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Epoxy Paste Adhesive
Stress-Free, Very High

Thermally Conductive
Reworkable
REACH Compliant

IDEAL FOR:
High Power Die Attach
Substrate and Component Attach
Reworkability
Mismatched CTE's

DESCRIPTION:

ME7158 is a reworkable, aluminum nitride filled, electrically insulating and thermally conductive epoxy paste adhesive. It exhibits outstanding flexibility for bonding materials having highly mismatched CTE's (i.e., alumina to aluminum, silicon to copper). The very high thermal conductivity of this material makes it useful for bonding high-powered, large area die and components.

It can be readily reworked at 80-150°C with torque or peel stress. Caution: AlN under high humidity and temperature may cause corrosion to copper or other non-noble metal.

AVAILABILITY:

ME7158 is available in syringes for automatic needle dispense applications or in jars.

APPLICATION PROCEDURES:

- (1) Thaw for 30 minutes before using syringe or opening jar.
- (2) Dispense adhesive onto clean substrate.
- (3) Pre-bake dispensed adhesive open-face at 60°C for 30 to 60 minutes or 80C for 30 minutes to achieve optimum bonding.**
- (4) Cure according to one of the recommended cure 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.

PRIMA-BOND
ME7158

TYPICAL PROPERTIES*

Electrical Resistivity (150°C/ 60 min)	>1x10 ¹⁴ ohm-cm
Dielectric Strength (Volts/mil)	>750
Glass Transition Temp.(°C)	-25 ±10%
Current Carrying Capabilities	N/A
Lap-Shear Strength	>1000 psi >6.9 N/mm ²
Device Push-off Strength	>1800 psi >12.4 N/mm ²
Hardness (Type)	80-100 (A) 33-63 (D) ±10
Cured Density (gm/cc)	2.3 ±10%
Thermal Conductivity	25 Btu-in/hr-ft ² -°F ±10% 3.6 W/m-°C ±10%
Linear Thermal Expansion Coeff. (ppm/°C)	120 ±15%
Maximum Continuous Operation Temp. (°C)	<150
Pot Life	>250,000 hr
Avg. Viscosity(0.5 rpm, 25°C) (Brookfield DV-1,spindle CP51)	250,000 cp ±20%
Thixotropic Index	>10

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CURE SCHEDULES:

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

** For higher temperature curing, above 125°C and/or bonding area of over 1cmx1cm, it is recommended that the dispensed adhesive be pre-baked, open-face without parts, at 60°C for 60 minutes or 80°C for 30 minutes, before parts are mounted and cured.

Caution: AlN under high humidity and temperature may cause corrosion to copper or other non-noble metal.

SHELF LIFE:

<u>Storage temperature</u>	<u>Shelf Life</u>
-40°C	1 yr
Pot Life	72 hrs @ 25°C