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TIC 4000

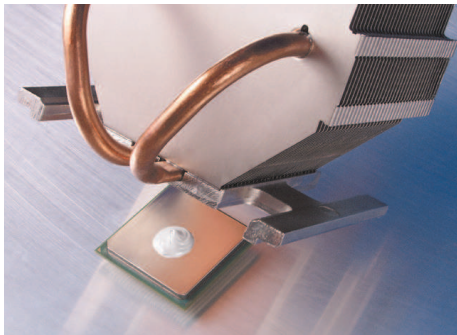
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PRODUCT DESCRIPTION

High Performance Thermal Interface Compound for Copper-Based Heat Sinks

FEATURES AND BENEFITS

- Thermal conductivity: 4.0 W/m-K
- Exceptional thermal performance: 0.19°C/W @ 50 psi



TIC™ 4000 is a thermally conductive grease compound designed for use as a thermal interface material between a computer processor and a copper-based heat sink. Other high watt density applications will benefit from the extremely low thermal impedance of TIC™ 4000.

The TIC™ 4000 compound wets-out the thermal interface surfaces and flows to produce low thermal impedance. The compound requires pressure of the assembly to cause flow. TIC™ 4000 compound will not drip.

For a typical 0.5" x 0.5" application at 0.005" thick, Bergquist estimates approximately 0.02 ml (cc) of TIC™ 4000.

Although Bergquist estimates a 0.02 ml (cc) volumetric requirement for a 0.5" x 0.5" component interface, dispensed at a thickness of 0.005", Bergquist also recognizes that an optimized application would utilize the minimum volume of TIC™ 4000 material necessary to ensure complete wet-out of both mechanical interfaces.

Note: To build a part number, visit our website at www.bergquistcompany.com.

TYPICAL PROPERTIES OF TIC 4000

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD			
Color	Gray	Gray	Visual			
Density (g/cc)	4.0	4.0	ASTM D792			
Continuous Use Temp (°F) / (°C)	302	150	—			
ELECTRICAL						
Electrical Resistivity (Ohm-meter) (1)	N/A	N/A	ASTM D257			
THERMAL						
Thermal Conductivity (W/m-K)	4.0	4.0	ASTM D5470			
THERMAL PERFORMANCE vs PRESSURE						
	Pressure (psi)	10	25	50	100	200
	TO-220 Thermal Performance (°C/W) (2)	0.21	0.20	0.19	0.19	0.18
1) The compound contains an electrically conductive filler surrounded by electrically non-conductive resin. 2) TO-220 performance data is provided as a reference to compare material thermal performance.						

Application Methods

1. Pre-clean heat sink and component interface with isopropyl alcohol prior to assembly or repair. Ensure heat sink is dry before applying TIC™ 4000.
2. Dispense TIC™ 4000 compound onto the processor or heat sink surface like thermal grease.
3. Assemble the processor and heat sink with clip or constant-pressure fasteners.

TYPICAL APPLICATIONS INCLUDE

- High performance computer processors (traditional screw fastening or clamping methods will provide adequate force to optimize the thermal performance of TIC™ 4000)
- High watt density applications where the lowest thermal resistance interface is required

Disclaimer

Note:

The information provided in this Technical Data Sheet (TDS) including the recommendations for use and application of the product are based on our knowledge and experience of the product as at the date of this TDS. The product can have a variety of different applications as well as differing application and working conditions in your environment that are beyond our control. Henkel is, therefore, not liable for the suitability of our product for the production processes and conditions in respect of which you use them, as well as the intended applications and results. We strongly recommend that you carry out your own prior trials to confirm such suitability of our product.

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