

DA 158A3 Die Attach/TIM Adhesive Product Datasheet

Outstanding Thermal Cycling Performance

Excellent Mechanical Shock Performance

High Thermal Conductivity

Description

DA 158A3 is a highly thermal conductive, electrically insulating die attach and thermal interface materials, rapid curing liquid epoxy which can be used for flip chip, chip scale package, ball grid array devices, package on package and land grid array application. 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 environment 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.

Typical Physical Properties

Product Name	DA 158A3 Die Attach/TIM Material
PROPERTIES OF UNCURED MATERIAL	
Appearance	Black
Specific Gravity (ASTM D 1475-60)	2.86 g/cc
Viscosity (Brookfield, 0.5 rpm)	15 – 20 kcp
PROPERTIES OF CURED MATERIAL	
Glass Transition Temperature (T _g) (ASTM D3418-82)	135 C

C.T. E (ASTM E 831), PPM /°C	$\alpha 1 = 20$; $\alpha 2 = 78$
Filler Load (%)	85-95
Die Shear Strength (Kg/mm ²)	2x2mm Silicon die on Pd: 2.1 2X2mm Au silicon die on bare Cu: 2.6 2x2mm Au silicon die on Au: 2.4
Thermal Conductivity (W/mK)	3.5-4.5
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Recommended Cure Process

In – line curing or 15 minutes at 150 C

Note: 15 min 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

DA 158A3 is a friendly, non-toxic material. However, general hygiene practice is recommended when handling this material. For detailed information please consult our SDS.



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Package

DA 158A3 Die Attach/TIM materials are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.