

IRON WOODS®

HARDWOOD DECKING & SIDING

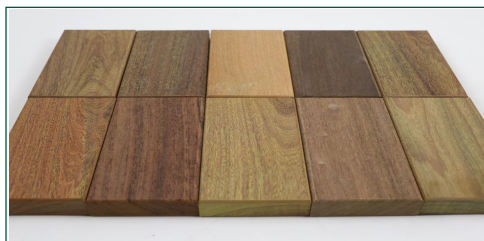
INSTALLATION - BEST PRACTICES

Iron Woods® hardwood decking products are naturally durable and truly Green By Nature each having their own unique appearance and time tested performance values. Whichever Iron Woods® product you choose, this guide is designed to outline current best practices and installation options. The use of Best Practices is an installer's guide to superior results and satisfied customers.

To the best of our knowledge this information is accurate; however due to the variance of products grown in nature, it is the sole responsibility of the installer to select the appropriate product for any given installation and site condition, check and follow local building codes and apply Best Practices in handling and installing Iron Woods® brand products. Installers should follow manufacturers recommended application and maintenance instructions when using proprietary finish and fastening products. To maximize the performance and beauty of Iron Woods® products please read this installation guide before you begin.

Color and Grain Variation

Color and grain variation is typical of materials created by nature and recognized as part of the beauty that sets natural products apart from manufactured products. This is particularly true where wood products are concerned though some species have more or less color variation than others. This should always be considered when looking at wood samples as Iron Woods are supplied mixed grain and are not sorted for color. Some consistency in color can be achieved through either staining wood or allowing wood to weather or grey out naturally.



Handling and Storage

Iron Woods should be handled with care prior to installation. Job site storage should be covered, out of direct sunlight and off the ground with a moisture barrier beneath if the ground is wet. Allow Iron Woods decking to acclimate and stabilize to equilibrium humidity levels prior to installation to reduce movement after install.



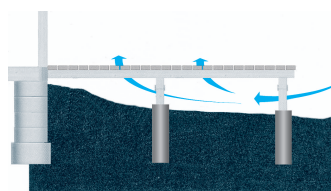
Wood Acclimation

Wood dries by movement of free water through fiber cavities, fiber walls and movement of water vapor through wood. Because wood is not homogeneous, it shrinks more along the growth rings (radial) than across the rings (tangential). Tangential dimensional change is often nearly twice that of radial movement for most wood species and (longitudinal) dimensional change is almost always negligible. These shrinkage variations cause drying defects like warping and checking. Shrinkage and swelling cease as the moisture content of wood approaches equilibrium to its environment. Species of wood vary in the rate and amount of shrinkage. To minimize shrinkage, warping, checking

and splitting in the finished product, lumber must be acclimated to the middle of the range of expected in-use moisture content. This can occur by either air drying or kiln drying the lumber. The extent of drying defects depends on the species and the rate at which the lumber dries. For much of the United States, the point of equilibrium in an exterior environment is between 10% to 14%. For the seasonal EMC levels in your region consult the US Forest Products Laboratories website, www.fpl.fs.fed.us. Search for the document titled, "Equilibrium Moisture Content of Wood in Outdoor Locations".

Deck Ventilation

The importance of ventilation and air flow under and around wood decking in improving product stability and performance has been well understood. Adequate ventilation of the deck is essential for long term stability, durability and to minimize cupping. Air should always be allowed to flow freely from outside and under the deck. Roof decks and decks with poor ventilation need to manage water beneath with slope, drainage, or a moisture barrier.



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Cutting, Drilling, Fastening

Use carbide tipped finish cut saw blades and coarse open bits. Seal all ends immediately after cutting with clear aqueous wax based end sealer in order to reduce end checking. Holes should be drilled as far from the board ends as allowable to reduce end splits from over torque of screw heads. The use of of corded drills for maximum torque and speed is highly recommended. The use on impact drivers should be avoided.

End Sealing

It is required that an aqueous wax be applied to board ends immediately after cutting to reduce end checking on both air dried and kiln dried decking and lumber.



Preparation, Finishing, Maintenance, and Restoration

When specifying wood products for exterior construction it is important to have realistic appearance expectations. When used outdoors wood products will not retain the appearance associated with their use in interior applications like furniture or flooring. Wood will not hold its original color over time without cleaning and reapplication of finishes. Wood by its nature will be subject to some limited amount of natural reaction, as it is difficult to predict how a natural product like wood will behave in any given environment or conditions.



Natural Weathering

Iron Woods decking left to weather naturally without finishing, will yield a beautiful silver patina in time. Maintenance is reduced to periodic cleaning.



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NEW DECK PREPARATION

To prepare a new deck for finishing, it must be clean and dry. Any scratches, stains, or discoloration should be addressed before applying coatings to prevent locking them in

If you are sealing to maintain the color of your deck consider using cleaners from the same manufacturer as the sealer. Caution should be exercised when using Wood Brighteners containing Oxalic Acid, and only used if the deck will be refinished after brightening. Oxalic Acid converts lignin in natural wood species to sugar and can accelerate the mold process if left raw after cleaning.

Finishing

To maintain natural color use high quality oil based outdoor finishes with UV inhibitor, fungicide and pigmented tint. Test finishes on decking to determine their compatibility and appearance. Before application, brush and clean decking surfaces to remove dirt, dust and other airborne contaminants. Follow the stain manufacturer's application instructions carefully. **Stains are defined as, "Vapor Permeable", and allow for natural equalization, and are less effected by seasonal changes in temperature and moisture.**



Finished Deck Maintenance

Mold and Mildew will grow on any surface on which a food source has accumulated. This includes plastic and glass surfaces. Mold or Mildew can be cleaned with deck cleaner containing Sodium Bicarbonate. Periodic cleaning and reapplication of finish (as needed), will enhance the appearance of your deck. The lowest maintenance approach we have found for maintaining finished decks is to treat them like you would a piece of furniture in your home. Simply clean your deck when it's dirty and wipe-on wipe-off a fresh coat of finish. That's the beauty of wood. It can always be restored to its original appearance.



Spotting, Staining, Discoloration and Weathering

Spots and stains can be difficult to remove from all wood. Iron Wood is extremely durable and can handle aggressive cleaners. For grease stains simply apply household degreasers such as Dawn Dish Detergent. Spotting must be diagnosed as to the cause. Often this is attributed to iron fragments

from deck fasteners. Once completely clean and free from fragments, natural UVs should cause the spots to fade over time. Removing natural weathering is done by the proper application of bleached based wood brightener. Be sure to follow manufacturer's application and dilution directions.



NOTE:

Any cleaner / brightener must only be applied to a wet deck. Applying to a dry deck can create a stain even more stubborn than the one being removed.