

Unsupported, Thermally Conductive Phase Change Material

Features and Benefits

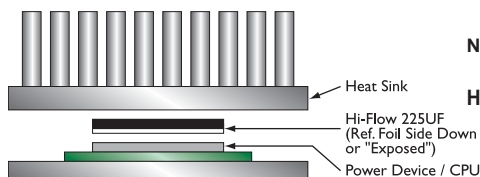
- Thermal impedance:
0.08°C-in²/W (@25 psi)
- Reworkable
- Easy release from CPU
- Easy to handle / assemble



Bergquist's reworkable Hi-Flow 225UF thermal interface material provides a low thermal resistance path between hot components such as high-performance processors and heat sinks.

Hi-Flow 225UF consists of a 55°C phase change compound bonded to one side of a conformable aluminum foil. This phase change material is easily applied to a nominal 45°C heat sink and securely conforms to many mounting surfaces. The compliant foil allows for easy release from the CPU/socket assembly, leaving the surface clean and residue-free. Hi-Flow 225UF is supplied in kiss-cut form with a carrier liner protecting the phase change material from contaminants.

Above the 55°C phase change temperature, Hi-Flow 225UF wets-out the heat sink interface and flows to produce exceptional thermal performance. Hi-Flow 225UF's thixotropic design requires pressure of the assembly to cause displacement and/or flow.



TYPICAL PROPERTIES OF HI-FLOW 225UF

PRO PERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD		
Color	Black	Black	Visual		
Reinforcement Carrier	Aluminum	Aluminum	—		
Thickness (inch) / (mm)	0.0045	0.114	ASTM D374		
Carrier Thickness (inch) / (mm)	0.001	0.025	ASTM D374		
Continuous Use Temp (°F) / (°C)	248	120	—		
Phase Change Temp (°F) / (°C)	131	55	ASTM D3418		
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)	0.70	0.58	0.52	0.43	0.37
Thermal Impedance (°C-in²/W) (2)	0.10	0.08	0.07	0.06	0.05

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.

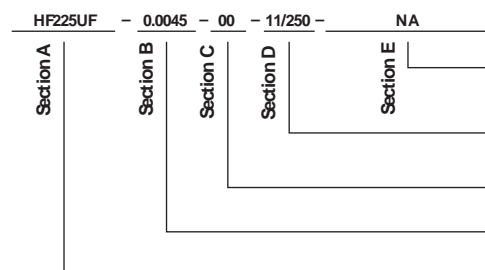
Typical Applications Include:

- Spring / clip mounted:
 - Digital / high power CPU's
 - Power modules

Configurations Available:

- Sheet form, kiss-cut or bulk
 - Preferred form: squares / rectangles
- Singulated die-cut parts
 - Preferred form: squares / rectangles
- Bulk roll form

Building a Part Number



◀ example

NA = Selected standard option. If not selecting a standard option, insert company name, drawing number, and revision level.

1112 = 11" x 12" sheets, 11/250 = 11" x 250' rolls, or 00 = custom configuration

00 = No adhesive

Standard thicknesses available: 0.0045"

HF225UF = Hi-Flow 225UF Phase Change Material

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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