

SMT 156 Solderable Assembly Adhesive

Eliminate Solder Paste and Related Issues

Eliminate All Package Steps and All Related Issues

Dramatically Reduce SMT Assembly Cost for Bare Die

Description

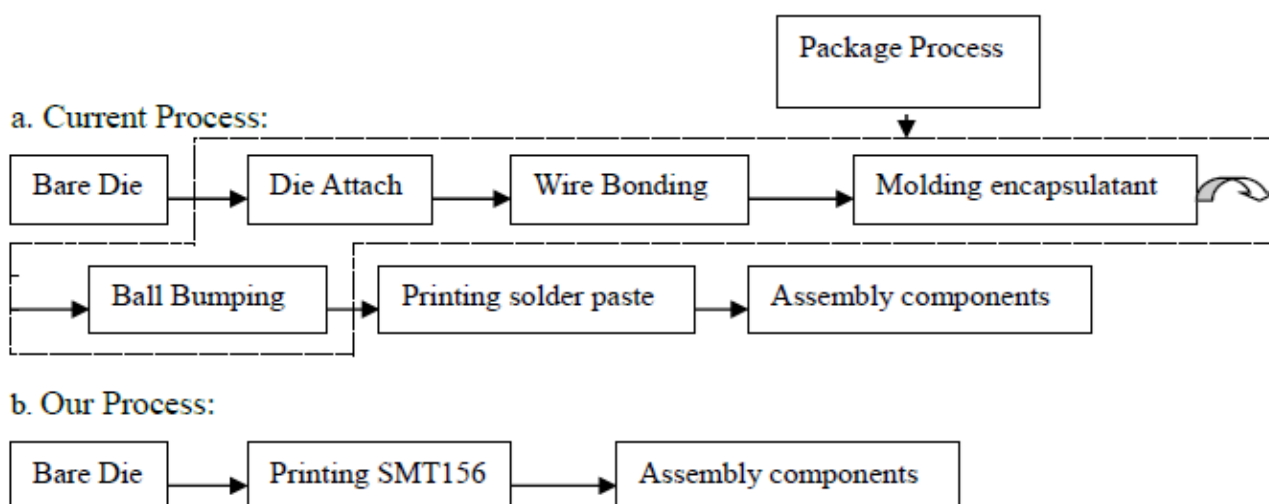
SMT 156 solderable conductive adhesives is rapid cure, self-leveling and self-soldering adhesives which can be used as assembly adhesives to replace solder paste for SMT product line, for bare die eliminating all packaging process: from die attach, to wire bonding, to molding, to ball bumping; eliminating solder paste and their related issues. SMT 156 solderable adhesives have higher stable electrical and thermal conductivity, self level die, and easy control of the bonding thickness. By comparison with soldering materials, SMT 156 solderable adhesives eliminate the outgassing from soldering process, eliminate die skewing and shifting, soldering bleed and soldering flux residues. The soldered interface will be encapsulated with the curing of SMT 156 solderable adhesives, thus the soldered metal interface is protected by a 3D polymer network, which can tolerate harsh environmental conditions. It can be used with SMT 158 together.

Typical Physical Properties

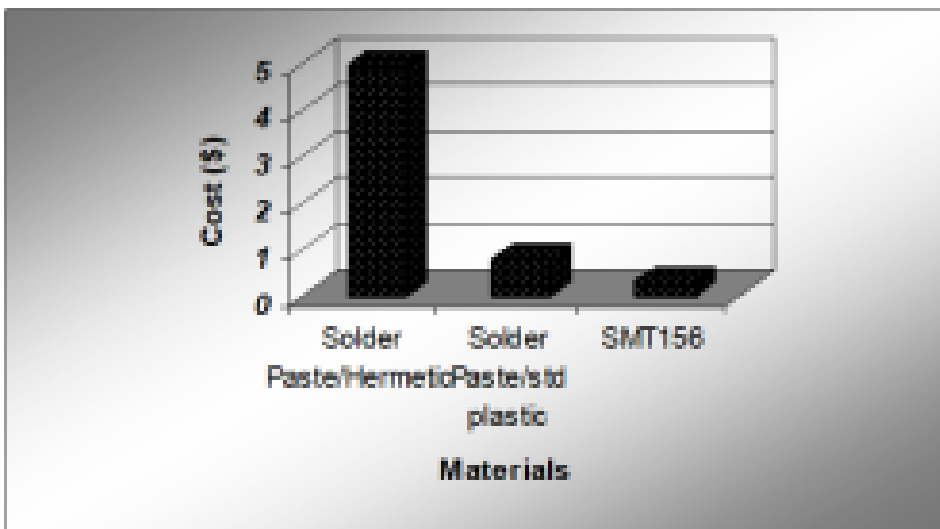
Product Name	SMT 156 Solderable Adhesives
PROPERTIES OF UNCURED MATERIAL	
Alloy	Silver
Resin Type	Epoxy
Specific Gravity (ASTM D 1475-60)	3.5 – 4.5 g/cc
Viscosity (ASTM D-1384)	500 – 700 kcp

PROPERTIES OF CURED MATERIAL	
Tensile Strength (MPa)	56
C.T. E (ASTM E 831), PPM /°C	23.5
Young's modulus (GPa)	26.3
Electrical conductivity ($\mu\Omega/\text{cm}$)	$>10^6$
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Process, Cost, & Comparison



C. Comparison



Recommended Curing Conditions

5 min at 150°C.

Note: 5 min curing time does not include 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 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

SMT 156 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 156 solder adhesives are available in 6oz and 8oz. Other packages are available depending upon customer's request. Contact YINCAE for order information.