Make your own grain fillers

TWO WAYS TO PREPARE WOOD FOR A SMOOTH FINISH

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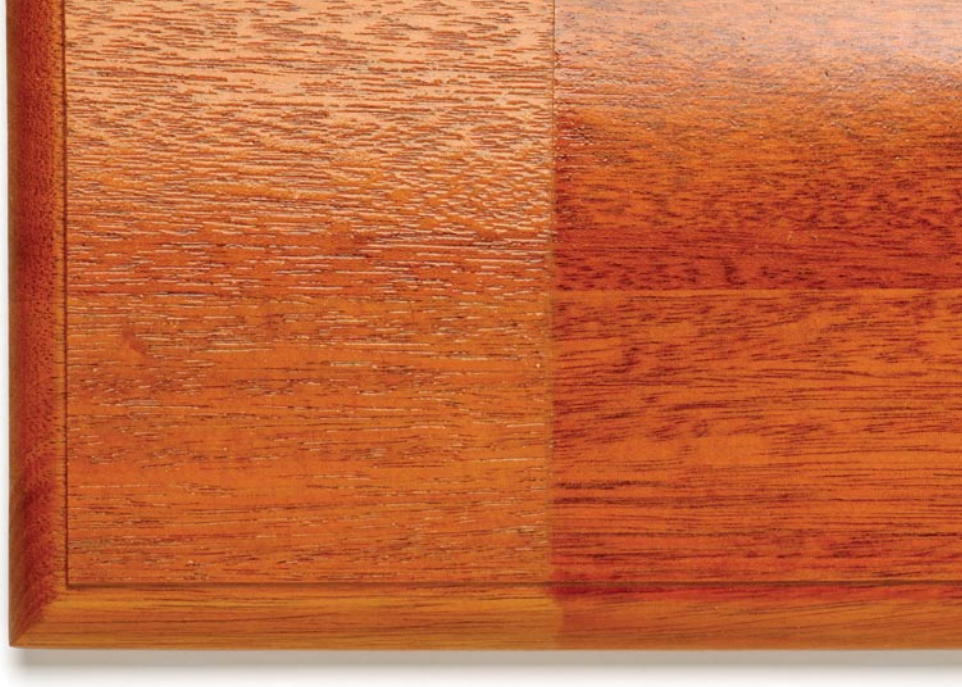

A smooth or textured surface. *On open-pore woods, use a grain filler if you desire a smooth finish. On this piece of mahogany (above), the open pores on the right side were filled with a grain filler before a clear finish was applied.*

When it comes to finishing, some woodworkers prefer to emphasize a wood's grain structure by using penetrating finishes. Others prefer uniformly smooth surfaces, with a satin luster or a glass-smooth, high-gloss "piano" finish. Such a finish requires the grain to be filled. You can fill close-grained woods such as cherry or maple with a couple of coats of finish. Open-grained woods such as oak, walnut, or mahogany, however, may require the use of a filler.

Grain fillers (also called pore fillers or paste wood fillers) are divided into two categories: oil based or water based. Both types are sold commercially but generally must be ordered from specialty woodworking stores.

I prefer to make my own grain filler, borrowing techniques used by finishers of the past. The ingredients are inexpensive and, unlike commercial fillers, are easy to find at any hardware store.

Linseed oil/pumice filler matches color beautifully

The combination of boiled linseed oil and pumice has been used for centuries as a grain filler. The advantages are twofold: First, once the light gray pumice (which actually is powdered volcanic rock) is mixed with the oil, it becomes translucent. Second, the slightly abrasive pumice works up a bit of sawdust, so the color of the filler matches the wood perfectly.

Because of this abrasion, you should be careful about staining the wood prior to filling the grain. Surface stains, such as pigmented wiping stains, are

Linseed oil and pumice: three easy steps

1 ***Sprinkle the pumice.*** *After wiping on a coat of boiled linseed oil, sprinkle some fine, 4F-grade pumice onto the wood.*

2 ***Pack the pores.*** *Work the pumice and linseed oil mixture into the wood using a cloth in a circular motion. The linseed oil causes the pumice to become translucent.*

3 ***Remove excess filler.*** *Wipe lightly across the grain with a clean, dry cloth to remove any filler that remains on the surface.*

Plaster of Paris: low-tech and quick-drying

Mix the plaster of Paris. *Add water a little at a time until you have formed a paste the consistency of drywall compound (left).*

Work fast with this filler. *Pack the pores quickly, working in one small section at a time (top). When the surface feels dry, remove the excess with a damp cloth (above).*

Smooth the surface. *After the board has dried overnight, sand the surface with P220-grit paper (above). As soon as the boiled linseed oil is applied (right), it turns the white grain filler translucent.*

worn away easily by the pumice. It's better to use a penetrating water- or alcohol-based dye beforehand, or apply a stain after filling the grain.

To begin, pour boiled linseed oil onto the wood and rub it in with a cloth. Sprinkle pumice (use the finest grade, 4F) over the surface and work it into the grain with a cotton cloth, using a circular motion. Use roughly a teaspoon of pumice for every square foot of surface. Add more oil if the mixture appears chalky. The oil filler has a generous open time, so you really can pack it into the grain. Examine the surface against a low-angle light, a technique known as backlighting, to make sure all of the grain is filled.

Last, with a clean, dry cloth, lightly wipe across the grain to remove the excess filler. This step is complete when the surface feels smooth. Let the filler dry overnight, and then examine the surface against backlighting a second time. Some open-grained woods, such as oak, may need a second application.

The filler should dry for at least 72 hours before applying a clear coat. Most finishes are compatible with this type of filler, including water-based finishes. But to be on the safe side, a 2-lb. cut of dewaxed shellac will seal the filler and allow the application of any finish.

Plaster of Paris filler dries quickly

If you have trouble finding pumice, plaster of Paris is an easy-to-use alternative. Mix the plaster with water until the filler has a fairly stiff consistency similar to drywall compound. The wetter the mixture, the more it will shrink after it has been applied to the wood.

Using a cloth, work the filler into the wood in a circular motion. Unlike the linseed oil/pumice filler, this water-based filler dries very quickly, so you will have to work in one small area at a time. After you're done, let the wood sit until the surface feels dry. Wipe off some of the excess with a damp cloth. Let the board dry overnight, and then sand it with P220-grit paper.

To turn the filler translucent, apply a coat of boiled linseed oil. If you wish to dye both the grain filler and the wood, color the linseed oil with artist's oil or Japan colors, or you can apply just about any oil-based wiping stain. To emphasize the grain pattern, dye the plaster of Paris when you mix it by adding water-soluble dyes, water-based pigment concentrates, or artist's acrylic colors. Instructions for applying clear coats on the plaster of Paris are the same as for the linseed oil/pumice filler. □

Photos: Mark Schofield