PAKCOOL® Two-part Thermally Conductive Silicone Gap Filler TC-250

Key Features and Benefits

- **2-parts thermally conductive compound**
- **Ultra-conforming, designed for fragile and low-stress applications**
- **Room and accelerated curing schedules**
- **100% solids, no cure by products**
- **Excellent high and low temperature, weather, radiation and exceptional dielectric properties**
- **Stable chemical and mechanical properties**

Description

PAKCOOL® TC-250 is a high performance, thermally conductive, liquid TIM material, supplied as two-part, room or elevated temperature curing system. It is a soft, form-in-place elastomer, ideal for coupling "hot" electronic components and heat sink. Before cure, it flows under pressure like grease. After cure, it won't be pumped out during thermal cycling. The liquid offers infinite thickness with little or no stress during displacement and assembly. It also eliminates the need for specific pad thickness and die-cut shapes for individual applications.

PAKCOOL® TC-250 consists with liquid A and B. The A component is white, the B component is the colored liquid so as to distinguish A and B are evenly mixed. TC-250 is intended for use in thermal interface applications when a strong structural bond is not required. TC-250 is formulated for low-modulus properties.

Applications

- **LED Assembly**
- **Power semiconductors/ Power supplies**
- **Automotive Battery Packs**
- **Communication devices**
- **Computer and peripherals**
- **Area where heat needs to be transferred to a frame, chassis, or other type of heat spreader**

Storage Conditions

- PAKCOOL® TC-250 should be storage at low temperatures. Cartridge-based products should be stored horizontally.

Packaging Specifications

- Available in 50mL, 200mL and 400mL cartridge kits, and 25Kg, 50Kg pails. Custom packaging options are also available based on customer requirements.

Curing Time

- PAKCOOL® TC-250 can be cure at room temperature for 12h-48h. The crosslinking time will be shortened with the increase of temperature (see table below).

25 ℃	**24 h**
70 ℃	**60 min**

Technical Parameters

Typical Properties	TC-250	Test Methods
Base Material	Silicone	--
Color	A: White B: Gray	**Visual**
Mix Ratio	1:1	--
Viscosity (cP)	650,000±250,000	**ASTM D2196-15**
Operation time (min @25 ℃)	≥30	--
Thermal Conductivity (W/m·K)	5.0	**ASTM D5470**
Hardness (Shore OO)	50±10	**ASTM D2240**
Density (g/ cm^3)	3.30±0.10	**ASTM D792**
Volume Resistivity (Ω·cm)	≥3.0×10^{13}	**ASTM D257**
Dielectric Strength (kV/mm)	≥10	**ASTM D149**
UL Flammability Rating	V-0	**UL 94**
Shelf Life (@ 20 ℃)	6 months	--
Continuous Use Temperature (℃)	-50 ~ 150	--

Note: Data is for guidance only and should not be used as product specifications.

Precautions

- This product may not solidify or completely solidify when exposed to some substances, such as sulfur, phosphorus, or nitrogen compounds and polysulfone, polysulfide, polyurethane, substances containing amides and amines, tin, arsenic, antimony, selenium, and tellurium, unsaturated hydrocarbons and plasticizers.
- Due to slight differences in viscosity between parts A and B, adjustments may be necessary to the pressure settings when using machine dispensing for both parts.
- Please store the product in a sealed container. Once mixed, the adhesive should be used in one session to avoid waste.

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