3A Composites Core Materials AIREX® T90.150 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

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http://www.lookpolymers.com/polymer_3A-Composites-Core-Materials-AIREX-T90150-Easy-Processing-Structural-FST-Foam.php

Physical Properties	Metric	English	Comments
Density	0.150 g/cc	0.00542 lb/in ³	average; ISO 845
	0.145 - 0.155 g/cc	0.00524 - 0.00560 lb/in³	typical range; ISO 845
Mechanical Properties	Metric	English	Comments
Elongation at Break	>= 2.0 %	>= 2.0 %	shear; ISO 1922
	2.5 %	2.5 %	average; shear; ISO 1922
Compressive Strength	>= 1.80 MPa	>= 261 psi	perpendicular to plane; ISO 844
	2.00 MPa	290 psi	average; perpendicular to plane; ISO 844
Compressive Modulus	>= 0.0800 GPa	>= 11.6 ksi	perpendicular to plane; DIN 53421
	0.0900 GPa	13.1 ksi	average; perpendicular to plane; DIN 53421
Shear Modulus	>= 0.0250 GPa	>= 3.63 ksi	ASTM C393
	0.0300 GPa	4.35 ksi	average; ASTM C393
Shear Strength	>= 0.700 MPa	>= 102 psi	ISO 1922
	1.00 MPa	145 psi	average; ISO 1922



Thermal Properties	Metric	English	Comments
Thermal Conductivity	0.0360 W/m-K	0.250 BTU-in/hr-ft²-°F	ISO 8301

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