

CoolTherm® SC-6711 WHT Silicone Resin

Technical Data Sheet

CoolTherm® SC-6711 WHT silicone resin is formulated for use with various CoolTherm and Circalok™ hardeners to create a two-component, thermally conductive encapsulant system with outstanding electrical properties. The encapsulant system is an ideal potting compound for any application where rapid heat transfer, high temperature service and a flexible system are required.

CoolTherm SC-6711 WHT resin can be catalyzed with CoolTherm SC-6731, CoolTherm SC-6730, or Circalok 6732 hardener. CoolTherm SC-6730 hardener is blue-green in color and assures thorough mixing by visual examination.

Features and Benefits:

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

High Thermal Conductivity – provides thermal conductivity for applications where superior heat dissipation are required.

Low Coefficient of Thermal Expansion – minimizes the possibility of cracking during severe temperature cycling.

Application:

Mixing – Thoroughly mix CoolTherm SC-6711 WHT resin within its shipping container. Weigh out the required amount of encapsulant and catalyze with the appropriate usage level of hardener. Thoroughly mix the components.

Unless a closed-chamber mechanical mixer is used, air may be introduced into the encapsulant system either during mixing or when catalyzing the mixture. Electrical properties of the silicone encapsulant are best when air bubbles and voids are minimized. Therefore, in extremely high voltage or other critical applications, vacuuming may be appropriate.

Applying – Apply silicone encapsulant manually by direct pouring or using handheld cartridges. Automatic meter/mix/dispense equipment may be used for high volume production. Encapsulate electronic devices within the working life of the mixed silicone encapsulant.

Curing – Cure time will vary depending on hardener used. Refer to cure schedules indicated. Avoid high humidity during cure.

Shelf Life/Storage:

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

Typical Properties*

Appearance	White Paste
Viscosity, cP @ 25°C	30,000
Specific Gravity	2.2

Typical Properties* of Resin Mixed with Hardener

	CoolTherm SC-6731 Hardener	CoolTherm SC-6730 Hardener	CoolTherm SC-6730 Hardener	Circalok 6732 Hardener
Mix Ratio, Resin to Hardener by Weight	100:0.5	100:3	100:5	100:0.5
Working Life, hours @ 25°C	1-2	2-3	0.5-1	<0.5
Cure Time, hours @ 25°C	12-16	12-16	8-12	6-8

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



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Typical Cured Properties**

Thermal Conductivity, W/m·K Hot Disc Transient Method, ISO 22007-2	1.0
Coefficient of Linear Thermal Expansion, ppm/°C ASTM D 696	150
Hardness Shore A	60
Tensile Strength, MPa (psi) @ 25°C	5.51 (800)
Elongation at Break, %	70
Volume Resistivity, ohm-cm @ 25°C	1 x 10 ¹⁴
Dielectric Strength, kV/mm (V/mil)	19.7 (500)
Dielectric Constant	5.2
Dissipation Factor	0.02

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

Cautionary Information:

Before using this or any Parker 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 document 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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**Parker LORD
Engineered Materials Group**

111 LORD Drive
Cary, NC 27511-7923
USA

phone +1 877 ASK LORD (275 5673)

www.lord.com