



Data Sheet AA / Issue 09/09 / Replaces Issue 07/09

AIREX[®] 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	C70.250
Apparent nominal density	ISO 845	kg/m ³	40	48	60	80	100	130	200	250
		lb/ft ³	2.5	3.0	3.7	5.0	6.2	8.1	12.5	15.6
Compressive strength perpendicular to the plane	ISO 844	N/mm ²	0.45	0.60	0.90	1.45	1.9	2.8	5.2	6.6
		psi	65	87	130	210	275	408	745	960
Compressive modulus perpendicular to the plane	DIN 53421	N/mm ²	37	48	69	104	125	170	280	350
		psi	5370	7000	10000	15080	18150	24650	40600	50800
Tensile strength in the plane	ISO 527-2	N/mm ²	0.70	0.95	1.3	2.0	2.7	3.8	6.0	7.5
		psi	100	138	190	290	390	550	870	1'090
Tensile modulus in the plane	ISO 527-2	N/mm ²	28	35	45	66	84	110	175	230
		psi	4060	5100	6530	9600	12200	16000	25400	33'400
Shear strength	ISO 1922	N/mm ²	0.45	0.55	0.85	1.2	1.6	2.3	3.5	4.7
		psi	65	80	123	175	230	330	510	680
Shear modulus	ASTM C393	N/mm ²	13	16	22	30	38	54	75	95
		psi	1900	2320	3190	4350	5510	7830	10900	13780
Shear elongation at break	ISO 1922	%	8	10	16	23	27	30	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	0.056
		BTU.in/ft ² .hr.F	0.21	0.21	0.21	0.23	0.24	0.27	0.33	0.39
Standard sheet	width	mm ± 5	1330	1270	1150	1020	950	850	750	700
	length	mm ± 5	2850*	2730*	2450*	2180	2050	1900	1600	1500
	thickness	mm ± 0.5	5 to 80	5 to 70	5 to 70	3 to 68	3 to 60	5 to 50	5 to 40	5 to 40
Block	thickness	mm ± 2	84	80	78	72	68	58	48	47
ContourKore (CK)	width	mm ± 10	690 or 930	660 or 900	600 or 1200	510 or 1020	510 or 1020	840	750	
	length	mm ± 10	1200	1200	1140	1080	930	950	780	
	thickness	mm ± 0.5	5 to 50	5 to 50	5 to 50	3 to 50	3 to 45	6 to 40	6 to 30	
Color			light green	violet	yellow	green	red	blue	brown	green

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.

ALCAN COMPOSITES CORE MATERIALS

www.corematerials.alcancomposites.com

Europe / Middle East / Africa:
Alcan Airex AG
Industrie Nord
CH-5643 Sins, Switzerland
Tel: +41 41 789 66 00
Fax: +41 41 789 66 60
contact@alcan.com

North & South America:
Alcan Baltek
108 Fairway Court
Northvale, NJ 07647, USA
Tel: +1 201 767 14 00
Fax: +1 201 387 66 31
sales@alcanbaltek.com

Asia / Australia / New Zealand:
Alcan Composites Ltd. / Core Materials Branch
Shangfeng Road 933, Building 6, Pudong
CN-201201 Shanghai, China
Tel. +86 21 585 86 006
Fax. +86 21 338 272 98
contact@alcan.com