



Data Sheet AA / Issue 10/08 / Replaces Issue 06/08

## AIREX<sup>®</sup> C70 UNIVERSAL STRUCTURAL FOAM

**Description** A unique closed cell, cross-linked polymer foam that combines high stiffness and strength to weight ratios with superior toughness. It is non-friable, contains no CFC's, has negligible water absorption, and provides an excellent resistance to chemicals. A fine cell structure offers an excellent bonding surface that is compatible with most resins and manufacturing processes. It is ideally suited as a core material for a wide variety of light-weight sandwich structures subjected to both static and dynamic loads in service.

- Applications**
- **Marine**  
Hulls, decks, bulkheads, superstructures, interiors
  - **Road and Rail**  
Roof panels, interiors, floors, doors, partition walls, side skirts
  - **Wind Energy**  
Rotor blades, nacelles, turbine generator housings
  - **Air**  
General aviation (sport aircraft) parts, galley carts
  - **Recreation**  
Surfboards, snowboards, wakeboards
  - **Industrial**  
Tooling, tanks, ductwork, containers, covers

- Characteristics**
- **high strength and stiffness to weight ratios**
  - **good impact strength**
  - **low resin absorption**
  - high fatigue resistance
  - good fire performance (self-extinguishing)
  - sound and thermal insulation
  - non biodegradable
  - good styrene resistance

- Processing**
- contact molding (hand/spray)
  - vacuum infusion
  - resin injection (RTM)
  - adhesive bonding
  - pre-preg processing
  - thermoforming



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Typical properties AIREX® C70			C70.40	C70.48	C70.55	C70.75	C70.90	C70.130	C70.200
Apparent nominal density	ISO 845	kg/m <sup>3</sup>	40	48	60	80	100	130	200
		lb/ft <sup>3</sup>	2.5	3.0	3.7	5.0	6.2	8.1	12.5
Compressive strength perpendicular to the plane	ISO 844	N/mm <sup>2</sup>	0.45	0.60	0.90	1.45	1.9	2.8	5.2
		psi	65	87	130	210	275	408	745
Compressive modulus perpendicular to the plane	DIN 53421	N/mm <sup>2</sup>	37	48	69	104	125	170	280
		psi	5370	7000	10000	15080	18150	24650	40600
Tensile strength in the plane	ISO 527-2	N/mm <sup>2</sup>	0.70	0.95	1.3	2.0	2.7	3.8	6.0
		psi	100	138	190	290	390	550	870
Tensile modulus in the plane	ISO 527-2	N/mm <sup>2</sup>	28	35	45	66	84	110	175
		psi	4060	5100	6530	9600	12200	16000	25400
Shear strength	ISO 1922	N/mm <sup>2</sup>	0.45	0.55	0.85	1.2	1.6	2.3	3.5
		psi	65	80	123	175	230	330	510
Shear modulus	ASTM C393	N/mm <sup>2</sup>	13	16	22	30	38	54	75
		psi	1900	2320	3190	4350	5510	7830	10900
Shear elongation at break	ISO 1922	%	8	10	16	23	27	30	30
Thermal conductivity at room temperature	ISO 8301	W/m.K	0.031	0.031	0.031	0.033	0.035	0.039	0.048
		BTU.in/ft <sup>2</sup> .hr.°F	0.21	0.21	0.21	0.23	0.24	0.27	0.33
Standard sheet	width	mm ± 5	1330	1270	1150	1020 / 1080	950	850	750
	length	mm ± 5	2850*	2730*	2450*	2180 / 1500	2050	1900	1600
	thickness	mm ± 0.5	5 to 80	5 to 70	5 to 70	3 to 70	3 to 60	5 to 50	5 to 40
Block	thickness	mm ± 2	84	80	78	72	68	58	48
ContourKore (CK)	width	mm ± 10	690	660	600	510	510	850	750
	length	mm ± 10	1200	1200	1140	1080	930	950	780
	thickness	mm ± 0.5	3 to 30	3 to 30	3 to 30	3 to 30	3 to 30	3 to 30	6 to 30
Color			light green	violet	yellow	green	red	blue	brown

Other dimensions, configurations, and closer tolerances upon request

\* Half size plane sheets for thickness ≤ 8mm (0.315")

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.

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