

DATA SHEET

07.2011 (replaces 08.2010)

AIREX®
BALTEK®



BALTEK® SB

Select Grade Structural Balsa

CHARACTERISTICS

- Outstanding strength and stiffness to weight ratios
- Fulfills most FST (flame, smoke, toxicity) requirements
- First-class, select grade lumber
- Ecological product
- Extremely wide operating temperature range
-212 °C to +163 °C (-414 °F to +325 °F)
- Excellent fatigue and impact resistance
- Good sound and thermal insulation
- Good moisture resistance

APPLICATIONS

- **Marine**
Hulls, decks, bulkheads, superstructures, interiors, tooling/molds
- **Road and Rail**
Floors, roofs, side skirts, front-ends, doors, interiors, covers
- **Wind energy**
Rotor blades (shear webs and shells), nacelles, spinners
- **Aerospace:**
Floors, cargo pallets, cargo containers, bulkheads, general aviation (fuselage & wing)
- **Defense:**
Naval vessels, containers, cargo pallets, shelters, ballistic panels
- **Industrial:**
Tanks, ductwork, covers, containers, architectural panels, concrete forms, infrastructure, impact limiters, sporting goods

PROCESSING

- Adhesive bonding
- Compression molding
- Contact molding (hand/spray)
- Pre-preg processing (up to 180 °C, 355 °F)
- Resin injection (RTM)
- Vacuum infusion



BALTEK® SB is a core material produced from select kiln-dried balsa wood in the 'end-grain' configuration. It has extremely high strength and stiffness to weight ratios, and achieves an excellent bond with all types of resins and adhesives.

It is compatible with a variety of manufacturing processes and is resistant to temperature changes, or exposure to fire, or chemicals such as styrene.

BALTEK® SB is an ideal core material for an extensive range of applications subjected to static or dynamic loads in service. All while being a renewable resource.

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Typical properties for BALTEK® SB		Unit (metrical)	SB.50	SB.100	SB.150
Apparent nominal density	ASTM C-271	kg/m ³	94	153	247
Compressive strength perpendicular to the plane	ASTM C-365	N/mm ²	6.3	12.9	26.3
Compressive modulus perpendicular to the plane	ASTM C-365	N/mm ²	1993	4005	7982
Tensile strength perpendicular to the plane	ASTM C-297	N/mm ²	7.4	13.2	23.5
Tensile modulus perpendicular to the plane	ASTM C-297	N/mm ²	2200	3570	5759
Shear strength	ASTM C-273	N/mm ²	1.8	3.0	4.9
Shear modulus	ASTM C-273	N/mm ²	106	160	309
Thermal conductivity at room temperature	ASTM C-177	W/m.K	0.048	0.066	0.084
Standard sheet	Width	mm ± 5	609.6	609.6	609.6
	Length	mm ± 10	1219.2	1219.2	1219.2
	Thickness	mm +0.25 -0.75	4.7 to 76	4.7 to 76	6 to 76
ContourKore (CK)	Width	mm ± 5	609.6	609.6	609.6
	Length	mm ± 10	1219.2	1219.2	1219.2 ¹⁾
	Thickness ²⁾	mm +0.25 -0.75	4.7 to 50	4.7 to 50	6 to 50

Finishing Options, other dimensions and tolerances upon request

¹⁾ above 38 mm sheets are 609.6 x 609.6 mm

²⁾ Thicknesses > 50mm upon request

Please specify Lamprep (micro-sanded) surface treatment or AL600/10 coating (decreases porosity and increases bond strength) when ordering

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.

Typical properties for BALTEK® SB		Unit (imperial)	SB.50	SB.100	SB.150
Apparent nominal density	ASTM C-271	lb/ft ³	5.9	9.5	15.4
Compressive strength perpendicular to the plane	ASTM C-365	psi	917	1878	3813
Compressive modulus perpendicular to the plane	ASTM C-365	psi	289'098	580'914	1'157'714
Tensile strength perpendicular to the plane	ASTM C-297	psi	1073	1920	3413
Tensile modulus perpendicular to the plane	ASTM C-297	psi	319'131	517'774	835'277
Shear strength	ASTM C-273	psi	262	433	712
Shear modulus	ASTM C-273	psi	15'364	23'191	44'786
Thermal conductivity at room temperature	ASTM C-177	BTU.in/ft ² .hr.°F	0.331	0.456	0.581
Standard sheet	Width	in ± ³ / ₁₆	24	24	24
	Length	in ± ³ / ₈	48	48	48
	Thickness	in +0.01 -0.03	0.1875 to 3	0.1875 to 3	0.25 to 3
ContourKore (CK)	Width	in ± ³ / ₁₆	24	24	24
	Length	in ± ³ / ₈	48	48	48 ¹⁾
	Thickness ²⁾	in +0.01 -0.03	³ / ₁₆ to 2	³ / ₁₆ to 2	¹ / ₄ to 2

Finishing Options, other dimensions and tolerances upon request

¹⁾ above 38 mm (1 ½ ") sheets are 24" by 24"

²⁾ Thicknesses > 2" upon request

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