

Product Data Sheet: CarbonFoam PU/PIR



CarbonFoam PU/PIR polyurethane foam is available in sheets from 3/16" to 24" thick blocks in densities from 2 lb/ft³ to 50 lb/ft³. Standard sheet size is 48" X96". All CarbonFoam PU/PIR products can be supplied in customer specified CNC cut kit form. Closed cell content above 92%. Freeze and thaw cycle tested. Anti-static additives available for specific applications. Low-abrasion additives available for machining applications. Fire - retardant additives available.

CarbonFoam PU/PIR can be ordered in any thickness desired. This product can be ordered scored/scrimmed, perforated, double contoured and plain. All options come in light green color and as 48"x96" sheets.

CHARACTERISTICS

- ◆ Self-extinguishing
- ◆ Low resin absorption
- ◆ Great impact strength
- ◆ Good styrene resistance
- ◆ Great strength/stiffness to weight ratio
- ◆ High insulation properties (sound and thermal)
- ◆ High heat distortion temperature
- ◆ Green dye added

INDUSTRIES

- ◆ **Marine:** Superstructures, decks, hulls, bulkheads
- ◆ **Industrial:** Tanks, covers, ductwork, tooling, container
- ◆ **Wind Power:** Nacelles, rotor blades
- ◆ **Recreational:** Kayaks, canoes, snowboards, skis, surf/wakeboards
- ◆ **Road and Rail:** Floors, doors, side skirts, roof panels, partition walls
- ◆ **Aerospace:** Radomes, interiors, fuselage, wings

PROCESSING

- ◆ Adhesive bonding
- ◆ Compression Molding
- ◆ Thermoforming
- ◆ Contact molding
- ◆ Vacuum Infusion
- ◆ Resin Injection

All tests carried out by independent laboratory. This information is provided in good faith and is subject to modifications without prior notification. It does not constitute a commitment, neither a contractual document. Carbon-Core Corp will not assume any liability from use or misuse of data presented herein. Assessment of suitability is the responsibility of end user only.

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Tests		PU 2 R	PU 4 R	PU 6 R	PU 10 R
Compressive Strength: Parallel Perpendicular	N/A	30psi	95psi 90psi	140psi 130psi	290psi 275psi
Compressive Modulus: Parallel Perpendicular	N/A	750psi	2100psi 2200psi	3100psi 2800psi	9427psi 8557psi
Tensile Strength	ASTM D1623	30psi	55psi	95psi	304psi
Tensile Modulus	ASTM D1623	1200psi	2300psi	2400psi	2900psi
Shear Strength	ASTM C273	23psi	42psi	80psi	140psi
Shear Modulus	ASTM C273	260psi	650psi	800psi	1479psi
Thermal Conductivity K-Factor	N/A	k=0.19	k=0.19	k=0.20	k=0.03
Water Absorption	N/A	<1.5%	<1.5%	<1.5%	<1.5%
Dimensional Thermal Stability	N/A	-297°F to 300°F	-297°F to 300°F	-297°F to 300°F	-297°F to 300°F
Flammability	ASTM D776	Self Extin- guishing	Self Extin- guishing	Self Extin- guishing	Self Extin- guishing
Density	N/A	2.0 lb/ft ³	4.0 lb/ft ³	6.0 lb/ft ³	10.0 lb/ft ³
Closed Cell Content	N/A	>92%	>92%	>95%	>95%
R-Value	N/A	5.3	5.3	5	3.57
Buoyancy	N/A	60 lb/ft ³	57 lb/ft ³	54.4 lb/ft ³	50.2 lb/ft ³
Flexural Strength	ASTM D790	39psi	128psi	160psi	370psi

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