

# COMPOSIMOLD



Heat and Pour Molding Material

## Making Plaster Castings Using ComposiMold

[www.ComposiMold.com](http://www.ComposiMold.com)

Plaster or Plaster of Paris is a great casting material because it is so inexpensive and works great with ComposiMold. Plaster is a safe, low cost medium that will reproduce fine detail. In this tutorial, we show you how to make a simple plaster dog figurine.

Here are some images of some of the many parts molded with plaster.

	<p>This bear was molded in both plaster and concrete.</p>
	<p>Here is a Buddha molded with concrete. Buddha has also been cast with plaster.</p>



Here is a frog that is now happily watching over a garden waiting for a plaster fly.

The steps involved with making a plaster casting with ComposiMold are the following:

1. Prepare your original part. Apply a mold release and place it into a container that can hold the ComposiMold.
2. Melt the ComposiMold
3. Pour the ComposiMold over your original and let it solidify
4. Separate the original from the ComposiMold mold
5. Apply a mold release to the ComposiMold mold
6. Mix your plaster
7. Pour the plaster into your ComposiMold Mold
8. Try to wait patiently as it cures.
9. Separate your cast part from the ComposiMold mold and admire your work.

### *Melting ComposiMold*

Melt the ComposiMold by heating above 130 F to melt using a double boiler or microwave.

A double boiler consists of one container inside another container with water between them. The purpose of the double boiler is to keep the heat from getting above 212 F. Marbles or rocks work well to keep the ComposiMold container off of the bottom of the pot. If the ComposiMold container is on a stove top directly, the container will melt. Heat the resin until it is melted.

Microwaving your ComposiMold is an efficient method for melting your ComposiMold. Microwave times will vary depending on the microwave used.

**Microwave times will vary. Start with short heating times until you understand how the microwave will heat the ComposiMold.** We have found that for the 6 oz container, 30 to 60 seconds is typically long enough to melt the resin. After

microwaving, stir and let the temperatures equilibrate throughout the molding compound.

The 16 oz container should be heated for 3 to 5 minutes. Start by heating in 1 minute intervals. Stir it after every minute or less to make sure all the material is heated evenly.

For the 32 oz container, 6 to 10 minutes is typically needed. The first time you melt CompositMold, do it in 1 minute intervals: 1 minute of heating followed by 1 minute of stirring to equilibrate the temperature. As you see how your microwave works, you can adjust the times.



<b>Container Size</b>	<b>Microwave times (estimated)</b>
6 oz	<b>30-60 seconds</b>
16 oz	<b>3 to 5 minutes, stir every 1-2 minutes</b>
<b>32 oz</b>	<b>7 to 10 minutes, stir every 1 to 2 minutes</b>

Warning: The CompositMold container WILL melt if overheated. Do not heat the container without the CompositMold in it. Also, the CompositMold WILL BE HOT. Be careful.

### *Solidifying CompositMold*

CompositMold solidifies when it cools to a flexible, rubbery, polymer. So to solidify, just let the part cool. To speed up to process, you can put your part in the refrigerator or use ice packs against your part. Do not submerge the CompositMold in water to cool.

### *Apply Mold Release to your Model*

Applying a mold release (or release agent) will allow your model to be easily separated from the CompositMold. Applying a mold release to the mold before casting will also minimizes wear and tear on the mold. This is important if you are using the mold to make many reproductions.

A vegetable oil mold release is included in this kit. Other mold releases that work with plaster include:

- Spray Vegetable Oil (Pam)
- Mineral Oil
- Petroleum Jelly
- Motor Oil
- Spray Lubricants (WD40, ArmorAll)

Apply a light mist coating over the entire surface of the model and surrounding forms (any surface that will come in contact with the ComposiMold).

Wipe off the mold release after to make sure you do not have too much.

You can also use a clean paint brush or cloth to brush the release agent over the surface of the model and surrounding forms. Make sure that intricate detail, undercuts and hard-to-reach areas are coated as thoroughly as possible.

NOTE: Do not soak your model with release agent. Over-applying release agent will result in tiny bubbles on the working surface of your finished mold (pin-holing) and will be reflected in your cast part taken from the mold. Wipe off all excess material.

Be sure to get the mold release in the crevices but do not use so much that it puddles up.

For other casting resins other than plaster or concrete, use mold releases designed for that resin. For most materials, a wax or PVA mold release will work fine.

### **Mixing the Plaster**

Plaster is a low cost, easy to use casting material consisting of plaster and water. It does not require accurate measurements when mixing with the water. Unfortunately, once dry, plaster is also brittle so it is easy to break edges or pieces off your cast. So use with care and allow your part plenty of time to cure before handling it. The longer you wait, the stronger the plaster will become.



A dust mask is recommended when working with the plaster powder as the inhaled plaster dust particles may be breathed into your lungs.

To start, pour clean lukewarm water into an empty flexible mixing container.

Use a ratio of 2 parts plaster to 1 part water by weight. This ratio can be modified in order to achieve the properties desired. The more plaster in the water, the stronger the plaster will be when solidified, but it will be thicker and more difficult to pour.

A good rule of thumb to determine how much plaster to mix with the water is to pour in plaster until it starts to show on the surface of the water. Stop adding plaster when there is no more standing water in the bucket. The surface of the combined water and plaster should be mostly grayish in color, with some areas of white dry powder. Let the plaster and water sit for a few minutes.

The water temperature makes a difference. Hot water will speed up the setting of the plaster; cold water will slow it down. Depending on your project, you may want to use either - hotter water may work best for fast turn around when pouring into your molds.

Add dry plaster to the water, gradually sifting the powder into the water trying to break up any clumps. Work quickly, but avoid dumping the plaster into the water.

Take a moment to check that your mold has the mold release applied. Use a stirring stick, wooden spoon or similar object to stir the plaster and water together. Be sure to get the bottom and sides of the container and try to break up any clumps of plaster. Do not whip bubbles into the plaster mix.

Pour plaster into mold starting at the lowest point in the mold to ensure that you do not trap any air below the plaster. After you fill the mold, vibrate the mold gently by tapping it with your fingers or against the table to dislodge any bubbles.

Let stand until the plaster solidifies. This usually takes at least 60 minutes. Preferably let the plaster casting stand overnight.

To clean up, you can use a wet paper towel if the plaster is still wet. Another method is to let it harden in the flexible mixing container. After it is hardened, it can be popped out into the trash by turning it upside down and hitting the bottom and sides of the container with your hand. Do not pour wet plaster down a sink or other drain. It can solidify and may ruin the plumbing. Dispose of unused plaster in the trash. Rinse wet plaster off hands in a bucket of water before washing them in the sink.

Plaster will dry out your hands or skin. You may want to use hand lotion after mixing.

## **To Make Your Plaster Cast**

Mix the Plaster and pour into part.  
For two part molds, a funnel may be needed. Gently vibrate the mold with your hand by tapping the sides of the mold to insure that all the cavities are filled and entrapped air can escape.



After the plaster has cured (It is best to wait a day), separate the mold gently and admire your part.

