



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

AIREX[®] T90

EASY PROCESSING STRUCTURAL FOAM

Superior FST-Properties

Description	<p>Closed-cell, thermoplastic structural foam designed for use with all resin systems and processing technologies. T90's production process creates a structural core with extremely consistent properties. It is easy to machine and thermoform and suitable for a wide range of structural composites applications due to advantageous properties especially compression strength and modulus. Outstanding high temperature stability and excellent fire resistance make T90 highly suitable where high FSt-requirements are needed. The foam is chemically stable, UV-resistant and does not absorb water. It is thermally stable during high temperature processing and post curing, with not after expansion.</p>
Applications	<ul style="list-style-type: none">• Wind energy Shear webs and shells• Marine Transoms, decks, hard spots, local reinforcements, interiors, Stringers, engine beds• Road and Rail Floors, sidewalls, interiors, engine covers• Industrial Cover, containers, local reinforcements, x-ray tables, sporting goods
Characteristics	<ul style="list-style-type: none">• Superior FST - Properties (FAR25.853; NF16.101; DIN5510)• Excellent fatigue strength• Easy to process with all types of resin and lamination processes• Excellent long term thermal stability up to 100°C (212°F)• Best thermal stability in process up to 150°C (302°F),• High compression strength and modulus• Good adhesion (skin-to-core bond)• Excellent chemical stability• No water absorption• No after-expansion• Thermoformable
Processing	<ul style="list-style-type: none">• Vacuum infusion• Contact molding (hand/spray)• Resin infusion / injection (VARTM / RTM)• Adhesive bonding• Prepreg processing• Compression molding



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Typical properties AIREX® T90			T90.100	T90.150 *)	T90.240	T90.320
Apparent nominal density	ISO 845	kg/m³	110	150	240	320
		lb/ft ³	6.8	10	15	20
Compressive strength perpendicular to the plane	ISO 844	N/mm²	1.3	2.0	3.5	6.0
		psi	190	290	507	870
Compressive modulus perpendicular to the plane	DIN 53421	N/mm²	65	90	150	270
		psi	9427	13053	21755	39160
Shear strength	ISO 1922	N/mm²	0.6	1.0	1.35	2.2
		psi	87	145	196	320
Shear modulus	ISO 1922	N/mm²	20	30	50	75
		psi	2900	4350	7250	10877
Shear elongation at break	ISO 1922	%	2.5	2.5	2.5	2.5
Standard plane sheets	width	mm ± 10	610	610	610	610
	length	mm ± 10	1220	1220	1220	1220
	Thickness	mm ± 0.5	max 100	max 100	max 100	max 100

Other dimensions and closer tolerances upon request

*) Preliminary data

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.