

DA 90UV Filled UV Die Attach Adhesives Product

Low Moisture Absorption
High Throughput and Process Yield
High Reliability

Description

DA 90UV is one part 100% solid, filled UV cure die attach adhesives, which has been designed for the application in optical, fiber optic and optoelectronic devices. It can be cured by UV in a few seconds to achieve fast fixing purpose, then further cured by thermal cure to achieve high reliability. DA 90UV has excellent adhesion to the substrate and bare die. It can be used for small and large die attach. It can be applied using dispense or printing methods. It has demonstrated high reliability and high temperature reflow performance. DA 90UV not only has excellent moisture resistance, but also has low CTE, which can easily dissipate the thermal stress from the different CTE substrates. All data of thermal cycle and surface insulation resistance have indicated DA 90UV meets MIL-I 46058C and IPC-CC-830 standards. DA 90UV is also in full compliance with the RoHS Directive.

Typical Physical Properties

Product Name	DA 90UV die attach adhesives
PROPERTIES OF UNCURED MATERIAL	
Appearance	Off-white
Filler (%)	50 – 80
Specific Gravity (ASTM D 1475-60)	1.8 g/cc
Viscosity (ASTM D-1384)	50 – 100 kcp
PROPERTIES OF CURED MATERIAL	

Durometer Hardness (ASTM D-224)	D85
Humidity Resistance (85C/85RH, 120 days) (IPC-CC-830)	Pass
Surface Insulation Resistance (IPC-J-STD-004)	Pass
Glass Transition Temperature (Tg) (ASTM D3418-82)	145
C.T. E (ASTM E 831), PPM /°C (ASTM E 831)	$\alpha_1 = 20$
Die Shear strength (2x2mm)	6800 psi
Adhesion (ASTM D2197)	Excellent
Moisture Absorption (ASTM D-570)	0.2%
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Thermal Performance	
Thermal Shock (-65/+125 °C)(IPC-CC-830)	100 cycles, Class 3

Recommended Curing Conditions

DA 90UV can complete the curing in a few seconds when exposed to a one 365 watts per inch 400-500nm UV light with light intensity 2 – 5W/cm² followed by 110 -130°C for 30- 120 min curing.

Storage & Shelf Life

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

Safety

DA 90UV is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information, please consult the product SDS.

Package

DA 90UV optical bonding adhesive is available in 55cc and 12oz. Other packages are available depending upon customer's request. Contact YINCAE for order information.