

One Piece Mold

Products used in this How To:

- * Original Piece
- * High Strength 2 Silicone Rubber
- * Alumilite Regular
- * Excel Knife
- * Corrugated Plastic
- * Glue
- * Rubbing Alcohol



A one piece mold works perfectly for parts like this bulldog that have a flat back side. The flat back side gives you a noncosmetic side to pour from. The advantages of a one piece mold are the simplicity of making the mold and no seam lines in your finished casting. This particular bulldog was used for as part of a beer tap found in bars across the country. This How To process will walk you through the steps for making this one piece mold.



The first thing you need to do is to fasten the part onto the mold base. The base can be any nonporous material. Here we used a piece of plastic. You can also use wood, metal, styrene, coated poster board, or any other material you have available. No mold release is necessary on your original unless it to is made of silicone. Silicone rubber only adheres to another silicone. When you fasten the piece down, try not to leave a gap between the base and the part. The silicone will seep under the original and it will require additional clean up later. It's much easier if you eliminate the gap before pouring the silicone.



The next step is to mix and pour the silicone moldmaking rubber into the moldbox. Here we are using Alumilite's High Strength 2 mold making rubber. The mix ratio is 10:1 by weight. After properly weighing and thoroughly mixing the rubber, we slowly pour the mixed silicone from one corner of the mold box. This slowly submerges the part in the rising silicone. If you have a significant amount of detail you may wish to paint on the first layer of silicone before pouring the rest into the mold box. Painting the first layer of silicone prevents air bubbles from sticking to the part and ending up with bubbles on the surface of your mold which would show up in your finished castings.



Allow the silicone to fully cure. The demold time of the High Strength 2 is approximately 12-18 hours. Once the silicone has cured remove the glue or clay that sealed the box to the base and begin to remove the mold from the box. Here we are using a putty knife to slide underneath the mold and the bulldog to break the glue off and remove it from the base.



Next is to trim the silicone in the pvc pipe to allow us to remove the silicone from the pvc.



One trick of the trade is to use rubbing alcohol to help remove the silicone from the pvc pipe. The rubbing alcohol will make the silicone very slippery which aids in its release.



We then slide a dull knife around the outside of the mold which allows the rubbing alcohol to seep in and make the two very slippery allowing us to simply pull the mold out of the pvc.



All that is left is to remove your original by flexing the silicone mold and removing your original.



Here you can see the original next to the mold that picked up every single bit of detail. You are now ready to mix up your Alumilite resin and cast your perfect replica of your original.