

A Durable Exterior Finish



Epoxy sealer and marine varnish protect wood against the weather

BY SEAN CLARKE

On any piece of wood exposed to the elements, whether it is your front door or the patio furniture, a durable finish is of utmost importance. For maximum protection, I use a two-step process that greatly improves the resilience of my exterior finishes. It consists of a primer and a varnish topcoat used in the boat business, where they know all about protecting wood from the elements. The primer is a two-part resin epoxy that impregnates the wood, making it resistant to fungi and water damage. It also chemically bonds to the varnish, which has ultraviolet (UV) inhibitors to protect the wood and the primer.

Prep the wood and apply the primer

Sand all of the surfaces with P220-grit sandpaper, removing the dust with a vacuum, compressed air, or a tack cloth. If desired, brush, spray, or wipe on a pigment-based oil stain, but avoid dyes





Prime with the epoxy

The epoxy penetrates the wood, making it resistant to water damage and giving a firm base to the varnish.



Mix the primer. The epoxy comes in two parts that are blended in equal measure.

because they will fade faster when used outdoors. Let the stain dry for 12 to 24 hours.

For several years, I've had great results using MultiWoodPrime (also called Clear Penetrating Epoxy Sealer) made by Smith & Company. Originally developed to stabilize decaying outdoor wood structures, it comes in a cold-weather formula for when the temperature is 28° to 65°F, and a warm-weather version for above 50°F. Both consist of two parts combined equally, with a working time of about 20 minutes.

Use a synthetic-bristle brush to apply the thin liquid generously, allowing it to soak into the wood. Re-apply to drier areas. The idea is to thoroughly saturate the fibers until all the porosity of the wood has been eliminated, so pay particular attention to joints and to end grain on legs and arms. When the surface will not absorb any more epoxy, wipe off the excess with a rag soaked in lacquer thinner. Let this coat dry for 24 to 48 hours.

Following the cure time, if the surface feels rough, gently scuff it with P320-grit no-load sandpaper. Try not to sand through to the bare wood on edges and corners. Apply a second coat of



Apply the primer. Once the two-part epoxy is combined, you have about 20 minutes to apply it generously to the surface, letting it saturate the wood. Pay attention to the end grain as this is where weather damage is most likely. Re-coat these areas as the epoxy is absorbed into the wood.



Smooth the surface. Between coats of epoxy and before applying the varnish, lightly sand the surface with P320-grit sandpaper.

epoxy in exactly the same manner. If the epoxy is still being absorbed, let this coat cure for 24 to 48 hours and apply a third coat. Once there is no absorption, evenly wipe the surface with a rag dampened with lacquer thinner and let the epoxy rest for 8 to 12 hours. Lightly sand the surface with P320-grit paper and remove the dust. This half-cured surface will create a very strong chemical bond with the subsequent coat of varnish. If you can't apply the varnish within the 8-to-12-hour window, let the epoxy fully cure, then apply another coat and allow that to cure for only 8 to 12 hours.

A good marine varnish protects the primer

Any type of spar varnish can be used, but I use a marine varnish called Epifanes, which has a high percentage of solids and UV blockers. Reduce the varnish for the first coat by 50% by blending it with equal parts mineral spirits. This will help it flow into any crevices. Brush it on and allow it to cure for 12 to 24 hours before

FINDING SUPPLIES

Smith & Co.'s MultiWoodPrime (Clear Penetrating Epoxy Sealer) and Epifanes varnish are available at:

Jamestown Distributors
www.jamestowndistributors.com
800-423-0030

lightly sanding with P320-grit, no-load paper. The sanding is not for adhesion, because as long as the second coat of varnish is applied within 36 hours, the two coats will chemically bond. Rather, it is to create a flat, consistent surface. Other brands may have different rules, so follow the manufacturer's recommendation. Reduce the second coat with 25% mineral spirits, and repeat the process, allowing it to cure 12 to 24 hours before applying a third coat, reduced by 15%. You can add subsequent coats at full strength, particularly

if heavy sanding has resulted in a lower build of material.

All exterior coatings eventually need refurbishing, but you shouldn't have to touch this chair for several seasons. When you do, only the varnish will need sanding as the epoxy primer should keep the wood in fine shape. □

Sean Clarke runs Clarke Company, a furniture-finishing and -restoration business in Columbus, Ohio.

Coat with the marine varnish

Developed to protect the woodwork on boats, marine varnish gives the wood more protection than standard spar varnish.



Thin the varnish. To promote better absorption, thin the first three coats of varnish with mineral spirits. When applying, take care to cover all the surfaces.

