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COOL-PAD
CP7138

Flexible From -55 to 150°C
"Phase-Change" Dry Pad
High Melt-flow >150°C
>1000 V Insulation @ 3 mil
UL 94V-0/ UL 746A Rated

IDEAL FOR:

- Thermal Grease Replacement
- Thermal Gasket Replacement
- Thermal Adhesive Interface
- BGA Die-Heatspreader Interface

DESCRIPTION:

CP7138 is an aluminum nitride crystallite filled, electrically insulating, medium bond strength thermal interface material. It is designed to enhance thermal transfer from power device to heat-sink. CP7138 has good melt-flow to form instant bond upon reaching high enough temperature. CP7138 is dry and handles well with automated excise-placement equipment and forms good bond with placement pressure similar to paste adhesives. UL 94V-0 / UL 746A Rated

AVAILABILITY:

CP7138 is available in sheet sizes, reel, and as custom preforms. Standard thicknesses are 0.003", 0.006", 0.020" and 0.040" (1.0 mm). Special thicknesses are available.

APPLICATION PROCEDURES:

- (1) Cut or pre-cut to desired size and shape.
- (2) Place COOL-PAD between device and heatspreader or heat-sink.
- (3) Place onto parts heated 150-175°C with 5-10 psi pressure.

TYPICAL PROPERTIES*

| | |
|---|--|
| Electrical Resistivity (25°C/ 1s is) | >1x10 ¹⁴ ohm-cm |
| Dielectric Strength (Volts/mil) | >550 |
| Glass Transition Temp.(°C) | -55 |
| Lap-Shear Strength | N/A |
| Device Push-off Strength | >700 psi >4.8 N/mm ² |
| Hardness (Type) | <60 (A) |
| Cured Density (gm/cc) | 2.5 |
| Thermal Conductivity | 28 Btu-in/hr-ft ² -°F 4.0 W/m-°C |
| Linear Thermal Expansion Coeff. (ppm/°C) | 110 |
| 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.

Melt/Flow Conditions

| Temperature | Time | Pressure |
|-------------|---------|----------|
| 150-175°C | 0.5 sec | 5-10 psi |

SHELF LIFE:

| Storage temperature | Shelf Life |
|---------------------|------------|
| 25°C | 1 yr |

CAUTION: This product may cause skin irritation. Avoid skin contact. If contact does occur, wash immediately with soap and water. Please refer to MSDS 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 A.I. Technology be liable for accidental, consequential or other damages arising from the use or handling of this product.

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