

## Technical Bulletin | **Magikmold® T-100 Silicone Rubber Series**

### DESCRIPTION

Magikmold® T-100 Series is a high-performing line of room-temperature curing (RTV), two-part, tin-cure silicone rubbers designed for the manufacture of flexible molds.

### PRODUCT OPTIONS | PHYSICAL PROPERTIES

Magikmold® Product	Magikmold® T-109 <i>Formerly Magikmold® 5090</i>	Magikmold® T-114 <i>Formerly Magikmold® 5091</i>	Magikmold® T-124 <i>Formerly Magikmold® 6142</i>
Type	Tin-cure (condensation-cure)	Tin-cure (condensation-cure)	Tin-cure (condensation-cure)
Mix Ratio by Weight	1 Part Catalyst : 10 Parts Base	1 Part Catalyst : 10 Parts Base	1 Part Catalyst : 10 Parts Base
Shore Hardness	A8 – A10	A12 – A15	A23 – A26
Mixed Viscosity	10,000 cP	13,000 cP	24,000 cP
Specific Volume	25.9 in <sup>3</sup> /lb	25.9 in <sup>3</sup> /lb	25.4 in <sup>3</sup> /lb
Specific Gravity	1.07	1.07	1.09
Tensile Strength	220 psi	250 psi	370 psi
Elongation	565 %	500 %	514 %
Die B Tear Strength	30.0 pli	37 pli	74 pli
Die T Tear Strength	4 pli	5 pli	16.0 pli
Cured Color with Standard Catalyst*	Pink	Light Blue	Purple

\*Cured Color will be different if another Catalyst is used (e.g., T-100 Medium Yellow Catalyst, T-100 Fast Red Catalyst, T-100 Clear Catalyst)

### CATALYST OPTIONS

T-100 Series silicone bases can be used with their standard catalyst or the following catalyst options for variable speed and color:

- **Magikmold® T-100 Medium Yellow Catalyst** (use for faster pot life and demold time)
- **Magikmold® T-100 Fast Red Catalyst** (use for fastest pot life and demold time)
- **Magikmold® T-100 Clear Catalyst** (use to achieve a cured color of opaque white)

### POT LIFE & DEMOLD TIME PER CATALYST

Catalyst	Standard Catalyst	Magikmold® T-100 Medium Yellow Catalyst	Magikmold® T-100 Red Fast Catalyst	Magikmold® T-100 Clear Catalyst
Pot Life	60 – 90 min.	30 – 35 min.	15 – 30 min.	60 – 90 min.
Demold Time (@ 77°F)	12 – 18 hr.	6 – 8 hr.	4 – 5 hr.	12 – 18 hr.

## MODEL PREPARATION

Porous models should be sealed to prevent the rubber from penetrating the surface. Porous models can be sealed with wax, petroleum jelly, PVA, lacquer or paint. Some surfaces (e.g., metals and glass) that contact the liquid rubber should be sprayed or brushed with a suitable release agent (e.g., Pol-Ease® 2500 Release Agent or Pol-Ease® 2350 Sealer & Release Agent). Pol-Ease® 2350 is both a sealer and release agent that must be allowed to dry before applying liquid rubber. Pol-Ease® 2500 is an aerosol spray that does not need to dry before applying liquid rubber. If there is any question about the release properties of this silicone rubber, perform a small test cure on an identical surface. Tin-cured liquid silicone rubbers usually bond to cured tin-cured silicone rubbers unless a release agent, like the ones mentioned above, are applied. Do not use silicone-based release agents (e.g., Pol-Ease® 2300 Release Agent) on surfaces that contact liquid silicone rubbers since inhibition and/or adhesion may occur.

Once sealed and positioned for mold making, vent porous models from beneath to allow trapped air to escape and to prevent air from migrating into the rubber.

## CURE INHIBITION

Modeling clays containing sulfur may inhibit surface cure of this product. Perform a test cure on an identical surface to determine that complete curing and good release are obtained.

## MIXING & CURING

Ensure that the silicone rubber, surface and air temperatures are at room temperature and at least above 60°F during application and for the entire curing period. Read all product labels to determine the correct mix ratio and if the product requires stirring or shaking. Carefully weigh the Base and then the Catalyst in proper ratio into a clean mixing container. Accurate weighing is essential to obtain the optimum physical properties from the cured rubber. Mix thoroughly, scraping sides and bottom of the container.

To ensure a bubble-free mold, it may be necessary to deaerate the liquid rubber under vacuum at 28-29 inches mercury. If vacuum is used, mix the Base and the Catalyst in a mixing container three to four times larger than the volume of rubber and deaerate until the mass of rubber rises and then collapses and continue for an additional two minutes.

Pour the rubber as soon as possible after mixing/vacuuming for best flow and air bubble release.

At room temperature (~77°F), this rubber cures to full hardness in the specified demold time. At higher temperatures, they cure faster. At lower temperatures, more time may be needed to reach full hardness.

## USING THE MOLD

Release agent is not necessary for casting most materials into Magikmold® T-100 Series molds, but for longer mold life with epoxy, polyurethane or polyester resins, a barrier coat or release agent (e.g., Pol-Ease® 2300 Release Agent or Pol-Ease® 2500 Release Agent) is recommended.

Tin-cure Magikmold® products release alcohol while curing and can inhibit the surface of some casting materials, including some clear polyurethane casting resins and polyurethane rubbers. This is especially the case in new tin-cured molds. Before casting these materials in a tin-cured mold, be sure that all alcohol has evaporated. Exposure for 24 hours to a warm location in open air is often adequate, but the mold can be baked for four hours at 212°F (100°C) to speed alcohol evaporation. Do not cast platinum-cured silicone rubbers in tin-cured silicone molds; they will not cure properly.

**ACCESSORIES, SEALERS & RELEASE AGENTS**

Accessories
Silicone Thixo - Thickener
Fumed Silica
Silicone Color Pigments
Silicone Fluid
Mixing Cups
d'Limonene – Natural Non-Toxic Cleaner/Solvent

Sealers & Release Agents
Polytek® Pol-Ease® 2500 Release Agent – <i>Release silicone from pattern or silicone from silicone.</i>
ZIP™ ME-301S Pattern Release Mold Release – <i>Release silicone from pattern.</i>
Polytek® Pol-Ease® 2350 Sealer & Release Agent – <i>Release silicone from pattern or silicone from silicone.</i> <i>Must allow to dry.</i>
Polytek® Poly PVA Solution (Green or Clear) – <i>Water-soluble sealer. Must allow to dry.</i>
Polytek® Pol-Ease® 2300 Release Agent – <i>Release polyurethane plastic or rubber from silicone mold.</i>
Stoner E-236 Urethane Mold Release – <i>Release polyurethane plastic or rubber from silicone mold.</i>
Stoner E-202 Rocket Release <i>Paintable mold release.</i>

**SHELF LIFE**

This product will remain useful for six months from the date of shipment when stored in the original, unopened containers at room temperature (60-90°F).

**CLEAN UP**

Tools should be wiped clean before the rubber cures. Denatured ethanol is a good cleaning solvent, but it must be handled with extremely caution owing to its flammability and health hazards.

**SAFETY**

Before use, read products labels and Safety Data Sheets. Follow safety precautions and directions. Avoid contact with eyes and mucous membranes. Best method of cleanup is by wiping with paper towels and washing with waterless hand cleaner, then soap and water.

**DISCLAIMER**

The information in this bulletin and otherwise provided by Raw Material Suppliers is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained by the use thereof, or that any such use will not infringe any patent. Before using, the user shall determine the suitability of the product for the intended use and user assumes all risk and liability whatsoever in connection therewith.