

HOW TO MAKE A SILICONE FLAT BACKED MOULD

Making a flat-back one-piece block mould, demonstrates many of the basic techniques needed to handle silicone mould making.

Silicone can handle the reproduction of high detail, the capturing of texture and form and the release of pieces with undercuts.

The Model

Pick a model that has a flat back such as a plaque. It can be made from virtually any material, wax, non-hardening oil based clay, leather, hard water based clay, concrete, metal or plaster to name only a few.



Equipment required

For mixing large amounts of CraftSil 750, an accurate set of scales will be required. Other items that will be required include:

- CraftSil 750 (2 part pack)
- Eye Goggles
- Latex Gloves
- Sealer
- Disposable stirring sticks
- Conical measure for catalyst
- Plastelina
- Mould box material: Wood, Lego blocks or Corflute.
- Conical measure for catalyst if mixing small amounts. Use scales for all larger moulds.

Model Preparation

Fasten your model to the mould box base using a hot glue gun, running a thin bead around the base of the model, a few millimetres in from the edge. Latex may also be used. Simply put a dab in the centre of the model.

Adhere the model to the centre of the box base by applying light pressure. A gap of 6mm between the model and the edge of the box is recommended.



It should be noted that a rolled ribbon of Plastelina pressed around the bottom perimeter of the model works well. The model should be pressed firmly on the base board in all directions. This flattens the clay while at the same time forming a tight seal under the model to prevent rubber from leaking underneath. Remove any Plastelina that is squeezed out past the edge of the model base.

No matter which method you use, you should inspect the model to ensure that no gaps are left between the model and the baseboard. Fill any gaps with Plastelina trimmed off even with the model base with a small spatula or ceramic clean up tool



If the model is highly porous, it should be vented underneath to prevent any air that may be trapping in or on the model from forcing its way into the rubber in the form of air bubbles. Drill 2 or 3 holes through the baseboard into the model.

It is a good idea to seal the model at this stage while you can view it from all angles, before the pouring box is constructed around it, particularly if your model is porous such as plaster or wood.

Brush on several coats of sealer onto the model, waiting for the first coat to thoroughly dry before applying the second.

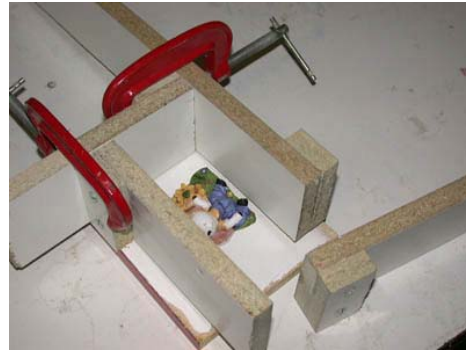


Making the Mould Box

Foamcore or timber can be used to make the walls of the form or mould box that is to make a container for the CraftSil when poured around the model to make the mould. Lego blocks can also be used.

Start by applying glue or latex to the bottom edge of one of the wall strips and affix it to the base on which the model is glued.

Keep the wall strip at least 1cm from the model. This is called the mould wall thickness. The rest of the wall strips can now be glued to the base and themselves to form a rectangular box around the model.



Wood can also be used to make the form when pouring larger moulds. All joints and corners including the area where the walls meet the base must now be sealed with the plastelina non-hardening clay to prevent any possibility of the CraftSil leaking out of the mould box.

It is best to do this by rolling pieces of Plastelina on a board, with the fingers and palm of your hand into long thin rolls of clay. These rolls should then be forced into position with your fingers or a rounded tool.

Check thoroughly to make sure that any cracks or openings in your box are sealed with clay. It is very embarrassing to find your mould box leaking as you fill it with silicone.



The Mould Release

Most models do not require mould release with silicone. However, although not essential, it is a good idea to apply a mould release until you have gained sufficient experience.

The entire inner surface of the form or mould box and the model should now have a mould release applied. A thin

coat of soft paraffin or Vaseline is suitable.

If using a liquid mould release allow the mould release to fully evaporate before proceeding. The right release agent must be used or the rubber will bond or stick to the model and you might never get it off.

Never use spray vegetable oil, mineral oil or spray lubricants like WD40.

Mixing CraftSil

Estimating the quantity of CraftSil required to make a mould usually comes down to a matter of judgement. Formulas do exist but are rarely used. Filling the mould box to the required height with water provides an accurate measure, but then you have to allow the box to dry.

Refer to the instructions in the Craftsil material information sheet for detailed mixing instructions.

Suffice to say the material must be well mixed, for at least 3 minutes. It is often a good idea to pour the mixed material into another container for a final mix. This prevents any possibility of any unmixed Part A or Part B still on the wall or bottom from finding its way into the final pour.

Pouring CraftSil

Pour the CraftSil into the mould box. It should be poured into the lowest part of the box in a thin, steady stream and allowed to rise up around the model, to displace air from the lowest point and help to eliminate air entrapment. Pour from as high a point as you can manage to allow the air bubbles to pop in the long, fine stream of silicone dropping down from the mixing container.



Always ensure before pouring that the mould box is level, using a small spirit level if necessary.

Pour the CraftSil till you reach a mark placed on the inside of the wall of the mould box that is about 1cm above the highest part of the model. Do not guess this part, it is extremely difficult to estimate what height you have reached unless this height is marked. It will avoid moulds that have too thick a wall thickness. A waste of material and an inflexible mould results.



Any air bubbles that rise to the surface can be dissipated by lightly passing an air gun or hair dryer quickly over the surface.

Curing the Rubber

Leave the mould box overnight at room temperature for curing when it will turn from a liquid to a flexible solid.

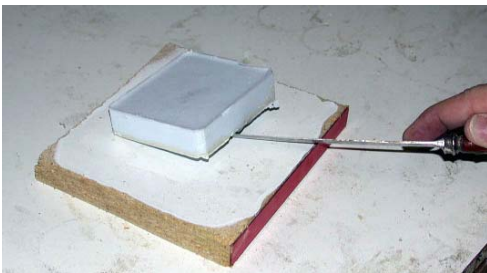
De-moulding

After the rubber has cured, the model can be removed from the finished mould.

First remove the mould box retaining walls by breaking open the glue seams or clamps holding the box together.



Next break the glue or clay seal between the model and the base board, this is done by inserting a palette knife or flat tool under the silicone, the model and the base. By simply twisting the tool the mould still containing the model is released from the base



Now the model can be removed from the mould. This is done by gently pushing the silicone away from the model working around the model gradually while getting deeper and deeper until the model is eventually released from the mould.



Solutions for Problems

If by any chance the mould did not cure or your attempt at mould making was unsuccessful in any way, read the solutions to problems in the material information sheets. You are sure to find the answer in these sheets.

You can always contact us to help you figure out what went wrong. Our email address is aldax@bigpond.com.au or our phone number is 02/9533 9555



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