

Key Features and Benefits

- Suitable for various potting modes
- Low stress, more effectively protecting electronic components.
- 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-200 is a two-part, 1:1 ratio, transparent liquid encapsulant designed for electronic applications, capable of curing at room temperature or when heated. This product boasts high resistance to extreme temperatures and superior insulative properties. The low stress nature of the cured compound effectively reduces the risk of damage to electronic components due to thermal fluctuations. It is particularly suited for encapsulating and securing double-clad fibers on aluminum fiber trays in laser devices. Its hydrophobic properties provide moisture resistance, thereby mitigating the effects of humidity on the external layers and extending the lifespan of the fibers. PAKCOOL® TPC-200 exhibits excellent flowability and levelness before curing, and it does not emit volatiles post-cure. The product's curing system is highly resistant to toxicity, typically requiring no special treatment of solder or paints under normal conditions.

Applications

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

Storage Conditions

- PAKCOOL® TPC-200 should be stored in a cool, dry place.

Packaging Specifications

- Available in 500g cans, 5Kg pails, and 10Kg pails. Custom packaging options are also available based on customer requirements.

Curing Time

- PAKCOOL® TPC-200 can be cure at 25°C within 4h to a non-flowing state, suitable for proceeding to the next step in the manufacturing process. The crosslinking time will be shortened with the increase of temperature (see table below).

25 °C	72 h
70 °C	20 min

Technical Parameters

Typical Properties	TPC-200	Test Methods
Base Material	Silicone	--
Color	colorless and transparent	Visual
Mix Ratio	1:1	--
Viscosity (cP)	A: ≤3000 B: ≤5200	ASTM D2196-15
Operation time (min @25 °C)	>20	--
Thermal Conductivity (W/m·K)	-	ASTM D5470
Hardness (Shore OO)	25±5	ASTM D2240
Density (g/ cm ³)	0.97±0.10	ASTM D792
Volume Resistivity (Ω·cm)	≥3.0×10 ¹³	ASTM D257
Dielectric Strength (kV/mm)	≥18	ASTM D149
Shelf Life (@ 20 °C)	6 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.
- It is normal for the fillers in the product to settle during storage. Before use, thoroughly scrape and stir components A and B within their respective containers to ensure uniformity. Afterward, mix the components in a 1:1 ratio and stir thoroughly again to achieve a homogeneous mixture.

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.