

Circalok™ 6035 Epoxy Encapsulant

Description

LORD Circalok™ 6035 epoxy encapsulant is a two-component system recommended for use as a thermally conductive, thin bondline adhesive for attaching semi-conductors to heat sinks, and as a low viscosity potting and casting product for applications where thermal conductivity and non-burning properties are required.

Features and Benefits

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

High Thermal Conductivity – provides high thermal conductivity for applications where superior heat transfer is required.

Electrically Insulative – provides excellent high voltage insulation.

Low Exotherm – exhibits low exotherm heat rise during room temperature cure.

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -65°C to +155°C.

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

Application

Mixing – Thoroughly stir each component prior to mixing together. Mix Circalok 6035 A Black resin with Circalok 6035 B hardener at a 1:1 ratio, by weight or volume.

Thoroughly mix epoxy system. Be careful not to whip excessive air into the material. If necessary, remove entrapped air by evacuating material prior to pouring.

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

Curing – Allow encapsulant to cure for 24 hours at 25°C, or for 2 hours at 65°C. 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 actually reaching the target temperature.

Typical Properties*

	6035 A Black Resin	6035 B Hardener	Mixed
Appearance	Black Liquid	Tan Liquid	Black Liquid
Viscosity, cps @ 25°C	9500	14,000	12,000
Specific Gravity	1.60	1.55	1.57
Working Life, hr @ 25°C	–	–	2

*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 ¹⁶
Thermal Conductivity, W/mK	1.0
Coefficient of Linear Thermal Expansion, ppm/°C	35
Hardness Shore D	75
Tensile Strength, psi	5000
Elongation at Break, %	5.0
Dielectric Strength, V/mil	475
Dielectric Constant @ 100 Hz	4.1
Dissipation Factor @ 100 Hz	0.025

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

Shelf Life/Storage

Shelf life of each component is one year 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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