

Pressure Casting Clear Resins

Products used in this How To:

- * Pressure Pot
- * Alumilite Clear Casting Resin
- * Gram Scale
- * Stir Stick
- * Cups



This How To will help you understand the process of Pressure Casting. We have chosen to work with the Alumilite Clear to demonstrate the difference between a casting that has been pressure cast and one that hasn't.



These are the items we used to mix and pressure the Clear: Pressure Pot, shop air, Alumilite Clear, Alumilite's Gram Scale, a 6 oz mixing cup, two 1 oz cups, and a stir stick.



Measure Alumilite Clear using a mix ratio of 1:1 by weight. It will not cure properly if you mix it by volume.



Once measured properly, mix thoroughly. The open time is approximately 6-7 minutes. Be sure to scrape the sides and the bottom of the container. It is very important to make sure you get the mixed resin into the pressure pot and to apply the air pressure prior to the resin starting to gel.



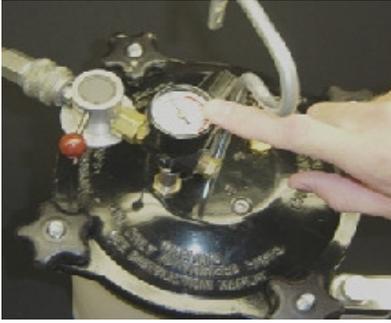
For our demonstration we will pour the mixed Clear into two 1 oz cups. The bubbles are many but very small. They are hard to see in this picture. They do show up better once the material has cured.



Here we are placing one of the cups in the Pressure Pot to be pressure cast.



It is very important to fasten all of the knobs down tightly to the lid. The red handle on our tank is a ball valve, which allows us to hold the pressure within the tank while disconnecting the air source after it has reached the proper air pressure in the tank. In addition, the ball valve allows you to slowly add pressure to the tank without splattering the resin out of the cup/mold. We recommend installing a ball valve if your Pressure Pot does not have one.



Before adding air pressure to the tank, make sure the regulator is set to the desired pressure and does not exceed the limits of the pressure pot. Many pressure pots have a safety valve that opens if the limits are exceeded.



We let the material set for 45 minutes before releasing the air pressure and removing it from the Pressure Pot. The size and mass of a one ounce cup will cure faster than a thin walled piece allowing us to demold it faster. We first disconnect the air source, release the air pressure from the pot, and then remove the knobs around the lid. You only need to make sure to pressurize the casting until you know it has hardened up. The concept behind pressure casting is to crush the bubbles to a point that we would not see them and then hold the bubbles in that state until the resin sets up. Once the resin sets up and hardens the bubbles will not be able to expand back to their original shape and size and will never be noticed in your finished casting.



We remove our Alumilite Clear cup from the Pressure Pot and see no air bubbles in the poured cup at all.



Here you can see the difference between the castings on the left that has been pressure cast compared to the cup that was just mixed and poured without the use of pressure. The cup that was pressure cast does not have any air bubbles. The cup that was not pressure cast has hundreds of small champagne sized bubbles throughout the entire casting.