

Key Features and Benefits

- Suitable for various potting modes
- 100% solids, no uncured by products
- Excellent high and low temperature, weather, radiation and exceptional dielectric properties
- Stable chemical and mechanical properties

Description

PAKCOOL® TPC-213 is a high thermal conductivity, 1:1 two-part liquid encapsulant designed for electronics. The glue is crosslinked at room temperature, and heating can accelerate the crosslinking speed. Besides, it has high thermal conductive, and low thermal expansion rate as well as high insulation performance. Thus, can effectively eliminate the destructive effect of electronic components caused by changes in operating temperature. It is extensively utilized for bonding heat-generating electronic components to heat sinks or metal casings. Before curing, TPC-213 demonstrates superior flowability and levelness. It remains securely bonded within the protective casing through thermal cycling, ensuring a smooth surface finish without the release of any volatile compounds.

Applications

- LED Assembly
- Inverters
- High-Frequency Transformers
- Power Modules
- Automotive Battery Packs
- Communication devices
- Electronic Components

Storage Conditions

- PAKCOOL® TPC-213 should be stored in a cool, dry place.

Packaging Specifications

- Available in 1Kg cans, and 20Kg pails. Custom packaging options are also available based on customer requirements.

Curing Time

- PAKCOOL® TPC-213 can be cure at room temperature for 24h-72h. The crosslinking time will be shortened with the increase of temperature (see table below).

25 °C	48 h
70 °C	40 min

The data of this specification are obtained under laboratory conditions. However, because of the difference of use environment, process and so on, it can not guarantee the correctness and applicability of the product in some usage and use. When using, be sure to test to confirm the product suitable for your purpose. If you have any problems in using this product, please contact our technical department. We will do our best to help you.

Technical Parameters

Typical Properties	TPC-213	Test Methods
Base Material	Silicone	--
Color	A: White B: Gray	Visual
Mix Ratio	1:1	--
Viscosity (cP)	≤6500	ASTM D2196-15
Operation time (min @25 °C)	>30	--
Thermal Conductivity (W/m·K)	1.3	ASTM D5470
Hardness (Shore A)	45±5	ASTM D2240
Density (g/ cm ³)	2.20±0.10	ASTM D792
Volume Resistivity (Ω·cm)	≥3.3×10 ¹³	ASTM D257
Dielectric Strength (kV/mm)	≥18	ASTM D149
UL Flammability Rating	V-0	UL 94
Shelf Life (@ 20 °C)	12 months	--
Continuous Use Temperature (°C)	-50 ~ +200	--

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 to the pressure on part B may be necessary when using machine encapsulation.
- During storage, it is normal for the fillers in the product to settle. Before use, thoroughly scrape and stir parts A and B within their respective containers to ensure a uniform mixture. Then, mix the components in a 1:1 ratio and continue stirring until the color is consistent throughout.