YINCAE® INNOVATION AT ITS BEST

YINCAE Advanced Materials, LLC
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UVA 88C UV Curable Adhesive Product Datasheet

Outstanding Reliability Performance
Excellent Low Temperature Cure Performance
Easy Rework

Description

UVA 88C is a dual cure UV adhesive, which is designed as corner bond and underfill replacement to achieve high reliability enhancement application, high throughput and low cost ownership. It can be applied at room temperature without preheating a substrate. After curing, there is void free in encapsulant adhesives. The cured UVA 88C can be easily reworked. UVA 88C not only can be used as an underfill replacement for chip scale package, ball grid array devices, package on package and land grid array and some flip chip applications. It is also suitable for bare chip protection in a variety of advanced packages such as memory cards, chip carriers, hybrid circuits and multi-chip modules. It is designed for high production and friendly environments where process speed and mechanical shock are the key concern. This material is easily dispensed, minimizes induced stresses and provides outstanding reliability performance (e.g. temperature cycling performance) and excellent mechanical resistance. The performance of the drop test has been improved by two orders of magnitude compared with that with the use of solder paste.

Typical Physical Properties

Product Name	UVA 88C adhesive
PROPERTIES OF UNCURED MATERIAL	
Appearance	Colorless
Specific Gravity (ASTM D 1475-60)	1.08 g/cc
Viscosity (Brookfield, 0.5 rpm)	15 – 50 kcp

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Capillary Flow Rate (STM 777)	Room temperature underfilling
PROPERTIES OF CURED MATERIAL	
Glass Transition Temperature (Tg) (ASTM D3418-82)	58 – 79 °C
C.T. E (ASTM E 831), PPM /°C	α1 = 75; α2 = 182
Lap Shear Strength (FR4/FR4)	2000 psi
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Recommended Curing Conditions

UVA 88C can complete the curing in a few seconds when exposed to one 365 watts per inch 365nm UV light (“H” lamp) with light intensity 2 – 5 W/cm. The “shadowed” areas of the assembled board not exposed to UV light can be cured by secondary thermal cure at the desired temperature.

The thermal cure schedule:
110 °C 30 min
120 °C 15 min.
150 °C 5 min

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Storage & Shelf Life

6-9 months provided materials are kept in a sealed original container below 25 °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

UVA 88C is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.

Package

UVA 88C adhesives are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.