

# CoolTherm™ EP-6009 Epoxy Encapsulant

## Description

LORD CoolTherm™ EP-6009 encapsulant is a two-component epoxy system designed to provide thermal conductivity for potting applications requiring flame retardance.

## Features and Benefits

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

**Good Thermal Conductivity** – provides moderate thermal conductivity for applications where heat dissipation is required.

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

## Application

**Mixing** – Thoroughly mix each component prior to combining resin and hardener. Mix CoolTherm EP-6009 BLK resin with CoolTherm EP-6009 hardener at a 10:1 ratio, by weight. Automatic meter/mix/dispense equipment may be used for high volume production.

**Applying** – Apply encapsulant using handheld cartridges or automatic meter/mix/dispense equipment.

**Curing** – Allow encapsulant to cure for 2-4 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 reaching the target temperature.

**Cleanup** – Disposable containers and utensils are recommended when working with epoxies. However, when disposable materials are impractical, uncured encapsulant can be removed by cleaning equipment with solvent. Solvent-cleaned utensils should be thoroughly dried before reuse; any remaining solvent can contaminate the next mixture.

## Typical Properties\*

	EP-6009 BLK Resin	EP-6009 Hardener	Mixed
Appearance	Black Liquid	Amber Liquid	Black Liquid
Viscosity, cps @ 25°C	17,500	40	2600
Specific Gravity	1.65	1.00	1.52
Gel Time, min @ 65°C	–	–	28
Working Life, min @ 25°C	–	–	60

\*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	1.0 x 10 <sup>15</sup>
Thermal Conductivity, W/mk	0.7
Coefficient of Linear Thermal Expansion, ppm/°C	47
Glass Transition Temperature (Tg), °C by TMA	75
Hardness Shore D	90
Tensile Strength, psi ASTM D 638	7000
Elongation at Break, % ASTM D 638	1.9
Moisture Absorption, % 10 days @ 25°C	0.35
Dielectric Strength, V/mil	500

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## 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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