

The Clearest of Finishes

Several products will preserve the natural color of wood or paint

BY PETER GEDRYS

The yellow or amber cast of most “clear” finishes often enhances the final appearance of a finished piece. However, sometimes you want a clear coat to be just that, as clear as possible with minimal alteration to the color of the project. You may want to preserve the just-planed look of maple or pine, or to keep the distinctive appearance of wood that has been bleached or pickled. If you have found the perfect blue for a built-in bookcase, you don’t want a coat of varnish with a typical yellow cast reminding you that blue plus yellow equals green.

The earliest demand for very clear topcoats came from artists who didn’t want their works viewed through a yellow film. They used clear resins such as mastic and sandarac dissolved in alcohol. Modern chemists have greatly improved and expanded the choices. The three I’ve selected for their clarity are water-based finishes, clear shellac, and a solvent-based lacquer. Each has pros and cons, but the first question to consider is the degree of protection you expect. Does the finish have to resist heat and abrasion? Will it get physical abuse or is it purely decorative? Think about your finishing skills and the tools available to you—all three finishes can be sprayed, but the shellac and lacquer should be sprayed in an explosion-proof booth.

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An oil-based, yellowing finish would have ruined the look of this bleached ash tabletop.

Water-based finishes are very clear

An oddity a generation ago, water-based finishes are widely available today. Spurred by environmental laws, most major coatings manufacturers now offer some type of water-based finish, and some specialize in them. But amateur woodworkers have been slow to accept these finishes. One reason is their complete lack of color; many woodworkers are used to the finish warming the wood's appearance. The application of water-based finish also requires a slight change in technique from the methods used to brush on oil-based finishes. However, if you want a totally clear finish, it is worth learning how to apply a water-based coating.

Just like solvent-based finishes, some water-based finishes are designed to be brushed, others to be sprayed. Make sure you have the right kind. There is no substitute for reading the directions. You can apply a water-based finish with a good synthetic-bristle brush (natural bristles absorb the water and go limp), a disposable foam brush, or my choice for large surfaces, a paint pad. The secret is to lay down an even coat of finish straight off the applicator; do not go back and rework the surface. Water-based finishes start to get tacky far more quickly than oil-based ones, and if you try to rebrush them, your learning curve will get very steep.

A technique that works well with pads is to pour some finish onto a paper or plastic plate and charge the pad by dipping it in the finish. Then, lightly touch it on another plate lined with a couple of paper towels. As the towels become saturated, just lay the pad on this second plate to recharge it. Practice your technique on scrap before tackling your project.

Don't be put off by the milky, bluish cast when you first apply these products. They will become clear as they dry. As with any finish, thin coats are best. Lightly sand between coats with P220- or P320-grit paper and remove the dust. Never use steel wool between coats, because the minute fibers left behind will rust, and the only way to fix that is to sand the surface and start over.

A family of finishes. Types of water-based finishes include acrylic, polyurethane, varnish, and shellac. Among the clearest of finishes, they can be sprayed or applied with paint pads, foam brushes, or brushes with artificial bristles. Advantages include fast drying time, minimal odor, and easy cleanup with water.



Padding wide areas. A paint pad works well when applying a water-based finish to a large area. Charge the pad on a plate containing the finish, and then remove the excess by touching it on another plate lined with paper towels.



A choice of brushes. When applying a water-based finish to narrow surfaces, use either a foam brush or an artist's brush with man-made bristles.

Shellac is easy to apply



Shellac is familiar but not the clearest of finishes. Clear, or blonde shellac, which is actually pale yellow in color, will have a minimal impact on the color of the wood if only a thin coating is applied. Shellac can be applied with fine-haired brushes dedicated to this type of finish, or padded on with a French-polishing rubber.

To achieve its pale yellow color (not the water-white of water-based finishes), clear shellac is bleached rigorously. This robs it of some of its natural hardness, but it makes a fine finish for objects not subject to heavy use.

Shellac can be sprayed, padded, or brushed. Most woodworkers find it easier to apply shellac by brush or pad than they do water-based finishes. With all three methods you'll probably need to thin the shellac. Zinsser's clear shellac comes as a 3-lb. cut. To get a brushing consistency, reduce it to a 1½-lb. cut by mixing four parts of shellac to three parts of denatured alcohol. After you've used shellac for a while, you'll find that you do less measuring and develop a feel for the cut by observing the viscosity of the liquid. Just keep in mind that two thin coats generally are better than one thick coat.

For large surfaces, a flat brush with very fine synthetic bristles such as Taklon works nicely. However, on smaller or shaped pieces, nothing beats a good round mop brush. They can be obtained in a variety of bristle types, sizes, and price ranges. I have a squirrel-hair mop that I've used for years. The unique quality of these brushes, besides laying down a very precise coat, is their memory; I rinse the brush in alcohol and shape the bristles into whatever shape I'm working on. If the project is mostly flat, I'll simply flatten the bristles out and let them dry. If I'm using the brush for moldings and such, I'll shape it into a point.

You can use the same brush for different grades of shellac, but don't use it for other types of finish. You don't have to clean a dedicated shellac brush after use; simply let the brush harden. The next time you need it, place the brush in alcohol for a few minutes and you're ready to go.

To apply a thin coat of shellac just to seal the wood, use a French-polishing pad made of a cheesecloth core wrapped in a piece of thin fabric such as linen, muslin, or a well-worn cotton sheet. To charge the pad, open it and apply a bit of finish to the cheesecloth. The shellac will cover the wood quickly and will leave no sags or runs.



Thinning a finish. The ideal brushing consistency for shellac is about a 1½-lb. cut. If you are using Zinsser's clear shellac, dilute it with denatured alcohol in a separate container.

A dedicated brush. You can use a variety of brushes to apply shellac, either flat or round, natural or artificial bristles, but you should use them for shellac only.



Pad on a seal coat. If you just want to seal the wood, use a French-polishing pad to apply a thin coat with no risk of drips or runs.

Lacquer is durable

Lacquer became popular in the first quarter of the 20th century because it embodied the same fast-drying properties as shellac yet was less susceptible to damage from heat and alcohol. Over the years, chemists have come up with a variety of lacquers. The most common brushing lacquer is nitrocellulose, but like super-blond shellac, the clearest still have a pale-yellow cast, and they get yellower as they age. To get a truly water-white finish, you need to use a cellulose acetate butyrate (CAB) lacquer. Also sold as CAB acrylic lacquers, they must be sprayed.

Good ventilation is a must when using lacquer. Its extreme flammability requires it to be sprayed in an explosion-proof booth. If you're not set up to spray lacquer, there are a variety of aerosols available. While they won't produce the same quality of finish as a commercial lacquer, they can be used successfully on small projects. Use a light touch when applying them.

Despite these drawbacks, nothing beats sprayed lacquer for a clear finish on a surface subject to wear and tear.



Sprayed lacquer provides a tough, non-yellowing finish. Most brushing lacquers are nitrocellulose and have a slight yellow cast that will increase with age. The clearest lacquer, CAB acrylic, must be sprayed.



Thin before spraying. It is a good idea to thin most finishes before spraying the first coat so that it flows more easily onto the wood. CAB acrylic lacquer must be sprayed, but it provides a tough, non-yellowing clear coat suitable for tabletops or kitchen cabinets.

