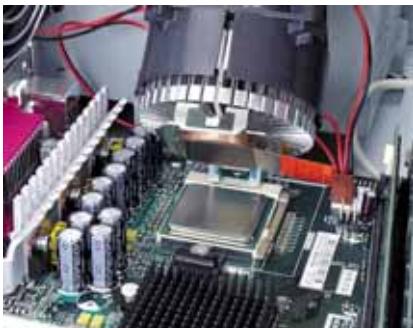


# Hi-Flow® 225U

## Non-Reinforced Phase Change Thermal Interface Material

### Features and Benefits

- Thermal impedance: 0.07°C-in²/W (@25 psi)
- Hi-Flow coating will resist dripping
- Thermally conductive 55°C phase change compound
- Available in roll form with kiss-cut parts



Hi-Flow 225U is designed for use as a thermal interface material between a CPU and a heat sink. The product consists of a thermally conductive 55°C phase change compound coated on a release liner and supplied on a carrier.

Above its phase change temperature, Hi-Flow 225U wets-out the thermal interface surfaces and flows to produce low thermal impedance. Hi-Flow 225U requires pressure of the assembly to cause flow.

### Application Methods:

1. Hand-apply to 35°- 45°C heat sink. The heat sink is heated in an oven or via heat gun to between 35°- 45°C. The Hi-Flow 225U part is then applied like an adhesive pad. The heat sink is cooled to room temperature and packaged. A protective tab liner remains in place until the unit is ready for final assembly. The protective tab can be readily removed from the applied Hi-Flow 225U pad at a maximum temperature of 28°C.

2. Automated equipment with 30-psi pressure. A pick-and-place automated dispensing unit can be used to apply the Hi-Flow 225U pad to a room-temperature heat sink. The placement head should have a silicone rubber pad, and should apply approximately 30-psi pressure to the pad on transfer to the 25° – 35°C heat sink. Once applied, the protective tab can be readily removed from the Hi-Flow 225U pad at a maximum temperature of 28°C.

TYPICAL PROPERTIES OF HI-FLOW 225U				
PROPERTY	IMPERIAL VALUE	METRIC VALUE	TEST METHOD	
Color	Black	Black	Visual	
Reinforcement Carrier	None	None	—	
Thickness (inch) / (mm)	0.0015	0.036	ASTM D374	
Continuous Use Temp (°F) / (°C)	302	150	—	
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
TO-220 Thermal Performance (°C/W)	0.53	0.47	0.39	0.34
Thermal Impedance (°C-in²/W) (2)	0.08	0.07	0.06	0.05
0.04				

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:

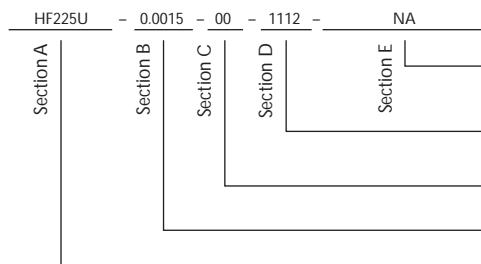
- Computer and peripherals
- High performance computer processors
- Graphic cards
- Power modules

### Configurations Available:

- Roll form with tabs and kiss-cut parts – no holes

Hi-Flow 225U is limited to a square or rectangular part design. Dimensional tolerance is +/- 0.020 inch (0.5mm).

### Building a Part Number



### Standard Options

#### ◀ example

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

— = Standard Hi-Flow 225U configuration, 11/500 = 11" x 500' rolls, or 00 = custom configuration

00 = No adhesive

Standard thicknesses available: 0.0015"

HF225U = Hi-Flow 225U Phase Change Material

Note: To build a part number, visit our website at [www.bergquistcompany.com](http://www.bergquistcompany.com).

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



[www.bergquistcompany.com](http://www.bergquistcompany.com)

The Bergquist Company -  
North American Headquarters  
18930 West 78th Street  
Chanhassen, MN 55317  
Phone: 800-347-4572  
Fax: 952-835-0430

The Bergquist Company - Europe  
Bramenbergs 9a, 3755 BT Eemnes  
Netherlands  
Phone: 31-35-5380684  
Fax: 31-35-5380295

The Bergquist Company - China  
Rm. 7C, Alie Mansion  
No. 629, Ling Ling Road  
Shanghai, China 200030  
Ph: 86-21-6464-2206  
Fax: 86-21-6464-2209

All statements, technical information and recommendations herein are based on tests we believe to be reliable, and THE FOLLOWING IS MADE IN LIEU OF ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MARKETABILITY AND FITNESS FOR PURPOSE. Sellers' and manufacturers' only obligation shall be to replace such quantity of the product proved to be defective. Before using, user shall determine the suitability of the product for its intended use, and the user assumes all risks and liability whatsoever in connection therewith. NEITHER SELLER NOR MANUFACTURER SHALL BE LIABLE EITHER IN TORT OR IN CONTRACT FOR ANY LOSS OR DAMAGE, DIRECT, INCIDENTAL, OR CONSEQUENTIAL, INCLUDING LOSS OF PROFITS OR REVENUE ARISING OUT OF THE USE OR THE INABILITY TO USE A PRODUCT. No statement, purchase order or recommendations by seller or purchaser not contained herein shall have any force or effect unless in an agreement signed by the officers of the seller and manufacturer.

PDS\_HF\_225U\_0307