



Compact Wood

INTERIOR & EXTERIOR SURFACES

Technical Data Sheet

Compact Wood 101

WHAT IS IT?

Compact Wood LLC has combined the strength and durability of solid compact/phenolic with the warmth and beauty of natural wood to create Compact Wood.

SPECIES

Available in over 100 species with 20 Quick Ship species in 51" x 120" x 1/2" sheets.

CUSTOM

Custom width, thicknesses, species and stain available for a 20 sheet minimum.

FIRE RATING

All thicknesses 1/2" and greater are Class A (ASTM-84) as standard. Thinner boards available as Class A.

Compact Wood

Compact Wood is a solid, decorative, self-supporting wood panel available for interior and exterior surfaces.

USES FOR COMPACT WOOD

Typical applications include horizontal and vertical solutions such as wall panels, toilet and dressing room partitions, lockers, table tops and counters, shelving, desktops, window sills, signage and wayfinding and wall protection components.

Compact Wood exhibits the following properties:

- Excellent resistance to fire - Class A
- Very high surface and edge impact resistance
- High resistance to chemicals and organic solvents
- Excellent moisture and water resistance
- Excellent hygiene characteristics
- Outstanding self-supporting properties
- Good dimensional stability and flatness
- Simple and quick fabrication
- No need for edging and adhesives
- High resistance to stress cracking
- Excellent resistance to termites

Outstanding strength and high machinability combine to make Compact Wood the real wood building board solution for all wood applications.

The outstanding surface and strength characteristics of Compact Wood makes it ideal to use in clean rooms, damp areas where moisture is a concern and rooms where sanitary issues are a concern. The surface is not adversely affected by moisture and is easy to clean with mild disinfectants. Compact Wood is not susceptible to mold, corrosion, rust or rot.

THICKNESSES

Full sheets are supplied in 1/2" thickness. Other thicknesses are available as a custom.

SHEET SIZES

Available in 51" x 120" sheets as standard. Larger sizes available to order.

EDGE DETAILS

Full sheets are supplied with clean cut edges. Cut to size and finished components are available direct from Compact Wood LLC with a variety of edge profiles either polished or clean cut.

CORE COLOR

The standard core color is brown. Black and solid color cores are available.

FABRICATION

Fabricators and millworkers can cut and machine CompactWood with traditional woodworking tools and best practices.

Compact Wood LLC also offers a full fabrication service including simple and complex custom CNC machined components with holes, grooves, custom edge profiles and metal inserts and connectors.

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Compact Wood's limited warranty is for one full year from the date of purchase. In the case of fabricated components manufactured by CompactWood LLC, the warranty is extended to three full years.

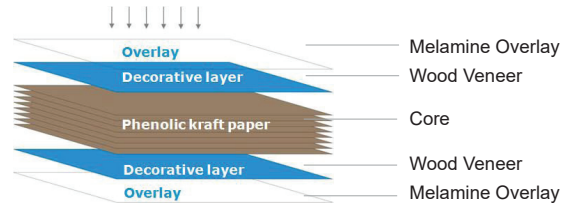
Compact Wood warranties Compact Wood sheets against swelling, delamination or warpage caused by humidity or proper maintenance.

Swelling must be more than 10 % of nominal panel thickness. Warpage must be more than 5 mm per every linear meter, and not due to an installation that has limited the panel's expansion. Delamination must not be caused by damage or chipping to the panel's edge.

Compact Wood LLC's warranty is limited to the replacement only of defective sheets or fabricated components manufactured by Compact Wood LLC. This Limited Warranty does NOT cover the cost of any labor or freight costs associated with any replacement

COMPOSITION

Compact Wood is manufactured by pressing melamine impregnated natural wood veneer over phenolic impregnated kraft sheets at pressures over 1000 psi pressure and temperatures of approximately 300 degrees F (149 degrees C). The decorative surface is the same on both surfaces to provide a flat and dimensionally stable board.



Fabrication

Conditioning, Cutting, and Drilling

Compact Wood should be allowed to acclimate for 72 hours before fabrication and assembly. Best conditions are approximately 23 degrees C (73 degrees F) and a relative humidity of 45 % to 55 %. When cutting, the rate of feed will depend on the thickness of the panel and the required quality of the cut. Chipping of the lower surface may be avoided by altering the angle at which the blade emerges. The use of a scoring blade avoids this problem altogether. The saw blade marks may be eliminated on the edge by using a router with a 2-flute straight bit or a solid carbide spiral bit.

Carbide-tipped saw and router blades should be used for cutting. Cutting blades should be kept very sharp and a hold-down used to prevent vibration. The edges may be polished with a lemon oil furniture polish to obtain a semi-gloss finish.

Drill oversize holes for screws or bolts. The drill diameter should be at least 0.05 mm (0.002") larger than the specified diameter of the hole. Secure objects to the surface of the laminate with self-tapping screws in predrilled holes. With self-tapping screws, the hole must always be predrilled with the diameter of the hole being smaller than the external diameter of the screw. The depth of the hole must be at least 1 mm greater than the depth of penetration of the screw. The finer the thread, the firmer the screw holding.

Compact Wood can be fabricated with traditional woodworking tools and techniques.

Inspection

Compact Wood must be inspected prior to fabrication or installation to ensure sheets are clean and free of surface defects. Protective peel coat should be removed prior to inspection.

Joinery Techniques and Hardware - Request copies of Ambienta product brochures for information on wall panel, toilet partition and locker systems using Compact Wood.

Fabricators of phenolic toilet partitions, lockers, wall panels and other phenolic based systems can machine Compact Wood sheets in the same way as they machine their existing phenolic stocks.

Hardware such as self drilling screws and threaded inserts and fasteners work extremely well in Compact Wood and the hardware can be furnished with the sheets.

Cutouts

To avoid stress cracking, do not use square-cut inside corners. All cutouts should be routed or filed to ensure smooth edges. A radius of 1/4" or larger in the corners is recommended to minimize stress cracking for an inner side of 10" or less. This radius must gradually be increased for openings with a longer inner side.

Industry Practices

Material, equipment, and workmanship should conform to industry standard practices, conditions, procedures and recommendations as specified by ANSI/NEMA LD-3-2000, Standard for High-Pressure Decorative Laminates, Annex A, Application, Fabrication, and Installation or Architectural Woodworking Institute (AWI) "Architectural Woodwork Quality Standards, Guide Specifications and Quality Certification Program".

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Transportation and Storage

Compact Wood should always be transported on flat, stable pallets. Secure the panels so that they do not slip. Make sure panels do not slide over each other during loading and unloading operations. Lift them by hand or with means of a suction cup hoisting device. Dirt, foreign bodies and sharp edges rubbing against the surface can cause damage. Store the panels in a closed place where normal climatic conditions are guaranteed. Stack the panels on top of each other on a flat base. Never stand the panels on edge. The protective film, if applied, must be removed simultaneously from both surfaces.

Care and Maintenance

Compact Wood sheets have a hard, durable melamine surface and will maintain their attractive appearance longer than most other decorative surfacing materials and requires minimal maintenance. The decorative surface may be cleaned with warm water and a mild soap or detergent using a damp cloth or sponge. Difficult stains such as coffee and tea can be removed using a mild household and a soft bristle brush with a household cleaning detergent. Do not use abrasive pads, scouring powders or cleaners as they may permanently dull or scratch the laminate surface making it susceptible to staining. Harsh chemicals such as oven cleaners, drain cleaner and acids and strong alkalis can etch and discolor the decorative surface. Follow our "Care and Cleaning of Laminates Guide"

NEMA Testing (National Electrical Manufacturer Association)

NEMA TEST	TEST RESULTS	NEMA REQUIREMENTS
Light Resistance	No Effect	Slight Effect
Cleanability	9	20 max
Stain Resistance		
Reagents 1-10	No Effect	No Effect
Reagents 11-	No Effect	Moderate Effect
Boiling Water	No Effect	Slight Effect
High Temperature	No Effect	Slight Effect
Linear Glass	<50 grams	No Requirement
Ball Impact	>3000mm	1900mm minimum
Resistance	>120"	
Dart Impact	>1000mm	No Requirement
Resistance	>40"	
Radiant Heat	>200	200 Seconds
Wear Resistance	400 cycles	400 cycles

Other Properties of Compact Wood

TEST METHOD	TEST RESULTS	NEMA REQUIREMENTS
EN 438.2.4	Thickness Tolerance	± 5%
DIN 53479	Density (Kg/m3)	1.420 ± 0.030
ASTM D-1037	Density (lb/cu. ft.)	88
EN 438.26	Abrasion Resistance	IP=>150 A=>350
EN 438-2.24	Steam Resistance	Grade=>4
EN 438-2.15	Stain Resistance Group 1-2	Min. Grade 5
	Stain Resistance Group 3-4	Min. Grade 4
EN 438-2.16	Color Fastness	Scale=>6
	Xenon Arc Lamp (Grey)	Tones=>4
EN 438-2.10	Dimensional Stability (%)	L<=0.2 T<=0.3
ISO 527	Tensile Strength (N/mm2)	L=>100 T=>70
ISO 178	Flexural Strength (N/mm2)	L=>100 T=>90
ISO 178	Modulus of Elasticity (N/mm2)	L=>1000 T=>8000
DIN 53454	Resistance to Compression	>200
ASTM-D-785	Rockwell Hardness (HRE)	>78
ASTM D-696	Coefficient of Expansion (/C)	0.0005

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