

Circalok™ 6711 Silicone Encapsulant

Description

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

Circalok 6711 encapsulant can be catalyzed with Circalok 6731 (formerly SC-29), Circalok 6730 (formerly SC-28), or Circalok 6732 (formerly SC-30) catalyst. Circalok 6730 catalyst 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 Circalok 6711 encapsulant within its shipping container. Weigh out the required amount of encapsulant and catalyze with the appropriate usage level of catalyst. Thoroughly mix the components.

Unless a closed-chamber mechanical mixer is used, air will 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 catalyst used. Refer to cure schedules indicated below. Avoid high humidity during cure.

Shelf Life/Storage

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

Typical Properties*

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

*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 Hot Die Transient Method	1.0
Coefficient of Linear Thermal Expansion, ppm/°C	150
Hardness Shore A	60
Tensile Strength, psi @ 25°C	800
Elongation at Break, %	70
Dielectric Strength, V/mil	500
Dielectric Constant	5.2
Dissipation Factor	0.02

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

Cautionary Information

Before using this or any LORD product, refer to the Material Safety Data Sheet (MSDS) 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 Encapsulant Mixed with Catalyst

	Circalok 6731 Catalyst	Circalok 6730 Catalyst	Circalok 6730 Catalyst	Circalok 6732 Catalyst
Usage Level, % by Weight	0.5	3.0	5.0	0.5
Working Life, hr @ 25°C	1-2	2-3	0.5-1	<0.5
Cure Time, hr @ 25°C	12-16	12-16	8-12	6-8

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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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