



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

# AIREX<sup>®</sup> PXw

## 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 with woven fabrics throughout the foam. This generates a product with enhanced mechanical properties in flexure (bending), allowing it to be used with or without face sheets. The foam is dimensionally stable, does not lose strength when wet, and is resistant to chemicals and high temperatures. It is ideally suited as a material for static applications requiring high stiffness or as a replacement for wood and plywood.

### Applications

- **Marine**  
Floors, soles, bulkheads, transoms, stringers, engine beds, interiors, local reinforcements, tooling and molds
- **Road & Rail**  
Floors, sidewalls, roofs, engine covers, interior panels
- **Industrial**  
Covers, tanks, containers, floors, tooling and molds, concrete pouring forms, architectural panels, tub and shower enclosures

### Characteristics

- **Stand alone product – does not need face sheets**
- **High flexural strength and stiffness**
- **Replacement for wood and plywood**
- High heat resistance
- Compatible with a wide range of resins and adhesives
- Excellent chemical resistance
- Good fastener pull-out strength
- Dimensionally stable
- High styrene resistance
- Very low water absorption

### Processing

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

Typical properties AIREX® PXw			PXw.320	PXw.385	PXw.420
Apparent nominal density	ASTM C-271	<b>lb/ft<sup>3</sup></b> <b>kg/m<sup>3</sup></b>	20 320	24 385	26 420
Compressive strength* perpendicular to the plane	ASTM C-365	<b>psi</b> <b>N/mm<sup>2</sup></b>	214 1.5	445 3.1	560 3.9
Compressive modulus* perpendicular to the plane	ASTM C-365	<b>psi</b> <b>N/mm<sup>2</sup></b>	10538 72	21100 145	26382 182
Shear strength	ASTM C-273	<b>psi</b> <b>N/mm<sup>2</sup></b>	125 0.9	255 1.8	320 2.2
Shear modulus	ASTM C-273	<b>psi</b> <b>N/mm<sup>2</sup></b>	6330 44	12040 83	14890 103
Flexural Strength*	ASTM D-790	<b>psi</b> <b>N/mm<sup>2</sup></b>	3245 22	4770 33	5535 38
Flexural Modulus*	ASTM D-790	<b>psi</b> <b>N/mm<sup>2</sup></b>	271070 1870	325305 2243	352425 2430
Standard rigid sheets	width	in mm	48 1219	48 1219	48 1219
	length	in mm	96 2438	96 2438	96 2438
	Thickness	in mm	3/4 to 2 20 to 50	1/2 to 1 3/4 12 to 45	1/2 to 1 3/4 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.