

TM 230 Solderable Conductive Adhesive Product Datasheet

Enhance Reliability
Improve Thermal Conductivity
Eliminate Outgassing

Description

TM 230 solderable conductive adhesives is 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 230 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 230 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 230 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 230 solderable adhesives
PROPERTIES OF UNCURED MATERIAL	
Appearance	Silver
Resin Type	Epoxy
Specific Gravity (ASTM D 1475-60)	3.5 – 4.5 g/cc
Viscosity (Brookfield, 0.5 rpm)	30 – 45 kcp

PROPERTIES OF CURED MATERIAL	
Tensile Strength (MPa)	53
C.T. E (ASTM E 831), PPM /°C	21.7
Thermal Conductivity (W/m.k)	58
Young Modulus (GPa)	41.6
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Recommended Curing Conditions

60 seconds at 230°C.

Note: 60 second curing time includes 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

TM230 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 230 solderable adhesives are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.