USING A SUPERGLUE FINISH FOR WOODTURNINGS

Byline: WOOD Magazine Staff [5] **Georgia woodturner Bill Hug applies a super-adhesive finish to make his finest small pieces sparkle. And it's literally a sticky process.**

William E. (Bill) Hug, a retired professor of botany in Athens, Georgia, has turned more than 5,000 vessels since he began woodturning 16 years ago. And while he has finished a lot of his work traditionally—with lacquer or oil—Bill has perfected the application of a quite unusual one: cyanoacrylate.

"Instant glue [Krazy Glue, Zip Grip, and others] was once promoted by turners as a quick, high-luster finish for turned objects that could be applied in one coat," Bill comments. "But while the result was immediately spectacular, it was short-lived. Turners overlooked the fact that instant glue, like most good finishes, has to be applied to a carefully prepared surface, you have to put on more than one coat, and you should protect it with a quality was. It's the perfect finish for small turnings."

Sand & sand

As a rule, Bill dons a dust mask and sands the turned object with progressively finer grits of abrasive—100, 150, and 220. Then, to get the surface exceptionally smooth for the cyanoacrylate finish, he raises the grain of the wood. "I moisten the wood with a wet towel," he explains. "But with the lathe off. If the workpiece was spinning, centrifugal force would drive the water deep into the wood, making it to take longer to dry.

"When the wood has dried, I sand again with 320-grit," the turner continues. "Then, I repeat the wetting and sanding until I can feel that the grain no longer rises and the wood is absolutely smooth. While all this preparation takes a lot of time, I find it time well spent in getting a beautiful finish."

The Georgia craftsman, like all turners, loves to work spalted wood and burls as well as normal stock. But finishing such wood requires extra preparation. "Spalted wood commonly contains soft spots. Burls often have bark inclusions and voids," notes Bill. "Then, there's end grain to deal with. But no matter the problems, the pieces must be turned to the point of sanding before you can deal with it.

"End grain and soft spots in spalted wood you can cut clean with a gouge if you first apply spray lacquer," he advises. "With the lathe turned off so the lacquer won't splatter, soak the problem area. Allow it to dry, then make shallow cuts with a sharp gouge until the area becomes smooth."

Bark inclusions and voids require different treatment. "Mix fine sawdust of the same or a contrasting color with white woodworking glue," Bill says. "Then, with the lathe off, force the mixture into the bad spots with a pallet or putty knife and let it dry. When it's dry, turn on the lathe and remove the excess glue mix with a surface cut. Next, with the lathe at low speed, apply a first coat of water- thin instant glue without using the accelerator. When it's dry, proceed through the normal sanding steps."

Apply the finish

"Instant glue must be carefully handled," cautions Bill. "First, be sure to read the label, wear eye protection, and have some acetone on hand for cleanup. Also, have a good amount of facial tissue for application.

"To apply it, place a few drops on a tissue and touch it to the workpiece while the lathe turns at a slow speed," he explains. "And do it quickly -- in just a few seconds. Then immediately discard the tissue because it will set in 4-5 seconds and the tissue may stick to your finger and burn the skin, stick to the workpiece, or both!"

Following the application, Bill quickly sprays the instant glue just applied with accelerator, then sands the area with 320-grit. "Following the sanding, I go over the piece with 0000 steel wool to remove the dust prior to adding a second coat. And I occasionally turn off the lathe to see if the work needs additional sanding and that I'm applying the glue evenly."

Bill repeats the sanding, blue application with accelerator, and steel wooling two more times, progressing from 320-grit to 400, then 600 grit. Finally, he speeds up the lathe and polishes the finish lightly with 2400, 2600 and 3200 Micro-Mesh abrasives (from Klingspor, 800/228-0000). Then, he tops off the finish with a thin coat of a good paste wax, allows it to dry, and gives the piece a final buffing.

Problems

"Open-grained wood usually requires two or more coats of instant glue between sandings to completely fill up the pores,""says Bill. "Another problem is uneven application. In tat case, you have to return to 320 or 220 grit, and the finish off, and refinish. Also, if you notice a dust buildup in spots on the piece when you're using the steel wool, that indicates roughness. You'll have to go to a coarser grit, like 220, and resand. Then go to finer and finer grits as you reapply the finish."

With a wet cloth, Bill dampens the wood to raise the grain for fine sanding.

Bill begins preparing the surface for the instant-glue finish by thoroughly sanding with 320-grit abrasive.

After three coats of quickly and carefully applied instant glue, plus a final sanding with 3,200-grit micro abrasive, Bill is satisfied with the finish.

Multi-coats of instant glue and micro-sanding give Bill's turnings a high-gloss finish. He protects them with wax, too.