

INSTRUCTIONS FOR AN OPEN FACED RTV SILICONE RUBBER MOLD

A mold box must be constructed to contain the liquid rubber. To construct the mold box, cut a piece of MDO plywood about $\frac{1}{4}$ to $\frac{1}{2}$ inches larger than the perimeter of the pattern, this is the base. Next, cut the sides of the mold box so they are about $\frac{1}{4}$ inch taller than the pattern when set along side of the base. You should now have 5 or more pieces of MDO that when assembled will form a box similar in shape to the pattern. **(TIP, if possible try to make the box symmetrical)**

Attach the pattern to the mold box base with hot glue or screws, keeping it centered within the base. Before attaching the sides of the mold box see if any gaps or space exists between the bottom of the pattern and the mold box. Fill in any gaps with Kleen Clay and trim smooth. This will prevent the RTV rubber from flowing under the pattern. Next, attach the sides of the box using screws so that the box can be unassembled after the RTV rubber cures. In order to completely contain the RTV rubber the seams of the mold box need to be sealed with a bead of Kleen Clay. Roll the clay into a wormlike shape and press into all the seams of the mold box. The final step before mixing the RTV rubber is to coat the entire mold box and pattern with a thin coat of petroleum jelly. This is an accepted mold release for RTV silicone.

Thoroughly mix the RTV silicone in the prescribed 10 to 1 ratio by weight, until the color is consistent and there are no streaks left in the mixture. Pour from one side at a height of about 6 inches and slowly let the RTV rubber ribbon into the mold box and flow across the pattern. For patterns with considerable detail and undercuts, it is advisable to de-air the mixed RTV silicone before pouring onto the master. This should prevent air pockets (bubbles) from forming on the face of the mold.

The RTV silicone has a pot life of about 1 hour and will fully cure in 24 hours at room temperature. When the rubber has cured disassemble the mold box and gently peel the mold from the pattern. You should now have a mirror image of the pattern. If you made the mold box symmetrical, reassemble it and put the rubber mold back into the box with the casting surface face up. The mold box now becomes a mother mold which will support the rubber during the casting process. The RTV silicone rubber mold is now ready for casting.

RTV silicone rubber as a mold material is unique because a mold release agent is not required when casting. However, when casting with polyester clear cast resin or with castable urethanes it is a good idea to spray the mold occasionally with a waxed base mold release, (Synair 531), to keep the rubber from becoming leathery.