



Brighten Your Shop With an Epoxy Floor

Revitalize your old concrete floor
with durable, easy-to-apply epoxy paint

BY TIM DEKORTE

Patch and clean the surface

Before applying the epoxy, fill any cracks in the concrete and then clean the surface thoroughly. Be sure to wear safety goggles, gloves, and rubber boots during the cleaning process.



Fill the cracks.

Apply a concrete patch mix or hydraulic cement to eliminate large cracks.

We all know that concrete is murder on your feet and back. But its aesthetic drawbacks can be significant, too. Left unfinished, concrete has a parasitic tendency to feed on light, making you feel like you're always working on a cloudy day. And the porosity of the material gives stains a permanent home, so you'll forever see the scars from chemical and finish spills.

Though it won't address the physical torments concrete inflicts, you can give your garage or basement floor a face-lift by applying a two-part, water-based epoxy paint. The material goes on easily with brushes and rollers, and once cured, the epoxy provides a light-reflective surface that brightens the entire shop and is very resistant to scuffing and shop chemicals. With this system, it's also super simple to create nonskid areas to make strenuous tasks like handplaning less like an extreme sport. You also have the option of adding some pizzazz with colored flakes. What's more, at about 25 to 30 cents per square foot at most home centers, epoxy won't put a large dent in your wallet.

Clean the surface, then give it some bite

Before applying epoxy to your shop floor, you'll need to remove all items from the space and fill any noticeable cracks in the floor. You'll also have to clean the concrete and profile the surface. The floor kits come with a cleaning and etching solution that will eliminate



EVERYTHING IN ONE PACKAGE

Two-part epoxies can be purchased in kits, available in the paint aisle at most home centers. The kit typically includes the base, the hardener, color flakes, a cleaning/etching solution, and a stir stick.



Fizzle while you work. After wetting down the entire floor, mix the cleaning and etching solution in a plastic watering can and pour it onto the floor. The product should bubble and fizz as it cleans.



Use a stiff-bristle brush to scrub the floor. Working in one small area at a time, scrub in one direction, then the other to remove stains and other contaminants. Rinse each area after it's been scrubbed. If you have an older floor with lots of stains, you may have to repeat the entire process to ensure the surface is ready for painting.

Painting is the easy part

After mixing the two components (hardener and base), the chemical makeup of the material changes (a process called cross-linking), creating a durable, heat- and scuff-resistant paint film that goes on easily.

A + B = E-P-O-X-Y. Two-part epoxy must be mixed together. Pour the hardener into the base and stir it using a mixer attachment for a drill. Once it's mixed, set it aside to allow the cross-linking process to complete, which typically takes about 30 minutes.



1

No coffee breaks. You have about 2½ hours to apply the epoxy, so work quickly and efficiently. Start at the edges using a brush to get into corners and tight places (1). Switch to a roller and work in small, 2x6 sections at a time, rolling in one direction (2) and then going over the area lightly in the other direction to achieve a smooth, level coat (3).



2

any surface contaminants (like motor oil) that interfere with the paint's adhesion, and will texture the surface so that it's easier for the paint to grab and hold. If you are cleaning an interior floor, however, clean the surface with TSP (trisodium phosphate) instead of the cleaning/etching solution, and be sure to follow the directions on the label.

After cleaning the surface, let it dry. In most cases, 24 hours is enough. One simple way to determine if the surface is dry enough is to tape an 18-in. by 18-in., 4-mil clear plastic sheet firmly over the surface for 16 hours. If you see condensation under the sheet at the end of the test, you'll need to wait a bit or speed up the drying time with fans or a dehumidifier.

Dealing with painted concrete—If you have a painted floor that's in good shape, you can skip the etching process and simply clean the surface using an all-purpose cleaner (coating manufacturers will recommend a product). Then you can use a floor sander with rough-grit paper to eliminate any glossy areas and to give the surface some tooth. Clean up the sanding dust thoroughly, and be sure to wear a good-quality dust mask or respirator.

If the existing paint is peeling, you'll have to remove all of it and start the process from the beginning. In this case, hire a professional shot blaster to remove the old coating and profile the concrete. This could run from \$1.50 to \$2.50 per square foot, depending on the size of the floor.

Mix it up and roll it out

You don't have to don a chemical suit to apply these water-based epoxies, but you should have plenty of ventilation and consult the product application instructions on proper safety precautions.

For application, you'll need the requisite painting gear. Buy a mid-grade brush, 2 in. or 3 in. in size, for cutting in, a ¾-in.- or ½-in.-nap polyester roller, along with a roller frame and pole.



3

Get a grip

Left as is, the epoxy coating will be slick if sawdust or moisture is on the surface, so broadcast a nonskid material between coats where needed, such as near a jointer or workbench. Some manufacturers sell a grit additive, but fine play sand works just as well.



Broadcast the sand while the paint is wet. After painting a section, use a handheld fertilizer spreader to distribute the sand evenly. You may want to practice on a tarp or other area.



Roll on a second coat. After the first coat dries (about 12 to 24 hours after application), apply a second coat over the sand particles. Once that coat dries, you'll have a gritty, nonslip surface that will last for many years.

Time of day matters—If you coat concrete as the temperature rises, air within the slab will expand, potentially causing bubbles in the paint. That's why you should coat the floor during the cool-down cycle of the day. As long as the surface temperature is descending, and it remains within the product's application recommendations, you should get a bubble-free coating.

Mix the hardener and base—These epoxy coatings have two components (the base and the hardener) that must be mixed together. The mixture must be set aside for 30 minutes to cross-link, a process that changes the chemical makeup of both ingredients to create a coating that ultimately will cure to a rock-hard film.

Work fast—Once the mix is ready, you'll have about 2½ hours to lay it down before the epoxy goes bad. Cut in the edges first and then use rollers for the bulk of the work. Because these products are formulated to be somewhat self-leveling or at least have very good flow qualities, the rolling process should be easy. Get a good wet coat on the surface in one direction, then roll in the opposite

Online Extra

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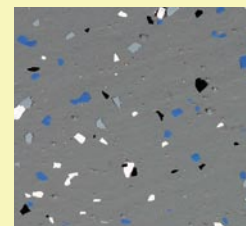
direction using a light touch. To ensure even coverage, it's best to work in small 2x6 sections.

If you are planning to add a nonskid area, it's best to broadcast the fine sand into the wet first coat and top it with a second coat. A handheld whirlybird-type fertilizer spreader will distribute the sand uniformly.

Now allow the surface to cure according to the manufacturer's instructions. Often, you have to wait almost a day to walk on the surface or to recoat it. If you are applying a second coat, which creates a more durable surface, brush and roll it on in the same



COLORFUL OPTION
Paint chips added to the final coat help hide imperfections in the floor and kick up the appearance. Use an underhand motion to distribute the flakes evenly.



manner as the first. If you want to add sparkle with paint chips, add them to the surface while the final coat is still wet.

Return the tools, and get to work

Follow these application guidelines, and you'll have a shiny new floor that should give years of service without peeling or delaminating, even after cars, bikes, and various tools have rolled in and out of your garage. When the paint does wear down, you can recoat without all the major prep work needed for the initial coating. You just need to clean the surface and repaint. □

Tim DeKorte is a coatings manufacturer's technical representative and a hobbyist woodworker in Santa Maria, Calif.