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# TECHNICAL DATA SHEET

## SOLARITE SI-221FR

**DESCRIPTION:** Solarite SI-221FR is a general purpose 1 to 1 by volume or weight RTV(Room temperature vulcanizing) silicone potting and casting compound, the convenient mixing ratio makes it easy to use and well suited to automatic dispensing equipment. SI-221FR meets the requirements of Underwriters Laboratories flammability test UL 94V-0 and produces high gloss and void free castings when potting electrical component. Also available is Solarite SI-221FRLV a lower viscosity version of this product (1500cps).

### SPECIFICATIONS—UNCURED:

	<b>Part A</b>	<b>Part B</b>
Color, Visual	Dk Grey	Neutral
Mix Ratio—By Weight	1	1
Mix Ratio—By Volume	1	1
Viscosity, cps, ASTM-D-2393	3,500	3,500
Specific Gravity	1.45	1.45
Gel Time, 25°C, Hours		2
Mixed Viscosity, cps, ASTM-D-1084		3000 - 3,500
Shelf Life, 25°C, Months		12

### SPECIFICATIONS—CURED:

#### PHYSICAL:

Durometer, ASTM-D-2240	65A
Tensile Strength, psi, ASTM-D-638	480
Tensile Elongation, Percentage, ASTM-D-638	125
Thermal Conductivity, BTU-in/ft <sup>2</sup> (Hour) (°F)	3.0
Flammability, UL 94V0	Passes
Service Temperature, °C	-55 to 230

#### ELECTRICAL PROPERTIES:

Dielectric Strength, Volts/Mil, ASTM-D-149	515
Dielectric Constant, 1 kHz, ASTM-D-150	3.6
Dissipation Factor, 1 kHz, ASTM-D-150	0.004
Volume Resistivity, ohm/cm, ASTM-D-257	1x10 <sup>15</sup>

### **USE INSTRUCTIONS:**

1. Pre-mix contents of each container before use to ensure the entire contents are uniform. Some settling may occur upon prolonged storage which is soft and easily incorporated.
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-221FR 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:**

This product has a tendency to settle upon storage and shipment, material should be mixed well prior to use. 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.