

Horizontal Hassles: Avoiding Deck Problems

As outdoor living has grown in popularity, the look of American backyards has been forever changed by decks – our favorite, most frustrating to maintain, outdoor wooden structures. Made predominantly of pressure-treated pine, cedar or redwood, decks require the application of a stain finish to provide maximum protection against the harmful effects of the elements while accentuating the natural beauty of the wood.

Selecting a product specifically designed for deck protection, combined with proper product application and a few maintenance steps, will put an end to horizontal deck hassles.

Defining the Problem

All wood surfaces need protection against the effects of moisture and the sun's damaging ultraviolet (UV) rays. Because of its horizontal structure, decks are susceptible to harsh weather conditions, including acid rain, ultraviolet light, infrared energy (heat) and standing moisture in the form of rain, dew, frost, ice or snow. The abuse a deck surface takes from foot traffic, barbecues, and food and drink spills can create additional problems. Decks built low to the ground or skirted in do not allow for adequate air circulation, leading to excessive moisture which then enters the untreated back of the wood decking. Moisture can also be a problem when a deck is located around a pool area, or if continually hit with water from a sprinkler system. In addition, the use of a knotty grade of lumber can pose penetration and adhesion problems for the deck finish. Homeowners who do not take precautions to prevent these problems from occurring will find their once beautiful decks turning gray and dingy, the wood surfaces beginning to crack, check, split and warp.

Surface Preparation

New wood should be allowed to dry 2-3 weeks to bring the moisture content down to an acceptable level. The homeowner should not allow wood to remain exposed for longer than 3 months without some form of protection. Recent research by the Forest Products Laboratory has shown that over-exposing unprotected wood for long periods of time can cause surface damage that reduces the wood's ability to hold on to applied stain or paint coatings – leading to premature coating failure. Some weathering of the wood is necessary if non-film forming finishes, such as stains and water repellents, are to penetrate the wood's surface and thus work effectively. Whether old or new wood, the surface should be inspected for cleanliness; it must be free of mildew stains, dirt and other foreign matter. If the deck is dirty, it should be scrubbed with Cabot Problem-Solver® Wood Cleaner #8002, rinsed with clean water and allowed to dry for 2-3 days prior to staining.

Selection

Semi-transparent penetrating type decking stains or clear water repellents are available for application to decks. Oil-based stains used on decks, like Cabot's Decking Stains, should penetrate deep into the wood and contain a tough alkyd resin for scuff resistance. Lightly pigmented decking stains, which include Cabot's oil-based Clear Solution and the new *Water-based* Clear Solution, bring out the full beauty of the wood grain while providing deep-penetrating wood protection. Although they are initially flat, translucent and amber-toned, Clear Solutions weather to a natural wood hue.

Also available for decks is Cabot's Solid Color Decking Stains with 100% Acrylic Resin, which provide a tough, scuff- and water-repellent finish, yet they are breathable. The water-repellent qualities of all these products

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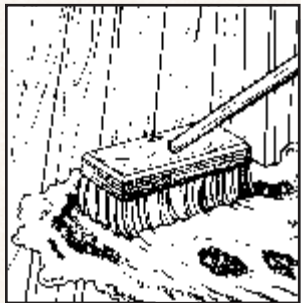
Deck Problems *(Continued from front)*

will protect the wood against the harmful effects of moisture, and the pigments in these stains will protect the wood against the sun's harmful ultraviolet (UV) rays. Clear wood protectors and water repellents, such as Cabot's Clear Decking Stain, will help to stabilize the wood by reducing the amount of shrinking, checking and cracking. Clear products provide good, short-term protection, and upon application of these products provide a "wet" look to the wood that will gradually weather gray. The degree of grayness will depend on the wood species and the amount of sun exposure the deck receives.

Each deck product has its own features, benefits and limitations. For that unique look, a homeowner may mix equal parts of Cabot's oil-based Clear Decking Stain with a semi-transparent, pigmented Decking Stain in the desired color, creating a uniquely translucent type appearance. The homeowner's selection should be based on both aesthetic qualities and product performance.

Application

Prior to application, a test patch should be done to make sure the color is agreeable and the dry time is normal and reasonable. When working with more than one gallon, all gallons should be blended together to ensure color consistency. Stain should be applied when air and surface temperatures are between 50°-90°F, avoiding application in direct sunlight. Ideally, deck finishes should not be applied if precipitation is forecast for the 12-24 hour period after coating. A major source of problems for deck finishes is the over-application of the coating. Many homeowners and professional paint contractors incorrectly believe "more is better."



In order for an oil-based stain to be effective, it must be able to penetrate the wood's surface. Over-application leads to a buildup of material, forming a film on the wood which can ultimately peel or crack when exposed to excessive moisture. Too much oil-based product can also produce an excessively waxy, sticky or slick surface, interfering with the finish's ability to dry properly. Brush application (natural bristle) is the

preferred method because it works the oil-based stain into the wood fibers and cells more effectively. First, heavily coat the open end-grain of the boards. Brush 3-4 boards at a time, from one end to the other in smooth strokes. To avoid lap marks, make sure that the leading edge is kept wet and that the wet stain is brushed into wet stain. On new decks, it is important to only apply **one coat** of oil-based deck finishes.

For composite decking, which is made up of recycled plastic materials and wood, it is important to follow the manufacturer's recommendations when coating these materials. Penetrating and film-forming coatings can be used successfully. One caution, when using penetrating products, spread rates and longevity may vary due to the makeup of the composite materials used.

Maintenance

To preserve the deck finish, maintenance is a necessity. Clear finishes, when applied to decks, will require reapplication every 6 months to 1 year. Pigmented finishes, like Cabot Decking Stains, will require inspection and reapplication every 2-4 years. Cabot Solid Color Decking Stains will require inspection every 2-3 years. The major cost of most deck finishing projects is in the labor, therefore the use of a high quality, premium performance finish is ultimately the most cost effective, to the contractor as well as the do-it-yourselfer. Whether protecting the deck from the scorching heat of the summer sun or guarding it against the damaging wintery effects of ice and snow, a deck finish must be properly selected, applied and maintained to maximize a deck's beauty and longevity, and most importantly the customer's investment.



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