

Resin Inlaid Bowls - Chuck Cohen

Chuck Cohen has demonstrated how to make resin inlaid bowls. Chuck's technique doesn't require any special equipment, like a pressure pot.

Getting Started:

For casting resins, the wood used must be dry. He starts with a round blank held with a woodworm screw as shown on the right. He trues up the outside and squares the bottom to the side.

Put a tenon on the bottom using a parting tool, to make a U-shaped channel. The center stub is 1/8 inch larger in diameter than the chuck jaws when they are closed. This allows the piece to be held with the chuck in contraction on the stub, or in expansion by the outside edge of the channel.

Now turn around the blank, grip by the tenon, and true up the top. Using a parting tool, make a channel that will hold the casting resin, as shown at right.

As you can see on the left, the shape of the channel determines the shape of the resin inlay in the final turning.

To center items such as beads in the channel, it may be necessary to use the parting tool to make a small centering groove for the beads to rest in. Items that float may require a drop or two of CA glue to hold them in place before the resin is added.

Resin Inlaid Bowls

Inlay and Coloring Options:

Some things added to the resin are cast in a way they will not contact the turning tools. An example of this is the bowl shown with the coins in the rim. The coins are placed in the center of the band of resin by casting it in layers. First a layer of resin is poured and allowed to setup. Another layer of resin is poured and the coins are carefully added to avoid trapping air bubbles. The layers of resin are thick enough to prevent contact with the coins as the final shape is turned.

Other items, such as calcite crystals, are soft and can be placed in the resin so they are exposed on turning.

The Mohs' hardness scale is a scale of relative hardness for minerals, named after geologist Friedrich Mohs. The softest rating is Talc (1), and the hardest is Diamond (10). When embedding items to be exposed on turning, do not use items with a Mohs hardness greater than 5. Items with a Mohs hardness of 5 can be scratched with a nail, and will not ruin your turning tool when it comes in contact with them.

Calcite crystals are white, but Inlace Nuggets come in a variety of colors.

The resin is naturally clear, but can be colored using TransTint Dye or PearlEx. The bowl to the left is colored with PearlEx. The one below and to the right is colored with TransTint.

Mixing and Pouring Resin:

Now that the bowl blank is prepared with a channel to accept the resin and you have decided on inlay and coloring options, it's time to prepare for the pour.

It's important to make sure your bowl blank is positioned absolutely level before pouring the resin. Use a small level and make any adjustments before you begin mixing the resin.

The resin Chuck uses is Clear Coat resin, the type with a ratio of two parts resin to one part hardener. He uses a small digital scale to measure each part separately to the proper ratio by weight. Use disposable plastic drinking cups and chopsticks to mix the two parts together. If you are adding colorant to the resin, be careful to mix enough, or carefully note the amounts of resin and colorant used. As you can imagine it's difficult to match colors.

When working with the resin, it's possible to pour in layers, particularly if you are embedding objects, layering colors, or both. It all depends on the effect you want in your casting. Pour a layer and allow it to cure for a day. Then you can add another layer as desired.

When adding a layer that will capture embedded objects, add the objects and carefully add the resin to avoid trapping air bubbles. You can use a heat gun or hair dryer to gently warm the resin to help release trapped air. If you find a surface air hole in the cured resin, use a drop of the product Rapid Fix to fill the hole and cure with a UV light.

Turning the Bowl:

Once casting and curing of the resin is complete the bowl can be turned. The casting resin is very hard and can chip easily. Your tools need to be sharp and you should take your time.

Chuck recommends the techniques described in the online article [No Catches-Using a Bowl Gouge With Confidence](#). Carbide tools work well on resin.

When hollowing the inside of the bowl, be careful entering the cut near the resin. It's a good idea to use a parting tool to make a small channel to support the bevel of the bowl gouge when entering the cut.

The resin can be very "stringy" when turned. It's a good idea to wear a smock and a face shield when turning.

Sanding and Finishing:

Chuck usually starts sanding at 220 grit and goes to 3,000 grit. He power sands the wooden areas of the bowl. Power sanding does not produce good results on the resin. For sanding the resin, hand sand with the lathe running. This orients sanding scratches in the direction of the bowl rim. He finishes with wet sanding of the resin using micro mesh sandpaper.

The finish is applied in multiple steps.

1. EEE Ultra Wax- Use a paper towel and polish at high speed (~2500 rpm) until no more residue is re-moved with the paper towel.
2. Yorkshire Grit - Apply and polish with a paper towel as in step 1.
3. Shellawax Cream - Apply and buff at high speed, but carefully use a small piece of cloth. An old t-shirt works well. Note, do not use Shellawax liquid. It will cause streaking on the resin areas.
4. Shithot Waxtik - The name says it all...

At this time, Chuck uses jumbo jaws to reverse the bowl, turn off the foot, sand and finish (as above).

Summary:

Below is a list of the items Chuck uses and where he obtains them.

- AWS Scale (for measuring resin) - Ebay
- Micromesh with foam pad backing - Amazon
- Calcite Crystals - Woodcraft
- TransTint Dye - Amazon
- EEE Ultra Shine - Penn State Industries
- Shellawax Cream - Penn State Industries
- Rapidfix UV - Ace Hardware, Walmart
- Shithot Waxtik - Timbnerbits
- Klear Kote Epoxy - Creative Wholesale