

OVERVIEW

In this module, you can expect to learn the process of creating slip-cast mugs. The module will guide you through each step, starting with spraying the printed form with black enamel spray paint and polyurethane to build up the layers. You'll learn how to sand the form after the paint has cured, apply additional layers of polyurethane, and repeat the process for the mug handle. The module will also cover clay leveling, blocking, and creating a seal with the flask. You'll discover techniques for pouring plaster, demolding, creating keys for the molds, and cleaning up the plaster. Finally, you'll learn how to dry and prepare the molds for slip-casting. By the end of this module, you'll have the knowledge and skills to create your own slip-cast mugs with professional results.



- Spray the printed form with black enamel spray paint and polyurethane, usually three layers provides enough build up.

- After the paint is fully cured, start sanding with 150 and then 220.

- Once the form is completely sanded, wash off all the dust and apply one more layer of polyurethane.

- Repeat the same process for the mug handle.

- After the polyurethane has set, clay to level the form and block up to the part line. Deciding the part line can be tricky and it will show, so I like to use an angle in the form to hide it the best I can.



- Refine the clay so that it is flat and meets the edge of your cast object without any dips or curves. This will help make your plaster mold nicer and last longer. Cut the clay at the front and back of the form so it is square.



Your mold should be between an 1" to 1.5" depending on the form. The mug body will be 1.25" and the handle will be 1".

Refine edges so all of the clay is square so it creates a nice seal with the flask.



- Add coils to all edges to keep plaster from leaking from the flask.



- Always mold soap your form. Pure Lube from Laguna works great and can be diluted 1 part soap to 4 parts water.

- You only need a thin layer, if it is too thick you will see a bubbled texture in the finished plaster. I apply the soap and then wipe my brush clean and use it to wipe the excess soap away from the form.



- Repeat the same blocking in process with the handle. I use a stick to pack down the clay on the interior. Using a serrated rib can help level out the clay.



- Cut the clay edges so it fits snug up against the flask boards. Apply mold soap.



Since this form is so small and I do not have flask boards that are this small, I use foam board with rubber bands and clay on the edges.



- Pour plaster and wait at least an hour to demold. The plaster will get hot to the touch as it cures. Wait until it fully cools down to demold.

- You will find the cubic volume of the flask minus the approximate volume of the form. You can find the exact value in CAD but you can also just guess, it also helps to have a little more plaster than you need in case you have any leaks.

- * Cubic inches/80= Quarts of water

- * Quarts of water * 2.09 = lbs. of water

- * Quarts of water * 3 = lbs. of Plaster

- Use the highlighted numbers for your water and plaster values.

- Sift the plaster into the bucket of water.

- Wait 3 minutes.

- Drill mix the plaster for 2 minutes

- Hand mix the plaster for 1 minute.

- Tap the bucket to force the air bubbles to the surface and blow on them to pop them.

- Pour the plaster in the corner carefully to not splash and let it slowly rise over the form.

- Agitate the mold by tapping the flask or the table to release any air bubbles that can get trapped on the surface.

- Always have a couple coils of clay nearby in case your mold leaks.



- After the plaster has set, remove the clay and clean up the plaster. Be careful to not mess up the part line, if you see that the part line is a little high, you can scrape it down to the ideal height.



- You can use pocket change to create simple, easy keys for the molds. Dig with light pressure into the plaster with a twisting motion. Do not go too deep, but also shallow keys do not work well. you want to go about 1/3rd of the way down on a penny.

- Mold soap the form and plaster, be sure to get plenty of soap in the keys as plaster likes to hold in there. If your keys break off it will be difficult to align your mold parts.



- Do the same to the handle mold. You can see here my plaster on the inside of the handle is a little high so I use this metal rib to slowly scrap it down to the right height.

- Repeat the same process for the bottom of the mold.



- While the mold is still together, I clean up as much as I can. Using a surform can knock down the corners and a green scrubby will soften the corners. Sharp corners in plaster can make the mold prone to chipping which will damage the mold and leave plaster around the studio which is not good when you switch to working with clay.



- If your mold does not come apart by pulling the pieces, you can lightly tap a scraper on the seams. The chunks that blew out on this mold part are because I did not wait for the plaster to fully set. Be patient, you do not want your mold doing this because it will create more clean up for you when you cast these in clay.



- Repeat the surform and scrubbing process for the rest of the parts. be careful to not mess up the interior of the cast though, this is just for the exterior seams. Once you finished, wash each part with water and a soft sponge to remove any loose plaster and mold soap that might be clinging in your mold.



- Repeat this same process for the handle mold.



- This handle was stuck in the plaster and I lightly tapped it with a stick to jostle the handle loose.

- Once your molds are cleaned and washed, band your molds up to dry. Plaster can warp as it dries so this helps it warp together so your seam lines do not open up. You want to wait until the plaster is dry to touch, if it feels cool, it is still wet. Once it is dry you can start slip-casting. You should spray the interior with water if your mold is completely dry for the first cast.



- Repeat the same process for the handle and enjoy your new molds!

