

# ProBalsa<sup>®</sup>

The Natural Choice for Sandwich Structures



A Renewable Resource

High Quality

Exceptional Shear Strength

Excellent in Compression

Good Fatigue Properties

Ideal for Dynamic Structures



# ProBalsa<sup>®</sup>

## ◆ A RENEWABLE RESOURCE

ProBalsa is a naturally recurring Ecuadorian resource. The balsa plant grows from a seedling to a mature tree in 4-6 years reaching heights of up to 28 meters (90 ft) before coming to the end of its natural life. Harvested trees are milled, kiln dried, sorted by density and quality and then assembled into blocks for conversion into ProBalsa. ProBalsa is environmentally friendly and biodegradable.

## ◆ TOTAL QUALITY CONTROL

Processing raw balsa wood into blocks and cut sheets is carried out in DIAB's own modern facility in Ecuador. DIAB Ecuador also qualifies raw material suppliers and carries out the ecological administration of the balsa program. This includes working closely with suppliers regarding correct harvesting and subsequent re-planting programs to ensure the future availability of balsa.

## ◆ OUTSTANDING PROPERTIES

DIAB ProBalsa is a high performance, high quality composite core material. The end grain, micro-honeycomb structure offers exceptional shear and compressive strength. In addition ProBalsa offers good fatigue properties, high thermal and sound insulation and low FST properties.

## ◆ IDEAL FOR DEMANDING APPLICATIONS

ProBalsa is best suited for dynamic structures where performance and efficiency are paramount. ProBalsa has a history of proven success in a wide variety of applications, including commercial, military and pleasure marine, wind energy and surface transportation.

## ◆ EASY TO USE

All ProBalsa core materials are particularly easy to work using conventional woodworking tools. They can be drilled, milled, turned and sawn to close tolerances. ProBalsa can be used in hand lay-up, vacuum bag and infusion applications. It is also suitable for elevated temperature cure prepreg systems.

## ◆ WORLDWIDE SUPPORT & SERVICE

ProBalsa customers throughout the world can take advantage of DIAB's unrivalled level of technical support. This includes a structural and process engineering service designed to optimize both the sandwich structure and the manufacturing process while minimizing production and material costs.



## ProBalsa Grades & Forms

ProBalsa is available in three different density ranges and four different forms in order to enable designers to achieve the most appropriate strength-to-weight performance. ProBalsa is supplied in plain or grid-scored sheets 609 mm x 1,219 mm (2 ft. x 4 ft.). Grid-scored sheets are cut in a grid pattern with an open weave fiberglass scrim glued to one side. This allows the core to readily conform to female molds and curved surfaces without building up internal stresses in the laminate.

### ProBalsa - Lightweight

A low density balsa core for weight critical applications. Nominal density: 90 kg/m<sup>3</sup> (5.6 lb/ft<sup>3</sup>).

### ProBalsa - Standard

ProBalsa Standard provides an excellent combination of high strength / low weight. It is available in plain sheets or grid scored (GS) for compound curves. Nominal density: 155 kg/m<sup>3</sup> (9.7 lb/ft<sup>3</sup>).

### ProBalsa - Heavyweight

A high density, high strength version of ProBalsa Standard for highly loaded applications. Nominal density: 220 kg/m<sup>3</sup> (13.8 lb/ft<sup>3</sup>).

### ProBalsa Plus

A premium version of ProBalsa where the surface is micro sanded and treated with a special surface primer to reduce resin absorption during lamination.

### ProBalsa Kits

ProBalsa Kits (available for all densities and forms) are pre-cut to your specifications ready for sequential installation. Kits substantially reduce build times, save labor costs, improve quality and cut waste. Edge fillet strips and hat section shapes can also be supplied to order.

### Custom Finishing

In addition to ProBalsa kits, a variety of custom finishing operations can be carried out to facilitate processing operations. These include grooving and/or perforating for resin infusion.

*DIAB manufactures and markets products and services based on advanced polymer and composite technologies.*

*Over thirty years of experience, together with continuous research and development, have made DIAB an international market leader, with its products being the primary elements in sandwich structures.*

*We supply core materials and solutions for composite sandwich constructions that make our customers' products light, strong and competitive.*

*DIAB also provides a range of support services so that a customer can maximize the benefits of sandwich composites technology and take full advantage of the most cost-effective processing techniques.*

*ProBalsa is approved by:*



GERMANISCHER  
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VERITAS



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