Mold Star™ 19T, 20T & 31T

1A:1B Mix By Volume Translucent Platinum Silicone Rubbers

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PRODUCT OVERVIEW

Mold Star™ 19T, 20T and 31T are easy to use translucent platinum cure silicones that are mixed 1A:1B by volume (no weighing scale necessary). They feature a relatively low viscosity and vacuum degassing is not required for most applications.

Mold Star™ 19T, 20T and 31T cure to a soft, strong rubber that is tear resistant and exhibits very low long term shrinkage. Molds made with Mold Star™ will last a long time in your mold library and are good for casting wax, gypsum, resins, concrete and other materials. **Mold Star™ 19T, 20T and 31T** silicones can be thickened with THI-VEX™ thickener for brush-on application and effects. An infinite number of color effects can be achieved by adding Silc Pig™ silicone pigments or Cast Magic™ effects powders.

Mold Star™ 19T, 20T and 31T are heat resistant up to 450°F (232°C) and are suitable for casting low-temperature melt metal alloys. **Note: This product *will not* cure against surfaces containing sulfur, even when sealed.**

	Mixed Viscosity (ASTM D-2393)	Specific Gravity (g/cc) (ASTM D-1475)	Specific Volume (cu. in./lb.) (ASTM D-1475)	Pot Life (ASTM D-2471)	Cure Time	Shore A Hardness (ASTM D-2240)	Tensile Strength (ASTM D-412)	100% Modulus (ASTM D-412)	Elongation at Break % (ASTM D-412)	Die B Tear Strength (ASTM D-624)	Color
Mold Star™ 19T	11,000 cps	1.08	25.6	3 min.	12 min.	19A	420 psi	47 psi	740%	90 pli	Translucent
Mold Star™ 20T	11,000 cps	1.08	25.6	6 min.	30 min.	20A	420 psi	47 psi	740%	90 pli	Translucent
Mold Star™ 31T	11,000 cps	1.08	25.6	5 min.	23 min.	30A	423 psi	47 psi	400%	90 pli	Translucent

Mix Ratio: 1A:1B by volume or weight

Useful Temperature Range: -65°F to 450°F (-53°C to 232°C)

Shrinkage *(in./in.) (ASTM D-2566):* < .001 in./in.

*All values measured after 7 days at 73°F/23°C

PROCESSING RECOMMENDATIONS

PREPARATION...Safety - Use in a properly ventilated area ("room size" ventilation). Wear safety glasses, long sleeves and rubber gloves to minimize contamination risk. Wear vinyl gloves only. Latex gloves will inhibit the cure of the rubber. Mixing containers should have straight sides and a flat bottom. Mixing sticks should be flat and stiff with defined edges for scraping the sides and bottom of your mixing container.

Store and use material at room temperature (73°F/23°C). Warmer temperatures will drastically reduce working time and cure time. Storing material at warmer temperatures will also reduce the usable shelf life of unused material. These products have a limited shelf life and should be used as soon as possible.

Cure Inhibition - Addition cured silicone rubber may be inhibited by certain contaminants in or on the pattern to be molded resulting in tackiness at the pattern interface or a total lack of cure throughout the mold. Latex, sulfur clays, certain wood surfaces, newly cast polyester, epoxy, tin cure silicone rubber or urethane rubber my cause inhibition. If compatibility between the rubber and the surface is a concern, a small-scale test is recommended. Apply a small amount of rubber onto a non-critical area of the pattern. Inhibition has occurred if the rubber is gummy or uncured after the recommended cure time has passed. To prevent inhibition, one or more coatings of a clear acrylic lacquer applied to the model surface is usually effective. Allow any sealer to thoroughly dry before applying rubber.

Even with a sealer, Mold Star™ 19T, 20T or 31T *will not* cure against surfaces containing sulfur. If you are not sure if your clay contains sulfur, do a small compatibility test before using for an important project.

Applying A Release Agent - Although not usually necessary, a release agent will make demolding easier when casting into most surfaces. Ease Release™ 200 is a proven release agent for releasing silicone from silicone or other surfaces. Mann Ease Release™ products are available from Smooth-On or your Smooth-On distributor. **Because no two applications are quite the same, a small test application to determine suitability for your project is recommended if performance of this material is in question.**

Safety First!

The Material Safety Data Sheet (MSDS) for this or any Smooth-On product should be read prior to use and is available upon request from Smooth-On. All Smooth-On products are safe to use if directions are read and followed carefully.

KEEP OUT OF REACH OF CHILDREN

BE CAREFUL **-** Avoid contact with eyes. Silicone polymers are generally non-irritating to the eyes however a slight transient irritation is possible. Flush eyes with water for 15 minutes and seek medical attention. Remove from skin with waterless hand cleaner followed by soap and water. Children should not use this product without adult supervision.

IMPORTANT **-** The information contained in this bulletin is considered accurate. However, no warranty is expressed or implied regarding the accuracy of the data, the results to be obtained from the use thereof, or that any such use will not infringe upon a patent. User shall determine the suitability of the product for the intended application and assume all risk and liability whatsoever in connection therewith.

MEASURING & MIXING...

Stir Part A and Part B thoroughly before dispensing. After dispensing required amounts of Parts A and B into mixing container (1A:1B by volume or weight), **mix thoroughly** making sure that you **scrape the sides and bottom of the mixing container several times.**

Optional... Vacuum Degassing **-** Although not necessary, vacuum degassing helps eliminate any entrapped air in pourable silicone rubber. After mixing parts A and B, vacuum material at 29 inches of mercury, making sure that you leave enough room in container for product expansion.

POURING, CURING & PERFORMANCE...

Pouring **-** For best results, pour your mixture in a single spot at the lowest point of the containment field. Let the rubber seek its own level. **A uniform flow will help minimize entrapped air.** If using as a mold material, the liquid rubber should level off at least 1/2" (1.3 cm) over the highest point of the model surface.

Curing **-** Allow rubber to cure as prescribed at room temperature (73°F/23°C) before demolding. Do not cure rubber where temperature is less than 65°F/18°C.

Heat Curing **-** Time to demold can be reduced with mild heat. **Example:** After pouring Mold Star™ 19T, 20T or 31T at room temperature, place the mold in a hot box or industrial oven at 140°F (60°C). This may reduce the demold time substantially. **Note** - time will vary depending on mold thickness.

Mold Performance & Storage **-** The physical life of the mold depends on how you use it (materials cast, frequency, etc.). Casting abrasive materials such as concrete can quickly erode mold detail, while casting non-abrasive materials (wax) will not affect mold detail. Before storing, the mold should be cleaned with a soap solution and wiped fully dry. Two part (or more) molds should be assembled. Molds should be stored on a level surface in a cool, dry environment.

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Call Us Anytime With Questions About Your Application.

Toll-free: **(800) 381-1733** Fax: **(610) 252-6200**

The new **www.smooth-on.com** is loaded with information about mold making, casting and more.