

Pressure Casting for Pens

by Mike Rice

Several months ago, Lauren Rants gave a demonstration to club members on casting resins as a process for creating unique pen blanks. His pens are breathtaking, and very unique. He often uses wood that is "punky*" or wood that has voids and/or holes in it. Many people would throw this type of wood out, but Lauren fills in the holes and voids with casting resin. The process isn't simple, nor is it 'cheap', but if you are interested in trying to go a step further, you may want to look into this process. The type of pen kit can vary, but it is recommended that you master the process before you use expensive kits (wasting tubes).

The following material contains a general approach, and there are several approaches that can be followed. One can go online and find web sites that deal with casting in general.

Lauren recommends using Alumilite, which is a urethane material. Alumilite Corp. can be found on line, or there is a hobby shop in Sandy that carries small amounts (call first). The clear resin is recommended, as you will probably be using colored dyes and metallic powders. Choosing the "right" color dyes and types of powder is an art form, and comes with practice. Beginners may put in too much of each. [The color should be subtle, translucent and not solid.]

In order to minimize air bubbles, Lauren uses a painters pressure pot to force the bubbles out of the resin while it's still 'fresh'. Painters pressure pots can cost upwards of \$160.00 new, or you might find one in a pawn shop. (Alumilite carries one in their catalog).

The pen blanks should be drilled before casting, and plugs or corks may be placed in the ends to prevent the resin from entering. At 50 or more lbs(psi) of pressure, this may be tricky.

My notes on the process are as follows:

1. Use a mold that is made for casting plastics. I got mine from Devlies Plastics in SLC. It is approximately 3" x 6" x 1" deep.

2. The resin is weighed on a digital scale. I got mine from Harbor Freight.

3. The mold will take about 12 oz. of resin (A & B) with 3 pieces of wood in it.

4. The resin is poured into clear plastic cups, each holding 6 oz. of resin.

5. The color and inert** metallic powder is placed into the part A, at a rate of 1 drop per oz (or 6 drops.) The colorant is not put into part B. This ratio is used at a rate of 2 oz. per pen blank.

6. At this point, you have not mixed the 2 parts of resin together, but they are ready. When you stir the color and powder, do it carefully, so as to minimize the air bubbles. [Use popsicle sticks...].
7. At this point, you should have the paint pot ready, along with an air supply. For hard woods, Lauren recommends up to 80 lbs of pressure, and 30 to 50 lbs for soft woods. If you are using a home pressure canner/cooker, these pressures are probably too high, and may destroy the cooker (and you).

8. You should have a toaster oven on hand to warm up the wood to about 150 degrees before putting the blanks, resin and mold into the pot. I would recommend a dry run before starting the cast. This is time sensitive.

9. When ready, pour part A and part B into a third cup, being careful to not create any new bubbles. Lauren pours them down the side of the cup, rather than into the middle. You may stir the resin to get the desired results.