



TECHNICAL BULLETIN #3089 – INSULCAST 8127 LOW VISCOSITY, HIGH THERMAL CONDUCTIVITY, POTTING COMPOUND

Revised: 04/2021

PRODUCT DESCRIPTION

INSULCAST RTVS 8127 is a flame retardant, reversion resistant silicone compound.

The low viscosity and high thermal conductivity make 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 UL94 Flame Rating of V-0 file E86165.

PROPERTIES UNCURED

	Part A	Part B	
COLOUR, VISUAL	Grey	Neutral	-
VISCOSITY @ 25°C, cPs	5,000	3,000	ASTM D 1084
SPECIFIC GRAVITY	1.78	1.78	-
MIX RATIO (by wt.)	1	1	-
MIXED VISCOSITY, cPs	4,000		ASTM D 1084
SHELF LIFE @ 25°C, months	12		-
POT LIFE, 100 g @ 25°C, min.	160-220		-

PROPERTIES CURED

PHYSICAL		
HARDNESS, DUROMETER (Shore A)	55	ASTM D 2240
TENSILE STRENGTH, psi / MPa	420 / 2.9	ASTM D 412
TENSILE ELONGATION, %	120	ASTM D 412
COEFFICIENT OF THERMAL EXPANSION, m/mK	18x10 ⁻⁵	-
THERMAL CONDUCTIVITY, W/mK	0.75	-
SERVICE TEMPERATURE, °C	-55 to 204	-

ELECTRICAL

DIELECTRIC STRENGTH, volts/mil / V/m	500 / 1.97x10 ⁷	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	1x10 ¹⁵	ASTM D 257

USE INSTRUCTIONS

1. Premix RTVS 8127 Part A & B in original containers before withdrawing any material. Some light, but soft settling will occur which readily re-disperses.
2. Measure equal portions either weight or volume of Part A & B.
3. Mix thoroughly scraping both the bottom and the sides of mixing container.
4. Vacuum the mixture at 29 in.Hg (0.98 bar) 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 product. Materials such as amines and amine-cured epoxies, sulfur containing materials, and condensation (tin-cured) silicones, may cause inhibition. Even surfaces that have been in contact with such materials may inhibit curing. If in doubt, a patch test should be done.

HANDLING PRECAUTIONS

RTV silicone rubber-based 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 that may 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.

IMPORTANT:

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HEALTH CAUTION:

Refer to the SDS prior to use. The use of NIOSH or CE approved respiratory protection may be required. Avoid breathing possible fumes, mists and vapors which can cause severe respiratory damage. 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.



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