



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 60-80°C in less than a second. Curing at 100-120°C without pressure is complete in less than 30 minutes. Higher temperatures may be used for shorter duration of curing.

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 60-80°C.
- (4) Cure according to one of the recommended schedules.

TYPICAL PROPERTIES*

Electrical Resistivity (150 °C/ 10 minutes)	<5x10 ⁻⁴ ohm-cm
Dielectric Strength (Volts/mil)	Not Applicable
Glass Transition Temp.(°C)	90/175
Lap-Shear Strength	
Device Push-off Strength	>3300 psi >22.8 N/mm ²
Hardness (Type)	80 (D)
Cured Density (gm/cc)	3.8
Thermal Conductivity	>45Btu-in/hr-ft ² -°F >6.4 W/m-°C
Linear Thermal Expansion Coeff. (ppm/°C)	40
Maximum Continuous Operation Temp. (°C)	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.	

CURE SCHEDULES:

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

Wafer lamination may be performed when adhesive reaches 65°C @ 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
0-5°C	1 yr in sealed package

CAUTION: This product may cause skin irritation. Avoid skin contact. If contact does occur, wash immediately with soap and water. Please refer to MSDS for more details.

The information contained herein is believed to be reliable. All recommendations or suggestions are made without guarantee inasmuch as conditions and methods of commercial use are beyond our control. 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 to be used in manufacturing and in the final product. Under no circumstance shall A.I. Technology be liable for accidental, consequential or other damages arising from the use or handling of this product.

While AI Technology owns all proprietary rights of material formulations of its products, specific usage in the manufacturing of certain products may involve patent rights of other companies.