



ISO-9001-2015 Certified

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TECHNICAL BULLETIN

SILCAST™ SC-417 CLEAR RTV SILICONE ENCAPSULANT

SC-417 is a two-part, low viscosity, clear silicone which will cure at room temperature or at elevated temperatures. The cured elastomer is suited for electrical/electronic potting and encapsulating applications and provides environmental protection. It is readily pourable and can cure from room temperature to 200°C. The cured resin has a very good flexibility with excellent electrical properties and high temperature resistance.

Key Performance Properties

- Convenient 1:1 mixing ratio for use in automatic dispensing equipment or hand mixing
- Low viscosity which allows for ease of flow around complex parts, providing electrical insulation and shock resistance
- Contains no solvents
- Non-yellowing catalyst system
- The chemical composition provides hydrolytic stability and reversion resistance

Typical Applications:

- Potting and encapsulating of:
- Equipment modules
 - Power supplies, relays and amplifiers
 - Transformers, coils and ferrite cores
 - Fiber optic waveguide coatings
 - Encapsulation of circuit boards

TYPICAL HANDLING PROPERTIES:

SILCAST	PART-A
Catalyst	PART-B
Mix ratio by weight, (PART-A/PART-B)	100/100
Mixed Viscosity at 25°C, cp	300-400
Pot Life (100 grams) at 25°C	20-30 minutes

CURE OPTIONS:	24 hrs @ 25°C
Or	3 hrs @ 65°C
Or	1 hr @ 100°C
Or	30 minutes @ 150°C

TYPICAL CURED PROPERTIES

(Tested @ 25°C unless otherwise indicated)

Color	Clear
Specific Gravity	1.02
Hardness, Shore A	23
Refractive Index	1.41
Service Temperature range	-55°C to 200°C
Thermal Conductivity, W/m°C	0.18
Tensile Strength, psi	970
% Elongation	>100
Dielectric Constant at 1 kHz	2.6
Dissipation Factor at 1 kHz	0.001
Volume Resistivity, ohm-cm	2x10 ¹⁵
Flammability	Self-extinguishing

INSTRUCTIONS FOR USE:

1. Weigh each 100 grams of PART-A to 100 grams of Catalyst PART-B.
2. Mix until uniform. Scrape the sides and bottom of container repeatedly during mixing.
3. Apply to clean bonding surfaces and cure as recommended to achieve the desired properties.
4. Typical cured properties were determined using recommended cure schedule. Some difference in properties may occur with the alternate or other cure schedules.

AVAILABILITY:

2 parts Kit - Packaged in Pint, Quart, Gallon, and 5-Gallon size.

FOR INDUSTRIAL USE ONLY:

Practices of good housekeeping, safety and cleanliness should be followed before, during and after use.

WARNING!

Adequate ventilation of workplace and ovens is essential. These materials may cause injury to the skin following prolonged or repeated contact and dermatitis in susceptible individuals. In case of skin contact, wash thoroughly with soap and water. For eyes, flush immediately with plenty of water for at least 10 minutes and seek medical attention. Refer to Material Safety Data Sheet (MSDS) for additional health and safety information.

DISCLAIMER: All data given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.