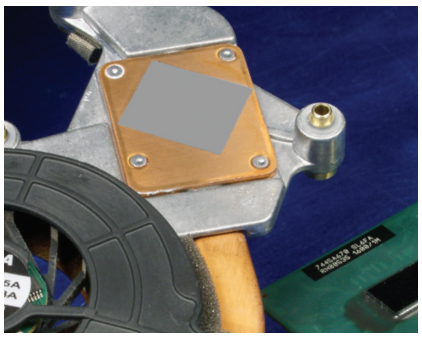
Hi-Flow® 565U

High Performance, Unreinforced Phase Change Thermal Interface Material

Features and Benefits

- Thermal impedance: 0.04°C-in²/W (@25 psi)
- Very high thermal conductivity: 3.5 W/m-K
- 52°C phase change temperature
- Unsupported



Hi-Flow 565U is a thermally conductive phase change material which is applied in tabulated pad form. In the application the easy to use material undergoes a phase change at 52°C. After phase change, Hi-Flow 565U wets out the thermal interfaces resulting in a very low thermal impedance.

Hi-Flow 565U displaces easily at low pressures to provide a thermal performance comparable to the best thermal greases. Hi-Flow 565U is provided at a consistent thickness to ensure reliable performance. Hi-Flow 565U is attached to the target surface via pressure from a hard rubber roller or squeegee.

TYPICAL PROPERTIES OF HI-FLOW 565U

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Gray	Gray	Visual
Reinforcement Carrier	None	None	—
Thickness (inch) / (mm)	0.005, 0.010	0.127, 0.254	ASTM D374
Continuous Use Temp (°F) / (°C)	257	125	—
Phase Change Temp (°F) / (°C)	126	52	ASTM D3418
ELECTRICAL			
Flame Rating	V-O	V-O	U.L. 94
THERMAL			
Thermal Conductivity (W/m-K) (1)	3.5	3.5	ASTM D5470
THERMAL PERFORMANCE vs PRESSURE			

Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	0.29	0.27	0.25	0.24	0.23
Thermal Impedance (°C-in²/W)(2)	0.05	0.04	0.04	0.04	0.03

1) This is the measured thermal conductivity of the Hi-Flow coating. It represents one conducting layer in a three-layer laminate. The Hi-Flow coatings are phase change compounds. These layers will respond to heat and pressure induced stresses. The overall conductivity of the material in post-phase change, thin film products is highly dependent upon the heat and pressure applied. This characteristic is not accounted for in ASTM D5470. Please contact Bergquist Product Management if additional specifications are required.
2) The ASTM D5470 test fixture was used and the test sample was conditioned at 70°C prior to test. The recorded value includes interfacial thermal resistance. These values are provided for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

Typical Applications Include:

- Processor lid to heat sink
- Processor die to lid or heat sink
- FBDIMM to heat spreader

Configurations Available:

- Tabulated in roll form, kiss-cut parts - no holes
- Hi-Flow 565U is typically provided as a square or rectangular part design.

Building a Part Number

HF565U – 0.005 – 00 – 00 – ACME10256 Rev a

- Section A: HF565U = Hi-Flow 565U Phase Change Material
- Section B: Standard Thickness Available = 0.005", 0.010"
- Section C: 00 = No adhesive
- Section D: _ _ _ = Standard configuration dash number, 11/100 = 11" x 100' rolls, or 00 = custom configuration
- Section E: NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

Standard Options

example

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

Hi-Flow®: U.S. Patent 6,197,859 and others

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