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**DIE-ATTACH FILM ADHESIVE**  
**ESP7675-HF**

**High Flow  
 Low Temperature Curable  
 Electrically Insulating  
 Epoxy Film Adhesive  
 Ultra-Low Ionic impurities**

**IDEAL FOR:**

- Precision Position Die-Attach
- Stacked Memory Die-Attach
- Wafer Lamination Die-Attach
- Component Attach
- Lid-Sealing

**DESCRIPTION:**

ESP7675-HF is a high flow version of standard ESP7675 epoxy film adhesive for standard and stacked memory die-attach. It is an alumina filled, high-bond strength epoxy film that can be cured to provide low stress bonding at 100-120°C without applied pressure. Die-attaches with ESP7675-HF has low thermal resistance and outstanding thermal and moisture stability.

Preforms or sheet of ESP7675-HF may be melt-laminated onto wafer or substrate of circuit sites at 80-100°C with placement pressure. Wafer and dies with pre-laminated die-attach adhesive may be ambient stored for over 12 months before attachment.

**AVAILABILITY:**

ESP7675-HF is available in sheet sizes or as custom preforms. Standard thicknesses are 0.003" and 0.006". Special thicknesses with tight tolerance are available.

**APPLICATION PROCEDURE**

For Tack-and-Cure Bonding:

- ( 1 ) Keep product at room temperature for 15 minutes. Remove protective liner before using.
- ( 2 ) Pick and place preform or die with pre-applied adhesive.
- ( 3 ) Make sure adhesive reaches 80-100°C with placement pressure in tacking to induce flow of film adhesive.
- ( 4 ) Cure with one of the curing schedules without pressure.

**TYPICAL PROPERTIES\***

Electrical Resistivity ( 150 °C/ 60 minutes )	>1x10 <sup>14</sup> ohm-cm
Dielectric Strength (Volts/mil)	> 750
Glass Transition Temp.(°C)	190
Current Carrying Capabilities	Not Applicable
Lap-Shear Strength	Not Applicable
Device Push-off Strength	>3000 psi >20.7 N/mm <sup>2</sup>
Hardness (Type)	90 (D)
Cured Density (gm/cc)	2.2
Thermal Conductivity	>10 Btu-in/hr-ft <sup>2</sup> -°F >1.4 W/m-°C
Linear Thermal Expansion Coeff. (ppm/°C)	30
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
80°C	8 hr	** (4 psi)
100°C	4 hr	** (4 psi)
125°C	2 hr	** (4 psi)
150°C	1 hr	** (4 psi)
200°C	20 min	** (4 psi)

\*\* (Pressure is applied to induce flow and not required for completion of curing)

**SHELF LIFE:**

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

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