



# Silicones, Inc.

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## Product Information

### GI-1000 SILICONE RUBBER

#### DESCRIPTION

GI-1000 is an extremely high tear, high tensile strength, two-component, tin catalyzed RTV silicone rubber. It is designed for casting polyurethane foam, polyester and epoxy parts. GI-1000 is a good electrical insulator where high mechanical stresses are involved. It is a superior product with the following advantages over other RTV silicones:

**Extremely high tear strength** GI-1000 is especially good for molds with deep undercuts and for those molds which require flexing for part removal.

**Low shrinkage** GI-1000 offers exceptional reproduction capability. It is particularly valuable in the production of many-sided molds where exact registrations are required.

**Excellent chemical resistance** GI-1000 exhibits extremely long mold life due to unique processing techniques that were developed to meet the rigors of polyester and polyurethane casting.

**Excellent shelf aging** GI-1000 retains its dimensional stability and resists embrittlement on aging.

**Low viscosity** The low viscosity of GI-1000 allows for easy mixing and de-airing, ensuring smooth, even flow.

**Color-coded catalyst** The blue GI-1000 activator ensures homogeneous mixing and eliminates mold loss resulting from inadequate stirring.

**Long pot life** GI-1000 gives good overnight cure despite having a working time of two hours. In addition, it is relatively insensitive to temperature and humidity fluctuations.

**Variable cure rate** Several activators are available for special or unusual applications.

**Insensitive to inhibition** GI-1000 is not inhibited by most common mold-making substrates, eliminating the need to use mold sealers.

**Good dielectric properties** GI-1000 provides excellent electrical insulating characteristics over a wide temperature range and is especially suitable for applications where mechanical stresses are involved.

**Low cost** GI-1000 has a low specific gravity which means less of it is required than RTVs with a higher specific gravity. When the long mold life is combined with the low specific gravity, GI-1000 is a cost effective, high performance RTV silicone rubber.

## MOLDING TECHNOLOGIES FOR TOMORROW™

## APPLICATIONS

GI-1000 is recommended for casting polyesters and polyurethanes. It is also excellent for casting waxes, gypsum, concrete, epoxies and other plastics.

## TYPICAL PROPERTIES

<u>Uncatalyzed Compound</u>	<u>Base</u>	<u>Activator</u>
Color	White	Blue
Viscosity (cps)	50,000-70,000	300-400
Specific Gravity	1.10	.99
Working Time (hours)	1.5 to 2.5	
Cure Time(hours)	16 to 18	
Shelf Life(months)	6	

### Cured Rubber (7 days @ 70°F & 50% R.H.)

Hardness, Shore A	32 ± 4
Tensile Strength (psi)	525 ± 25
Elongation (%)	300 ± 25
Tear, Resistance (ppi)	120 ± 10
Shrinkage (%)	0.1
Specific Gravity	1.09
Dielectric Strength (volts/mil)	500
Dielectric Constant @ 100Hz	3.3
Dissipation Factor @ 100 Hz	0.019
Volume Resistivity (ohms/cm)	1 x 10 <sup>15</sup>

## MIXING INSTRUCTIONS

Mix 100 parts by weight of GI-1000 Base with 10 parts by weight of GI-1000 Activator in a container that will hold approximately three times the volume being used. Stir thoroughly either by hand or by mechanical mixing until a uniform light blue color results. Immediately after mixing, place the material in a vacuum chamber capable of 28 inches of mercury vacuum. The material will expand to double or triple its original volume and then collapse. Maintain vacuum for an additional minute and release. Carefully pour the catalyzed silicone rubber over the released pattern (MR-15 is recommended). Allow to cure for 16 to 18 hours.

*The information contained in this product information sheet is based on sources believed to be accurate. It is offered in good faith, but without guarantee since the conditions of use are beyond our control. All risks of use are assumed by the user.*