

ACP 158H Anisotropic Conductive Adhesive Product Datasheet

Outstanding Thermal Cycling Performance

Excellent Electrical Conductivity

High Process Yield

Description

ACP 158H is an anisotropic conductive adhesive which can be used for chip scale package, ball grid array devices, package on package and land grid array and some flip chip 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 temperature lead free (SnAgCu, SnAg..) solder thermal compression bonding process. This material is easily dispensed, minimizes induced stresses and provides outstanding reliability performance (e.g. temperature cycling performance) and excellent mechanical resistance. After thermal compression bonding and cure, ACP 158H interconnect formed has the same reliability as the regular solder joint. ACP 158H can provide a reliable solution for high denser interconnect and miniaturization.

Typical Physical Properties

Product Name	ACP 158H conductive adhesive
PROPERTIES OF UNCURED MATERIAL	
Appearance	Solderable Silver
Specific Gravity (ASTM D 1475-60)	1.8-2.2 g/cc
Viscosity (Brookfield, 0.5 rpm)	5-8.0 kcp
PROPERTIES OF CURED MATERIAL	

Glass Transition Temperature (Tg) (ASTM D3418-82)	149 °C
C.T. E (ASTM E 831), PPM /°C	$\alpha 1 = 30$; $\alpha 2 = 135$
Lap Shear Strength (FR4/FR4)	2600 psi
Extractable ions (MIL-STD-883E)	
Na+	<5ppm
K+	<5ppm
F-	<5ppm
Cl-	<10ppm
Surface insulation resistance (J-STD-004)	Pass

Recommended Curing Conditions

Thermal compression Temperature: 260-280 °C, hold time: about 30s

Note: 5-10 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

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



YINCAE Advanced Materials, LLC
93 Broadway
Menands, NY 12204
T (518) 452-2880
F (518) 452-2779

Package

ACP 15H8 capillary underfill series are available in 10cc and 30cc. Other packages are available depending upon customer's request. Contact YINCAE for order information.