

CASTING POLYESTER RESIN

By Anthony Turchetta

Several members have requested that I do an article on casting polyester Resin (PR). I have resisted, as I thought it would be a redundancy of the excellent article that I learned from, which was the one Jay Pickens wrote.

(http://www.penturners.org/content/PR_Instructions.pdf) I recommend that article to anyone, as it is everything you need to know to cast PR and make your own great looking pen blanks.

I am just going to add to it and show more photos of the process and the supplies you need.

What I will not do is give you specific recipes. Part of the fun of casting your own PR blanks is coming up with your OWN individual colors and patterns. What fun would it be, if we all made the same blanks? As more folks around here have been starting to cast their own, I've noticed some shades may be similar. But so far everybody seems to be making his or her own unique colors, which is GREAT! Once you have the basic concept down, the variations are endless. Yes, some will be duds, but hey, we all manage to break pens while learning to turn!

1. Materials. www.artstuf.com is where I buy ALL my casting materials except for the molds. They are a one-stop shop for QUALITY dyes. I buy my molds at www.misterart.com. I usually use a 2x3x1 (4 oz) & 6x3x1 (9 oz). You will want to buy the powder dyes, as I feel they give a deeper richer color with less transparency. I also recommend the luster pigments, especially the white luster pigment, as you can mix this in with all your colors to get that pearl look. You will need plastic cups and stir sticks. I buy the PR clear casting resin by the gallon and it comes with the hardener, about \$33.00.

So you can cast your PR blanks with as little as this:



or as much as this:



I keep all my casting materials on a cart, as the odor (which I'm sure is not real good for your health) is a bit much. I wheel my cart outside and do my casting there. Being in Arizona I am almost guaranteed a nice day! 😊

Here are some bronzing powders; they work well for other stuff, but not real good for mixing with PR. But maybe you can find the right combo, about \$4.00 per bottle.



Here are what the small bottles of powder & luster powder dyes look like. The big jug is the White pearl - that gets used a lot! Powder pigments are about \$4.00-7.00 per bottle & luster \$6.00-20.00. They will last you a long time! The liquid PR resin dyes are 2.00 a bottle.



2. First I pour water into whatever mold I am going to use, then I pour the water into a measuring cup to see how many ounces of PR I will be mixing, then I pour it into my mixing cup and mark a line. This gives you the right amount of PR to pour into your cup. I always pour in a touch more. Whatever is leftover I pour into a piece of PVC, and use that for center bands or something.

Next, stir in your hardener, I use 7 drops for every 1 OZ of PR.

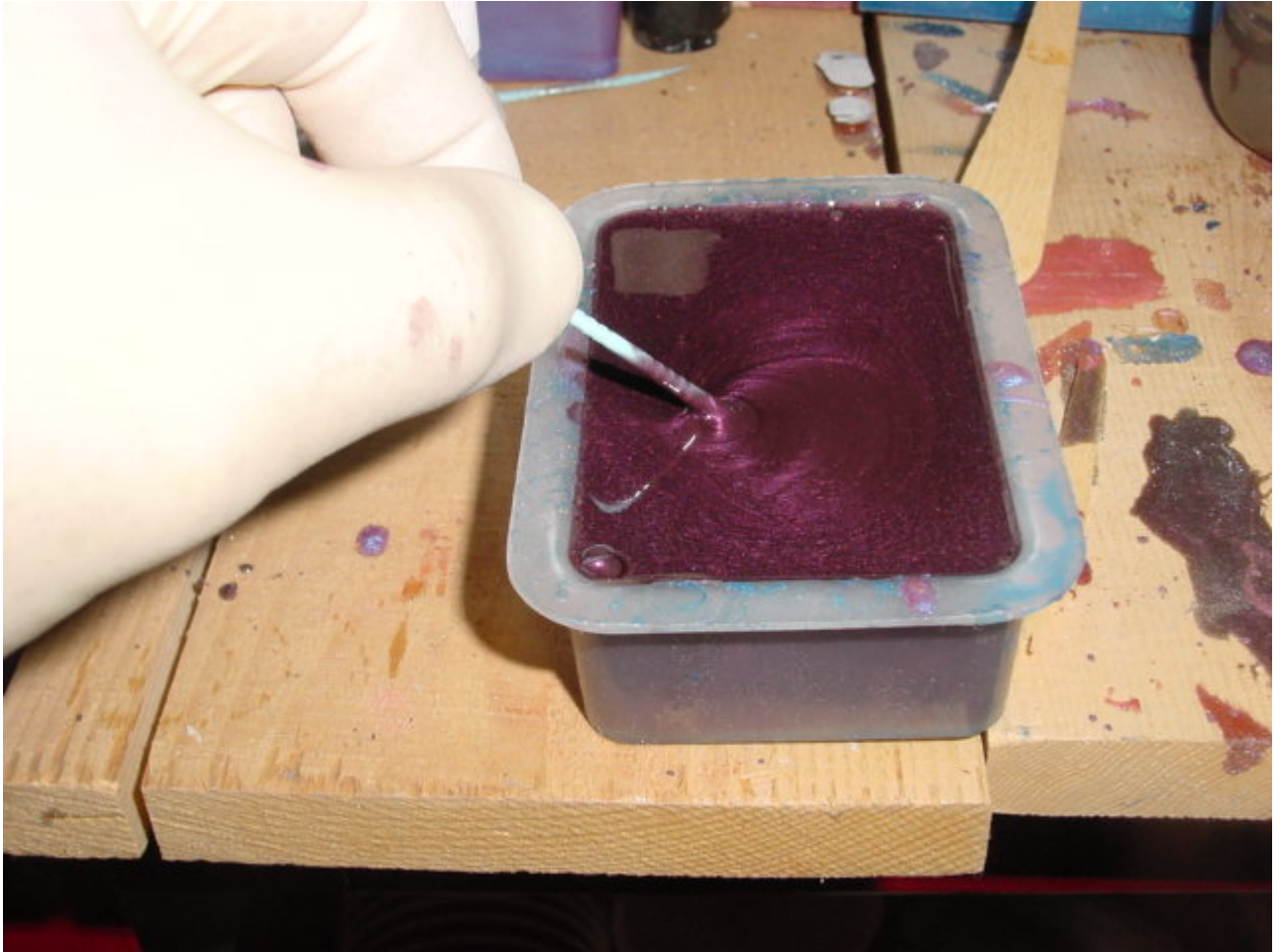


After I mix it up for about two minutes I then add my powder dyes. This happens to be a 4 OZ mold 2x3x1 so I am adding 2 scoops of dye. One would work, but I want a real non-transparent color. I stir this up for another couple of minutes, and then pour into the mold. You can also add some white luster powder dye, or any other color combo you want, into the cup at this time, and then pour into the mold.





Now depending on the humidity and temperature, setting can vary from 15-35 minutes, I stir mine occasionally to check the stiffness, about every 5 minutes, waiting for that right time before it gels.



When it gets to the gel stage, I add some pearl drops and then gently stir. Remember, it has almost gelled, I am hoping to get some pearl highlights in this dark purple cast. This is the final stir and then that's it. It will fully harden in 4-8 hours. I usually wait 24 hours before drilling and turning.





Here are some sample castings. I cut them on a band saw to the size blank I want. Also, the round casts are some of the leftovers from my mixes. I pour them into a short section of PVC - you do not need a release agent as the PR will shrink when curing and just pop out of the mold.



Also, if you cast into a round cylinder mold, I have noticed it takes allot longer to set up. Any time I pour into a PVC pipe mold, I don't even bother to look at it for at least a day or two.

Here are some clear PR castings with snake skins:



All I can add is that it's fun, and when you get good at it, it is a lot cheaper than buying commercial produced resins. Also PR castings tend to turn easier as they are a touch softer.

A finished product, Purple Passion from Cave Creek Casting....



Now go get your gas masks....and have some FUN 🤖

Ciao, Anthony at PenWorks,...

"Life is too short to carry an ugly pen" tm Retro 51

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