

# Instructions for Mixing Polyester Resin For Pen Blanks

First, for those of you who have used "Inlace products" - you have already dealt with Polyester Resin - VERY EXPENSIVE Polyester Resin (here to referred to as PR). I bought it a couple of times for about \$30 per issue - \$60 total. Bottom line, 8oz. Of PR for around \$30.

After a search on the web, I found a one-stop source for PR, colorants, Luster powders and all shades of gold, silver, brass and whatever your heart might desire. And the prices are RIGHT!!

That place is Douglas and Sturgess at [www.artstuf.com](http://www.artstuf.com) (one "f"). When you go there, look on left buttons and first click "Epoxy and PR resins". Then scroll down to "Clear-Casting Resins" I normally buy in 1-gallon containers. That's 128 ounces! The price is about \$24 a GALLON - and the catalyst is FREE! Did you read that right? 128 Ounces for less than the "Inlace" 8-oz package.

Now,, go to the buttons on the left again and click on "Dyes and Colorants" When you get there, scroll down to "Luster Pigments". This is ultra-fine powdered pigment. These powders contain a pearlescent or reflective pigment that will make your pen blanks glow, just like the acrylic or whatever plastic blanks you can purchase commercially at pen blank suppliers. I generally buy 1/2# plastic bottles - I have bought my most used Luster, "Pearl White" a pound at a time. A half-pound will probably color a hundred or so pen blanks

Then, continue down to "Polyester Resin Dyes". Here, you can buy small, VERY CONCENTRATED colors for your PR. I normally buy the smallest containers.

You may find that the 1-gal container of PR is a bit unwieldy, so you can buy PR on Quart Containers (it will cost you more) Last order, I still bought the gallon size, but also bought 5 or 6, 1-quart fresh containers. - I will keep the "mouth of these cleaned of PR and re-use them from now on.

Without going into numbers and great details, I can tell you that I can make a set of PR custom pen blanks for under \$.30. It takes a little time, but I make and offer a pen that NO-ONE ELSE ON THE PLANET HAS!!!

## What You'll Need and How It's Done

1. Polyester Resin and Catalyst (catalyst comes free from D&S).
2. Clear, plastic (throw-away) highball cups - supermarket, Wal-Mart - everywhere.
3. Popsickle Sticks (for stirring mixes - then, throw away)
4. Toothpicks, for final, more finite and controlled stirring.
5. Various Luster Powders, colorants (liquid pigments) - your choice
6. Molds for your castings. See "where to get" later.



On the left, you see the mold. Pour water into the mold up to about 1/8" from the top. Then pour that water into a kitchen measuring cup. Mark the level with a permanent marker. This is the amount of PR you'll use for your pen blanks (mold). Now, take the water in your measuring cup and pour it into one of your "highball" plastic cups. Using your marker again, on the outside of the cup, draw a "Level Line". Now, pour that water into another "highball" cup and mark that one. Continue transferring the water from one empty "highball cup" to the next, until you've marked 8 or 10 cups. This way, the next time you're ready to pour PR, then you just grab a cup and pour to the line - you're done!

Once your PR has been poured into the mixing cup, you can add the catalyst to the PR, drop-by-drop.

With reasonably fresh stock, I drip in about 7 drops to the ounce. This isn't critical, but generally, I find this amount works well - two ounces of PR=14 drips (or drops), etc. Immediately start a slow, even stir to mix the catalyst with the PR. Get it thoroughly mixed within about 2-minutes. If you introduce air bubbles, don't worry. With a big "open" mold like this, air bubbles will rise to the top.

#### **FOR ADDITION OF LUSTER POWDER:**

Now, take a CLEAN popsickle stick and dip it into The wide mouth of your luster powder. I just "scoop" up on about the last inch of the stick, a pile of powder - maybe 1/2" or so tall - then I dump it into the PR cup - may do this two or three times - whatever it takes to give me a pretty opaque final mix. I don't want the brass tube to show through after turning the blank.

POWDER IN? Continue stirring it into the PR. Once it's all submerged, you will see exactly what "patterns or swirls" you're creating. Stir it thoroughly for about 2 or 3 more minutes. By this time, you should be ready to pour your mixture into the **mold**. With a toothpick (or your popsickle stick) you can continue stirring and swirling the luster powder around in the mold - making your desired patterns. Just stir occasionally after a couple of minutes - and watch what's happening, if anything - if the swirl begins to disappear, give it another gentle stir. Watch for "gelling" to take place - ( that's when, like "Jell-o", it starts to harden) and when this happens, STOP STIRRING and let it "set up". Your work is over - now, it's just wait and see.

Generally in 8-15 minutes, you'll see "dimples or tiny waves" on the surface. It's "Gelling" and will continue to get harder and harder. In a few hours, you could turn it over and slam it on a counter-top and "de-mold" the block of PR.

I like to at least leave it overnight before I do this. If you touch the surface that is exposed to the air, it will still be a bit sticky to the touch. It might also be days later, but don't worry. Once hardened, you can take the block out to the shop and start cutting your blanks - sticky on the surface or not!



Above shows a block that was molded - then removed, a blank bandsawed away and then the block was re-positioned into the mold, just to show how it first appeared.

#### **"Where to get suitable molds"**

The square molds in this article come from [www.craftsetc.com](http://www.craftsetc.com). In their search window, type in "Poly Casting Molds" and click "GO". Usually given two choices, so go for item 43885 Mc-6 (3" x 3" x 1-1/16") SKU # 72988

MY FAVORITE Molds I now use come from [www.MisterArt.com](http://www.MisterArt.com). "Environmental Tech Resin Molds" In search window, type in #4292869 (a 2-1/8 x 3-1/4 x 1-1/8" mold) normally about \$1.75 ea. - get several.



This shows what can happen very quickly - a whole bag of 1/2 pen blanks, ready to be paired or mixed with other colors or wood to make a most unusual and attractive custom pen.

TRY THIS AND YOU'LL LOVE IT - VERY EASY, ONCE YOU'VE DONE IT. Have fun - Jay Pickens