

CoolTherm™ SC-6712 WHT Silicone Resin

Description

LORD CoolTherm™ SC-6712 WHT silicone resin is formulated for use with various CoolTherm hardeners to create a two-component, solvent-free RTV silicone system. The silicone system is ideal for potting and encapsulating densely packed components and for producing flexible molds.

Features and Benefits

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

Excellent Conductivity – cured system provides excellent electrical and thermal conductivity.

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

Application

Mixing – Thoroughly stir CoolTherm SC-6712 WHT 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.

To promote adhesion, substrates can be primed with Thermoset™ P-1291 primer prior to silicone application.

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.

Typical Properties*

Appearance	White Liquid
Viscosity, cps @ 25°C	7250
Specific Gravity @ 25°C	1.18

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

LORD TECHNICAL DATA

Typical Cured Properties**

Volume Resistivity, ohm-cm @ 25°C	1 x 10 ¹⁴
Thermal Conductivity, W/mK	0.3
Coefficient of Linear Thermal Expansion, ppm/°C	140
Hardness Shore A	35
Tensile Strength, psi @ 25°C	340
Elongation at Break, %	180
Dielectric Strength, V/mil	500
Dielectric Constant @ 25°C	3.6
Dissipation Factor @ 25°C	0.018

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

Shelf Life/Storage

Shelf life 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.

Typical Properties* of Resin Mixed with Hardener

	CoolTherm SC-6730 Hardener	CoolTherm SC-6731 Hardener
Mix Ratio, Resin to Hardener by Weight	10:1	100:0.5
Working Life @ 25°C	1 hr	1-3 hr
Cure Time	12 hr @ 25°C; or 2 hr @ 65°C	16-24 hr @ 25°C; or 2-4 hr @ 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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