



Working with Bamboo Plywood

(844) 293-6060
www.Bamboo-Design.ca

WORKING WITH BAMBOO PLYWOOD

Receipt and Preparation

All products should be inspected upon arrival to confirm the condition of the material, that there is no freight damage and that the product conforms to the order. Bamboo will naturally vary in color and this is to be expected. For this reason, all panels to be used should be color paired for best effect. If panels are to be stored prior to working, leave the panels in their protective packaging and stack horizontally. Prior to fabrication, sheets should be checked for moisture. If the panels need to be acclimated, un-bag and stack horizontally with spacers to allow proper air circulation to occur. Consider the relative humidity (RH) and temperature of the final installation site to establish the appropriate moisture level of the panel prior to working, sealing and finishing.

Construction variations

Three-Ply Construction:

The most common is our three-ply construction that has been in use since bamboo plywood exists. This construction employs a perpendicular core running the width of the panel. The core is constructed of full-length strips of bamboo. These strips are laminated into a single-piece core board. The surface plies are assembled in a similar fashion and laminated to top and bottom with grain running the length of the panel to complete the three-ply construction.

Linear/Single-ply Constructions:

Linearly laminated panels assembled using vertical-grain "single-ply" lamination where all the narrow edge strips are running the length of the panel with no inner cross-ply core.

Vertical grain Construction:

With the vertical grain construction and working with a strip that is $\frac{1}{4}$ " thick (edge) and $\frac{3}{4}$ " wide (face), multiple strips are laminated face to face, (the $\frac{3}{4}$ face) so that when fully laminated the surface expresses the $\frac{1}{4}$ " edge-grain of the bamboo strip giving it a distinctive linear look.

Horizontal grain Construction:

With the horizontal grain construction, the lamination method employs the same dimension of strip as above but is laminated edge-to-edge exposing the $\frac{3}{4}$ face of the strip in a 4x8 panel.

General Rules of Usage:

The three-ply construction, like all cross-ply constructions, are designed for greater stability. The three-ply construction is also the most popular for its versatility of application. Uses for this panel include, cabinetry, shelving, store fixtures, furniture and wall panel systems.

The linear laminated products will work much like a solid stock lumber product. These sheets are best ripped down to narrower widths and used for furniture stock, exposed frame cabinet door construction or construction systems that allow the material to be well fastened and supported.

*As these sheets do not have a cross-ply core this product is not recommend for European-style single-piece cabinet doors.

If you have further questions about a specific use or application for bamboo plywood, please feel free to contact our technical support department.

Moisture and Humidity:

Bamboo Design bamboo panels are manufactured to an average moisture content of 6 to 9%. However, due to environmental conditions, the product you receive may vary. It is recommended that before working a panel that a moisture reading be taken. If acclimation is necessary, this should be performed prior to working the material and should take into consideration the environment and the application at the final installation point.

Bamboo Design bamboo panels, like wood products, will expand and contract with changes in relative humidity (RH). The greater the seasonal change, the greater the potential for movement.

For best performance, a temperature range of 45–75 degrees Fahrenheit (10-24 Celsius degrees), and a relative humidity of 35–65%, should be maintained throughout the year. In areas with a wide seasonal variation in RH and temperature, every effort should be taken to adhere to the recommend ranges. Exceeding these ranges can result in unwanted movement and including checking, cracking and warping in some cases.

For further information on relative humidity, moisture and wood, please refer to the AWI Architectural Woodwork Standards – First Edition, October 1, 2009, appendix B, page 453. Note AWI recommends an RH range of 25-55% for wood products where Bamboo Design recommends a range of 35% to 65% for bamboo.

Fabricating with Bamboo Design Bamboo Plywood

Tools

Our bamboo panels can be worked like a wood product using the same techniques and equipment including hand and shop tools as well as CNC machinery. If you are working the material in a way that you are uncertain with, first test the method to confirm that the method and the material are compatible. If you have questions, please contact our technical support department.

Fasteners and Adhesives

Bamboo Design bamboo panels work well with most methods of fastening. This includes, joinery, screws, brad nailing and clamp and glue methods. Please note however that due to bamboos' greater hardness and less give that screws should be pre-drilled and that hammer and nail should be avoided. All wood glue types are acceptable for use with our bamboo panels.

Sanding

Our bamboo panels can be sanded like a wood product using the same materials and equipment including standard sandpaper, hand sanders and shop or industrial sanding equipment.

Finishing bamboo plywood

Bamboo Design bamboo panels can be finished using conventional methods and materials that include hand-rubbed, spray, brush, dip applied or industrial roll or flow coating equipment with a UV cure system. All standard finishes ordinarily work well, but you should always check for compatibility, including by testing the finish on a sample piece.

Because we cannot test the compatibility of every finish system available on the market, the ultimate responsibility for finish compatibility rests with the user. When applying a wax finish, it is recommended to first apply a hard-drying seal coat.

All Surfaces should receive a finish, including edges, ends, cutouts and bottom side. Full absorption requires at least three to four coats. Apply sealers multiple times to the end grain to seal thoroughly and be effective.

Equal applications of sealer and finish are recommended to allow for slow balancing. For example, if two full coats are applied to a top face, two full coats of the same finish should be applied to the back face.

Left unfinished, the panels can either absorb moisture or dry out. Moisture imbalance will cause cracking. Any new cuts need to be re-sealed. Sealers and finishes need to dry thoroughly between applications and where the relative humidity of 35% to 65% year round is present. The longer a panel remains unfinished and the greater the environmental extremes, the greater the chance the panel will develop problems. This is natural and site condition material response and is not considered a manufacturing defect.

Undermount Sinks and Countertops

Please note, we advise against gluing down firmly, nailing or screwing down tightly onto any material, including undermount sinks, that will prevent expansion and contraction of the material. Use adhesives that are 100% Silicone and other wood-suitable adhesives in moderation. Adhesive should be used to supplement wood screw anchorage, especially at spots where access is difficult. Apply adhesive in daubs, never in a continuous bead, and do not use adhesive at both the front and back of the worktop, as this will conflict with expansion/contraction.

Around Sinks and Tubs – Give extra care and attention to seal edges of panels and countertops around undermount sinks, regular sinks or tubs. Prolonged or constant exposure to water can cause darkening of the wood and over-saturation that in turn might cause warping.

Additional Notes

Bamboo plywood is designed for interior use only. Bamboo plywood is not a structurally rated sheet good. Bamboo Design cannot take responsibility for inappropriate applications or environmental conditions. If you have further questions about a product or specific application, please feel free to contact us for further information. Toll free (844) 293-6060 or email us at info@bamboo-design.ca.