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TECHNICAL DATA SHEET

SOLARITE SI-223 GEL

DESCRIPTION: Solarite SI-223 Gel is a low viscosity transparent general purpose 1 to 1 by volume or weight RTV(Room temperature vulcanizing) silicone potting compound. The convenient mixing ratio makes it easy to use and well suited to automatic dispensing equipment. SI-223 Gels produce high gloss and void free castings when potting electrical component. For softer gels less Part B can be added and harder gels more Part B can be added. The cured gel provides excellent vibration damping and mechanical cushioning for sensitive electronics and is re-enterable for component repair. Also available is Solarite SI-224 Gel-T a thixotropic paste for non-sag applications. NOTE: Custom formulas are available for thermal conductivity,fire retardency,cure speed and color-coding .

SPECIFICATIONS—UNCURED:

	Part A	Part B
Color, Visual	Clear	Clear
Mix Ratio—By Weight	1	1
Mix Ratio—By Volume	1	1
Viscosity, cps, ASTM-D-2393	900	900
Specific Gravity	0.98	0.98
Gel Time, 25°C, Hours		2-3
Mixed Viscosity, cps, ASTM-D-1084		800 - 1000
Shelf Life, 25°C, Months		12

SPECIFICATIONS—CURED:

PHYSICAL:

Penetration, mm , 50 gram mass	8.9
Durometer, ASTM-D-2240	Less than zero Shore A
Tensile Elongation, Percentage, ASTM-D-638	125
Thermal Conductivity, BTU-in/ft ² (Hour) (°F)	0.10
Service Temperature, °C	-55 to 200

ELECTRICAL PROPERTIES:

Dielectric Strength, Volts/Mil, ASTM-D-149	515
Dielectric Constant, 1 kHz, ASTM-D-150	2.9
Dissipation Factor, 1 kHz, ASTM-D-150	0.001
Volume Resistivity, ohm/cm, ASTM-D-257	1x10 ¹⁵

USE INSTRUCTIONS:

1. Pre-mix contents of each container before use to ensure the entire contents are uniform.
2. Measure out equal components of the product by weight or volume and mix thoroughly together to incorporate any settled material.
3. De- air if necessary at 760 mm of Hg for 5-10 minutes.
4. Pour into cavity to be encapsulated.

CURE SCHEDULE:

Initial cure is achieved in 16-24 hours at room temperature. To accelerate the cure higher temperatures can be used, 2-4 hours@150 F is usually sufficient or 1 [hour@190F](#) or 15 minutes@250F.

NOTE: SI-223 Gel when placed in contact with certain materials may inhibit the cure. Anything that contains amines, amine cured epoxies, and tin cured silicones can cause poisoning. It is strongly recommended to test surface to be potted if in doubt.

STORAGE REQUIREMENTS:

Store in a cool dry place.

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 clear 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.