3A Composites Core Materials AIREX® T90.100 Easy Processing Structural FST Foam

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

Material Notes:

AIREX® T90 is a closed-cell, thermoplastic and recyclable polymer foam with excellent fire, smoke & toxicity (FST) properties. It has very good mechanical properties and 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 outgassing. T90 is designed for easy use with all resin systems and processing technologies. AIREX® T90 is the ideal core material for structural sandwich applications requiring high fire resistance.CharacteristicGood FST Properties (FAR 25.853; NF 16.101; DIN 5510)Excellent fatigue strengthEasy to process with all types of resin and lamination processesExcellent long term thermal stability up to 100°C (212°F)Best thermal stability in process up to 150°C (302 °F)High compression strength and modulusVery low variance of the mechanical valuesGood adhesion (skin-to-core bond)Excellent chemical stabilityNo water absorptionNo after-expansion, no outgassingApplicationsRoad and Rail: Floors, sidewalls, font ends, interiors, roofs, engine coversMarine: Decks, interiors, superstructure Industrial: Cover, containers, x-ray tables, sporting goodArchitecture and Construction: Roofs, claddings, domes, portable building

Order this product through the following link:
http://www.lookpolymers.com/polymer_3A-Composites-Core-Materials-AIREX-T90100-Easy-Processing-Structural-FST-Foam.php

Physical Properties	Metric	English	Comments
Density	0.110 g/cc	0.00397 lb/in³	average; ISO 845
	0.105 - 0.115 g/cc	0.00379 - 0.00415 lb/in³	typical range; ISO 845

Mechanical Properties	Metric	English	Comments
Tensile Strength	>= 1.60 MPa	>= 232 psi	in the plane; ISO 527 1-2
	2.20 MPa	319 psi	average; in the plane; ISO 527 1-2
Elongation at Break	>= 5.0 %	>= 5.0 %	shear; ISO 1922
	10 %	10 %	average; shear; ISO 1922
Tensile Modulus	>= 0.0900 GPa	>= 13.1 ksi	in the plane; ISO 527 1-2
	0.120 GPa	17.4 ksi	average; in the plane; ISO 527 1-2
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	>= 0.0750 GPa	>= 10.9 ksi	perpendicular to plane; DIN 53421
	0.0850 GPa	12.3 ksi	average; perpendicular to plane; DIN 53421

Mechanical Properties	Metric	English	Comments
Shear Modulus	>= 0.0180 GPa	>= 2.61 ksi	ASTM C393
	0.0200 GPa	2.90 ksi	average; ASTM C393
Shear Strength	>= 0.700 MPa	>= 102 psi	ISO 1922
	0.800 MPa	116 psi	average; ISO 1922

Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0330 W/m-K	0.229 BTU-in/hr-ft²-°F	ISO 8301

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