

Product Data Sheet

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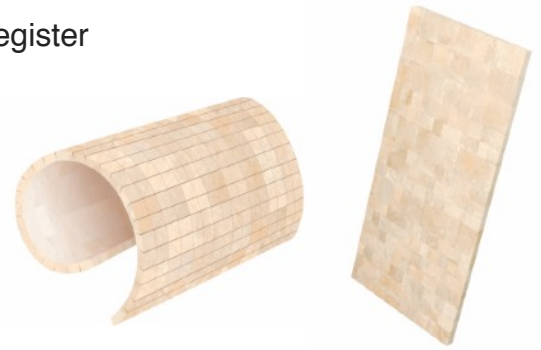
BALSASUD® Core - Product Data Sheet

BALSASUD® Core is the finest end-grain balsa wood core material in the market, ideal for sandwich construction. It has remarkable physical properties, starting with its outstanding strength-to-weight ratios (high shear and compression strength). It is an all-natural and renewable resource coming from Ecuador. It has exceptional fatigue and impact resistance properties. And it provides phenomenal sound and thermal insulation. In addition, it is a natural fire-retardant material.

- Outstanding strength-to-weight ratios
- High chemical resistance (including styrene) and amazing bonding properties
- Completely organic, sustainable and renewable resource
- BALSASUD® Core SG is approved by DNV GL and Lloyd's Register

PROCESSING

- Prepreg processing (up to 180°C or 355°F)
- Resin infusion / injection (VARTM / RTM)
- Adhesive bonding
- Vacuum infusion
- Hand Lay-up and Spray-up
- Compression molding (GMT, SMC)



APPLICATIONS

Marine: Hulls, Decks, Superstructures, Bulkheads, Attachment points, Interiors, Engine beds, Flooring, Molds, Topsides and Stringers

Wind Energy: Rotor blades, nacelle covers and spinners

Aerospace: Aircraft structures, floor panels, structural panels, air cargo containers, interior partitions and Unmanned Aerial Vehicle (UAV)

Transportation: Primary Body Structure, Interior Structure, Sidewalls, Floors, Ceilings and Panels

Defense: Naval vessels and deckhouses, panel structures, cargo pallets, containers, aircraft structures, Shelters and Unmanned Aerial Vehicle (UAV)

Industrial: Tub & Shower, Tooling, Industrial tanks, Shelters, Construction panels (soundproofing, insulation and decoration), Sports equipment: surfboards, snowboards, skis and wakeboards

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Mechanical Properties for BALSASUD® Core

| TEST STANDARDS | Units (Imperial) | Ultra Lite (UL) | Standard Grade (SG) | Heavy Weight (HW) |
|---|-------------------------------|--------------------|------------------------|----------------------|
| Density per ASTM C-271 | Lbs. / cu.ft | 6.5 | 9.5 | 17.5 |
| Compressive Strength per ASTM C-365 | psi | 947 | 1547.55 | 3136 |
| Compressive Modulus per ASTM C-365 | ksi | 295.36 | 340.72 | 635.99 |
| Tensile Strength per ASTM C-297 | psi | 1088 | 2087.09 | 2618 |
| Tensile Modulus per ASTM C-297 | ksi | 324.68 | 518.36 | 825.55 |
| Shear Strength per ASTM C-273 | psi | 272 | 394.50 | 808 |
| Shear Modulus per ASTM C-273 | ksi | 15.84 | 27.01 | 52.79 |
| Thermal Conductivity at 24°C per ASTM C-177 | BTU.in/ft ² .hr.°F | 0.331 | 0.460 | 0.581 |
| Sheet Length | inches | 48 | 48 | 48 |
| Sheet Width | inches | 24 | 24 | 24 |
| Sheet Thickness | inches | from 1/4 to 3 | from 1/4 to 3 | from 1/4 to 3 |

Nominal value is an average value of a mechanical property at a nominal density. Tests are perpendicular to the plane.

| | |
|---|------------------------|
| Continuous operating temperature range: | -349.6° F to +325.4° F |
| Moisture content: | from 6% to 12% |
| Density Tolerance: | + / - 10% |

Disclaimer: The information provided in this Data Sheet has been obtained through different tests and experience. The values provided are approximate and should be treated as such. The information is believed to be correct. However, there is no warranty, either expressed or implied, regarding the precision of results obtained by using such information. The company shares no liability for its misuse. BALSASUD® Core SG is approved by DNV GL and Lloyd's Register.

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| Mechanical Properties for BALSASUD® Core | | | | |
|---|----------------|--------------------|---------------------|--------------------|
| TEST STANDARDS | Units (Metric) | Ultra Lite (UL) | Standard Grade (SG) | Heavy Weight (HW) |
| Density per ASTM C-271 | Kg. / M3 | 100 | 152,18 | 280 |
| Compressive Strength per ASTM C-365 | MPa | 6,53 | 10,67 | 21,62 |
| Compressive Modulus per ASTM C-365 | MPa | 2036 | 2349,2 | 4385.00 |
| Tensile Strength per ASTM C-297 | MPa | 7,50 | 14,39 | 18,05 |
| Tensile Modulus per ASTM C-297 | MPa | 2238 | 3574 | 5692 |
| Shear Strength per ASTM C-273 | MPa | 1,88 | 2,72 | 5,57 |
| Shear Modulus per ASTM C-273 | MPa | 110 | 186,19 | 364 |
| Thermal Conductivity at 24°C per ASTM C-177 | W/m*K | 0,048 | 0,066 | 0,084 |
| Sheet Length | mm | 1220 | 1220 | 1220 |
| Sheet Width | mm | 610 | 610 | 610 |
| Sheet Thickness | mm | from 6,35 to 76,20 | from 6,35 to 76,20 | from 6,35 to 76,20 |

Nominal value is an average value of a mechanical property at a nominal density. Tests are perpendicular to the plane.

| | |
|---|--------------------|
| Continuous operating temperature range: | -212° C to +163° C |
| Moisture content: | from 6% to 12% |
| Density Tolerance: | + / - 10% |

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Driven by innovation,
inspired by **possibilities**,
powered by **nature**,
built for **you**,
we are proud to make the most
sustainable core material on earth.

Learn more



imagine.
create.
enjoy.

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