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August 2004
No. 171

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A Durable Tabletop Finish

Wiped-on polyurethane is a surefire way to achieve a beautiful surface

BY SEAN CLARKE

A kitchen table is subject to more abuse than any other piece of furniture in the house: Heat, liquids, and dropped forks are just a few of the daily assaults this table must withstand. When choosing a finish for a kitchen table, you need something extremely durable. Polyurethane is an excellent choice because it rates highly as a water and solvent barrier, and it also has a high impact resistance.

Traditionally, woodworkers have brushed on polyurethane to obtain a finish thick enough to be durable. Too often the result is a surface marred by runs and brush marks, with an overall plastic appearance. My wipe-on method builds the finish layer by layer and is almost impossible to mess up. However, it is not a method for those in a hurry.

Pick your polyurethane

Polyurethanes, a class of varnish that is tough and fast-drying, are available in solvent- or water-based forms; I recommend the former for this wiping method. Solvent-based polyurethane (hereafter simply called polyurethane) can be thinned by 20% to 30% using mineral

BUILD UP A THICK BASE FOR LONG-TERM PROTECTION

1. THIN THE FINISH AND APPLY SEVERAL COATS

The polyurethane must be thinned to be wiped on. For sufficient protection, numerous coats must be applied, particularly to areas most subject to wear.

A thinned finish is easier to wipe on. *Use mineral spirits to thin oil-based polyurethane by 20% to 30% (above). The first coat will soak into the wood, so apply it generously (right). Allow each coat to cure four to eight hours.*

spirits to make the viscosity suitable for wiping. Water-based polyurethane can be diluted by only 10% with water before the chemical makeup becomes unstable.

There are many brands of polyurethane. I have had great results with Pro Finisher gloss and semigloss, made by Parks and available at The Home Depot. Whatever brand you purchase, follow the recommendations on the can for thinning and drying times.

Build up the base coats

As in any finishing process, this one starts with good prep work. Smooth all surfaces with 220-grit sandpaper. Remove most of the dust with a vacuum or a clean cloth, then wipe the surfaces lightly with a tack cloth to remove any residual dust.

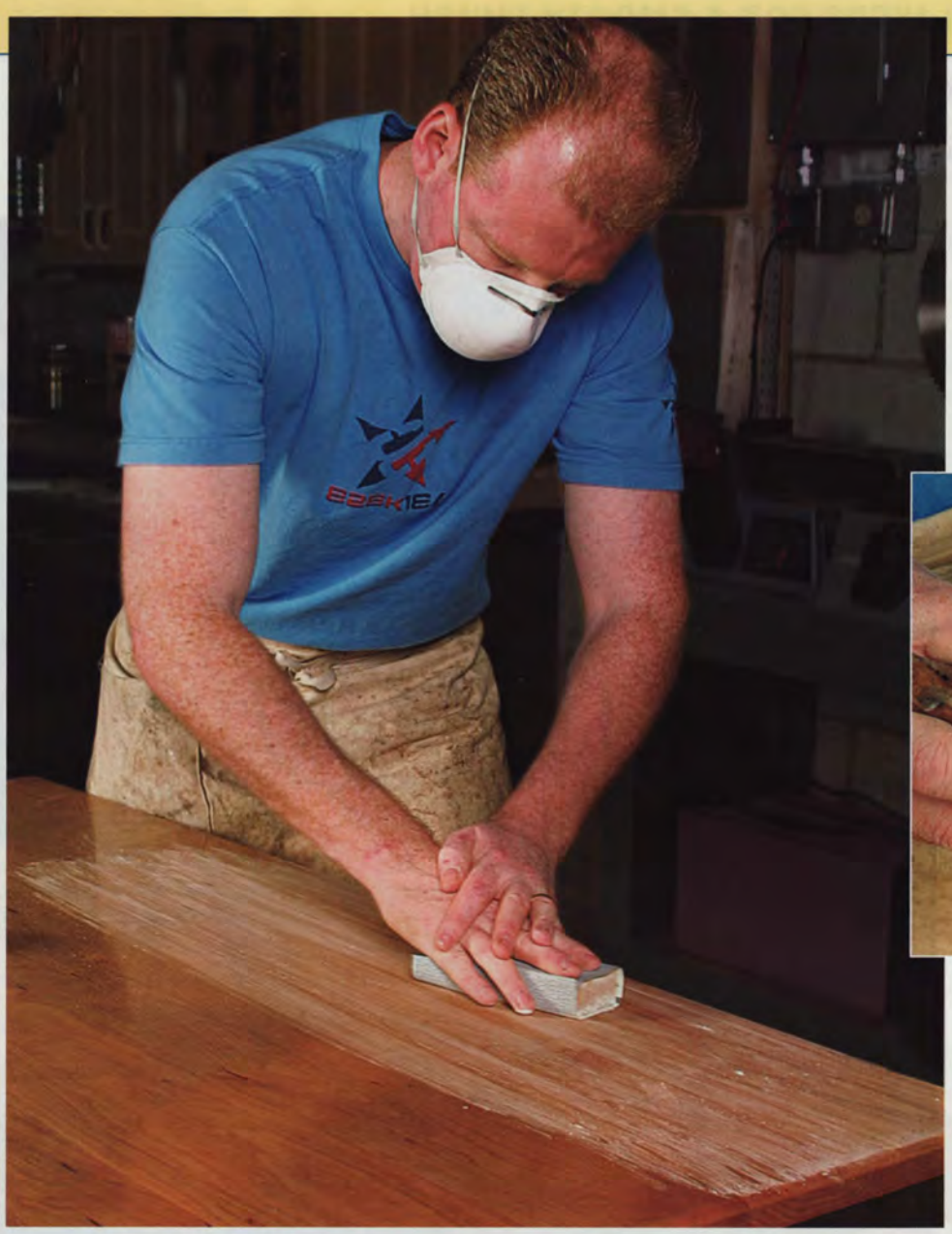
This is the point to do any staining. Don't use an oil stain under wiped-on solvent-based polyurethane because streaking may occur. Instead use a water- or alcohol-based stain. For this trestle table, I stayed with the natural color of the cherry.

Start by thinning the polyurethane by 20% to 30% with mineral spirits. The best fabric for wiping on the finish is mutton cloth, traditionally used to hang meat. However, this material is hard to find, and an acceptable alternative is a stretchy, open-weave, lint-free cotton polishing cloth sold in auto-supply stores.

Fold the cloth into a pad and dip it into the polyurethane, squeezing out the excess. Apply the polyurethane to the surface in long, even strokes with the grain, recharging the pad with finish as necessary. Don't be too sparing in the amount you apply. The object is to wipe the finish on, not off, so go heavy on the first coat, as it will sink into the wood. If you are working on a large table like this one, it pays to use sawhorses so that you can finish the base at a comfortable height. When the first coat has been applied, let the workpiece cure for four to eight hours.

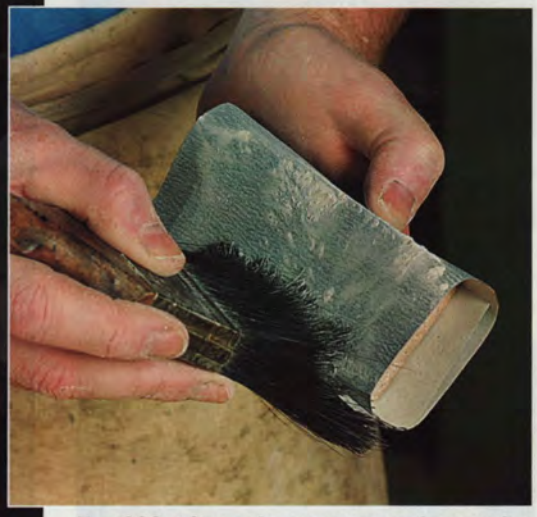
Subsequent coats can be applied without any sanding as long as the time between coats is less than 24 hours. If you exceed this time, lightly scuff-sand the surface with

Photos: Mark Schofield



2. SAND WITH 320-GRIT PAPER

If you wait longer than 24 hours between wiped-on coats, sand with 320-grit paper. Also, sand before and after the last wiped-on coat.



Use 320-grit sandpaper wrapped around a cork block to level the finish. *Frequently remove dust from both the tabletop and the sandpaper with an old paintbrush to extend the life of the paper.*

Wipe on a last base coat. *Sanding may have revealed small voids and craters. Wipe on a final coat to help level the surface, and then sand again.*

320-grit paper. Each coat needs to cure before the next is applied, which means eight hours in warm, dry areas, and overnight if the table is in a damp, cool basement. I recommend applying a minimum of six coats to protect a kitchen tabletop, but if you want a higher build and sheen, apply eight or even 10. Most of the base needs only three coats, but areas liable to be used as footrests will need more.

Sand before and after the final wiped-on coat—Before applying the final coat, lightly sand the tabletop with 320-grit paper, then get rid of the dust. This step removes embedded dust nibs but might not remove small craters in the finish. The final coat will fill these craters, leaving a fairly smooth finish.

After a minimum of 24 hours' drying time, sand all of the surfaces with 320-grit paper wrapped around a cork block. I frequently brush off the dust from both the table and the sanding block with a paintbrush to maintain the cutting action of the sandpaper. If you still have shiny spots caused by slight depressions in the finish, use sandpaper without the block and apply localized light pressure with your fingers to remove irregularities. Don't go overboard and sand through to the bare wood. For the same reason, lighten up the pressure when block-sanding near edges. It is a good idea to wear a dust mask when

PAD ON THIN LAYERS FOR A SMOOTH FINISH

1. MAKE A RUBBER TO APPLY THE FINAL COATS

Apply a few very thin layers of polyurethane with a method traditionally used for padding on shellac. First, make a rubber out of cotton wadding and an old cotton bedsheet. Charge the pad with the finish and then use the rubber to wipe on thin layers of finish.

The core of a polishing rubber. *Cotton wadding, used by upholsterers, acts as the reservoir for the finish.*

Wrap the outer layer of the rubber. *Fold the cotton bedsheet over the rubber, and then twist the surplus sheet into a tail that is tucked in on top of the rubber.*

Recharge the rubber. *Unwrap the outer cloth and pour the finish into the cotton wadding. When it's rewrapped, the rubber will give a more even release of finish and trap any hard bits of finish or foreign matter.*

Flatten and dull the surface. *Use 600-grit wet-or-dry sandpaper lubricated with mineral spirits to smooth the tabletop and remove any shiny low spots.*

sanding because the polyurethane produces a very fine dust.

Pad on a few final coats

Now that you have built up a good base of polyurethane, the next step is to apply several very thin coats of finish to fill any voids and to leave the surface smooth and ready to be rubbed out. Borrowing a trick from French polishing, I employ a pad known as a rubber to lay down thin coats of polyurethane.

The core of the rubber is a piece of cotton wadding, also known as cotton batting, which you can find in upholstery and fabric shops. Cut off a section roughly 8 in. by 6 in., and fold it three times into a tight pad. Saturate this pad in the finish, squeeze it out, and then place it on a section of used cotton sheet roughly 8 in. to 10 in. square. Fold the edges of the sheet tightly over the pad, concentrating on leaving the bottom of the pad wrinkle-free. Last, take the ends of the sheet, twist them into a tail, and fold the tail over onto the top of the pad.

Using polyurethane reduced by 10% with mineral spirits, apply a coat with the rubber in straight strokes, with the grain. To recharge the rubber, unwrap the cotton sheet and pour the polyurethane directly into the wadding before re-forming the rubber. This will give a more even release of finish and will trap any hard bits of finish that may be floating in the can.

Let that coat dry for 30 minutes to an hour so that the surface is not fully cured but stable. Then repeat this process several times until the appearance is generally smooth and blemish-free, at which point the finish can be left to cure for 24 hours.

Create an even sheen

To achieve as smooth a surface as possible, sand the tabletop with 600-grit wet-or-dry paper wrapped around a block, using mineral spirits as a lubricant. There is no need to perform this step on the base of the table. After allowing the mineral spirits to dry for 15 to 30 minutes, wipe down all of the surfaces with a cotton rag or dusting brush, followed by a light sweep with a tack cloth.

To even the sheen, I rub all of the surfaces with 0000 steel wool. Apply a moderate amount of pressure, rubbing with the grain and going over the whole surface of the table. Remove the dust and fragments of steel wool, then apply a good furniture paste wax. This will produce a semigloss finish that is smooth and silky, that retains the clarity of the wood, and that will protect it from the assaults to come. □

2. RUB OUT FOR A FINAL POLISH

To achieve an even, low-luster sheen, the tabletop's finish must be flattened with wet-or-dry paper, rubbed with steel wool, and then polished with paste wax.

Steel wool is next. *Available in rolls and pads, 0000 steel wool should be refolded to form a loose pad slightly larger than your hand.*

Wax and buff the surface. *Apply a good paste wax to the surface. After the wax has dried, buff the surface with a clean cloth, leaving it silky smooth.*

Sean Clarke is a professional finisher in Columbus, Ohio.