



Data Sheet / Issue 06/07 / Replaces Issue 05/07

AIREX[®] PXc

FIBER-REINFORCED STRUCTURAL FOAM PANEL

Description

Closed-cell, fiber reinforced urethane foam uniquely formulated to offer performance advantages over conventional sandwich core materials. A special manufacturing process evenly distributes continuous glass fibers throughout the foam. This generates a very consistent product with enhanced properties especially in compression and shear. The foam is dimensionally stable, has very low water absorption, and is resistant to chemicals and high temperatures. It is ideally suited as a core material for highly loaded sandwich structures or as a replacement for wood and plywood.

Applications

- **Marine**
Transoms, bulkheads, stringers, engine beds, floors, interiors, local reinforcements, tooling and molds
- **Road & Rail**
Floors, sidewalls, roofs, engine covers, interior panels
- **Industrial**
Covers, tanks, containers, tooling and molds, local reinforcements, architectural panels, sporting goods

Characteristics

- **High shear and compression properties**
- **Replacement for wood and plywood**
- **Good fastener pull-out strength**
- High heat resistance
- Compatible with a wide range of resins and adhesives
- Dimensionally stable
- High styrene resistance
- Very low water absorption
- Excellent chemical resistance

Processing

- Contact molding (hand/spray)
- Resin infusion / injection (VARTM / RTM)
- Adhesive bonding
- Pre-preg
- Compression molding (GMT)

Typical properties AIREX® PXC			PXc.245	PXc.320	PXc.385	PXc.420
Apparent nominal density	ASTM C-271	lb/ft ³ kg/m ³	15 240	20 320	24 385	26 420
Compressive strength* perpendicular to the plane	ASTM C-365	Psi N/mm ²	279 1.9	425 2.9	543 3.7	612 4.22
Compressive modulus* perpendicular to the plane	ASTM C-365	psi N/mm ²	11037 76	19575 135	26406 182	30152 208
Shear strength	ASTM C-273	psi N/mm ²	280 1.9	320 2.2	352 2.4	368 2.54
Shear modulus	ASTM C-273	psi N/mm ²	8975 62	12770 88	15810 109	17328 119.5
Flexural Strength*	ASTM D-790	psi N/mm ²	1990 13.7	3080 21.2	3950 27.2	4383 30
Flexural Modulus*	ASTM D-790	psi N/mm ²	164000 1130	187210 1290	205780 1420	215065 1483
Standard rigid sheets	Width	in	48	48	48	48
		mm	1219	1219	1219	1219
	Length	in	96	96	96	96
mm		2438	2438	2438	2438	
Thickness	in	1/2 to 2	1/2 to 2	1/2 to 1 3/4	1/2 to 1 3/4	
	mm	12 to 50	12 to 50	12 to 45	12 to 45	

Other dimensions and closer tolerances upon request

* Evaluated on 3/4" (20 mm) rigid sheet

The data provided gives approximate values for the nominal density. Due to density variations these values can be lower than indicated above. Minimum values to calculate sandwich constructions can be provided upon request. The information contained herein is believed to be correct and to correspond to the latest state of scientific and technical knowledge. However, no warranty is made, either expressed or implied, regarding its accuracy or the results to be obtained from the use of such information. No statement is intended or should be construed as a recommendation to infringe any existing patent.