



Working with Durapalm® Plywood

Receipt and Preparation:

All product 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. Palm 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 of Durapalm: three variations

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 palm. 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 completing the three-ply construction.

Our Durapalm end grain, or PalmSquared, 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.

Linear laminated “single-ply” is in the edge grain format. There is no inner cross-ply core. With the edge-grain construction palm strips are laminated face to face, (the $\frac{3}{4}$ ” face) so when fully laminated the surface expresses the edge-grain look of the palm strip giving it a distinctive linear look.

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.

Our five-ply, Palm 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.

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 Durapalm plywood, please feel free to contact our technical support department.

Moisture and Humidity:

Durapalm 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.

Durapalm 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, 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 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 Smith & Fong recommends a range of 35% to 65% for Durapalm.

Fabricating with Durapalm:**Tools:**

Durapalm 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:

Durapalm 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 Durapalm's 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 Durapalm.

Sanding:

Durapalm 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:

Durapalm can be finished using conventional methods and materials that include hand-rubbed, spray, brush, dip applied. Finish systems that employ heat to cure a finish such as a flat-line UV cure system should be avoided. Extreme heat can cause the Durapalm to check. All standard finishes work well. 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 system is recommended.

Additional Notes

Durapalm is designed for interior use only. Durapalm is not a structurally rated sheet good. 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.