

TEC 135 Thermally & Electrically Conductive Adhesives

Product Datasheet

Enhance Reliability
High Thermal Conductivity
Excellent Electrical Conductivity

Description

TEC 135 is a thermal conductive and anisotropic electrical adhesive. During the curing process, a proper force has to be applied to the substrate for a few minutes in order to get the electrical conductivity. The best conductivity is up to the same order of magnitude as metal. TEC 135 provides excellent adhesion to copper, aluminum, steel, glass, ceramics and most plastics. After curing, TEC 135 has a hydrophobic layer formed on the air interface of the fillet, which can provide excellent weatherability and water resistance. TEC 135 also has a very comparable co-efficiency of thermal expansion. Therefore, TEC 135 can provide higher reliability for electrical devices. It can be used as interface materials and conductive materials for electrical devices.

Typical Physical Properties

Product Name	TEC 135 thermal conductive adhesives
PROPERTIES OF UNCURED MATERIAL	
Filler	Conductive filler
Resin Type	Mixed resins
Specific Gravity (ASTM D 1475-60)	2.5 – 3.5 g/cc
Viscosity (Brookfield, 0.5 rpm)	20 – 50 kcp
PROPERTIES OF CURED MATERIAL	

Tensile Strength (MPa)	16
C.T. E (ASTM E 831), PPM /°C	30
Young's modulus (GPa)	12
Thermal conductivity (W/mK)	7 – 10
Electrical resistivity (Ω.cm)	0.00002 – 0.00008
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm

Recommended Curing Conditions

30 – 45 min at 135 °C.

Note: curing time not including the time to allow the bond location to reach the desired cure temperature. Alternate cure profiles may be evaluated.

Storage & Shelf Life

6 months provided materials are kept in a sealed original container below – 40 °C. Storage beyond this period can produce higher viscosity. Protect from moisture, evaporation and foreign materials. Process ability of these products can be adversely affected by evaporation and contamination.

Safety

TEC 135 is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.

Package

TEC 135 solder adhesives are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.