Hi-Flow® 225F-AC

Reinforced, Phase Change Thermal Interface Material

Features and Benefits

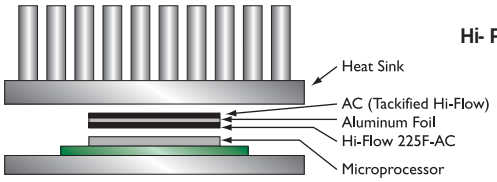
- Thermal impedance: 0.10°C-in²/W (@25 psi)
- Can be manually or automatically applied to the surfaces of room-temperature heat sinks
- Foil reinforced, adhesive-coated
- Soft, thermally conductive 55°C phase change compound

Hi-Flow 225F-AC is a high performance, thermal interface material for use between a computer processor and a heat sink. Hi-Flow 225F-AC consists of a soft, thermally conductive 55°C phase change compound coated to the top surface of an aluminum carrier with a soft, thermally conductive adhesive compound coated to the bottom surface to improve adhesion to the heat sink.

Above the 55°C phase change temperature, Hi-Flow 225F-AC wets-out the thermal interface surfaces and flows to produce low thermal impedance.

Hi-Flow 225F-AC requires pressure from the assembly to cause material flow. The Hi-Flow coatings resist dripping in vertical orientation.

The material includes a base carrier liner with differential release properties to facilitate simplicity in roll form packaging and application assembly. Please contact Bergquist Product Management for applications that are less than 0.07" square.



TYPICAL PROPERTIES OF HI-FLOW 225F-AC

PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD
Color	Black	Black	Visual
Reinforcement Carrier	Aluminum	Aluminum	—
Thickness (inch) / (mm)	0.004	0.102	ASTM D374
Carrier Thickness (inch) / (mm)	0.0015	0.038	ASTM D374
Continuous Use Temp (°F) / (°C)	248	120	—
Phase Change Temp (°F) / (°C)	131	55	ASTM D3418
ELECTRICAL			
Flame Rating	V-O	V-O	U.L. 94
THERMAL			
Thermal Conductivity (W/m-K) (1)	1.0	1.0	ASTM D5470

THERMAL PERFORMANCE vs PRESSURE					
Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance (°C/W)	0.87	0.68	0.57	0.50	0.45
Thermal Impedance (°C-in²/W) (2)	0.12	0.10	0.09	0.08	0.07

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:

- Computer and peripherals
- Power conversion
- High performance computer processors
- Power semiconductors
- Power modules

Configurations Available:

- Roll form, kiss-cut parts, and sheet form

Building a Part Number

HF225FAC – 0.004 – AC – 11/250 – NA

- Section A: HF225FAC = Hi-Flow 225F-AC Phase Change Material
- Section B: Standard thicknesses available: 0.004"
- Section C: AC = Adhesive, one side
- Section D: ____ = Standard configuration dash number, 1112 = 11" x 12" sheets, 11/250 = 11" x 250' 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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