

Graham Paint/ 773-585-9110

Deck staining

Many houses today have decks. Most new houses are built with a deck included. Recoating decks is a big business. Decks take a lot of abuse. They are usually in the direct sun much of the day subject to the harsh UV rays that degrade both stains and wood. In the winter, snow and ice often remain on the deck for extended periods. Decks need to be maintained much more often than other coated areas of a house. Decks are constructed of many kinds of wood: treated pine or fir, cedar, redwood, mahogany, teak or lately, some imported lumber. More and more, decks are being constructed from synthetic materials. These synthetic materials, although resistant to rot, often need an application of a coating

to provide a color that makes the deck blend in with the house.

There are several choices for coating decks. The choices are all-different and achieve different results. We'll talk about them in a minute.

Surface preparation is a critical step in achieving the best results. Not following good procedures for surface preparation will often result in premature failure of the coating.

Types of stains & coatings

Stains with the word "transparent" or "natural" in the product name are generally formulated from translucent iron oxide as the pigment and oil and alkyd as the resin. These solvent-base products penetrate deeply into the wood. They are generally very low viscosity. The translucent iron oxide pigments provide color as well as protection from the sun's UV rays. Incidentally, these same iron oxide pigments (used in much higher concentrations than in deck coatings) are used in heavy-duty coatings used to coat bridges and other metal structures because the pigment also gives good corrosion resistance over metal. Transparent stains usually have brighter and clearer colors

than semi-transparent stains. Transparent stains allow the wood grain and patterns to be seen quite clearly. Transparent stains usually need to be refinished every year. Fortunately, transparent stains wear away and do not flake off so recoating is relatively easy.

Semi-transparent stains are formulated from conventional pigments and alkyd and oil resins. They are solvent-based. They can be tinted with universal colorants. They do penetrate the wood. They do allow the grain of the wood to plainly show through but not as clearly as do the transparent stains. Since opaque pigments are used, their appearance is somewhat more "muddy" than that of the transparent stains. They do impart more color to the substrate. Semi-transparent stains usually need to recoat every two-three years. Generally, the more pigment a coating has in it the longer the coating will be protected from UV rays.

Types of coatings and stains

Semi-solid stains have more pigment in them than a semi-transparent stain, but less than a solid stain. These stains allow some of the wood grain to show through, but hide a fair amount of the grain pattern. They look like a stain rather than a paint. They will last a little longer than a semi-transparent stain before refinishing is required. They should be treated as if they were a solid color stain as far as application recommendations are concerned.



Solid color stains completely hide the grain and look a regular paint. They are gaining popularity because

We coated a piece of cedar with an oil based primer on all 6 sides and then top coated with Aqua Borne Ceramic® Solid Hide Deck Stain. We placed the piece one-half submerged in water. After 90 days, there was no failure. With a control piece using only the topcoat and no primer, blisters could be seen in two weeks in the submerged section. Whenever a new deck is built, encourage the builder to coat all sides of the deck materials with a good oil based primer. Coating all 6 sides of a board is a good idea no matter what the board is used for. This seals the wood and helps

they now last longer than they once did. They are formulated from conventional exterior paint pigments and 100% acrylic resins. Exposing water –based acrylic resins to snow and ice for extended periods of time will eventually cause the coatings to fail. However, properly applied, one can expect these coatings to last for five years or longer on decks.

It is mandatory to use an oil based primer on the deck before applying the water based solid hide stain. The oil-based primer will greatly reduce the chance of early failure of the topcoat.

keep moisture from getting into the wood. It really makes a big difference in the life of topcoats.

“There are a lot of different systems to choose from.”

So which one should I choose??

Solid hide stains last the longest but are harder to prepare for recoating. The semi-transparent and semi-solid stains are in between in longevity and ease of recoating.

Solid hide acrylic stains fail by delamination. Usually, the coatings will peel off before it wears away. Many people are willing to accept this because they want the color of the deck to match the colors of their house and are willing to make the repairs as necessary.

Transparent stains are the easiest to recoat but last the shortest amount of time. They are generally the brightest and cleanest color and show the most grain of the wood.

Semi-transparent stains allow the wood grain to be clearly seen.

The all-important job of surface preparation

To do the job right, surface preparation will take about twice as long as the actual staining. The purpose of the cleaning is to get rid of as much of the old finishes as possible so the new stain comes in direct contact with the wood surface rather than with an old coat of paint. The surface may be cleaned with a power washer or with old-fashioned scrubbing with a stiff bristle brush and deck cleaner and some elbow grease. Most commercial deck cleaners work fine just follow the instructions on the label. A mixture of oxalic acid in water will also do the job nicely.

Actually, the sun also causes these fuzzy fibers to appear on the surface of the wood. The sun's UV rays degrades the wood cells creating fuzzy fibers that if not removed by sanding may cause premature coating failure, particularly if the coating is a solid hide stain.

A stiff bristled brush and cleaner also work very well in preparing the surface. Brush with the grain, at 45 degrees to the grain and across the grain to loosen dirt embedded in the wood cells.

Always wear safety glasses and rubber gloves. If you get any of the chemicals on you, flush immediately with lots of water. Protect our plants from the chemicals. The cleaners and oxalic acid will lighten masonry surfaces.

Although power washing is a good way to rid the deck of foreign material and remove old loose coatings, power washing does fluff up the top layer of wood into little fibers that stick up. If power washing is done, the deck should be sanded to remove these wood fibers that will cause premature coating failure.

Whether power washing or brush-cleaning, rinse thoroughly with plenty of clean water. It is important to remove the entire cleaning compound or premature coating failure is likely to occur.

Allow the wood to dry thoroughly. The wood should be good and dry. Check for the fuzzy wood fibers and sand if necessary. Vacuum or sweep off the wood sawdust.

Finally! The application of your new finish!

You may use brush or roller to apply the stain. Use a good 4" stain brush or 1/2" nap roller. The best way to apply the stain is to work from one edge and stain a few boards and work the few boards all the way to the opposite edge. Do not allow the coating to puddle on the surface. Although you will have to move more often than if you would do several boards at once as far as you can reach, you will eliminate most lap marks. Lap marks are caused by the edges drying enough so that when you

go over the area again, you in effect get a second coat on the area creating lap marks since the second coat rests on top of the dried first coat and doubles the amount of pigment in that area. This is particularly true for the transparent and semi-transparent stains.

In almost all cases, one coat of transparent, semi-transparent and semi-solid stains is enough. In fact, multiple coats are not desirable. Multiple coats will result in a build-up of a film on top of the wood that can delaminate.

“Proper preparation is the most important part of the job..”



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As mentioned earlier, acrylic solid deck stains require the use of an oil-based primer. Apply the primer with a brush or roller. Allow to dry thoroughly until it is difficult to dig a fingernail into the primer.

Apply the solid hide deck stain with a good brush or 3/8" nap roller. Usually one coat is enough although two may be used if necessary. Allow to dry overnight before using.

Invite your neighbors over for a barbeque!

Graham Lumber Jacket Deck products

903 Series Lumber Jacket Semi-transparent deck & Siding Stain

923 Series Lumber Jacket Acrylic solid Hide Stain

973 Series Lumber Jacket Transparent Deck & Siding Stain

943 Lumber jacket Semi-Solid Deck & Siding Stain

233 Lumber Jacket Oil Base Exterior Primer

Other Lumber Jacket products

932 Series Aqua Borne Ceramic® Lumber Jacket Acrylic Solid Hide Stain

962 Series Limber Jacket Solid Hide Stain