

Fill Pores for an Even Sheen



Even open-grained oak can be smooth as glass when you plug those pesky pores. If you've buried the tip of a ballpoint pen into the grain of a red-oak desktop as you write, you've learned one benefit of a filled-pore finish. Or maybe you've seen a high-gloss finish marred by pockmarks that grain filler would have eliminated.

Don't confuse pore fillers with wood putty. Fillers mix finely ground solids, usually silica, with a binder and a colorant. Water-based fillers emit less odor than solvent-based products, but they also dry faster. So stick with solvent-based fillers for large projects, or until you gain more experience filling smaller projects.

You can buy pore filler in a handful of colors, or mix pigments with off-white (called "natural") filler for a custom look. (See **Sources**, bottom of page.) You'll also need mineral spirits, naphtha, or a pore-filler reducer; a plastic scraper or squeegee; at least 1 sq yd of burlap cloth; and a 320-grit sanding sponge.

For most projects, you need to fill only the topmost horizontal surface because that's where the most light is reflected off the finish. If you're filling more than one surface though, do each one separately with that side up.

Prepare your project by machine-sanding up to 180 grit, then hand-sanding at 180 grit with a flat pad to level the surface. Pore filler highlights surface flaws, so check for

scratches by wiping the wood with mineral spirits. If you plan to stain the wood, do it now.

Filler alters stained or bare wood's color, so seal the area to be filled with a washcoat of the film finish you'll use for the topcoats. (For a polyurethane washcoat, thin one part oil-based poly with two parts mineral spirits. For lacquer, mix equal parts finish and lacquer thinner.)

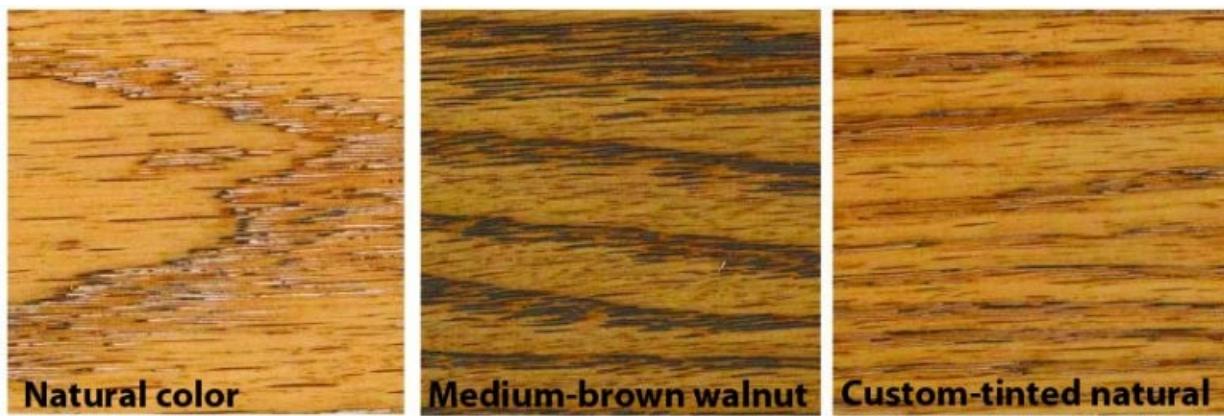
The washcoat also seals the pores to help your filler fill better and makes excess filler easier to wipe off. Do not sand the washcoat before applying pore filler because it will also lodge in any sanding scratches in the washcoat.

Prepare the pore filler

Filler typically comes in a thick paste that should be thinned to a pourable consistency for spreading. Some filler manufacturers sell a reducer, but mineral spirits or naphtha accomplish

the same thing for less money. Choose mineral spirits to slow the filler's drying time and let you work longer on large surfaces. Use naphtha to speed up the drying time for smaller projects.

Test the filler color on scrap that's been sanded and sealed the same as your project. If you're dissatisfied with the color, change it by adding pigments. (See "Choose fillers for a custom color" below.) We added Mixol to a natural-color filler, but you also can add universal pigments or japan colors.



Depending on your choice of filler color or added pigments, you can make pores match or contrast with the surrounding wood. All three red-oak samples above started with Varathane golden-oak stain and a washcoat of spray lacquer.

Using thinned natural filler on the *above left* sample turned the pores off-white, mimicking an antique pickled finish that's been stripped away. For strong grain

contrast, use medium or dark fillers like the Pore-O-Pac medium-brown walnut shown *above center*. Despite the washcoat, the dark filler also darkened the surrounding wood.

To match pore colors to the stain color, mix colorant with natural-color filler. The sample *above right* uses 1 teaspoon of Mixol 21 terra-brown pigment in 1 cup of natural filler. Mix more than you need to avoid running out and to match related projects you might build later.

Now fill those pores

Pour thinned filler directly onto the workpiece surface and spread it across the grain using a plastic scraper or squeegee, as shown *top photo*. Press the filler into the pores as you work, but not hard enough to scratch the washcoat. Also fill the end grain and edges of routed profiles visible from the top [**Photo A**]. Continue to wipe across the grain to remove any filler globs or large streaks.



A



B

As filler solvents evaporate, they leave a dull, hazy surface [**Photo B**]. That's your signal to wipe away surface filler using a burlap cloth. Wipe across the grain to avoid pulling filler out of the pores [**Photo C**], and refold the cloth as it becomes packed with filler. Stop when no more hazy areas or cross-grain streaks show in the reflection of an angled light [**Photo D**].



Filler drying times vary widely, but allow three days before finishing a filled surface because solvents in the finish could resoften the filler. Then, lightly sand with a 320-grit sanding sponge, but avoid cutting through the thin washcoat. Apply a second washcoat to seal the surface, and use an angled light and your fingertips to find unfilled spots. Woods with large pores, such as oak, may require a second filler application and washcoat.

After you're satisfied with the surface smoothness, apply two coats of film finish, and level the final coat by sanding it to 320 grit using a flat, rigid sanding pad. (A piece of felt glued to a roughly 3×4½" block works well.) Then, apply a third coat, and rub out the finish to the desired sheen. For a glossier finish, top off the film finish by buffering on a coat of wax.

Sources

Pore filler. Natural-shade Pore-O-Pac paste-wood filler no. B7440416, \$19, Klingspor's Woodworking Shop, 800-228-0000; woodworkingshop.com. Other colors are available. Pore-O-Pac filler reducer no. B7442006. Bartley's Paste Wood Filler no. 02237028 (light), Van Dyke's Restorers, 800-558-1234, vandykes.com.

Pore-filler colorants. Mixol terra brown (21) no. 832406, Woodcraft, 800-225-1153; woodcraft.com. Other colors are available.

Burlap. Check with local fabric stores, or order no. BL70000, Klingspor's.