

Product Information

Moldmaking

Silicone Rubber

DOW CORNING

Silastic[®] M-2 RTV Silicone Rubber

FEATURES

- Fast RTV cure; heat accelerable
- Very high inhibition resistance
- Very low shrinkage
- High durometer hardness
- Good tear strength and elasticity

COMPOSITION

- Two-part, pourable liquid RTV silicone rubber
 - Base: beige
 - Curing agent: regal blue

RTV silicone rubber for use when fast demold time is critical

APPLICATIONS

- Prototype design
- Production tooling
- Artistic and renovation applications
- Architectural and furniture components

TYPICAL PROPERTIES

Specification Writers: These values are not intended for use in preparing specifications. Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

Test	Unit	Result
As Supplied		
Base Color		Beige
Viscosity	poise	1150
Curing Agent Color		Regal Blue
As Mixed – 100 Parts Base to 10 Parts Curing Agent by Weight		
Viscosity	poise	660
Specific Gravity		1.29
As Cured¹		
Durometer Hardness, Shore A	points	59
Tensile Strength	MPa (psi)	4.8 (700)
Elongation	percent	200
Die B Tear Strength	kN/m (ppi)	15 (85)
Linear Shrink	percent	<0.1

¹Cured 24 hours at 25°C (77°F).

DESCRIPTION

Silastic[®] M-2 RTV Silicone Rubber is a more inhibition-resistant, faster curing version of *Silastic* M-2 RTV Silicone Rubber developed specifically for use when faster demold time is critical. At room temperature, *Silastic* M-2 RTV Silicone Rubber provides 1½ hours of working time, yet is able to be demolded in four to five hours.

This two-part material is designed for detailed reproduction of surfaces and objects used in prototype design and production tooling, artistic and renovation applications, and architectural and furniture components made with urethane foams and other resins.

Silastic M-2 RTV Silicone Rubber base is beige, and its curing agent is regal blue to aid inspection for uniform blending. An easy-to-mix ratio of 10:1 base to curing agent helps ensure accurate measuring and blending by hand or machine. The material cures by an addition reaction at room or elevated temperatures, and can be molded in unlimited thickness – regardless of part configuration or degree of confinement.

HOW TO USE

Pattern Preparation

Certain contaminants found in mold-making operations can prevent *Silastic* M-2 RTV Silicone Rubber from curing. Patterns to be molded should be thoroughly cleaned to remove grease,

oil, and other surface contaminants. Care should also be taken to ensure that corners, crevices, and draws are free of dirt or particles of foreign matter. A light “blow over” with compressed air is advised when the pattern has convoluted draws or undercuts. Then, the original model or pattern should be placed in a light frame or cardboard, foil, wood, or other material. There should be approximately (0.95-cm) 3/8-inch clearance on all sides and over the top of the pattern. The pattern should be attached securely to the bottom of the frame so it does not float.

A pattern release agent should then be wiped or sprayed on the pattern. Spreading a light coat of release agent on the sides and underside of the top of the frame will facilitate release.

A good pattern release agent can be made by combining five percent petroleum jelly and 95 percent solvent.¹ Combine the materials and let stand overnight – then shake by hand to provide a good mix.

Application

Weigh out 100 parts of *Silastic* M-2 RTV Silicone Rubber base and 10 parts of curing agent in a clean container. Mix until the curing agent is completely dispersed in the base and a uniform color is obtained.

Entrapped air should be removed in a vacuum chamber, allowing the mixture to completely expand and then collapse.

¹When handling solvents, always provide adequate ventilation. Keep away from heat, sparks and open flames. Always follow all precautions given on the solvent container label, and ensure compliance with local, state and federal regulations.

After an additional three minutes of vacuum, the mix should be inspected and can be used if free of air bubbles. A volume increase of three to four times will occur on vacuum deairing of the mixture, so a suitably large container should be chosen.

Pressure casting may be substituted with equal success. Pour the mixed base and curing agent onto the master, avoiding air entrapment.

The catalyzed mixture will typically cure to a flexible rubber within four to five hours at room temperature, at which time the part can be demolded. Heat accelerating the cure is possible, but some physical property changes, such as increased durometer hardness, will occur.

NOTE: Above room temperature, the working time for *Silastic* M-2 RTV Silicone Rubber is substantially decreased. Due to this decrease in working time, automatic dispensing equipment is recommended.

Inhibition of Cure

All addition cure silicone elastomers are susceptible to cure inhibition when in contact with certain materials and chemicals. It is strongly recommended that mixing containers, mold construction materials, masters, and release agents be checked for any inhibition effect before use by properly mixing *Silastic* M-2 RTV Silicone Rubber base and curing agent and applying a small amount against the surfaces. Inhibition has occurred if the elastomer is only partially cured after 16 hours, or has a sticky surface in contact with another material. Amines and sulfur-containing materials are strong inhibitors, as are organotin salts used in condensation cure RTV silicones. Wet or moist surfaces can cause gas bubbles to form during cure in the silicone adjacent to the substrate surface

HANDLING PRECAUTIONS
PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION

USABLE LIFE AND STORAGE

When stored at or below 32°C (90°F) in original unopened containers, *Silastic* M-2 RTV Silicone Rubber has a shelf life of 12 months from date of manufacture. Refer to product packaging for “Use By” date.

Both base and curing agent can be sensitive to moisture and contamination. Ensure containers are tightly closed after use.

PACKAGING

Silastic M-2 RTV Silicone Rubber is supplied as a base and lot-matched curing agent in 22- and 224-kg (49.5- and 495-lb) kits. All weights net.

LIMITATIONS

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

HEALTH AND ENVIRONMENTAL INFORMATION

To support Customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area.

For further information, please see our website, www.dowcorning.com or

consult your local Dow Corning representative.

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