

3A Composites Core Materials AIREX® C71.75 Elevated Temperature Structural Foam

Category : Other Engineering Material , Composite Core Material , Polymer

Material Notes:

AIREX® C71 is a closed cell, crosslinked polymer foam especially formulated to maintain its stability also at higher processing or service temperatures. It combines excellent stiffness and strength to weight ratios with superior toughness. It is non-friable, contains no CFC's, has negligible water absorption, and provides an excellent resistance to chemicals. A fine cell structure offers an excellent bonding surface. Compatible with most resins and manufacturing processes AIREX® C71 is ideally suited as a core material for a wide variety of lightweight sandwich structures subjected to both static and dynamic loads, and exposed to elevated temperatures during manufacturing. Characteristics outstanding strength and stiffness to weight ratios High temperature resistance Good impact strength High fatigue resistance Low resin absorption (fine cell structure) Good fire performance (self-extinguishing) Sound and thermal insulation Good styrene resistance Dimensionally stable and non biodegradable Applications Wind Energy: Rotor blades, nacelles, turbine generator housings Road and Rail: Roof panels, interiors, floors, doors, partition walls, side skirts, front-ends Marine: Hulls, decks, bulkheads, superstructures, engine hatches Aircraft: Interiors, radomes, galley carts, general aviation (sport aircraft) Recreation: Skis, snowboards, surfboards, wakeboards, canoes, kayaks Industrial: Tooling, tanks, ductwork, containers, covers

Order this product through the following link:

http://www.lookpolymers.com/polymer_3A-Composites-Core-Materials-AIREX-C7175-Elevated-Temperature-Structural-Foam.php

| Physical Properties | Metric | English | Comments |
|---------------------|----------------------|--------------------------------------|------------------------|
| Density | 0.0800 g/cc | 0.00289 lb/in ³ | average; ISO 845 |
| | 0.0720 - 0.0920 g/cc | 0.00260 - 0.00332 lb/in ³ | typical range; ISO 845 |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|---------------|-------------|--|
| Tensile Strength | >= 1.40 MPa | >= 203 psi | in the plane; ISO 527 1-2 |
| | 2.20 MPa | 319 psi | average; in the plane; ISO 527 1-2 |
| Elongation at Break | >= 20 % | >= 20 % | shear; ISO 1922 |
| | 32 % | 32 % | average; shear; ISO 1922 |
| Tensile Modulus | >= 0.0400 GPa | >= 5.80 ksi | in the plane; ISO 527 1-2 |
| | 0.0600 GPa | 8.70 ksi | average; in the plane; ISO 527 1-2 |
| Compressive Strength | >= 1.30 MPa | >= 189 psi | perpendicular to plane; ISO 844 |
| | 1.50 MPa | 218 psi | average; perpendicular to plane; ISO 844 |
| Compressive Modulus | >= 0.0850 GPa | >= 12.3 ksi | perpendicular to plane; DIN 53421 |
| | 0.102 GPa | 14.8 ksi | average; perpendicular to plane; DIN |

| Mechanical Properties | Metric | English | 53421 Comments |
|-----------------------|-------------------|-----------------|--------------------|
| Shear Modulus | ≥ 0.0250 GPa | ≥ 3.63 ksi | ASTM C393 |
| | 0.0300 GPa | 4.35 ksi | average; ASTM C393 |
| Shear Strength | ≥ 1.10 MPa | ≥ 160 psi | ISO 1922 |
| | 1.35 MPa | 196 psi | average; ISO 1922 |

| Thermal Properties | Metric | English | Comments |
|----------------------|--------------|-------------------------------------|----------|
| Thermal Conductivity | 0.0360 W/m-K | 0.250 BTU-in/hr-ft ² -°F | ISO 8301 |

| Descriptive Properties | Value | Comments |
|------------------------|--------------|----------|
| Color | light yellow | |

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