

SMT256EP Solderable Based Adhesive Product Datasheet

Excellent electrical conductivity
Eliminating contact resistance
High temperature application

Description

SMT256EP solderable adhesive is self-leveling and self-soldering adhesives, which has been designed for high temperature Pb-free application. By comparison with conductive adhesives (Ag), SMT256EP solderable adhesive has higher stable electrical and thermal conductivity, outstanding reliability, and easily rework. By comparison with soldering materials, SMT256EP solderable adhesives eliminate the out gassing from soldering process, flux residue issue and soldering bleed. During the reflow process, Solder joint encapsulant adhesive removes metal oxide and encapsulates individual solder joints with enhancing solder joints to eliminate some drawbacks of underfilling (large CTE above T_g, trouble process control). The performance of the drop test has been improved by two orders of magnitude compared with that with the use of solder paste. The polymer network can be removed using methyl ethyl ketone (MEK) or heating.

Typical Physical Properties

Product Name	SMT256EP solderable adhesives
PROPERTIES OF UNCURED MATERIAL	
Alloy	Solderable Powder (T4)
Resin Type	Epoxy
Specific Gravity (ASTM D 1475-60)	3.5-4.5g/cc
Viscosity (Brookfield, 0.5 rpm)	80-100 k cp

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/m.k)	60
Electrical conductivity ($\infty \Omega/\text{cm}$)	10-30
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Reflow & Cure

SMT256EP is completely comparable with current SMT assembly processes and all kinds of pad surface finishes such as Ni/Au, Immersion Ag, OSP. It can be used in convection, conduction, infrared, or vapor phase soldering systems under air or nitrogen atmosphere. The time from ambient temperature to peak temperature should be 4 to 5 min with a peak temperature from 230°C to 260 °C.

Storage & Shelf Life

6 months provided materials are kept in a sealed original container below – 20 °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.



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Safety

SMT 256EP is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.

Package

SMT 256EP adhesives are available in 10cc and 30cc syringe. Other packages are available depending upon customer's request. Contact YINCAE for order information.