

## Low Viscosity, High Thermal Conductivity, Potting Compound

Technical Bulletin # 3089

**Product Description**

**INSULCAST RTVS 8127** is a flame retardant, reversion resistant silicone compound. The low viscosity and high thermal conductivity makes the **RTVS 8127** ideal for potting dense component packages requiring heat dissipation. This compound has excellent thermal stability, electrical properties, is compatible with most electrical insulating materials and has a UL 94 Flame Rating of 94 V-0.

**Properties Uncured**

	Part A	Part B	
COLOR, VISUAL:	Gray	Neutral	
VISCOSITY @ 25°C, cps:	5000	3000	ASTM D 1084
SPECIFIC GRAVITY:	1.78	1.78	
MIX RATIO (by wt.):	1	1	
MIXED VISCOSITY, cps:		4000	ASTM D 1084
SHELF LIFE @ 25°C, months:		12	
POT LIFE (100 gr.) @ 25°C, mins:		30-60	

**Properties Cured****PHYSICAL**

HARDNESS, DUROMETER (Shore A):	50-60	ASTM D 2240
TENSILE STRENGTH, psi:	420	ASTM D 412
TENSILE ELONGATION, %:	120	ASTM D 412
COMPRESSIVE STRENGTH, psi:		
FLEXURAL STRENGTH, psi:		
COEFFICIENT OF THERMAL EXPANSION, °C:	$18 \times 10^{-5}$	
THERMAL CONDUCTIVITY, BTU-in/(ft <sup>2</sup> )(hr)(°F):	5.2	
THERMAL CONDUCTIVITY, W/m °k	0.749	
HEAT DISTORTION POINT, °C:		
SERVICE TEMPERATURE, °C:	-55 to +204	

**Electrical**

DIELECTRIC STRENGTH, volts/mil:	500	ASTM D 149
DIELECTRIC CONSTANT, 1 KHz:	4.0	ASTM D 150
DISSIPATION FACTOR, 1 KHz:	0.005	ASTM D 150
VOLUME RESISTIVITY, ohm-cm:	$1 \times 10^{15}$	ASTM D 257

**Use Instructions**

1. Premix **RTVS 8127** Part A and Part B in original containers before withdrawing any material. Some light, but soft settling will occur which readily re-disperses.

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2. Measure equal portions either weight or volume of Part A and Part B.
3. Mix thoroughly scraping both the bottom and the sides of mixing container.
4. Vacuum the mixture at 29 in.Hg for 3-4 minutes for void-free castings.
5. Pour into unit or mold.

### Cure Schedule

Overnight at room temperature: 24 hours at 25°C  
or 2 hours at 60°C,  
or 30 minutes at 95°C,  
or 15 minutes at 120°C.

### Storage Requirements

This product may settle upon shipment or storage, it should be re-mixed well prior to use. Store material in a cool dry place.

### Special Notes

Certain materials may inhibit the cure of **RTVS 8127** when placed in contact with the mixed, uncured rubber. Materials such as amines and amine cured epoxies, sulfur containing materials and condensation (tin cured) silicones, are some which may cause inhibition. Even surfaces which have been in contact with such materials may cause it. If in doubt, a patch test should be done.

### Handling Precautions

RTV silicone rubber base compounds and the curing agents for addition cure products are non-hazardous and practically non-toxic. Curing agents for condensation cure products contain tin soaps which can irritate eyes and skin of some individuals. Avoid contact with skin; if contact occurs, wash affected areas at once with soap and water. Avoid contact with eyes. In case of contact with eyes, flush with water for 15 minutes; call a physician.

**Date** 02/2009

**IMPORTANT:**

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**HEALTH CAUTION:**

Avoid breathing possible fumes, mists and vapors which can cause severe respiratory damage. Use of NIOSH approved breathing apparatus is required for more than minimal exposure. Always work in areas with adequate ventilation to allow dissipation of polyamine and other chemical fumes, and where applicable, solvent fumes. Use of goggles, protective garments, rubber gloves, protective cream is required. If material gets into eyes, flush thoroughly with clean water for twenty (20) minutes; then seek medical treatment. Avoid skin contact. Material can cause contact dermatitis. Always wash exposed areas immediately, using warm water and soap, followed by rinsing with clean water. Observe all safety precautions. It is important when using solvent based materials or solvents to keep away from open flame or ignition source.

**PLEASE REFER TO MATERIAL SAFETY DATA SHEET FOR FURTHER FIRST AID INFORMATION. FOR CHEMICAL EMERGENCY, CALL CHEMTREC (DAY OR NIGHT) 800 424-9300.**