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## BALTEK® SBC

The ultimate bio-based  
structural sustainable core material

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# BALTEK® SBC

## The ultimate bio-based structural sustainable core material

**BALTEK® SBC** is the ultimate structural core material, with a proven track record of decades of being the material of choice due to its best-in-class mechanical properties-to-weight ratio. Density controlled select lumbers of responsibly sourced prime balsa wood are used to manufacture the **BALTEK® SBC** product lineup. Paired up with certification schemes to ensure traceability from tree to core material, it is the most sustainable option to deliver high performance in composite sandwich structures with low weight and peace of mind with reliable and responsible sourcing, with FSC® Mix certification available.

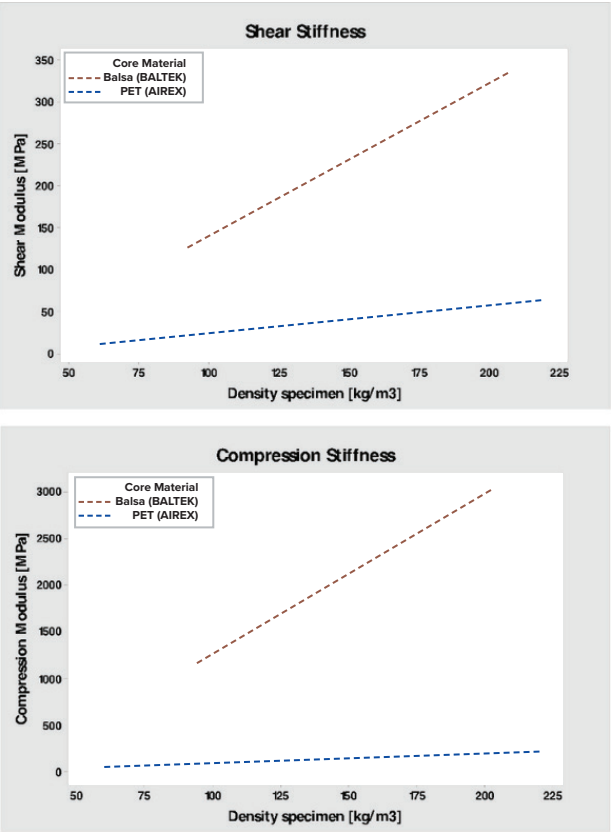
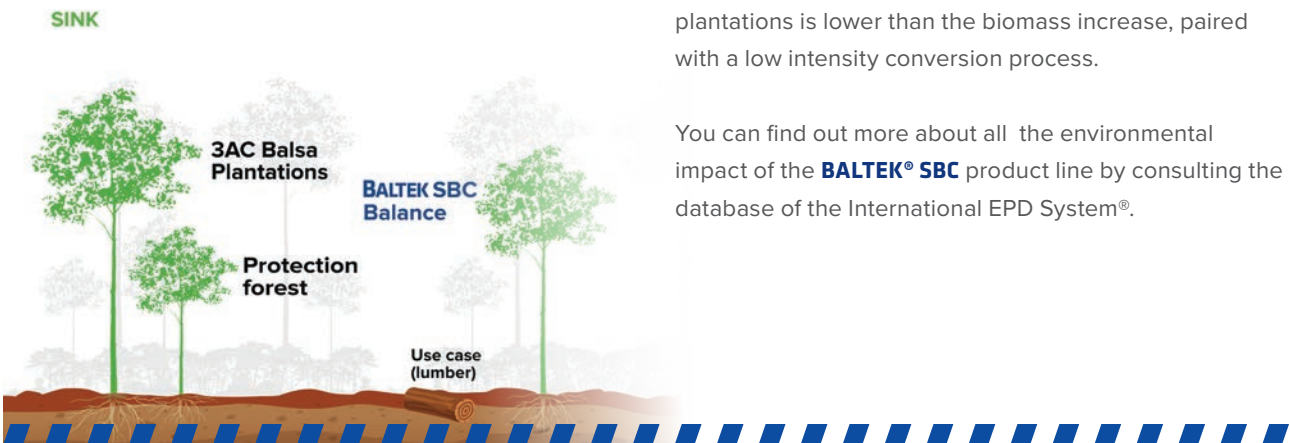
### Benefits

- / Best-in-class specific properties<sup>1)</sup>
- / Available in wide range of densities for different structural requirements

Sheet density	BALTEK® SBC.50	BALTEK® SBC.80	BALTEK® SBC.100	BALTEK® SBC.150
Nominal (kg/m³)	109	132	148	285
Range (kg/m³)	84 - 116	113 - 161	136 - 176	248 - 296

- / High mechanical strength and stiffness
- / Circularity by biomass recycling
- / Excellent fatigue resistance
- / High impact resistance
- / Operating temperature from -212 °C to +163 °C
- / Good chemical resistance
- / Compatibility with all types of resins and adhesives
- / When used with VARTM, it is safe to be used below the water line
- / Excellent sound absorption and thermal insulation

<sup>1)</sup> Please check our latest technical data sheet



### Environmental Performance

**BALTEK® SBC** is the ultimate core material when it comes to environmental performance. As balsa wood is an organic, biobased renewable resource, it is the most sustainable choice when compared with materials derived from fossil, non-renewable sources. It is also boasting the lowest carbon footprint in the industry, with EPD-verified negative global warming potential. This is due to the fact that the biomass removal from **3A Composites Core Materials** owned and managed plantations is lower than the biomass increase, paired with a low intensity conversion process.

You can find out more about all the environmental impact of the **BALTEK® SBC** product line by consulting the database of the International EPD System®.

### Responsible Sourcing & Certifications

At the core of the business model that makes **BALTEK®** possible, is the largest balsa wood forest patrimony anywhere in the world. With more than 14,000 ha of FSC™ certified plantations in Ecuador and Papua New Guinea, **3A Composites Core Materials** secures not only the volume of prime balsa wood lumber to manufacture our products, but it does so in a sustainable and responsible way. With a short cycle of 3 - 5 years, balsa trees are harvested and replanted, while preserving sensible areas for conservation. 20 % of the forest patrimony is destined to preserve high value conservation assets and water sources.

In order to be flexible, **BALTEK® SBC** is also coming from selected and controlled sources where our time to kiln (T2K) and wood legality is verified. This allows us to offer FSC® Mix certified products through a Chain of Custody (CoC) with Controlled Wood standards.

When it comes to mechanical performance, **BALTEK®** is backed up not only by its proven track record of more than 85 years of use in composites but by the most reputable certifications. With DNV-type approval<sup>2)</sup>, including slamming performance, it is confirmed that **BALTEK®** is ready to tackle the most challenging and demanding applications.

With a full suite of ISO certifications for quality, environment, occupational health and safety and energy efficiency, **BALTEK® SBC** is manufactured complying with industry leading standards to satisfy worldclass supply chains.



<sup>2)</sup> Please check on the DNV finder portal



### Finishing Options

**BALTEK® SBC** is available with a wide array of finishing options to adapt itself to all the applications and processing whether used as rigid material or flexible with environmentally friendly backings.

Whether its is used for 2D sandwich composite structures or in complex shapes, **BALTEK® SBC** boasts versatility in formats, surface finishes, precision tolerances and flexible patterns to optimize drapeability, ease of processing, resin uptake and resin flow.

### Research & Development

**BALTEK® SBC** is not just balsa wood. It is a full suite of core material solutions for sandwich composite structures. The research and development that goes behind, dates back from decades of optimization and continuous improvement from seed to core material. **3A Composites Core Materials** ensures the availability of prime balsa wood lumber year-round and the best possible yields.

### Bioenhanced plant breeding

Our research begins by selecting the best individuals to promote those traits in all of our forest patrimony. **BALTEK®** genetic material selection is adapted to the soils and micro climate type.

### Core material physical properties

Our network of laboratories around the world do mechanical and physical characterizations of **BALTEK®** core materials, work jointly with our partners to develop solutions for various applications to optimize and take advantage of the inherent competitive advantages of balsa wood's stiffness and lightness.

### Processing<sup>3)</sup>

- / VARTM / Vacuum infusion
- / Hand lamination / wet lay-up
- / Prepreg processing (up to 180 °C)
- / Adhesive bonding

<sup>3)</sup> Please check our latest **BALTEK®** Processing Guidelines

BALTEK® SBC		mm	in
Standard sheet size		610 x 1220	24 x 48
Full sheet size		1220 x 2440	48 x 96
Thickness tolerance std		+0.25 / -0.75	+0.01 / -0.03
Thickness tolerance PRE		+/- 0.25	+/- 0.01
Flexibility cutting patterns	CK	25 x 50	1 x 2
module size (width x length)	ACK	25 x 25	1 x 1
	ACK	50 x 0	2 x 0
	ACK	150 x 0	6 x 0
	ACK	50 x 150	2 x 6
Perforation	P50 staggered	50 x 50	
	P20	20 x 20	
	P40	40 x 40	
Grooves*	G30	30 / 1.5 / 2.5	
	G25	25.4 / 2 / 2 - 4	

\*one side or double-sided | distance / width / depth dependant

CK = ContourKore (Special ContourKore also available)  
ACK = Adaptive ContourKore  
Please check our latest Finishing Option Overview