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PRIMA-BOND
ME7158

**Stress-Free, Very High
 Thermally Conductive
 Reworkable
 Epoxy Paste Adhesive**

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-power, large area die and components.

It can be readily reworked at 80-100°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 opening jar.
- (2) Dispense adhesive onto clean substrate.
- (3) Pre-bake dispensed adhesive at 60°C for 30 to 60 minutes to achieve optimum bonding. Pre-bake not needed in all applications.**
- (4) Cure according to one of the recommended schedules.

TYPICAL PROPERTIES*

Electrical Resistivity (150 °C/ 60 min)	>1x10 ¹⁴ ohm-cm
Dielectric Strength (Volts/mil)	750
Glass Transition Temp.(°C)	-25
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 (A)
Cured Density (gm/cc)	2.3
Thermal Conductivity	25 Btu-in/hr-ft ² -°F 3.6 W/m-°C
Linear Thermal Expansion Coeff. (ppm/°C)	120
Maximum Continuous Operation Temp. (°C)	150
Avg. Viscosity(0.5 rpm, 24°C) (Brookfield DV-1,spindle CP51)	250,000 cp

* 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>
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-faced without parts, at 60°C for 30 minutes, before parts are mounted and cured.

SHELF LIFE:

<u>Storage temperature</u>	<u>Shelf Life</u>
-40°C	1 yr
0°C	3 mo

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