

Finishing Boxes Inside and Out

Easy ways to protect the wood
and line the interior

A box is a deceptively complex piece of woodworking. Small components must fit precisely. Surfaces inside and out must be as close to flawless as possible in order to withstand close scrutiny. There are lots of nooks and crannies where finish can pool. Also, one small box may be made from several woods chosen for their contrasting grain, color, or figure. So the choice of finish becomes critical.

Like many other woodworkers, boxmakers Doug Stowe and Dave Shaw experimented with different finishes until they settled on the one that works best for them. Stowe uses Danish oil. Shaw finishes his boxes mainly with hand-rubbed shellac.

The right finish for a box doesn't always have to come from a can.

A luxurious lining of suede cloth or velvet imparts its own special look and feel. Woodworker Emily Palm uses those fabrics in conjunction with wooden dividers to line her oiled hardwood boxes.

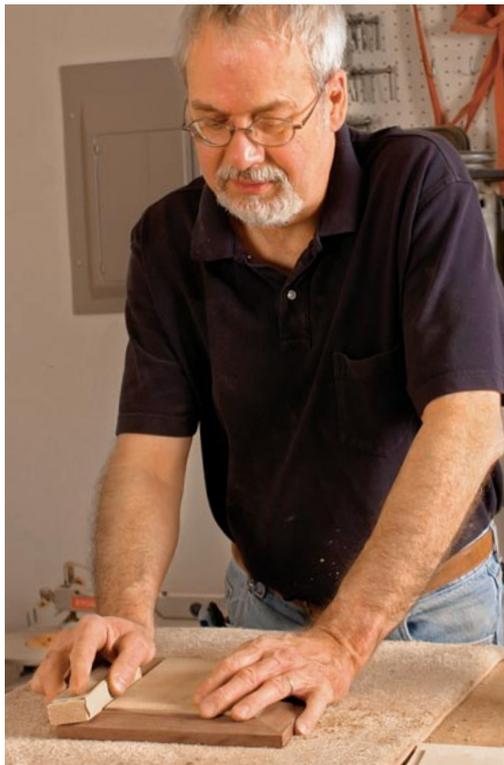




Danish oil: durable wipe-on finish

BY DOUG STOWE

A good combination. This type of finish combines oil and urethane, which is harder than oil alone.



Finish in stages. With larger boxes, sand individual components and apply oil before final assembly.



Flow it on and wipe it off. Apply liberal amounts of oil with a rag (above) or brush. After an hour, wipe off the excess oil (right). Repeat the oiling once for the interior, twice for the exterior.



I finished my first boxes with Deft brush-on lacquer, but because I worked and finished in the same space, the fumes were horrid and dust settled on the surface. I started using Watco Danish Oil, but it never really looked like the wood had a finish. I tried Minwax Antique Oil, but I wasn't happy with the smell.

When I discovered Deft Danish Oil, my problems were solved. Now I finish in the same room that I use to cut wood, and the odor is tolerable. The oil heightens the contrast between the local woods I use, making the inlay patterns more distinctive.

When designing a box, think about how and when you'll finish it. In my experience, larger boxes or complex designs of any size should be broken down into their essential components and finished before assembly. But with small, simple boxes, you can apply the oil after finish-sanding and assembly.



I sand on a 6x48 belt sander up to P180-grit, paying close attention to avoid putting too much pressure in one spot. I finish sanding by hand or with an orbital pad sander to P320-grit.

Then I apply a heavy coat of Danish oil. It often helps to rag on a second coat of oil on the outside. Most of the boxes I make are small enough to hold in my hand while being oiled. With a larger box, I oil the insides and sides, then flip it over onto sticks to oil the bottom.

About an hour later, I'll begin wiping the box to remove and re-distribute excess oil. Using a rag slightly damp with oil helps to work the finish into the wood. If the boxes still seem wet, I'll go through them all again, paying extra attention to places where excess oil might collect, such as the areas around joints or floating panels.

I put small boxes or components on sticks and let them dry overnight. Next day, I repeat the oiling and wiping. I've found that it pays to be conservative on the second oiling. I generally put a third coat on the outside of most boxes. You can build the finish to a sheen or use 0000 steel wool to dull the gloss.

Doug Stowe, author of Taunton's Complete Illustrated Guide to Box Making (The Taunton Press, 2005), works in Eureka Springs, Ark.

Shellac offers a few options

BY DAVE SHAW



Some years ago I used nitrocellulose lacquer on my boxes, but I could only spray that stuff outside. Worse, bugs would land in it, leaving interesting trails across the surface. I still use lacquer occasionally, but I've switched mainly to dewaxed shellac, whether

I want something nearly invisible or a high-gloss French polish.

Begin by mixing fresh shellac to a 2-lb. cut. While the flakes dissolve, take the time to make the pieces of the box as flawless as possible. Steam out any dents. Scrape and sand the outside to CAMI 220-grit to remove all remaining blemishes. Also sand the pieces for interior dividers or trays to 220-grit.

When I'm ready to finish, I dilute the shellac to about a ½-lb. cut. Exact proportions aren't critical, for this is a very forgiving finish.

I get better, more uniform results if I apply the shellac before I glue up the box. Blue painter's tape keeps shellac out of areas to be glued. Use a pad to put a few thin layers of shellac on each piece. (Use a lint-free rag or paper towel to apply shellac to small pieces or to work it into grooves.) If I'm coloring the wood, I'll stop here to apply a dye. The shellac controls blotching. If not, the shellac dries in minutes, so you can pad on more coats almost immediately until you have the sheen you want. Stop when the wood begins to look shiny or when it stops changing color. Let the shellac dry and then finish-sand with CAMI 600-grit paper or, better, a gray abrasive pad.

For a very hard, clear finish, use shellac as a thin seal coat under spray lacquer. I've had good results with water-based lacquer and aerosols such as Behlen's Master Jet Spray Lacquer. Let the lacquered pieces cure for a week, then begin rubbing out the finish. If the sandpaper clogs too much, let the finish cure for another week.

My boxes always get a coat or two of Clapham's lavender-scented beeswax polish at the end. It gives the wood a wonderful sheen and makes the shop smell good.

Dave Shaw makes boxes, bowls, and furniture in Tucson, Ariz.



Dilute the shellac. Mix dewaxed pale blond shellac to a 2-lb. cut, then add more alcohol until the liquid is a pale yellow (left). Make a pad by wrapping lint-free cotton padding in muslin (above) and apply the shellac.



Finish before assembly. The first pass of shellac (above) will begin to pop the wood grain. Keep rubbing on finish until it has the depth and sheen you like. Dowels, later used in joinery, make convenient holders (left). Before assembling the box, go over each piece lightly with a gray abrasive pad.

Padded lining adds a final touch

BY EMILY PALM



Lining a box with fabric not only protects the items inside, but also greatly enhances the overall look of the piece. In my boxes, I line the bottom and removable trays with thin foam pieces wrapped in velvet, synthetic suede, or other luxurious fabrics. I also fit fabric around thicker foam to create holders for rings and other small pieces of jewelry (see facing page).

Choose the fabric with the same care you used to select the wood for the box. Because the color of wood can vary dramatically from board to board, what looked good next to, say, cocobolo last time might clash with it now. Keep in mind, too, that real suede will tarnish silver; synthetics make better lining fabrics.

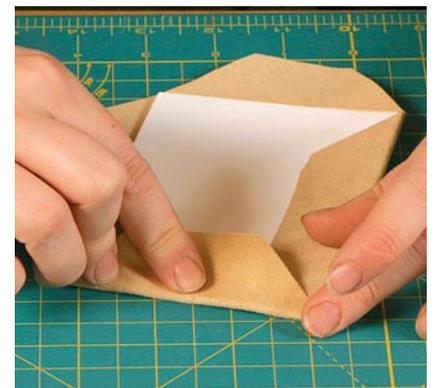
I like to use Darice Foamies 2 mm foam sheets, available at craft and fabric stores. These sheets have one paper-backed adhesive side. You could use cardboard, but flexible foam is better. It makes the lining feel upholstered because it gives when you touch it.

Mark the foam sheets with the dimensions of the box or tray. Whenever possible, take measurements directly from the dividers fitted inside the box, rather than trying to measure interior dimensions of the box itself. Be sure to allow for the thickness of the fabric—as much as $\frac{1}{16}$ in. per side for thicker velvets, as little as $\frac{1}{64}$ in. per side for suede cloth.

Rich, protective lining.
Synthetic suede cloth feels like the real thing but won't tarnish silver.



Cut the padding to size and glue on the fabric. Fit the foam to the box and trays, leaving a slight gap to accommodate the fabric (above). Spray a light coat of adhesive on the back side of the fabric and on the side of the foam sheet that is not preglued (right). Palm puts paper towels and cardboard under the foam and fabric to catch overspray.



Trim and fold. Attach the fabric to the foam sheet, then miter the corners (top). Remove backing from the preglued side of the foam sheet, then carefully fold over the excess fabric (above).

Use a straightedge and a craft knife to cut the foam sheets to size, then test to be sure they fit snugly. Once you've glued on the fabric, it's too late to make adjustments to the foam core.

Fabric can reflect light differently from different sides, especially if it has a nap, so orient all the foam sheets in the same direction on the cloth. Rough-cut the fabric to size, allowing about 1 in. extra all around to fold over the edges of the foam sheets; you don't have to be exact because the extra fabric doesn't show.

Iron the fabric good side down, using steam and a low or medium heat setting. Then spray adhesive to the back side of the fabric and to the plain side of the foam sheet (not the paper-backed adhesive side). I use Duro All-Purpose Spray Adhesive. Like similar products, it carries a list of safety warnings; I try to do my spraying outside.

Keep the fabric good side down. Turn the foam sheet so that the side you've sprayed with adhesive faces down, and press it onto the fabric. Smooth it with your fingers to be sure it adheres uniformly. Trim the fabric corners on a diagonal, staying about 1/16 in. away from the foam at the corner; if you cut right up to it, the foam will peek through. Peel away the backing to expose the adhesive, then fold the fabric edges over. Press the fabric down and smooth out wrinkles.

Fit the finished liner inside the box. Run a table knife around the edges to tuck in and smooth the edges.

Emily Palm, the owner of Blue Heron Woodworks, makes boxes and hair accessories in Petoskey, Mich.



Refine the fit. As a final step, run an ordinary table knife around the lining to smooth the edges in place.

How to make ring holders



Just about any box becomes more useful if you add ring holders, which look like slotted pieces of soft foam. The slots are nothing more than fabric folded around pieces of thick foam.

I use high-density rolled foam, the same stuff used for sleeping-bag pads. It's available at craft and fabric stores, in 3/8-in. or 1/2-in. thicknesses, and cuts with scissors or a sharp craft knife.

Trim three or more pieces to fit snugly inside one compartment of the box; exact dimensions will depend on the size of the box. As with a liner for the bottom of a box, be sure to allow for the thickness of the fabric.

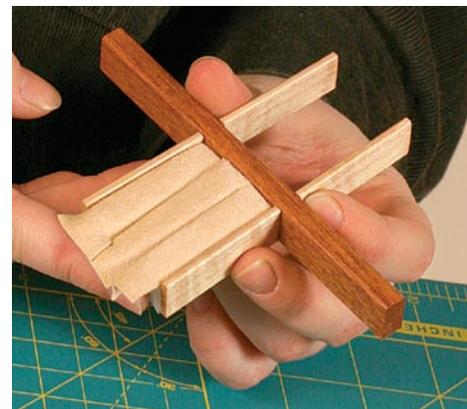
Cut a piece of fabric an inch or so wider than the foam pieces, and about twice as long as the compartment. Spray the wrong side of the fabric with adhesive, then accordion-fold the fabric between the foam pieces (see photo, above right).

Finally, carefully trim away most of the excess fabric, leaving only small flaps on the ends. Wrap those flaps over the sides and tuck them in place with the end of a blunt knife.

— E.P.



Shape the ring holders. Accordion-fold the fabric over small blocks of resilient foam.



Test and trim. Cut away most of the excess fabric and check the dividers' fit.



Fit and smooth. Fit the ring holder and divider into the box and smooth the fabric into place.