

TOMPS Mould Making & Casting Guide 2006

RTV Silicone Skin Moulds

Our final look at the use of silicone as a moulding compound turns us towards the area of Skin Moulds. Skin Moulds are useful for a number of reasons but the primary reasons for choosing this type of mould are extreme flexibility giving rise to easy demould but also the fact that far less silicone is used in their construction (making the mould cheaper!).

You will need an additional item to perform this activity called Thixotropic or Thixotroping Agent. When added to the silicone base it changes the behaviour of it to a thick butter like material that will cling to overheads and verticals where a standard silicone would simply run away. The disadvantage is the fact that air release is nearly impossible so care must be taken when mixing the additive and secondly when homogenising the catalyst.

Prepare the former as if you were pouring the silicone. At this stage some people choose to paint a thin, unthickened layer of silicone onto the former. This ensures there are no bubbles close to the mould surface. Allow this thin primary layer to cure before continuing.

Next weigh out the required quantity of silicone base and catalyst to suit. Next add the thixotropic to the silicone base and mix using a folding action trying not to entrap air. You will notice the change in consistency. Next add the catalyst and homogenise to a solid colour.

Using a spatula, palette knife, plastic applicator or brush, apply the silicone to the former being careful not to entrap air once more. In the case of a larger former, mix the silicone in stages so as not to run out of potlife during application. Apply silicone to a minimum thickness of 10mm. Make sure that the finish is reasonably smooth and that there are keyways present (for engaging a support case)

Allow to fully cure, 24 hours is advised and then begin work on the support case (refer to later sections about making support cases for your moulds). You can choose either plaster (economical reasons) or fibre glass (for large lightweight cases).

Support cases are essential with a skin mould since the mould will deform readily under very little weight due to the thickness. Allow the case to cure fully and remove carefully.

Finally gently peel away the silicone skin from the former and reassemble in the support case, engaging the keyways to ensure there is no deformation from the original.

Of course the disadvantage of a skin mould is the fact that it will slump with large verticals and will fall away from any overhead. To help avoid this as much as possible use a harder Shore A Silicone which will support itself to a degree and resist slump on the verticals.