

CoolTherm™ SC-6705 FST Silicone Encapsulant

OBSOLETE

Description

LORD CoolTherm™ SC-6705 FST encapsulant is a two-component, addition-cure silicone system for use in applications where high temperature service and a flexible system are required.

Features and Benefits

Low Viscosity – maintains low viscosity for complete and void-free encapsulation.

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -55°C to +205°C.

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

UL Rated – provides excellent flame retardancy; UL 94 V-0 certified.

Application

Mixing – Thoroughly mix each component prior to combining resin and hardener. Mix CoolTherm SC-6705 FST resin with CoolTherm SC-6705 hardener at a 1:1 ratio, by weight or 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 1-2 hours at 65°C, or 24 hours at room temperature. 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.

Typical Properties*

	SC-6705 FST Resin	SC-6705 Hardener	Mixed
Appearance	Black Liquid	Off-white Liquid	Black Liquid
Viscosity, cps @ 25°C	3000	2500	2500
Specific Gravity	1.35	1.35	1.35
Gel Time, min @ 65°C	–	–	10-20
Working Life, hr @ 25°C	–	–	1

*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	0.35
Hardness Shore A	60
Tensile Strength, psi	300
Elongation at Break, %	100
Dielectric Strength, V/mil	450
Dielectric Constant @ 100 Hz	3.2
Dissipation Factor @ 100 Hz	0.005

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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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