

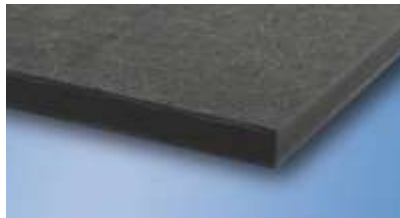
AIREX® PXc

GM-TDS-109

Fiber-Reinforced Structural Foam

DATA SHEET 07.2011 - Replaces 08.2010

DESCRIPTION



AIREX® PXc is a closed-cell, fiber reinforced polymer foam with very high mechanical properties ideally suited as core material for structurally loaded sandwich applications.

The sophisticated manufacturing process evenly distributes continuous glass fibers throughout the foam generating a very consistent foam with enhanced mechanical properties especially in compression and shear.

AIREX® PXc 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.

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
- ☐ Non biodegradable
- ☐ Excellent chemical resistance

APPLICATIONS

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

PROCESSING

- ☐ Contact molding (hand/spray)
- ☐ Resin infusion / injection (VARTM / RTM)
- ☐ Adhesive bonding
- ☐ Pre-preg processing
- ☐ Processing molding (GMT, SMC)

MECHANICAL PROPERTIES						
Typical properties for AIREX® PXc		Unit (metric)	PXc.245	PXc.320	PXc.385	PXc.420
Density	ASTM C-271	kg/m³	240	320	385	420
Compressive strength perpendicular to the plane*	ASTM C-365	N/mm²	2.6	5.1	7.8	9.5
Compressive modulus perpendicular to the plane*	ASTM C-365	N/mm²	56	179	277	326
Shear strength	ASTM C-273	N/mm²	2.1	3.5	4.8	5.5
Shear modulus	ASTM C-273	N/mm²	63	122	170	193
Flexural strength*	ASTM D-790	N/mm²	5.3	8.8	11.5	12.9
Flexural modulus*	ASTM D-790	N/mm²	280	447	581	648
Standard sheet	Width	mm	1219	1219	1219	1219
	Length	mm	2438	2438	2438	2438
	Thickness	mm	12 to 50	12 to 50	12 to 45	12 to 45

Finishing Options, 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.

MECHANICAL PROPERTIES						
Typical properties for AIREX® PXc		Unit (imperial)	PXc.245	PXc.320	PXc.385	PXc.420
Density	ASTM C-271	lb/ft³	15	20	24	26
Compressive strength perpendicular to the plane*	ASTM C-365	psi	373	738	1136	1373
Compressive modulus perpendicular to the plane*	ASTM C-365	psi	8'044	25'882	40'153	47'288
Shear strength	ASTM C-273	psi	312	511	699	802
Shear modulus	ASTM C-273	psi	9'099	17'697	24'575	28'015
Flexural strength*	ASTM D-790	psi	773	1'272	1'672	1'871
Flexural modulus*	ASTM D-790	psi	40'608	64'827	84'203	93'890
Standard sheet	Width	in	48	48	48	48
	Length	in	96	96	96	96
	Thickness	in	½ to 2	½ to 2	½ to 1 ¾	½ to 1 ¾

Finishing Options, other dimensions and closer tolerances upon request

* Evaluated on ¾" (20 mm) rigid sheet

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