CoolTherm® TC-2002 Thermally Conductive Structural Adhesive

Technical Data Sheet

CoolTherm® TC-2002 adhesive is a two-component adhesive system designed for use in structural bonding applications which require thermal conductivity with high bond strength.

Features and Benefits:

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

Broad Temperature Range – can be used on parts and devices that experience operating temperatures from -65°C to +100°C.

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

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

Electrically Isolative – provides good isolation for managing current corrosion.

Application:

Mixing – This adhesive system is designed for use with meter/mix/dispense equipment. Using a static mixing tip, mix resin with curative at a ratio of 10:1, resin to curative, by volume.

Applying – Apply adhesive system using automatic meter/mix/dispense equipment. Glass beads incorporated in the adhesive system maintain bondline thickness at 100 µm.

Curing – Allow adhesive to cure at room temperature (25°C). Handling strength is achieved in 20-25 minutes. Adhesive will cure to full strength in 2-3 hours.

Shelf Life/Storage:

Shelf life of each component is six months when stored below 25°C in original, unopened container. For CoolTherm TC-2002 A resin, storage temperatures of 4-25°C are recommended. For CoolTherm TC-2002 B curative, storage temperatures of 4-10°C are recommended. If stored cold, allow component to return to room temperature before using. Protect from exposure to direct sunlight.

Typical Properties*

	TC-2002 A Resin	TC-2002 B Curative	Mixed
Appearance	Tan Paste	Gray Paste	Tan Paste
Viscosity, cP @ 25°C	600,000	325,000	500,000
Specific Gravity	1.71	1.24	1.67
Working Life, minutes @ 25°C	–	–	7-8

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

Typical Cured Properties*	
Thermal Conductivity, W/m·K	1.0
Glass Transition Temperature (Tg), °C by DMA	85
Hardness Shore D	73
Lap Shear Strength, MPa (psi) @ 25°C Aluminum	15.86 (2300)
Elongation at Break, %	5
Dielectric Strength, kV/mm (V/mil)	19.0 (482.6)

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

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.

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