

Genuine Mahogany Decking Installation Guide

Genuine Mahogany is among the most durable natural wood decking available. When properly installed and maintained, you should have a beautiful deck that should last for decades.

The following guidelines have been prepared to help the installer achieve the best results with your deck installation. Conrad Forest Products has tried to accumulate and present the best information possible.

Due to the variance in nature-grown products, as well as general disagreement among professionals, we can only advise and make recommendations based on our own personal experience as well as feedback from suppliers and contractors who have used these methodologies.

It is the sole responsibility of the installer and owner to adequately test and determine final applications. Follow all manufacturers' recommended application instructions when using proprietary products.

SAFETY

- First and foremost, always check and follow local building codes.
- Proper safety equipment should be worn at all times.
- Wear safety glasses when working with hardwoods.
- Warning: dust masks are required when cutting and sanding hardwoods, as hardwood dust can potentially cause breathing problems.
- Be careful lifting hardwood lumber.
- Always use the proper tooling when working with hardwoods.

TOOLS

- Use carbide-tipped saw blades when sawing.
- Use bending tools such as the BoWrench to straighten crooked or bowed boards and hold them in place while fastening.
- Use only high quality stainless steel trim head screws or hidden fastener system. #2 Square bit drivers are recommended to minimize screw head stripping.

MATERIAL HANDLING & STORAGE

- Genuine Mahogany deck boards supplied by Conrad Forest Products are for outdoor use only.
- Store out of direct sunlight and keep dry by covering. Covering also prevents premature oxidation and fading.
- Stored decking should be kept off the ground at least 4" (used 2×4's for dunnage, or scrap pieces of lumber).
- Use dunnage (separating sticks) between rows of stacked lumber for ventilation during acclimation.
- Stack deck boards with the longest lengths on the bottom, building to the shortest lengths on top. Hardwood decking is heavy, so do not stack more than several feet high.

Use enough support dunnage (such as 2x4 studs) so that you stack does not sag from its weight. Line your dunnage up vertically for maximum stabilization.

- Allow wood to acclimate and stabilize to installation environment humidity levels before installation! The wood will lose some moisture while air drying.
- Allow a minimum of two weeks to properly acclimate the wood. Failing to properly acclimate the wood before installation could cause the wood to crack, buckle, warp, etc. after installation.
- Wood will naturally darken upon exposure. There may be lighter/darker areas on boards (i.e. – where banding straps have been) that will darken and even out with the rest of the board after exposure.

CUTTING

- Use all safety precautions when using tools, including wearing safety glasses and breathing mask.
- Carbide-tipped saw blades are recommended for smooth cuts.
- Go slower as you cut through the wood to get a smooth cut. This will minimize splintering on the bottom of the board.
- It is recommended that you use a 10" to 12" compound miter saw to ensure smooth, straight cuts.
- Always cut with the good face up to minimize end-cut splintering.
- Seal all fresh-cut ends with an end-sealer such as AnchorSeal immediately after cutting in order to minimize splitting.

INSTALLING

- Genuine Mahogany should never be attached to a solid surface such as concrete. Sleepers, stringers or joists should be used to fasten the deck boards to the structure. Proper drainage and ventilation should be considered to avoid movement, cupping and checking.
- Ventilation – Allow for air flow underneath and between the deck boards in your design for maximum long-term stability. Follow proper gapping/spacing recommendations below for best results. Decks should be built at least 24" above the underlying surface and have open ventilation from three sides.
- Spanning – For minimal waste, we recommend that you build your deck on 12" spans. Otherwise, follow these standard spans for installation for minimal deflection of the deck surface:

Fijian Genuine Mahogany Decking

<u>Nominal Size</u>	<u>40 psf Span</u>
1x4	16" on center
1x6	16" on center
5/4x4	18" on center
5/4x6	18" on center

Gapping – Allow a 1/8" gap between board widths on 4" wide decking, and 3/16" gap between board widths on 6" wide decking for drainage, airflow and expansion. Use 1/8" and 3/16" strips of scrap plywood or nails with equivalent shank size for gauging.

Expansion – Hardwood decking may expand by as much as 1/8" on 6" wide boards and 1/16" on 4" wide boards during times of high moisture, thus proper gapping is recommended.

Shrinkage – Air dried hardwood decking can shrink laterally approximately 1/16" on 4" wide boards, and up to 1/8" on 6" wide boards. Shrinkage will be less on kiln-dried (KD) boards. Expect more shrinkage of width in hot or dry areas.

FASTENING

- Face screwing – use stainless steel trim head screws for superior corrosion resistance and maximum holding power, driven with a slow speed drill into a pilot hole and countersink to prevent splitting. Use two fasteners to attach decking to each joist, approximately 3/4" from the edge of each side of the board. It takes approximately 3.5 screws to cover 1 square foot, so allow for 350 screws per 100 square feet.
- To determine typical fastener length needed, multiply the wood thickness by 2.5. Many contractors use #7 x 2-1/4" stainless steel screws.
- Pre-drill to the diameter of the screw shank to avoid splitting. The screw tip will bite into the joist below to hold the board in place.
- Trim head screws are recommended as they produce a lower visible profile.
- Pre-drill to avoid splitting. Screws require a pilot hole and countersink. Use of a countersink/drill bit combo is recommended. Judge the depth of the countersink based on the screw head size. Trim heads require little to no countersink, while wider heads require a deeper countersink. Also consider the depth of the countersink if using plugs to hide the screw heads.
- While coated or galvanized steel fasteners have been used, they may stain the wood black and have a shorter service life, and are therefore not recommended.
- Plugging will help conceal the fastener head. Plugging is an aesthetic that is sometimes preferred, however is labor intensive. Use species specific 3/8" diameter plugs (Fijian Genuine Mahogany plugs) and set the depth of your countersink using a stop collar to accommodate the plug, approximately 1/4" deep. Using a dab of exterior adhesive, such as Gorilla Glue, tap the plug into place using a rubber mallet and allow the adhesive to set. Using an electric hand planer, plane the remaining material nearly flush with the deck board. Go over again with a belt sander, spot sanding where needed to ensure flush plug.

SANDING

- Spot sand where necessary
- Orbital sanding is not recommended as it can leave circular scratches in the grain

END SEALING

- End sealing all cross-cut boards with a wax-based product is recommended to minimize cracking, which may occur as moisture escapes the wood.
- It is recommended that fresh cuts be sealed immediately after cutting.
- AnchorSeal2 is one of the better products on the market for this type of application. It goes on much like paint, and dries to a waxy clear finish. It can be applied by brush, sponge, or rag.
- Do not get end sealer on the face of the board, as it will cause staining.
- For best results, follow the manufacturer's instructions on the container.

CLEANING & MAINTENANCE

- Periodic cleaning with simple soap and water and a stiff brush will keep your deck looking new.
- Pressure washers are not recommended. Using a pressure washer can have a sand blasting effect and tear wood fibers, causing a coarse and uneven surface. A simple garden hose with a spray nozzle should be sufficient.

FINISHING

- Before applying finishes, brush and clean the surface to remove dirt and dust.
- To maintain the hardwood's rich color, use a transparent penetrating oil-based finish with UV inhibitors.
- Fully spot test any oil- or water-based coating before general application to determine compatibility. Conrad Forest Products recommends Timber Pro UV Oil.
- Follow all manufacturers' instructions for applying sealers and finishes.
- The lifespan of a finish will vary, depending on the weather extremes; however expect an annual maintenance and perhaps a regular over-coating of high traffic.