Working with Standard Smith Fong 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 colour and this is to be expected. For this reason, all panels to be used should be colour 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 acclimatised, unwrap 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 of Smith Fong Bamboo Plywood - four variations:

Three-Ply Construction:

The most common is our three-ply construction that has been in use since 1996. This construction employs a perpendicular core running the width of the panel. The core is constructed of multiple 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 Constructions:

Linearly laminated panels come in two types: edge-grain "single-ply" lamination and a four-ply linear lamination where in both constructions all the strips are running the length of the panel with no inner cross-ply core.

Edge Linear Construction:

With the edge-grain construction, and working with a strip that is 6mm thick (edge) and 18mm wide (face), multiple strips are laminated face to face, (the 18mm face) so that when fully laminated the surface expresses the 6mm edge-grain of the bamboo strip giving it a distinctive linear look.

Flat Linear Construction:

The linear 4-ply lamination method employs the same dimension of strip as above but is laminated edge-to-edge exposing the 18mm face of the strip in a 1220 x 2440mm panel. These 1220 x 2440mm panels are then laminated ply upon ply in a linear, not perpendicular fashion, to create this look and design.

Five-Ply End Grain Construction:

Our end grain or Smith Fong Bamboo Squared™ product is a five-ply construction that employs our standard three-ply construction as a core and the end-grain face plies are applied top and bottom to complete this design.

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.

Our five-ply, Squared sheets, due to their greater thickness and weight, are best for treatments such as table or counter top surfaces. As this material is more sensitive to RH swings, an epoxy resin sealing system may be used for greater resistance to changes in RH. As with any other site-applied finish, you should check and verify compatibility between your finish system and the product surface before proceeding with your work.

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

Moisture and Humidity:

Smith Fong Bamboo plywood 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.

Smith Fong Bamboo plywood 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 10–26°C, and a relative humidity of 35–55%, 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 checking, cracking and warping in some cases.

Fabricating with Smith Fong Bamboo plywood:

Tools:

Smith Fong Bamboo plywood 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:

Smith Fong Bamboo plywood 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 Smith Fong Bamboo plywood.

Sanding:

Smith Fong Bamboo plywood 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:

Smith Fong Bamboo plywood 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 Smith & Fong 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. When working with the Squared product in high RH swing environments an epoxy resin sealing system may be used for greater resistance to changes in RH. As with any other site-applied finish layer, you should check and verify compatibility between your finish system and the product.

Additional Notes

Smith Fong Bamboo plywood is designed for interior use only. Smith Fong Bamboo plywood is not a structurally rated sheet. Smith & Fong 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.