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Stress Free  
 Reworkable  
 High Thermal Conductivity  
 Epoxy Film Adhesive

**IDEAL FOR:**

- Substrate and Component
- Reworkability
- Mismatched CTE's

**DESCRIPTION:**

Tack-film TK7755 is a reworkable, alumina-filled, epoxy film adhesive. It is designed for bonding component and substrate to a mismatched substrate or carrier. This B-Staged conductive adhesive offers excellent reworkability at 80-150°C and is storable at -40°C for 3 months.

Designed to meet the hybrid adhesive specification MIL-STD-883; Method 5011.4, TK7755 exhibits low outgassing at 125°C. TK7755 has excellent thermal conductivity and its low Tg adhesive imposes minimum thermal stress on bonded parts during thermal cycling or shock testing.

**AVAILABILITY:**

TK7755 is available in sheet sizes or as custom preforms. Standard thicknesses are 0.003" and 0.006". Special thicknesses are available.

**APPLICATION PROCEDURES:**

- ( 1 ) Let adhesive thaw in bag or plastic box, as received, at ambient for 15 minutes.
- ( 2 ) Cut to desired size.) Clean contact surfaces if needed.
- ( 4 ) Fold one release liner over, approaching a 180° angle. Pull the release paper quickly, removing it with one stroke.
- ( 5 ) Apply to substrate, then remove the other release liner and attach to die or component.
- ( 6 ) Cure using to one of the recommended schedules.

**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. 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 AI 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.

**TACK FILM**  
**TK7755**

**TYPICAL PROPERTIES\***

Electrical Resistivity ( 150 °C/ 60 minutes )	>1x10 <sup>14</sup> ohm-cm
Dielectric Strength (Volts/mil)	750 ±10%
Glass Transition Temp.(°C)	-25 ±10%
Lap-Shear Strength	1000 psi ±10%
	6.9 N/mm <sup>2</sup> ±10%
Device Push-off Strength	2400 psi ±10%
	16.6 N/mm <sup>2</sup> ±10%
Hardness (Type)	82 (A) ±10%
Cured Density (gm/cc)	2.3 ±10%
Thermal Conductivity	12 Btu-in/hr-ft <sup>2</sup> -°F ±10%
	1.7 W/m-°C ±10%
Linear Thermal Expansion Coeff. (ppm/°C)	110 ±15%
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:**

<u>Temperature</u>	<u>Time</u>	<u>Pressure</u>
80°C	8 hr	3-5 psi
100°C	4 hr	3-5 psi
125°C	2 hr	3-5 psi
150°C	1 hr	3-5 psi

Post-curing at 150°C for 16 hours is required for MIL-STD 883, Method 5011.4 applications. The die or component can also be tacked on the substrate at 80°C or higher with 5 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.

Pot Life: 5 days at 25C.

**SHELF LIFE:**

<u>Storage temperature</u>	<u>Shelf Life</u>
-40°C	12 Months In Original Sealed Pkg