

CoolTherm™ EP-6151 Epoxy Adhesive

Description

LORD CoolTherm™ EP-6151 adhesive is a one-component, aluminum-filled epoxy adhesive designed for use as a thermal interface adhesive for heat sink attachment and other applications requiring good adhesion and heat transfer properties.

Features and Benefits

Thermal Stability – provides excellent thermal stability; can be used on parts and devices that experience operating temperatures from -40°C to +150°C.

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

Fast Cure – rapidly cures at 121°C and 177°C.

Non-Sag – thixotropic rheology allows shape to be maintained after dispensing.

Chemically Resistant – provides excellent resistance to acids and strong bases.

Application

Applying – Before use with dispensing equipment, allow adhesive to be warmed to room temperature (ideally 20-25°C). Allow adhesive to warm by placing syringe in a vertical (upright) position with dispense tip facing downward in an ambient environment. Consult handling instructions** for specific guidelines.

Mount the syringe onto the dispensing equipment that has been thoroughly cleaned and purge adhesive through the system until an unbroken flow of material is extruded. The system is now ready to begin dispensing.

Curing – Allow adhesive to cure for 30 minutes at 121°C, or for 10 minutes at 177°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.

**Handling instructions are available on LORD.com.

Typical Properties*

Uncured

| | |
|-----------------------|------------|
| Appearance | Gray Paste |
| Viscosity, cps @ 25°C | 750,000 |
| Specific Gravity | 1.50 |
| Gel Time, min | |
| @ 121°C | 10 |
| @ 177°C | 1 |

Cured

| | |
|--|------|
| Thermal Conductivity, W/mK | 0.6 |
| Glass Transition Temperature (T _g), °C by TMA | 124 |
| Hardness @ 25°C Shore D | 90 |
| Tensile Strength, psi AL-AL | 3000 |

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

LORD TECHNICAL DATA

Shelf Life/Storage

Shelf life is four months from date of manufacture when stored at 5°C in original, unopened container. Syringe must be stored in a vertical (upright) position with the dispense tip facing down. Do not store syringe on its side (horizontally).

If material is stored at 25°C, shelf life will be shortened to approximately one month.

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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