

BALTEK® SB STRUCTURAL END-GRAIN Balsa

Description A core material produced from certified kiln-dried balsa wood in the 'end-grain' configuration. The properties of balsa make it ideal as a core for sandwich construction. 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. It is an ideal core material for an extensive range of applications. All while being a renewable resource.

Applications

- **Marine**
hulls, decks, bulkheads, superstructures, interiors, tooling and molds
- **Road and Rail**
floors, walls, roof panels, body panels, interiors, front-ends, side skirts
- **Wind Energy**
rotor blades, spinners, nacelle covers, generator housings
- **Aircraft**
floor panels, galley carts, interior partitions, cargo pallets, containers, general aviation (sport aircraft) parts
- **Defense**
naval vessels, containers, cargo pallets, tactical shelters
- **Industrial**
tooling, tanks, ductwork, impact limiter, concrete forms, fascia panels, skis, snowboards, wakeboards

Characteristics

- **extremely high strength and stiffness to weight ratios**
- **excellent fire performance**
- **ecological product**
- wide operating temperature range (-212°C to +163°C, -414°F to +325°F)
- excellent fatigue resistance
- good sound and thermal insulation
- high impact strength
- good moisture resistance

Processing

- contact molding (hand/spray)
 - resin injection (RTM)
 - adhesive bonding
 - compression molding
 - pre-preg processing (up to 180°C, 355°F)
 - vacuum infusion

Typical properties for BALTEK® SB			SB.50	SB.100	SB.150
Apparent nominal density	ASTM C 271	kg/m ³	94	153	247
		lb/ft ³	5.9	9.5	15.4
Compressive strength perpendicular to the plane	ASTM C 365	N/mm ²	6.3	12.9	26.3
		psi	917	1878	3813
Compressive modulus perpendicular to the plane	ASTM C 365	N/mm ²	1993	4005	7982
		psi	289098	580914	1157714
Tensile strength perpendicular the plane	ASTM C 297	N/mm ²	7.4	13.2	23.5
		psi	1073	1920	3413
Tensile modulus perpendicular the plane	ASTM C 297	N/mm ²	2200	3570	5759
		psi	319131	517774	835277
Shear strength	ASTM C 273	N/mm ²	1.8	3.0	4.9
		psi	262	433	712
Shear modulus	ASTM C 273	N/mm ²	106	160	309
		psi	15364	23191	44786
Thermal conductivity at room temperature	ASTM C 177	W/m.K	0.048	0.066	0.084
		BTU.in/ft ² .hr.°F	0.331	0.456	0.581
Plain sheet	width	mm	609.6	609.6	609.6
		in**	24	24	24
	length	mm	1219.2	1219.2	1219.2
		in**	48	48	48
	thickness	mm	4.7 to 100	4.7 to 100	6 to 100
		in**	0.1875 to 4	0.1875 to 4	0.25 to 4
Contoured	width	mm	609.6	609.6	609.6
		in**	24	24	24
	length	mm	1219.2	1219.2	1219.2
		in**	48	48	*48
	thickness	mm	4.7 to 50	4.7 to 50	6 to 50
		in**	0.1875 to 2	0.1875 to 2	0.25 to 2

Other dimensions, configurations, and closer tolerances upon request

* over 38 mm (1½ ") sheets are 24" by 24"

** tolerances 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.