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# TECHNICAL DATA SHEET

## SOLARITE EP-0597 SOLARCURE-5&6

**DESCRIPTION:** Solarite EP-0597 is a moderate viscosity epoxy potting and casting compound. SolariteEP-0597 cured with Solarcure-5 gives transparent semi-rigid products with excellent thermal shock resistance and good electrical properties. When cured with Solarcure-6 excellent adhesion and low durometer/low stress systems are attained with good thermal shock properties that allow component replacement and repair. EP-0597 can be cured with various other custom Solarcure hardeners to adjust viscosity, hardness, curetime, exotherm, service temperature, thermal shock resistance etc.

### SPECIFICATIONS—UNCURED:

|                                   | <b>Part A</b> | <b>Solarcure-5</b> | <b>Solarcure-6</b> |
|-----------------------------------|---------------|--------------------|--------------------|
| Color, Visual                     | Clear         | Clear              | Clear              |
| Mix Ratio—By Weight               | 100           | 35-36              | 85-87              |
| Viscosity, cps, ASTM-D-2393       | 10,000        | 20                 | 6000               |
| Specific Gravity                  |               | 0.98               | 0.98               |
| Gel Time, 25°C, Hours             |               | 2-3                | 1-1.5              |
| Mixed Viscosity, cps, ASTM-D-1084 |               | 350                | 8,000              |
| Shelf Life, 25°C, Months          | 12            |                    |                    |

### SPECIFICATIONS—CURED:

#### PHYSICAL:

|  |        |        |
|--|--------|--------|
| Durometer, ASTM-D-2240                                   | 75-80D | 40-45D |
| Compressive Strength, psi, ASTM-D-695                    | 12,975 | na     |
| Tensile Strength, psi, ASTM-D-638                        | 9,500  | 1000   |
| Tensile Elongation, Percentage, ASTM-D-638               | 2.0    | 100.0  |
| Thermal Conductivity, BTU-in/ft <sup>2</sup> (Hour) (°F) | 1.5    | 1.5    |
| Service Temperature, °C                                  | 105    | 105    |

#### ELECTRICAL PROPERTIES:

|  |                    |                    |
|--|--------------------|--------------------|
| Dielectric Strength, Volts/Mil, ASTM-D-149 | 395                | 450                |
| Dielectric Constant, 1 kHz, ASTM-D-150     | 4.6                | 4.5                |
| Dissipation Factor, 1 kHz, ASTM-D-150      | 0.02               | 0.02               |
| Volume Resistivity, ohm/cm, ASTM-D-257     | 1x10 <sup>15</sup> | 1x10 <sup>14</sup> |

**USE INSTRUCTIONS:**

1. Pre-mix contents of each container before use to ensure the entire contents are uniform.
2. Measure out components of the product by weight 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:**

Solarcure 5 & 6: Initial cure is achieved in 48-72 hours at room temperature. Final cure takes at least 7-10 days at 72F. To accelerate the cure higher temperatures can be used, 4-6 hours at 150 F is usually sufficient. after allowing the product to gel at room temperature for 3 hours.

**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.