AI TECHNOLOGY INC
70 Washington Road
Princeton Jct., NJ 08550
(609) 799-9388 fax (609) 799-9308
E-Mail: ait@aitechnology.com
Internet: http://www.aitechnology.com

Die-Attach Film Adhesive

RTC8660-HK

Self-Tacking
Electrically Conductive
Epoxy Film Adhesive
Low Temperature Curable

IDEAL FOR:

- **Precision Die Attach**
- **Stack-Memory Die-Attach**
- **Wafer-Prelamination Die-Attach**
- **Lid Sealing**

DESCRIPTION:

RTC8660-HK is a high flow, tacky, low temperature curable epoxy film version of ESP8660. It is a silver-filled high bond strength epoxy film adhesive specifically designed for bonding die, component, and substrate. Low temperature curing reduces internal stresses. RTC8660-HK-RC has excellent thermal conductivity. Because of its high bond strength and low stress induced with low temperature curing, RTC8660-HK-RC is recommended for both small and larger dies. It is also ideal for lid attach passing fine and gross leak requirements.

Preforms of RTC8660-HK may be tacked onto substrate or dies with nominal pressure at 60-80ºC in less than a second. Curing at 100-120ºC without pressure is complete in less than 30 minutes. Higher temperatures may be used for shorter duration of curing.

TYPICAL PROPERTIES*

Electrical Resistivity (150 ºC/ 10 minutes)	**<5x10 $^{-4}$ ohm-cm**
Dielectric Strength (Volts/mil)	**Not Applicable**
Glass Transition Temp.(ºC)	**90/175**
Lap-Shear Strength	
Device Push-off Strength	**>3300 psi >22.8 N/mm²**
Hardness (Type)	**80 (D)**
Cured Density (gm/cc)	**3.8**
Thermal Conductivity	**>45Btu-in/hr-ft²-ºF >6.4 W/m-ºC**
Linear Thermal Expansion Coeff. (ppm/ºC)	**40**
Maximum Continuous Operation Temp. (ºC)	**150**
VISCOSITY	

* Properties given are typical values and not intended for use in preparing specifications. The user is advised to evaluate the product in the manner the product is intended to be used in manufacturing and in the final product.

AVAILABILITY:

RTC8660-HK is available in custom preforms in waffle-packs or customer wafer sheet. Standard thickness is 0.003". Custom thicknesses are available.

APPLICATION PROCEDURES:

(1) Keep product at room temperature for 15 minutes before using.
(2) Before using, remove protective liner from film.
(3) Cut to desired size. Tack onto substrate or die at 60-80ºC.

(4) Cure according to one of the recommended schedules.

CURE SCHEDULES:

Temperature	Time	Pressure
85ºC	12 hr	5-15 psi
100ºC	4 hr	5-15 psi
125ºC	120 min	5-15 psi
150ºC	30 min	5-15 psi

Wafer lamination may be performed when adhesive reaches 65ºC @ 5 psi for few seconds. Wafer may be diced with standard wafer dicing tape with dies storable for more than one year before bonding.

1 cP = 10-3 Pa·s = 1 mPa·s; 145psi=.99974MPa=.99974 N*mm²; 1lb = 4.448N; 1 inch=25.4 mm; 1V/mil= 39.3701 V/mm; 1 lb-in = 0.11298 N-m

SHELF LIFE:

Storage temperature	Shelf Life
0-5ºC	1 yr in sealed package