

## 3A Composites Core Materials AIREX® R82.60 High Performance Structural Foam

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

### Material Notes:

AIREX® R82 is a closed-cell, thermoplastic polymer foam that combines fire resistance with low smoke and toxicity, along with good dielectric properties. It has a good strength to weight ratio, very low moisture absorption, is thermoformable and ductile. AIREX® R82 is a core material for use in structural lightweight applications that demand high fire resistance, radar transparency or operation in extremely hot or cold environments. Characteristics: Fulfills most stringent fire requirements; Operating temperature from -194°C to +160°C (-317° F to +320 °F); Remains ductile at cryogenic temperatures; Excellent dielectric properties (radar transparent outstanding); Very low moisture absorption; Good fatigue resistance; High impact resistance (non-brittle failure mode); Thermoformable; Good sound and thermal insulation. Applications: Aircraft and Aerospace: Interiors, cockpit doors, cryogenic tanks, insulating panels, radomes, helicopter rotor blades, general aviation (fuselage and wing); Road and Rail: Front-ends, side skirts, roof panels, interiors; Marine: Fast-ferries, fire resistant interiors, radomes; Defense: Naval superstructures, antennas, combat communication systems; Industrial: High-temperature tooling, radomes, x-ray tables

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_3A-Composites-Core-Materials-AIREX-R8260-High-Performance-Structural-Foam.php](http://www.lookpolymers.com/polymer_3A-Composites-Core-Materials-AIREX-R8260-High-Performance-Structural-Foam.php)

Physical Properties	Metric	English	Comments
Density	0.0600 g/cc	0.00217 lb/in <sup>3</sup>	average; ISO 845
	0.0540 - 0.0690 g/cc	0.00195 - 0.00249 lb/in <sup>3</sup>	typical range; ISO 845

Mechanical Properties	Metric	English	Comments
Tensile Strength	>= 1.20 MPa	>= 174 psi	in the plane; ISO 527 1-2
	1.70 MPa	247 psi	average; in the plane; ISO 527 1-2
Elongation at Break	>= 15 %	>= 15 %	shear; ISO 1922
	25 %	25 %	average; shear; ISO 1922
Tensile Modulus	>= 0.0350 GPa	>= 5.08 ksi	in the plane; ISO 527 1-2
	0.0450 GPa	6.53 ksi	average; in the plane; ISO 527 1-2
Compressive Strength	>= 0.600 MPa	>= 87.0 psi	perpendicular to plane; ISO 844
	0.700 MPa	102 psi	average; perpendicular to plane; ISO 844
Compressive Modulus	>= 0.0400 GPa	>= 5.80 ksi	perpendicular to plane; DIN 53421
	0.0460 GPa	6.67 ksi	average; perpendicular to plane; DIN 53421

Shear Modulus Mechanical Properties	$\geq 0.0150$ GPa Metric	$\geq 2.18$ ksi English	ASTM C393 Comments
	0.0180 GPa	2.61 ksi	average; ASTM C393
Shear Strength	$\geq 0.650$ MPa	$\geq 94.3$ psi	ISO 1922
	0.800 MPa	116 psi	average; ISO 1922
Charpy Impact, Notched	0.100 J/cm <sup>2</sup>	0.476 ft-lb/in <sup>2</sup>	DIN 53453

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

Descriptive Properties	Value	Comments
Color	off white	

## Contact Songhan Plastic Technology Co.,Ltd.

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