

# Everlast™ Mold Casting System Instructions

## List of Materials Included In Basic System (Item #CASTEV) Fig 1

HDPE Mold with 2 cavities size: 5-1/4" x 7/8" x 7/8"

- a) 2 sets Small Silicon tube mounts. Holds tube sizes from 7mm to 3/8" (Item #CASTEVS1)
- b) 2 sets Large Silicon tube mounts. Holds tube sizes from 10mm to 12-1/2mm (Item #CASTEVS1)
- c) 2ea Small blank silicon stoppers. Allows making blanks of any blank length. (Item #CASTEVS3)
- d) 95 ml Wax Mold Release w/brush (#CASTEVMR)

Additional Materials Included In Ultimate Bundle (Item #CASTEVB)

e) 32oz High performance Resin (#PKCASTRF2) that also includes:

- 5ea stir sticks
- 1ea 1-1/4 oz Plastic bottle Hardening additive
- 5 pair of Latex Gloves
- 1ea 8 oz measuring cup

f) 9 pack of concentrated color pigments (#PKCOLOR9)



**Important Note:** The following assumes you are working with the items a) – f) above. Note that the casting mold set (#CASTEV) is compatible with many other types of Polyester Resins, Alumillite, Epoxy and other mold making materials some of which require a pressure pot for curing. These instructions are limited to the customer using PSI products d) – f) as listed and shown above

### Before Starting

Make sure the work area is clean and well ventilated. Work on a disposable tabletop cover (i.e. newspaper), keep plenty of paper towels available to wipe up. Wear the rubber gloves provided. Have mineral spirits available for cleaning up. Work with room temperatures between 60-75 degrees. Remove the metal seal on the can of resin, puncture and pry out carefully.

### Preparation of your mold for resin

The first step is to liberally apply a coat of Mold Release wax to the cavities of your mold being used – this will allow for easy removal of your finished / casted blanks. Allow to dry for about 2 minutes. Estimate the amount of resin you will need for your pour (refer to Chart A). Pour/measure the resin into the measuring cup. A full cavity will accept 2 oz of resin.

Two methods of making Pen Blanks are discussed. The first (A) is with decorated pen tubes, the second (B) is making custom pen blanks. Section (C) is common processing to (A) and (B)

### Section A – Making decorated pen tubes

1) To Decorate your pen tubes. Wrap the brass pen tube with decorative paper or material, or paint your tubes. Use Craft papers, wall papers, small photos or wrapping paper or any other paper with an attractive design. Apply an adhesive on the paper then attach or wrap the paper around the tube. Note that the resin may seep into the paper during casting so it is advised to seal the papered tube with a glue or sealer on the round and end surfaces. After wrapping trim any excess from the tube ends so that all material glued to the brass does not extend past the brass. Apply more than one application of sealer if necessary. Allow the sealer to dry. If you're artistic, paint a design or apply stickers or glitter to achieve the final effect.

2) Press your decorated tubes firmly onto the Silicone tube mounts appropriate for the size of your tubes. Press firmly into the mold chamber you are using with the resin. (Fig 2)

3) Slowly pour your mixed resin over your blank and into the mold. Avoid bubbles – will distort the final cast and create the potential for blowout when turning. Go to section C for final processing. Place in a 70-75 degree low humidity dustless area to dry.

**Fig 2**



Mounting decorated tubes

Section B – Making a solid pen blank (multiple colors).

1) Determine the length of your blank. Mix a proportionate amount of resin (max 2oz each chamber– See Chart A).

Chart A - Mix Proportions

Length of blank	Mark on cup	Drops of Hardener
2-1/8in	1oz	6
3-1/8in	1-1/4oz	8
4in	1-1/2oz	9
4-1/2in	1-3/4oz	11
5-1/4in	2oz	12

Example: Your blank is 3-1/8" long. Temperature is 70 deg.

Mix 1-1/4 oz of resin – harden with 8 drops of Hardener

Small Blank silicon stoppers in the mold to make a cavity for the pour.

2) Select the colors from the Concentrated color kit that you wish to use. Shake or mix each well before using

3) Pour your mixed (clear) resin into separate cups (paper or plastic) in proportion to the amount of each color you will be using. i.e. for 3 colors you will have 3 nearly equal cups of resin.

4) Add a 2-3 drops of color concentrate into each of the cups. Mix each color well until homogeneous. Notice that each color is a solid color in the resin.

5) Pour thin layers of each color into the mold when done give the mixture a quick "S" swirl. Fig 3 (**DO NOT MIX! or colors will blend**). There are many techniques available beyond the scope of these instructions to make interesting multi-colored effects – practice and test different color and layer / swishing techniques to refine your techniques.

Fig 3



Section 6 – Final processing

1) Allow the mixed / poured solution to cure for about 24 hours. It is fully cured when it feels dry to your touch. Note that the cavity with mixed colors will take longer to cure – perhaps up to 48 hours. When nearly cured, you can accelerate the process by placing the mold in an oven for 15 minute intervals at about 120 degrees.

**DO NOT HEAT UNTIL THE CURING PROCESS IS NEARLY DONE. DO NOT OVERHEAT OR HEAT FOR PROLONGED TIME**

2) Remove the casting from the mold – It may require tapping the mold against a solid surface removing the rubber feet for access to the bottom of the mold for punching out the blank.

3) Cleaning up. Wipe down the stir sticks and inside of the measuring cup with a paper towel. Use mineral spirits to clean away any excess or stains. Make an effort to preserve the measuring cup and stir sticks for future projects.

4) Turning. Drill (Solid blanks) and mount the blanks as you would any other plastic materials. Turn carefully not to expose any underlying decorative materials. You may have to leave a small amount of material above the bushing to not "blow out" the blanks at the edges. Taper the ends of the blanks slightly and it usually will not affect the beauty or function of the kits. Sand to 600 grit then use micromesh or PSI One-step polish.

5) Assemble and press your pen together the same as you would for any other pre-fabricated plastic blank.

Enjoy your pen with your custom made pen barrel.

