

Mold Making

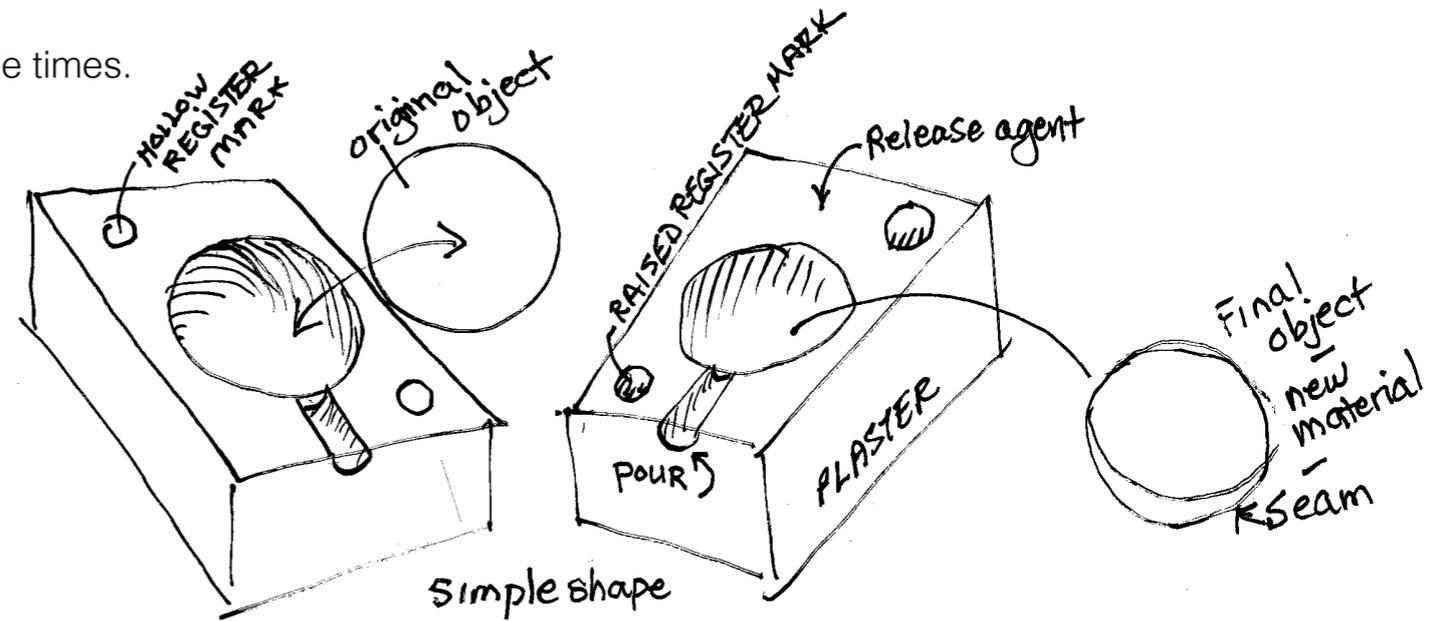


Mold Making

Purpose: To replicate an object in another material, once or multiple times.

Basic Process:

- make or find original object
- attach clay tube for later pouring of new material (screw hole)
- coat in mold release agent if necessary (green soap, thin vaseline or cooking spray works for some materials)
- pour container 1/2 full of plaster
- immerse object 1/2 way in plaster
- let harden
- cut registration holes with a dime,
- coat plaster with release agent
- pour more plaster on top half, covering object
- when hard and dry, use rubber mallet and wooden shims or dull chisel to open (careful!)
- remove original object
- clean mold, widen screw hole if needed.
- apply release agent
- close mold (hold together with string, etc)
- prepare new material
- pour into screw hole
- let dry
- unmold
- clean





Process: handmade clay object mold, not reusable.

1. make original object without undercut areas
attach clay tube for later pouring of new material (screw hole) in this case the neck hole is enough
2. attach metal flanges if object is made of clay and has irregular edges
coat in mold release agent if necessary (green soap, thin vaseline or cooking spray works for some materials)
3. Splatter thin plaster on first to get detail, then add thicker plaster let harden
4. Carefully pull apart mold. you can use tools, wooden shims, mallet
5. Dig out clay
6. Put empty mold back together. Here caulking is used, but if you don't plan to break the mold afterward, you don't have to use this...just tie it together.
7. Pour new material in screw holes, let dry
8. remove outer mold
9. refine surface of final object.



Mold Making

Mother and child mold: possibly reusable

make or find original object (this one is baked sculpy)

depending on material, you may need to coat in release agent

Put a sulfur-free clay dam around half of it temporarily to keep plaster and rubber from flowing around the entire piece. Attach clay tube for later pouring of new material (sprew hole) (not shown here)

Put in molding container (you can make this or find it)

brush on thin layers (> 1.5mm) of latex rubber...or other paintable molding material...this one is Rub-R-Mold each layer has to almost dry (to the touch) which takes about an hour depending on conditions. It should change color a bit...darker (at least in parts.) If it totally dries the next layer won't adhere well.

pour plaster into container with about an inch above object. Let harden.

remove object from container or turn over in container.

remove clay from around object, possibly remove rubber from non-object area

carve registration circles in plaster

paint release agent on plaster at least,

paint layers of latex again on object

pour plaster into container with about an inch above object. Let harden.

separate mold halves, removing original object

place rubber child mold in plaster halves (its possible you will need to adhere rubber to plaster sides)

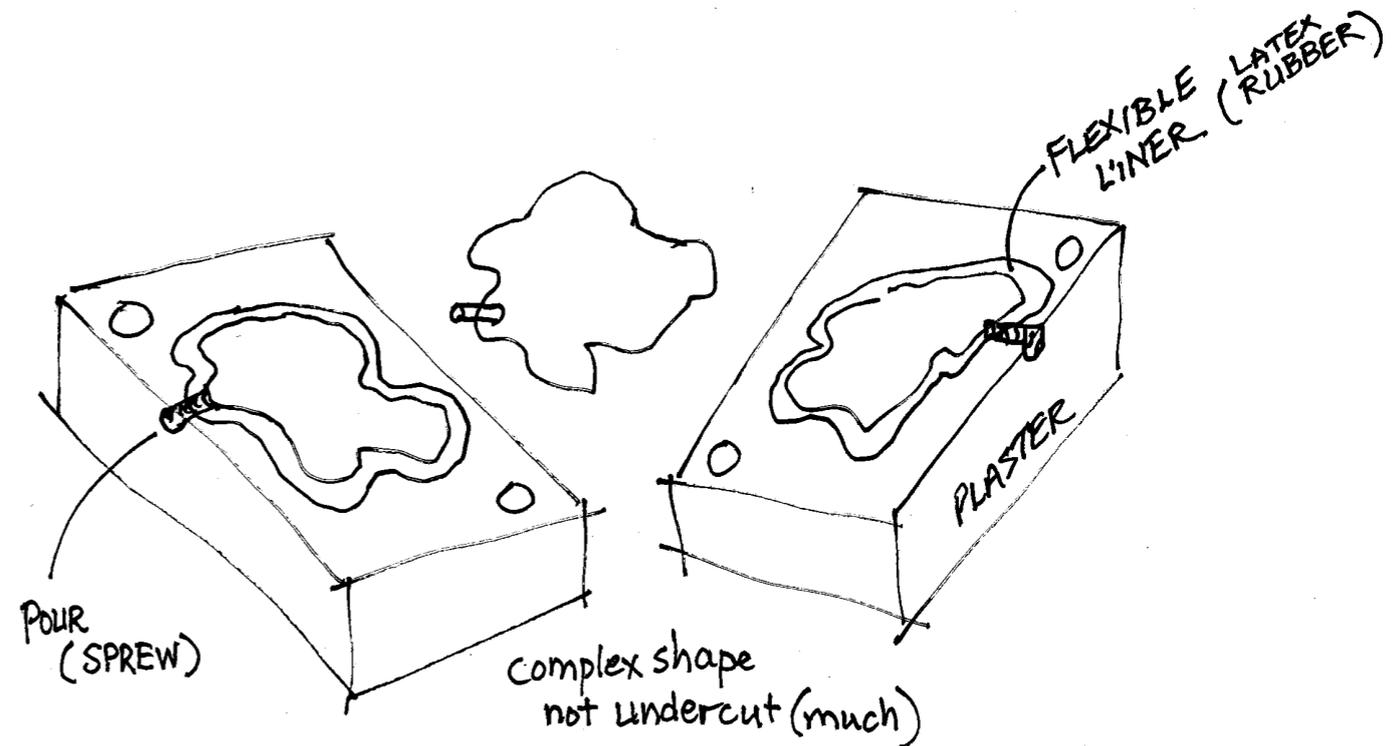
put mold back together,

pour final material into sprew hole. pour slowly to avoid bubbles...perhaps stopping midway and moving mold around.

let dry

unmold

clean



Mold Making

Detailed Alginate or Moulage mold: not reusable as is, but can be used as a step in making a more permanent mold.

Mix alginate with water
or heat Moulage in double boiler (stir till liquid, you can add water if too thick.

These materials are non-toxic and generally don't stick to what they are applied to, so you probably don't need a release agent. (maybe to seal the object if it is porous like feathers)

If you half submerge your object like the frog on the right, you can let the first half dry, then spray release and add the second half to make a full mold and they MAY separate cleanly.

After separating and removing the form, you can pour an intermediary material like fine plaster in the hollow to create your intermediary form. (You might be able to use wax if it melts at a low enough temperature....if you do this, you can use the lost wax method for bronze casting)

breakup moulage and keep moist to reuse... alginate cannot be reused.

now treat your plaster image as the previous page indicated: release agent, latex rubber, plaster mother mold in sections.

the biggest problem is getting a mold that can separate from arms, undercuts, etc.

for this reason, you may want to use a VERY FLEXIBLE latex such as Body Double from Smooth-On* or Alumite** that will stretch over the object rather than need a multi-part mold.

Pour your final material into the mold, remove, repeat for multiple images.

Your mold material must hold up to whatever you put into it.

For silicone molds you might be able to use polyester, epoxy, resins... (FYI for bronze casting, you use a special heat resistant sand mixture and melt out the wax figure with heat, replacing the interior with bronze...)



[*http://www.smooth-on.com/Silicone-Rubber-an/c2_1115_1313/index.html?catdepth=1](http://www.smooth-on.com/Silicone-Rubber-an/c2_1115_1313/index.html?catdepth=1)

** http://www.amazon.com/Amazing-Casting-Products-Alumilite-Strength/dp/B004BNA6VA/ref=pd_sim_201_5?ie=UTF8&refRID=1EZ2QWEM64X7M9HGAG65&dpSrc=sims&dpST=_AC_UL160_SR160%2C160_