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Flexible From -55 to 180°C

Compressible

Will Not Melt-flow <175°C

High thermal stability

IDEAL FOR:

- Thermal Grease Replacement
- Thermal Gasket Replacement

DESCRIPTION:

CP7178 is an aluminum nitride crystallite filled, electrically insulating, compressible thermal interface material. It is designed to enhance thermal transfer from power device to heat-sink. CP7178 is dry and handles well with automated excise-placement equipment and will not flow below 175°C. It is suitable for use as thermal gasket.

AVAILABILITY:

CP7178 is available in sheet sizes, reel, and as custom preforms. 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) Clamp with 10 psi for optimum conformance.

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.

COOL-PAD
CP7178

TYPICAL PROPERTIES*

Electrical Resistivity	>1X10 ¹⁴ ohm-cm
(25 °C/ As is)	
Dielectric Strength (Volts/mil)	>3000
Glass Transition Temp.(°C)	-55 ±10%
Lap-Shear Strength	N/A
Device Push-off Strength	N/A
Hardness (Type)	<60 (A)
Cured Density (gm/cc)	2.2 ±10%
Thermal Conductivity	>28 Btu-in/hr-ft ² -°F >4.0 W/m-°C
Linear Thermal Expansion	60 ±15%
Coeff. (ppm/°C)	
Maximum Continuous Operation Temp. (°C)	<180
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Melt/Flow Conditions

Temperature	Time	Pressure
>175°C (Nominal)	0.5 sec Bond Force)	>10 psi

CP7178 is thermally stable for use up to 180°C and beyond. For continuous usage from 180-220°C, AIT recommends testing for qualification before usage.

For the lowest thermal resistance, AIT recommends the use of COOL-GREASE ZXM on between CP7178 and the mating interfaces to eliminate any trapped air.

SHELF LIFE:

Storage temperature	Shelf Life
25°C	1 yr