

Product Name

TINSIL 70-25

General Purpose Mouldmaking System RTV-2 Silicone Rubber

Product Description

Pourable, condensation-curing, two component silicone rubber that cures at room temperature and features:

- Excellent Flow
- Mid Shore A Hardness (approx 25)
- High Tear Strength
- Great extensibility and elasticity
- Accurate detail reproduction.
- Excellent long term stability of the mechanical properties of the cured rubber
- Suitable for most casting resins, plaster and waxes.
- Excellent for use with Sil-Thix Thickener for brush-up moulding

Typical Applications

Due to the excellent mechanical properties of the cured rubber, TINSIL 70-25 is especially suitable for reproducing models with large undercuts in casting resins such as polyurethane, epoxy and polyester. Other materials such as wax and plaster may be cast without any problems in moulds made from TINSIL 70-25. Widely used for figurine and giftware moulds and is a popular choice when a brush-up system is required.

Physical Properties

Product Data / Cured – with 10% wt catalyst, after 7 days @ 23°C / 50% relative humidity

Density at 23°C	[g/cm ³]	1.10
Hardness, Shore A		25
Tensile Strength	psi [mPa]	306 [2.11]
Tear Strength, Die B	pli [kN/m]	107 [18.74]
Linear Shrinkage	[%]	0.3
Elongation	%	516
Colour		Blue

Handling Properties

Processing

With 10% by weight Catalyst	60 [min] Pot life	16 [hr] Demould Time 48 [hr] Total Cure Time
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Product Data / Uncured

Mix Ratio	A:B by weight	10:100
Viscosity @ 23°C	[cP]	14 000

Master Preparation

- Porous models made of timber or plaster may need to be sealed to prevent penetration of the rubber into the pores of the material/model.
- Although TINSIL 70-25 has excellent release properties, it is suggested that a light spray of J-Wax or Stoner E324 release is applied to the master prior to pouring the TINSIL 70-25.
- For multi-piece moulds, TINSIL 70-25 will bond to itself, ensure a suitable release such as J-Wax or petroleum jelly is applied to the cured silicone surface prior to pouring.
- Some modeling compounds containing sulfur may inhibit the cure of TINSIL 70-25.
- When in doubt, a small sample pour is always recommended to test for complete curing and proper release.

Mix and Cure

- To ensure a bubble free mould, deaerate the catalysed liquid silicone under vacuum at approx 29-29 inches mercury until the mass of rubber rises and then collapses, then continue for an additional 2 minutes.
- To achieve full hardness in the specified demould time, the mould should be cured at or above 25°C. Lower temperatures will result in a slower cure, curing below 18°C is not recommended.
- Condensation cure silicones release alcohol when curing, ensure this has evaporated sufficiently prior to casting some polyurethanes. Certain polyurethanes can be inhibited.
- Exposure to a warm environment and open air is normally adequate, however the mould can be baked at 100°C for 4 hours to speed the evaporation process.

Cured Moulds

- Release agent is not necessary when casting materials into a silicone mould, however, a fine mist of a suitable release such as J-Wax, E236, E302 or Epoxy Parfilm can be used for prolonging mould life when using resins such as polyester, polyurethane or epoxy. Consult your Barnes Representative for the best choice.

Thickening

- Sil-Thix Silicone Thickener is added to the TINSIL 70-25 to produce a brush-on consistency.
- Using amounts up to 5% will create a very thick consistency which can be used for vertical surfaces. A test is always recommended to determine the consistency you require.
- When brushing on several layers, wait for the first layer to “gel” but not fully cure, before applying the next layer.
- Delamination can occur if too much time has passed between applications of subsequent layers.
- Do not allow the layer to fully cure before application of the next layer. As a guide a maximum period of 3 hours between layers should be noted (this is a guide and can guide in varying environments).

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1

Disclaimer

The data presented in this leaflet are in accordance with the present state of our knowledge, and does not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. Recommendations for use do not constitute a warranty, either expressed or implied, of the fitness or suitability of the product for a particular purpose.