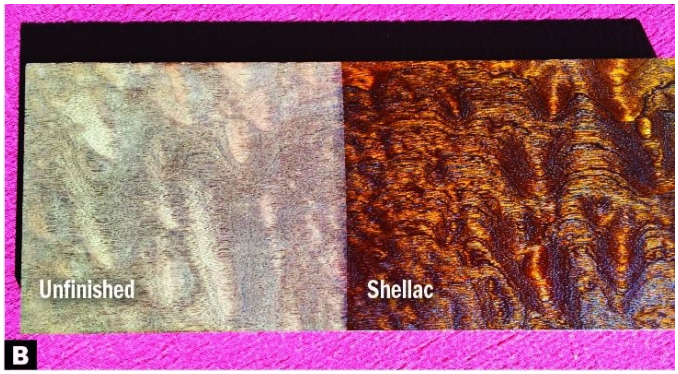
Applying a Shellac Finish

Exaggeration: We're bombarded by it. Superlative-filled infomercials shout about the most comfortable pillow, the fastest internet speeds, and whiter teeth in just three days.

But, what if I told you of an age-old woodworking finish that imparts a beautiful luster to any wood; builds and dries quickly; creates a strong bond for topcoats; eliminates blotching; and blocks smoky or musty odors from cherished antiques. Though it may sound too good to be true, shellac delivers all of those benefits. But wait…there's more!

The secret ingredient

Shellac originates with the lac beetle, mainly in India and Thailand. Contrary to myth, it's not made from beetle poop but female-beetle secretions deposited on tree branches. Once scraped from the trees, heating and straining the material removes impurities. It's then rolled out into sheets to cool and dry. Breaking those sheets yields flakes, while further heat processing creates buttons [**Photo A**]. Each form dissolves in denatured alcohol, creating a liquid finish.



Find shellac in flake or button form. Button shellac creates a more mar-resistant finish than flakes but comes only in darker hues.

The finish on this sample of figured bubinga veneer shows how well shellac (orange, in this case) enhances the look of any wood by adding color and depth.

Depending on the type of tree upon which the beetles feast, natural shellac colors range from a dark garnet through brown, red, orange, and yellow. Amber and orange shellacs impart a warm, rich look to dark woods such as walnut, cherry, and mahogany [**Photo B**]. Bleached shellac imparts clear, light-blonde and super-blonde shades. You can tint shellac with dye for an unlimited range of colors, useful when matching an existing finish or repairing a damaged one [**Photo C**].

Measure carefully when using powdered and liquid dyes or universal tinting colors (UTCs), and make more solution than you need. It can be difficult to precisely replicate a color in subsequent batches.

Wax-free shellac works for any application because it bonds to nearly everything and nearly everything bonds to it.

Though not as durable as polyurethane or varnish, shellac proves much easier to repair. All shellac products produce a gloss sheen.

Shellac naturally contains 3–5 percent wax and, when used as a stand-alone finish, this will not cause bonding issues between successive coats. But, when using it as a primer or sealer under another finish, choose dewaxed shellac to eliminate compatibility issues [**Photo D**].

So simple, anyone can mix it

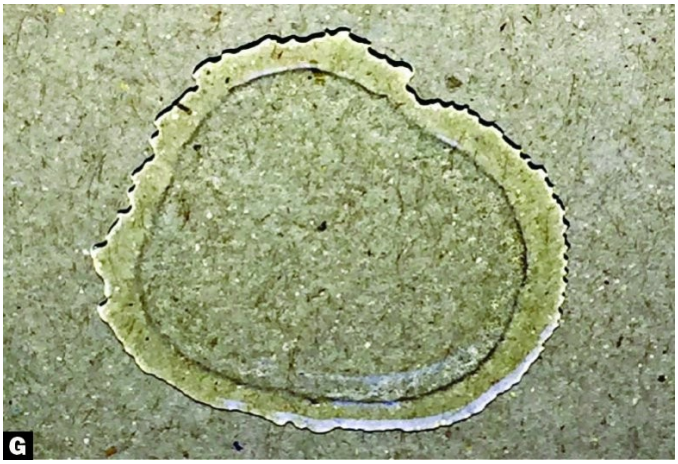
Shellac is mixed in “cuts” which refer to the proportion of shellac flakes (measured in pounds) to solvent (measured in gallons). So, 1 pound of flakes mixed in 1 gallon of alcohol makes a 1-pound cut. A 2-pound cut would be slightly thicker and provide a quicker build. Very seldom does a mixture go beyond a 4-pound cut.

Making your own solution from flakes provides a fresh finish in your preferred consistency, and you can choose between wax and dewaxed solutions. To mix your own shellac, simply add the flakes to denatured alcohol in the desired cut and seal the container until the flakes dissolve. This usually takes about 24 hours. Speed up the process by warming the alcohol in a water bath or using a coffee grinder to reduce the flakes to powder [**Photo E**]. Strain the finished solution to remove any undissolved material.

Pulverizing shellac flakes or buttons in a coffee grinder reduces dissolve time to about 6 hour.

The first number in the code on top of a can of Zinsser shellac indicates the year of manufacture. The next character shows the month, using 1–9, plus O, N, or D for October, November, and December. The next two numbers indicate the day of the month.

The cut found in premixed shellac may vary, so check with the manufacturer for information on its formulation. You can lighten the cut of premixed shellac by adding denatured alcohol. Premixed shellac lasts about 3 years on the shelf. Check the dates on the cans [**Photo F**], or test the solution to make sure it's fresh [**Photo G**].



Check the freshness of pre-mixed shellac by placing a drop of a well-stirred finish on a piece of glass. Within 30 minutes, the shellac should dry to a hard finish. If it stays tacky, discard the batch.

Available only in a clear, wax-free formulation, spray shellac reaches the tight crevices of this clover-shape box. Shellac's quick dry time reduces runs.

Ultra-easy application

Whether sprayed, brushed, or padded on, shellac dries quickly at optimal conditions of 70°F and 50–70 percent humidity. Though it dries to the touch in about 30 minutes, allow 1 hour between coats. Each coat dissolves into the previous one, creating a single, thicker coat, so don't sand between coats to enhance bonding, as with varnish or urethane finishes.

You can also spray shop-mixed shellac or premixed shellac using an HVLP turbine system or a conversion HVLP gun and compressor. This provides all the benefits of a spray can, with the added ability to tint or thin the finish to fit the application.

You also can brush on shellac [**Photo I**]. Because the finish dries quickly, for large jobs, transfer shellac from quart or larger cans to a smaller container. Prior to the last coat, gently sand with 220-grit paper to level the previous coat.

Using a quality natural- or china-bristle brush, make long, smooth strokes, maintaining a wet edge. Do not overbrush. Clean brushes with denatured alcohol.

Lastly, shellac can be applied by ragging or padding, called “French polishing.” Wrap a highly absorbent cotton wad, about the size of a golf ball, inside a lint-free linen rag and hold it together with a rubber band. (It resembles a badminton birdie when complete.) Add shellac to the rounded end using a squeeze bottle, and move the pad in light side-to-side or figure-eight strokes over the surface of the project [**Opening photo**]. As the pad dries, it will begin to drag rather than glide across the workpiece. Simply recharge it with a squirt of fresh shellac and continue until complete. Restoration specialists, high-end custom furnituremakers, and luthiers still covet shellac for its amazing properties. Go ahead and try it on that special heirloom project you have in mind.