

TM 150 Series Solderable Conductive Adhesive Product Datasheet

Enhance Reliability
Improve Thermal Conductivity
Eliminate outgassing

Description

TM 150 series solderable conductive adhesives are rapid cure, self-filling, self-leveling and self-soldering adhesives which can be used as die attach adhesives for LED, CSP, QFP, and so on, to replace conductive adhesives (Ag) or solder materials such as solder paste or preform. By comparison with conductive adhesives (Ag), TM 150 solderable adhesives have higher stable electrical and thermal conductivity, are able to easily-fill-gap and self-level die, and easily control the bonding thickness. By comparison with soldering materials, TM 150 solderable adhesives eliminate the outgassing from the soldering process, eliminate die skewing and shifting, and solder bleed. The soldered interface will be encapsulated with the curing of TM 150 solderable adhesives, thus the soldered metal interface is protected by a 3D polymer network, which can tolerate harsh environmental conditions.

Typical Physical Properties

Product Name	TM 150 series solderable adhesives
PROPERTIES OF UNCURED MATERIAL	
Filler	Silver
Resin Type	Epoxy
Specific Gravity (ASTM D 1475-60)	3.5 – 4.5 g/cc
Viscosity (Brookfield, 0.5 rpm)	20 – 50 kcp

PROPERTIES OF CURED MATERIAL	
Tensile Strength (MPa)	56
C.T. E (ASTM E 831), PPM /°C	23.5
Young's modulus (GPa)	26.3
Thermal conductivity (W/mK)	60 – 90
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm

Recommended Curing Conditions

30 min at 180°C.

Note: 30 min 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 at – 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

TM150 is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.

Package

TM 150 solder adhesives are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.