

CoolTherm™ SC-6725 Thermally Conductive Silicone Encapsulant

Description

LORD CoolTherm™ SC-6725 encapsulant is a two-component, thermally conductive, addition-cure silicone system for use in applications where high temperature service is required. CoolTherm SC-6725 encapsulant cures to a red elastomer which adheres to most substrates without the use of a primer.

Features and Benefits

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -55°C to +260°C.

Reversion Resistant – provides excellent reversion resistance at high temperatures; will not cause corrosion.

Application

Mixing – Thoroughly mix each component prior to combining resin and hardener. Mix CoolTherm SC-6725 resin with CoolTherm SC-6725 hardener at a 1:1 ratio, by weight or by volume.

Applying – Apply encapsulant using automatic meter/mix/dispense equipment.

Avoid applying encapsulant to surfaces that contain cure inhibiting ingredients, such as amines, sulfur, or tin salts. If bonding surface is in question, apply a test patch of encapsulant to the surface and allow it to set for the normal cure time.

Curing – Allow encapsulant to cure for 4 hours at 85°C. This time-at-temperature profile refers to the time the material should be allowed to cure once it reaches the target temperature. Allowance should be made for oven ramp rates, parts with large thermal mass and other circumstances that may delay material reaching the target temperature. An overnight post cure at 85°C is recommended to obtain optimum properties, especially for large volumes.

Typical Properties*

	SC-6725 Resin	SC-6725 Hardener	Mixed
Appearance	Red Liquid	White Liquid	Red Liquid
Viscosity, cps @ 25°C	14,000	16,000	15,000
Specific Gravity	1.90	1.80	1.80
Working Life, hr @ 25°C	–	–	4

*Data is typical and not to be used for specification purposes.

LORD TECHNICAL DATA

Typical Cured Properties*

Volume Resistivity, ohm-cm @ 25°C ASTM D 257	1 x 10 ¹⁴
Thermal Conductivity, W/mK	1.16
Hardness Shore A	45
Tensile Strength, psi	550
Elongation at Break, %	80

*Data is typical and not to be used for specification purposes.

Shelf Life/Storage

Shelf life of each component is six months from date of manufacture when stored at 25°C in original, unopened container.

Cautionary Information

Before using this or any LORD product, refer to the Safety Data Sheet (SDS) and label for safe use and handling instructions.

For industrial/commercial use only. Must be applied by trained personnel only. Not to be used in household applications. Not for consumer use.

Values stated in this technical data sheet represent typical values as not all tests are run on each lot of material produced. For formalized product specifications for specific product end uses, contact the Customer Support Center.

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