

Technical Bulletin – Iron Woods Cladding Finishing and Maintenance



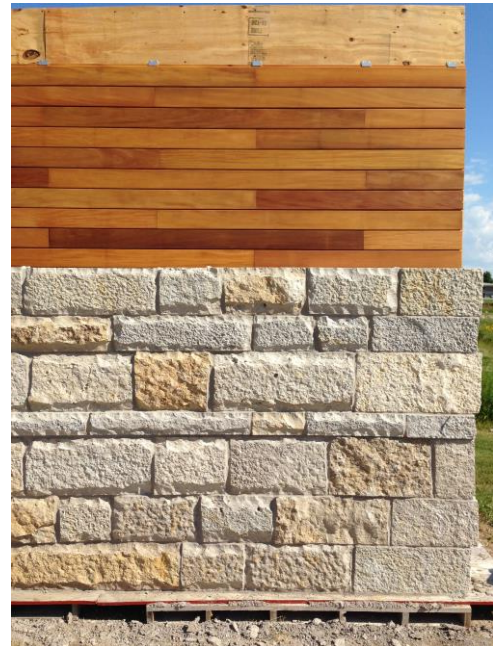
Garapa Gold With Clear Penofin First Coat



Iron Woods Ipe With Clear Penofin First Coat



Day 360



After cleaning and reapplicaton

In 2015 a mock up was constructed to evaluate finish weathering performance for the Grande Cheese Headquarters project to establish maintenance requirements.

Natural Weathering

Left unfinished or over time without cleaning and refinishing, Iron Woods® will weather naturally to a silver grey patina.

It is important to note that areas which do not receive direct UV rays, like soffits, will weather very slowly compared with vertical surfaces.

Finishing and Maintenance

A first coat on all faces prior to installation with an oil based finish is not necessary but recommended even if you intend to let the rain screen weather. Application of even an inexpensive oil based finish slows moisture absorption and release during seasonal moisture transitions, reduces surface checking and improves stability during the initial acclimation process. This can significantly improve project outcome if you are in arid dry conditions and direct sunlight. It is important to remember that you can apply water based finishes over oil based finishes but you cannot apply oil based finishes over water based finishes so make sure you take this into consideration when selecting finishes.

Preparation, Finishing, Maintenance, Cleaning 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 cannot be predicted how a natural product like wood will behave in any given environment or conditions.

New Cladding Preparation

Unless the cladding is provided prefinished, clean your cladding using a Sodium Bicarbonate deck cleaner like Penofin Pro-Tech Cleaner to remove dirt and debris from the wood surface. Follow the cladding cleaning with an application of wood brightener to remove any stains or discolorations from weathering. Oxalic Acid based wood brighteners also improve finish penetration. Make sure you allow for wood to dry thoroughly before and between any and all cleaner, brightener or finish applications.



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 cladding 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 cladding to determine their compatibility and appearance. Before application, brush and clean decking surfaces to remove dirt, dust and other airborne contaminants. Iron Woods® are dense, so apply thin coats, wipe down and allow each coat to dry thoroughly. Over application will result in a sticky surface which will collect dirt and promote mold growth. Cladding, pre-finished with a First Coat of Penetrating oil, may or may not, be available in your market. Check with your local dealer for availability of this service. Grain, density and moisture content can all affect finishing. Every piece of wood will accept finish differently, even pieces from the same tree. Sampling finishes is always recommended prior to full application. Timber Holdings does not warrant the performance of finishes. Warranties if available are the responsibility of the finish manufacturer.



Finished Cladding Maintenance and Weathering

Periodically cleaning and reapplication of finish (as needed), will enhance the appearance of your cladding. 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 cladding when it is dirty and wipe-on wipe-off a fresh coat of finish before the finish deteriorates from UV exposure and the greying out or other forms of discoloration begin to take place. We recommend you do this twice per year (spring and fall) or as needed. Light power-washing is an acceptable practice.

Spotting, Staining and Discoloration

From time to time we get calls asking about black spots that appear on wood cladding. These spots are caused either by mold or by a reaction between the iron in water with the natural tannic acid found in all wood. Mold or Mildew can be cleaned with deck cleaner containing Sodium Bicarbonate. Other stains can be removed with wood brighteners. Wood cleaners and brighteners are supplied in both powder or a concentrated solution form and are mixed with water. Multiple applications may be necessary to remove some types of stains.



If you wait for the finish to deteriorate beyond the capabilities of deck cleaner and wood brighteners, all is not lost. Simply remove the old finish using a finish stripper like Penofin Pro-Tech Stripper followed by cleaner, wood brightener and oil based finish just like you did when you first installed the deck. That's the beauty of wood. It can always be restored to its original appearance.



Use extreme caution when handling any of these chemicals and wear protective clothing and glasses. Do not mix these cleaners with ammonia or household cleaners. We recommend that tests in small areas on a few different boards be made before overall use on the project. Always consult and follow the manufacturer's recommendations when using proprietary products.

Dealer Locators

<http://www.penofin.com/homeowner-resources/where-to-buy>

While this document references Penofin as it has a full line of wood maintenance products and is our chose, there are other brands of penetrating oil based finishes, Sodium Bicarbonate wood cleaners, and Oxalic Acid wood brighteners available in the market.

Consult your dealers for available products in your market.