPa	203 psi	average; perpendicular to plane; ISO 844
Compressive Modulus	>= 0.0650 GPa	>= 9.43 ksi	perpendicular to plane; DIN 53421
	0.0900 GPa	13.1 ksi	average; perpendicular to plane; DIN 53421

Mechanical Properties	Metric	English	Comments
Shear Modulus	0.0210 GPa	3.05 ksi	average; ASTM C393
Shear Strength	>= 0.750 MPa	>= 109 psi	ISO 1922
	0.900 MPa	131 psi	average; ISO 1922

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0340 W/m-K	0.236 BTU-in/hr-ft ² -°F	ISO 8301

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