The Power of Composites

“The world’s most advanced composite core materials”

CoreLite®

Number 1 for Quality Since 1939
CoreLite Today

What do you think when you hear CoreLite?

• The Mosquito airplane? • Kon-Tiki Expedition? • Life vests?

Really? That was decades ago. Today, we are a new CoreLite. Possibly, not like you imagined.

For a start, we are in more than 10 different industries. Our leaders apply Design Thinking. We develop our own robotic and information systems. We embrace sustainability and are giving back!

• We built the most advanced balsa wood’s kiln drying system, enabling the shortest time to kiln-dry the balsa, and our technologies make structures lighter, but stronger.
• We’re transforming wind energy and helping build the boats of the future.
• We have developed an incredible radar absorbing material for the military.
• We’re revolutionizing mass transit transportation and teaching manufacturers how to make their structures more durable while enabling them to capitalize on it.
• We’re helping aircraft spend more time flying.
• We’re reinventing the construction industry.
• We’re changing the game for sports and making cars go faster.
• We’re using proprietary robotics in our manufacturing and reinventing composites.
• We’re predicting what you will need and when, and we’re just getting started.
Each client’s **need** is different… but often, the product is **not**.

**What if new composite technologies were…**

...customized to your needs?  ...delivered on-time?

...sustainable and organic?  ...more effective?

...produced with extreme agility?

...designed to minimize your waste?

**We engineer customized solutions to fit your needs**

At CoreLite®, we **understand** that when working with composites, the “one size fits all” approach cannot be taken because every user’s needs vary.

Therefore, we work together with our clients in a **holistic approach** to find a unique solution for their particular problem.

And then, we start producing with extremely **fast turnarounds**.

We believe that innovative core materials, combined with **agile manufacturing**, will optimize the way the world works with composites.

This idea drives everything we do at CoreLite®, making us the leading **balsa & foam core materials** manufacturer.

Our unique manufacturing technologies enables us to deliver the best quality, reduce time and cost, increase sustainability and customize each project.

Our goal is to enable our customers with more competitive advantage.
Some see a simple tree. We see the potential that changes everything.

CoreLite® core materials have been engineered to increase performance by making structures lighter, stronger and more powerful.

Offering a wide range of End-Grain Balsa Wood Core and Foam Core products, combined with engineering support, enables CoreLite® to deliver the right core material solution for your particular application.

Number 1 for Quality
We believe in composites.

CoreLite® uses the latest technology to produce BALSAUSD® Core, CoreLite® Board, CoreLite® PET and CoreLite® PVC in a completely innovative and sustainable manner that helps our customers be more competitive and keep the planet plentiful.

We have the technical knowledge and experience to provide professional guidance to our customers on how to best use our products for their particular application and help them save time and money.

Our state-of-the-art kilns enables our excellent time to kiln-dry practices so our balsa wood core comes with no drying defects and the correct moisture content, optimizing our process and overall quality. The result is balsa core that will not rot or delaminate when used properly.

What if you could reduce resin absorption?

To reduce resin absorption, CoreLite® has the capability of coating the balsa wood panels with a proprietary Epoxy-based coating system with ultra-modern UV coating machinery. However, this is only one part of the process. According to our tests, approximately 50% of resin absorption depends on the gaps, which is why our panels contain virtually no gaps.

What if your kits were more cost-effective?

We use lean manufacturing techniques that make our kits much more cost-effective and extremely fast to produce. Combined with our convenient locations, we are able to provide incredible agile turnarounds for you.

Straight from the raw source to you.
BALSASUD® Core is an End-Grain Balsa Core that has been perfected over the years to be renowned worldwide for its amazing **high quality**. It also has remarkable physical properties such as:

- Outstanding **strength-to-weight** ratios (high shear and compression strength).
- A natural insulator, fire retardant and noise reduction material.
- Heat Deflection Temperature of over **320 degrees** Fahrenheit (160 °C)
- High **chemical resistance** (including styrene).
- Completely organic, sustainable and **renewable resource**.
- BALSASUD® Core is approved by **DNV GL** and **Lloyd's Register**.

The Balsasud S.A. facility in Ecuador is certified for **Forest Stewardship Council™ (FSC™)** Chain of Custody by the Rainforest Alliance to FSC™ standards'.

### BALSASUD® Products

<table>
<thead>
<tr>
<th>BALSASUD® Products</th>
<th>Balsa Grades</th>
<th>Avg. Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rigid Sheets</td>
<td>Ultra Lite (UL)</td>
<td>6.5 Lbs./ft³</td>
</tr>
<tr>
<td>Flexible Sheets</td>
<td>Standard Grade (SG)</td>
<td>9.5 Lbs./ft³</td>
</tr>
<tr>
<td>Balsa Core Kits</td>
<td>Heavy Weight (HW)</td>
<td>17.5 Lbs./ft³</td>
</tr>
<tr>
<td>BALSA FSC™ Certified</td>
<td>Pith Grade (PG)</td>
<td>Random Density</td>
</tr>
</tbody>
</table>

### Standard Dimensions

- **Width**: 24" (610mm)
- **Length**: 48" (1220mm)
- **Thicknesses**: from 1/4" to 3" (6.4mm to 76.2mm)

Back to the basics. Pure nature.
CoreLite® Board is a high quality, cost-effective, closed-cell PVC foam specially formulated to possess high mechanical properties, phenomenal screw retention and amazing resistance to moisture; it will not rot, mold or mildew.

CoreLite® Board is a stand alone product and can be used without skins for a replacement for wood and plywood. CoreLite® Board is 27% lighter than Plywood. This PVC foam board has excellent fastener pullout strength and high flexural strength and stiffness. It is also highly resistant to chemicals and temperature changes.

Engineered to meet the physical demands needed in transom boards, attachment points, floors, bulkheads, stringers, local reinforcements, molds, and tooling.

**CoreLite® Board Products**

- CoreLite Board
- CoreLite Transom
- CoreLite Board Kits

**More Options**

- Grooving
- Drilling
- Cut to Size

<table>
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<tbody>
<tr>
<td>Density (average): 28 Lbs/ft³ (448 Kg./m³)</td>
</tr>
<tr>
<td>Width: 48&quot; (1220mm)</td>
</tr>
<tr>
<td>Length: 96&quot; (2440mm)</td>
</tr>
<tr>
<td>Thicknesses: from 3/8&quot; to 3&quot; (9.52mm to 76.2mm)</td>
</tr>
</tbody>
</table>

CoreLite® Board will save you weight and will not rot, mold or mildew.

Provides much better performance and is easier to work with.
CoreLite® PET is the next-generation foam core material. It is a cost-effective, closed-cell PET foam specially formulated to provide high mechanical properties. It is a 100% recyclable polymer foam with excellent performance.

- Remarkably high mechanical properties
- Completely **homogenous** cell structure.
- Exceptionally density consistent panel.
- **100% recyclable** material.
- High temperature resistance
- Thermoformable
- Low cost foam

CoreLite® PVC is a closed-cell, cross-linked polymer PVC foam formulated for **durability**, strength, and high processing temperatures. It has a very low water absorption rate and excellent chemical resistance.

- Low water absorption
- Superb shear elongation
- Great strength-to-weight ratios
- Ideal for many **lightweight** applications
- Available in multiple densities
- Extremely **consistent** foam core
- Compatible with **multiple** resin systems
- Self extinguishing
Core Kits

CoreLite’s kitting concept is simple: From plantation to kit to you, delivered fast.

We are inspired by possibilities. And with the latest kit cutting technologies, we can precisely cut-to-shape our core materials. Lean manufacturing techniques allow us to optimize the design and obtain a higher yield for your core kit and deliver it much faster.

CoreLite® engineering works closely with you on a holistic approach to ensure that all your requirements are met and kit assembly is efficient.

Our convenient core material processing locations will save you significant freight costs.

Sandwich Panels

High Strength. Cost-Effective. Responsive

Colossal innovation for you. CoreLite’s advanced sandwich process can combine many different core materials with numerous skin options, ranging from aluminum, carbon fiber, fiberglass, wood laminates and custom requirements.

Composite panels are used in architectural projects and in performance-driven structures to reduce weight and increase strength.

Why Sandwich Construction?

- Unique composite material
- Lighter structures
- Enhanced mechanical properties
- High strength
- High stiffness
- Design flexibility
- Thermal insulation
- Very durable
Driven by innovation, inspired by possibilities, powered by nature, built for you, we are proud to make the most sustainable core materials on earth.

CoreLite® materials are designed for use in high performance applications and for solving unique and complex engineering challenges:

- Weight and density control.
- High compression properties to withstand heavy impacts.
- Excellent shear properties to carry dynamic loads.
- Superb FST (Fire, Smoke, Toxicity) properties.
- And much more.
Due to the strict quality standards required by our customers, we do not simply want to produce better balsa wood. We want to produce **much better balsa wood. We aim to make a difference in the world.**

The main purpose of our FSC™ certification is to assure that our balsa wood processing facility meets a set of rigorous environmental criteria.

Fully **sustainable and organic** BALSASUD® Core is the result of this approach.

CoreLite’s strict **time to kiln-dry** practices ensure that the wood enters the kilns within the week of being harvested. We measure and weigh each timber, to deliver a more **density-consistent final panel**, that will avoid failure due to an inadequate-density zone within the panel.

**The overall result of CoreLite**: unique high quality with very fast response times at lower costs.
CoreLite® wants you to **imagine** designs with endless possibilities and we want to help you **create** those stunning designs with freedom and customization. **Enjoy** your finest masterpieces with CoreLite® core materials.

Helping turn **dreams** into reality **since 1939.**