

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.

T-100 molds have excellent release properties and are suitable for casting a number of materials, including urethane plastic and rubber, wax, polyester casting resin, plaster, concrete, epoxy, soap, and some low melt metals.

PRODUCT OPTIONS | PHYSICAL PROPERTIES

Magikmold® Product	Magikmold® T-114	Magikmold® T-124
Type	Tin-cure (condensation-cure)	Tin-cure (condensation-cure)
Mix Ratio by Weight	1 Part Catalyst : 10 Parts Base	1 Part Catalyst : 10 Parts Base
Shore Hardness	A12 – A15	A23 – A26
Mixed Viscosity	13,000 cP	24,000 cP
Specific Volume	25.9 in ³ /lb	25.4 in ³ /lb
Specific Gravity	1.07	1.09
Tensile Strength	250 psi	370 psi
Elongation	500 %	514 %
Die B Tear Strength	37 pli	74 pli
Die T Tear Strength	5 pli	16.0 pli
Cured Color with Standard Catalyst*	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)

POUR TIME & DEMOLD TIME PER CATALYST

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

PREPARE THE ORIGINAL MODEL

Porous models should be sealed to prevent rubber from penetrating the surface – common sealers include wax, petroleum jelly, PVA, and some lacquers and paints. Some properly sealed models and non-porous surfaces (e.g., metals and glass) must also be sprayed or brushed with a suitable release agent. If there is any question about the compatibility between the liquid mold rubber and the prepared model surface, a test cure should be performed first. Tin-cured liquid silicone rubbers usually bond to cured tin-cured silicone rubbers unless a release agent is applied. Do not use silicone-based release agents on surfaces that contact liquid silicone rubbers since inhibition and/or adhesion may occur.

Affix the model to a suitable baseboard. If the model is porous, vent it from beneath (e.g. drill a hole in the baseboard directly below the model) to allow trapped air to escape.

NOTE: Depending on the model, it may make more sense to affix the original model to a baseboard prior to applying sealer and /or release agent.

For poured blocks molds, construct a secure and leak-proof containment area around the model. If the containment area is porous, it must be sealed. Non-porous and properly-sealed materials should be coated with a suitable release agent.

CURE INHIBITION

Modeling clay and other materials 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.

MIX & CURE

Before use, be sure that the Catalyst and Base are at room temperature (~73°F) and that all tools are ready. All mixing and curing should be done in room temperature conditions. 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.

Pour the rubber as soon as possible after mixing/vacuuming.

At room temperature (~73°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.

THICKENING THE MIX

Add Magikmold® Thixo to mixed Catalyst and Based to thicken the liquid mix to a gel for application by brush or trowel. Add up to 5% of the mixed weight.

THINNING THE MIX

Add Magikmold® DMF-50 Silicone Thinner/Softener to mixed Catalyst and Base to thin the liquid mix. Can result in loss of strength, hardness and cure speed. Do not add more than 10% of the mixed weight.

CASTING IN MAGIKMOLD® T-100 MOLDS

Release agent is not necessary for casting most materials in Magikmold® T-100 Series molds, but for longer mold life with epoxy, polyurethane or polyester resins, a barrier coat or release agent (e.g., Stoner E-236 Urethane Mold Release) 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

Accessories
Magikmold® Thixo Additive
Magikmold® DMF-50 Silicone Thinner/Softener
Mixing Cups
Mixing Sticks

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 product labels and Safety Data Sheets. Follow safety precautions and directions. Contact with uncured products may cause severe eye and skin irritation. Avoid contact. If skin contact occurs, remove by wiping with paper towels, then wash with soap and water. In case of eye contact, flush with water for 15 minutes and call a physician. Use with adequate ventilation. Do not use these products where food or body contact may occur.

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.