My introduction to turning began with small projects. Turning wooden pens helped me learn basic skills, and I used some of the money from selling pens to fund my hobby. Before long, I started to buy resin pen blanks because of the amazing variety of colors that are available.

It took a few years for me to realize the unique turning you can create by combining resin and wood. (A few examples are shown above.) It all started in northern California when I was taking a woodworking course at the David Marks school. On a trip to a local wood dealer, I saw some figured Claro walnut logs full of cracks and bark inclusions. I bought a log and took it back to my shop in Illinois, with no idea of how this beautiful specimen might be used. Then one night when I was turning a pen that contained resin and burl wood, it hit me: Why not combine resin and wood for larger-scale turning?

My biggest problem was lack of information—what resin to use, how to add color, how to get resin into cracks and inclusions, and so on. After plenty of trial and error, I’ve developed the techniques shown here and made cast resin turning a specialty in my woodworking business. I hope you’ll give it a try.

Control the cut. Resin is hard and dense, so you can expect to sharpen often and remove small amounts of material at a time.
Wood prep is an important first step

I’ve found that my success in creating a good resin-infused turning blank depends largely on how well I can prepare the wood that will form the core of the casting. There are two parts to the prep work you need to do: cleaning and drying.

Clean, then bake. To ensure a good bond between resin and wood, it’s important to remove dirt, dust and loose bark. I remove grit from crevices with a curved awl. General surface cleaning can be done with a drill and wire-brush accessory. Use compressed air to blow the blank clean. For thorough drying, I put the blank into a 220° toaster oven for at least six hours, then test for dryness with a moisture meter. For best results, dry wood to 5% MC or lower.

Resin-casting essentials

It doesn’t take much to gear up for resin casting (See Buyer’s Guide, p. 60.) The Alumilite resin I use is available in different quantities. Power-mixing with a drill and paddle is preferable to mixing by hand because of the resin’s short working time. Your major investment will be a painter’s pressure pot; basic models sell for $150 or less. The pot is designed to be pressurized by an air compressor and comes with a gauge to help you maintain a safe pressure range. Pressurizing the resin is essential for eliminating bubbles in the casting and forcing resin into all the cracks and crannies in the wood.
Make a mold to contain the casting

The mold will become part of the casting, and is cut away after the resin cures. I like to use melamine-coated particleboard (MCP) to make this type of one-time mold. MCP is inexpensive, readily available, and easy to work with. Assembling the mold with hot-melt glue and screws creates a leakproof container for the resin. Make sure to remove the screws before cutting the mold free of the casting.

A quick custom-made mold. Size your mold not just for the wood, but also for the blank you’d like to turn. The resin can make up the rest of the volume. Secure the wood inside the mold with glue or a screw to prevent the wood from floating when resin is added. I record wood and tinting details on the outside of the mold. This eliminates confusion if I store the resin casting for any length of time before turning it.

Estimate with rice, then mix the resin and fill the mold

Plan to work quickly, because the Alumilite resin has an open time of just 12 minutes after Part A and Part B are blended. The resin is mixed by weight, but I need a volume estimate to get started. I fill the mold with rice to establish the volume, then I mix equal weights of Parts A and B to create the total volume required. Mix with a drill and paddle, only until the Alumilite becomes completely clear. Then pour resin into separate pigment containers. Fill the mold as soon as your tinting is done.

Put in the pigment first. Since I’m using several colors in this mold, I use a separate mixing container for each color.
Mix the resin, mix the colors, then fill the mold. I use a drill and paddle mixer to blend equal weights Part A and Part B until the cloudy mixture turns clear. Then I divide the activated resin into separate containers containing my different pigments. Work quickly here, so you can fill the mold and put it under pressure before the resin starts to cure.

Cure under pressure, then cut the mold free and get set for turning

Putting the resin under pressure eliminates bubbles and voids; it also forces the resin deep into the wood. After placing the mold in my pot and securing the lid, I connect my compressor hose and add air until the pressure gauge reads around 60 psi. Never exceed your pot’s pressure rating. For a mold this size, I only need to keep the pressure on for about an hour and a half. Then I let the resin cure overnight.

Remove the mold to free up the blank. The resin will bond to the mold as well as to the wood inside. Remove all the fasteners in the mold, then cut the blank free. This can be done on the tablesaw or on the bandsaw, as shown above. Resin casting offers creative possibilities that are limited only by your imagination and the size of your pressure pot.

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