CASE FOR SHELLAC

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This gift from the insect world is a great finish for home woodworkers. Today, shellac is the most under-appreciated of all finishes, but this hasn't always been the case.

Until the 1920s, when lacquer was introduced, shellac was the primary finish used in furniture factories and small woodworking shops.

It continued to be the favoured finish of professionals finishing interior wood trim and floors, and of hobbyists finishing everything, including furniture, until the 1950s and 60s.

Then polyurethane and "wiping" varnish (varnish thinned about half with paint thinner and often mislabelled "tung oil") were introduced and widely promoted.

Beginning in the1970s, blends of linseed oil and varnish, like Watco Danish Oil, were promoted in magazines for their ease of use.

Instead of defending shellac during this period, suppliers retreated to the position that shellac was a good sealer for stains and knots.

They also allowed shellac to get an exaggerated reputation for weak water resistance, and they increased its stated "shelf life" from one year to three years. (Shellac slowly deteriorates after it's dissolved in alcohol. After about a year it no longer hardens well enough or is water-resistant enough to be used as a complete finish on most furniture and cabinet surfaces. Always use shellac within a year of when it was dissolved.)

Now shellac is rarely used as a finish except by high-end antique refinishers (which ought to tell you something). This is terribly unfortunate, because shellac still is one of the best finish choices for most woodworking and refinishing projects.

What is Shellac?

Shellac is a natural resin secreted by insects called lacbugs, which attach themselves to certain trees native to India and Southeast Asia.

Suppliers buy the resin and sell it as flakes, or dissolve it in alcohol and package the solution in cans for purchase.

Natural shellac is orange (amber) in colour and is the best choice when you want to add warmth to wood. Most old furniture and woodwork was finished with orange shellac.

Bleached shellac (sold as "white" or "clear") is best when you want to maintain the whiteness of a pickling stain or the natural colour of light woods such as maple, birch and poplar. You can mix orange and bleached shellac to achieve an in-between colour.

Natural shellac contains about 5 percent wax and will produce excellent results; but dewaxed shellac, whether pre-dissolved or in flake form, is more water-resistant. You can remove wax from regular shellac by letting it settle and then decanting the liquid.

Shellac is a very old finish, so it has an old measuring system based on the concept of "pound cut."

One pound of shellac flakes dissolved in one gallon of alcohol equals aone-pound cut. Two pounds in one gallon is a two-pound cut; one pound in a quart is a four-pound cut; and so on.

The shellac you buy at the paint store is almost always a three-pound cut, which is very thick for brushing or spraying.

Thin this shellac by half with denatured alcohol (shellac thinner) and make adjustments from there to reach the thickness, or pound cut, you feel most comfortable working with.

To obtain maximum freshness and thus maximum hardness and water resistance, use denatured alcohol to dissolve your own shellac from flakes, which are available from many woodworking suppliers. Start with a two-pound cut, and adjust from there.

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Applying Shellac

To brush shellac, remember that alcohol evaporates rapidly, so you must work fast. Use a good quality natural or synthetic bristle brush, or a foam brush, and brush in long strokes in the direction of the grain if at all possible.

Work fast enough on your project to keep a “wet edge,” and wait until the next coat to fill in any missed places if the shellac becomes tacky.

Spraying shellac is no different than spraying other finishes. Just as thinning shellac reduces brush marks during brushing, thinning reduces orange peel while spraying.

However you apply the shellac, allow the first coat to dry about two hours, then sand with gray, 320-grit stearated (self-lubricated) sandpaper just enough to remove dust nibs and raised grain. Use a light touch to reduce sandpaper clogging and to avoid sanding through the finish.

Remove the dust and apply a second coat. Add more alcohol to the shellac if you’re getting severe brush marks or orange peel, or if air bubbles are drying in the film. The alcohol will slow the drying and allow the bubbles to pop out.

There is no limit to the amount you can thin shellac, but you may have to apply more coats to get the build you want. Apply as many coats as necessary to achieve the look you want.

Each new coat dissolves into the existing coat, so there’s no need to sand between coats except to remove dust nibs or other flaws. To see flaws like runs and sags before they dry in the film, arrange your work so you can see a reflected light in the area you’re finishing. Then brush out the flaws before they dry.

If the humidity is high, or if there’s too much water in the alcohol you’ve used to thin your shellac, it may turn milky-white. This is called “blushing” and is caused by moisture settling in the finish.

Wait for a drier day, use a purer alcohol or both. You usually can remove existing blushing in the finish by applying alcohol on a dry day or by rubbing with an abrasive, such as a Scotch-Brite pad or steel wool.

If, at any time, you create problems you can’t remove without creating greater problems, strip the finish with alcohol or paint stripper and begin again.

In between coats you can store your brush by hanging it in a jar of alcohol, or you can clean it easily by washing it in a half-and-half mixture of household ammonia and water. You can reclaim brushes with hardened shellac by soaking in either solution.

When you have applied the desired number of coats (three is minimum in most cases), you can leave the finish as is.

Or you can level it using 320-grit and finer sandpaper and a flat backing block, then rub it to the sheen you want using Scotch-Brite pads, fine steel wool or abrasive compounds like pumice and rottenstone. If the rubbed finish shows finger marks easily, apply paste wax or an oily furniture polish

Shellac Pros Cons

Advantages:

- Much more water and scratch-resistant than oil or oil/varnish-blends, which cure too soft to be built up on wood.
- Better dust-free results than varnish or polyurethane, which cure very slowly.
- Less polluting, less of a health hazard and less smelly than varnish, polyurethane or lacquer.
- Easier to apply and richer-looking than water-based finishes.
- Easier to clean (with ammonia and water) than all other finishes.

Disadvantages:

- Not water- or scratch-resistant enough for surfaces such as kitchen cabinets and tables that take a beating.
- Available only in gloss shean.
- Tends to ridge at the edges of brush strokes.
- Slowly deteriorates after being dissolved in alcohol.