

3A Composites Core Materials AIREXÂ® C70.130 Universal Structural Foam

Category : Other Engineering Material , Composite Core Material , Polymer

Material Notes:

AIREXÂ® C70 is a closed cell, crosslinked polymer foam that combines excellent stiffness and strength to weight ratios with superior toughness. It is non-friable, contains no CFCs, 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 AIREXÂ® C70 is ideally suited as a core material for a wide variety of lightweight sandwich structures subjected to both static and dynamic loads.

Characteristics: outstanding strength and stiffness to weight ratios, Good impact strength, Low resin absorption, High fatigue resistance, Good fire performance (self-extinguishing), Sound and thermal insulation, Good styrene resistance.

Applications: Marine: Hulls, decks, bulkheads, superstructures, interiors; Road and Rail: Roof panels, interiors, floors, doors, partition walls, side skirts, front-ends; Aircraft: Interiors, radomes, galley carts, general aviation (fuselage and wing); 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-C70130-Universal-Structural-Foam.php

| Physical Properties | Metric | English | Comments |
|---------------------|--------------------|--------------------------------------|------------------------|
| Density | 0.130 g/cc | 0.00470 lb/in ³ | average; ISO 845 |
| | 0.120 - 0.150 g/cc | 0.00434 - 0.00542 lb/in ³ | typical range; ISO 845 |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|---------------|-------------|--------------------------------------------|
| Tensile Strength | >= 3.00 MPa | >= 435 psi | in the plane; ISO 527 1-2 |
| | 4.00 MPa | 580 psi | average; in the plane; ISO 527 1-2 |
| Elongation at Break | >= 20 % | >= 20 % | shear; ISO 1922 |
| | 30 % | 30 % | average; shear; ISO 1922 |
| Tensile Modulus | >= 0.0950 GPa | >= 13.8 ksi | in the plane; ISO 527 1-2 |
| | 0.115 GPa | 16.7 ksi | average; in the plane; ISO 527 1-2 |
| Compressive Strength | >= 2.60 MPa | >= 377 psi | perpendicular to plane; ISO 844 |
| | 3.00 MPa | 435 psi | average; perpendicular to plane; ISO 844 |
| Compressive Modulus | >= 0.145 GPa | >= 21.0 ksi | perpendicular to plane; DIN 53421 |
| | 0.170 GPa | 24.7 ksi | average; perpendicular to plane; DIN 53421 |
| Shear Modulus | >= 0.0450 GPa | >= 6.53 ksi | ASTM C393 |
| | 0.0540 GPa | 7.83 ksi | average; ASTM C393 |

| Mechanical Properties | Metric | English | Comments |
|-----------------------|----------|---------|-------------------|
| Shear Strength | 2.40 MPa | 348 psi | ISO 1922 |
| | 2.40 MPa | 348 psi | average; ISO 1922 |

| Thermal Properties | Metric | English | Comments |
|----------------------|--------------|-----------------------------------------|----------|
| Thermal Conductivity | 0.0390 W/m-K | 0.271 BTU-in/hr-ft ² - °F | ISO 8301 |

| Descriptive Properties | Value | Comments |
|------------------------|-------|----------|
| Color | blue | |

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