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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.

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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.

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.

Melt/Flow Conditions

<u>Temperature</u>	<u>Time</u>	<u>Pressure</u>
150-175°C	0.5 sec	5-10 psi

SHELF LIFE:

<u>Storage temperature</u>	<u>Shelf Life</u>
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.

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