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Die Attach Film
ESP8660-HK

High Moisture Resistance
Electrically Conductive
Epoxy Film Adhesive

IDEAL FOR:

- High Volume, Automated Assemblies
- Substrate Attach
- Wafer Level Die-Attach

dd

DESCRIPTION:

ESP8660-HK is a silver filled high-bond strength epoxy film adhesive. It can be used in die-cut preform for ease of pick-and-placement. This new generation film can also be laminated onto a wafer at 70-80°C and then mounted on dicing tape.

It is designed for bonding component and substrate to substrate and carrier with matched thermal coefficients of expansion. ESP8660-HK has good thermal stability. The dry, tack-free handling of the film makes it suitable for an automated assembly.

AVAILABILITY:

ESP8660-HK is available in sheet sizes or rolls. Standard thickness of ESP8660-HK are 25 microns and 50 microns. Special thicknesses are available upon request.

APPLICATION PROCEDURES:

- (1) Keep product in aluminum poly laminate protective bag when not in use.
- (2) Before using, remove protective release liner from film. Place wafer onto adhesive film.
- (3) Laminate (low heat of 70 - 80°C) wafer onto adhesive film until good wetting is achieved.
- (4) Cure according to one of the recommended schedules.

TYPICAL PROPERTIES*

Electrical Resistivity (150 °C/ 60 minutes)	<4x10 ⁻⁴ ohm-cm
Dielectric Strength (Volts/mil)	N/A
Glass Transition Temp.(°C)	175 ±10%
Current Carrying Capabilities Lap-Shear Strength	N/A
Device Push-off Strength	>2500 psi >17.1 N/mm ²
Hardness (Type)	85 (D) ±10%
Cured Density (gm/cc)	4.0 ±10%
Thermal Conductivity	>56 Btu-in/hr-ft ² -°F >8.0 W/m-°C
Linear Thermal Expansion Coeff. (ppm/°C)	40 ±10%
Maximum Continuous Operation Temp. (°C)	<150

* 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
125°C	1 hr	8-10 psi
150°C	30 min	8-10 psi

The die or component can also be tacked on the substrate at 80°C or higher with 10 psi. When a fillet around the edge of the die or component is observed, the pressure can be released for the rest of the bonding cycle. Besides major transition of Tg at around 175°C, additional molecular relaxation occurs at 50-120°C.

SHELF LIFE:

Storage temperature	Shelf Life
25°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 SDS for more details.

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