

CoolTherm™ SC-6710 RED Silicone Resin

Description

LORD CoolTherm™ SC-6710 RED silicone resin is formulated for use with various CoolTherm and Circalok™ hardeners to create a two-component, RTV silicone system. The silicone system is designed to provide excellent thermal conductivity for electrical/electronic encapsulating applications, while retaining desirable properties associated with silicones.

Features and Benefits

Low Viscosity – maintains low viscosity for ease of component encapsulation compared to other highly thermal conductive materials.

Low Stress – exhibits low shrinkage and stress on components as it cures.

Versatile – room temperature curing formulation is not subject to hardener poisoning.

High Thermal Conductivity – provides thermal conductivity for applications where rapid heat dissipation is required.

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -55°C to +200°C.

Application

Mixing – Thoroughly stir CoolTherm SC-6710 RED resin within its shipping container to ensure uniform dispersion. Transfer amount of resin needed to a clean container and add proper amount of hardener by weight.

Thoroughly mix silicone system to ensure catalyzation.

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

Curing – Cure time will vary depending on hardener used. Refer to cure schedule indicated on next page. 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.

Shelf Life/Storage

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

Typical Properties*

Appearance	Red Liquid
Viscosity, cps @ 25°C	20,000
Specific Gravity @ 25°C	2.15

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

LORD TECHNICAL DATA

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.

Typical Cured Properties**

Volume Resistivity, ohm-cm @ 25°C	1 x 10 ¹⁴
Thermal Conductivity, W/mK	1.0
Hardness Shore A	65
Tensile Strength, psi @ 25°C	800
Elongation at Break, %	100
Dielectric Strength, V/mil	500
Dielectric Constant @ 25°C	5.3
Dissipation Factor @ 25°C	0.02

**Data is typical and not to be used for specification purposes.
Cured properties are the same regardless of the hardener used.

Typical Properties* of Resin Mixed with Hardener

	CoolTherm SC-6730 Hardener	CoolTherm SC-6731 Hardener	Circalok 6732 Hardener
Mix Ratio, Resin to Hardener by Weight	100:5	100:0.5	100:0.4
Working Life, hr @ 25°C	1-2	1-2	1
Cure Time	30-60 min @ 65°C	12-16 hr @ 25°C	30-60 min @ 65°C

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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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