



THE COMPLEAT SCULPTOR

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Resilpom Liquid Silicone Mold Making Rubber Technical Data Sheet

Resilpom Liquid is a low viscosity, 25 Durometer (Shore A), two component, tin catalyzed, room temperature curing silicone elastomer. It is designed as a high strength elastomer with good cured rubber properties, long library life and accurate detail reproduction. Resilpom Liquid is catalyzed with Resilpom Catalyst, and can be made thixotropic with the addition of an Additive for brush on or spray molds.

Typical Applications

Casting of polyester or polyurethane resins for figurine, giftware and decorative accessories.
Architectural and furniture parts and accessories.
Statuary and collectables.

Typical Properties – as supplied

Part A – Base Component

Color: White
Consistency: Pourable
Viscosity, cP. (mPa.s): 40,000

Part B – Catalyst Component

Color: Lt. Blue
Consistency: Pourable
Viscosity, cP. (mPa.s): 90
Specific Gravity: 1.00
Flash Point, closed cup: >204oF (96oC)

Typical Catalyzed Properties, using Resilpom Liquid Catalyst, mixed at 24oF (75oF) and 50% R.H.

Mixed Ratio, A:B (Part by weight) 10:1
Viscosity, cP. (mPa.s): 20,000
Pot life, hours(1) 1
Demold Time, hrs at RT 5
24 Hour Thick Section
Hardness Shore A(2) 23

Typical Properties of Cured Rubber, Cured 7 days at 24oC (75oF) and 50% RH

Property	Test Method	Value
Specific Gravity		1.10
Hardness, Shore A	ASTM D2240	27
Tensile Strength, psi (N/mm ²)	ASTM D412	620 (4.2)
Elongation (%)	ASTM D412	390
Tear Resistance, ppi (N/mm)	ASTM D624, Die B	120 (21.1)
Linear Shrinkage (3), %		
24 Hours		0.4
7 Days		0.6
Temperature Range °C (°F)		-50 to 150 (-58 to 302)

(1) Time at which material gels.

(3) 8x8x0.25 (20.3x20.3x0.64 cm) molded sheet

(2) 0.5 in. (1.27 cm) thick cup specimen.

Please note: The typical properties listed in this bulleting are not intended for use in preparing specifications for any particular application of Resilpom Liquid silicone materials. Please contact our Technical Service Department for assistance in writing specifications.

Mixing Guidelines for Resilpom liquid Two Component Tin Cure Mold-making Systems.

1. Stir the base (Part A) well before use and shake the catalyst container (Part B) well before use.
2. Weigh the desired amount of base into a clean mixing container. Tip the container and roll the base all the way around the side wall up to two inches from the top. This will prevent the catalyst from becoming absorbed into the container. It is recommended that the container be filled to not more than 1/3 the container depth to allow for sufficient room for expansion during the deaeration procedure.
3. Weigh the proper amount of catalyst into the container. Mix the base and catalyst together by stirring with a stiff, flat ended metal spatula until a uniform color is obtained. Scrape the container walls and bottom well to insure a thorough mix.
4. Place the container into a vacuum chamber and evacuate the entrapped air from the mixture using a vacuum pump capable of achieving 29 inched of mercury vacuum. The mixture will rise, crest and then collapse in the container. Interruption (bumping) of the vacuum may be necessary to prevent overflowing the container. Keep the mixture under full vacuum for 2-3 minutes after the material has receded in the container.
6. Bleed air slowly into the vacuum chamber. When the chamber is at atmospheric equilibrium, remove the cover plate and take out the container.
7. Pour the de-aired material slowly in a steady stream from one end of the mold box so that the material flows evenly over the pattern. This should minimize entrapment of air bubbles under the flowing material. A "print" coat may be poured first over the pattern which will also help reduce the possibility of entrapped air on the pattern and in the cured rubber. A mold release (petroleum jelly) may be applied on the pattern first to improve release.
8. Allow the rubber to cure 6 hours at 75+5°F (24°C) before removing the cured rubber mold from the pattern. Heat acceleration is not recommended with this product. For best results, allow the mold to air cure an additional 2 hours before using it in production. Full cure is achieved in 3-7 days.

Processing Information

Catalyzed Processing Properties are affected by temperature and humidity variation.

1. For best results, mix and cure the material at 75°F (24°C) and 50% relative humidity
2. Higher temperature and humidity will decrease the work life and pot life of material. The faster cure will also affect the flow properties. Refrigeration of the base prior to use in hot environments has shown to improve the handling properties of this material.
3. Lower temperatures and humidity will increase the work life and pot life of the material. The slow cure will increase the flow time. Cure temperature below 68°F (20°C) are not recommended and have been found to cause a reduction in final cure hardness and properties.
4. It is important that the catalyst containers are tightly closed after use. Catalyst exposed to air for extended periods of time will hydrolyze (cure). An indication of hydrolysis is a film or crust formation on the surface of the catalyst. The use of hydrolyzed catalyst is not recommended and may cause incomplete cure.

Shelf Life

Twenty-four (24) months from date of manufacture when stored at 24°C (75°F) in original unopened containers.

Safety Precautions

Use Material in Accordance with Material Safety Data Sheet

This rubber system uses an organometallic tin catalyst, which may irritate or burn skin and eyes upon contact. If eye contact occurs, flushing with water for at least 15 minutes should relieve discomfort. If irritation or discomfort persists, obtain medical attention. Keep product away from children.

To obtain a MSDS for this product, visit www.SCULPT.com
or contact TCS at (212) 367-7561.