

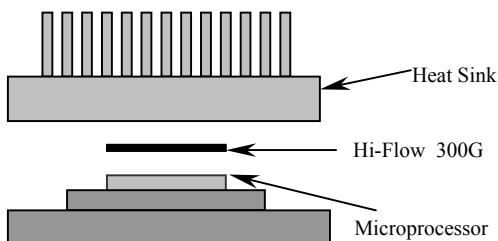
Hi-Flow™ 300G

Alpha

Fiberglass Reinforced, Phase Change Thermal Interface Material Thermal Interface Material for High Performance Computer Processors

Hi-Flow 300G is a thermally conductive phase change material. The product consists of a thermally conductive 55 °C phase change compound coated on a fiberglass web. The inherent offset created by the fiberglass substrate provides a low voltage dielectric, and it is anticipated for use in secondary power applications as well as between a computer processor and a heat sink.

Above the phase change temperature, Hi-Flow 300G wets out the thermal interface surfaces and flows to produce the lowest thermal impedance. Hi-Flow 300G requires pressure of the assembly to cause flow.



Bergquist suggests the use of spring clips to assure constant pressure on the interface. The spring pressure that will deliver the optimum thermal performance is 50 psi as shown by the Table #1.

Configurations

Available:

- Roll form
- Sheet form
- Die-Cut parts

We produce thousands of specials. Tooling charges vary depending on tolerances and complexity of the part.

Typical Properties of Hi-Flow 300G

Physical Property	Typical Value	Test Method			
Color	Green	Visual			
Thickness	0.0045"	ASTM D374			
Reinforcement Carrier	Fiberglass	***			
Phase Change Temperature	55 °C	DSC			
Continuous use Temp.	120 °C	***			
Electrical					
Dielectric Constant, 100HZ	3.5	ASTM D150			
Volume Resistivity, Ohm-meter	> 10 ⁸	ASTM D257			
Flame Rating	TBD	U.L.			
Thermal					
Thermal Conductivity (2)	1.6 W/m-K	ASTM D5470			
Pressure (psi)	10	25	50	100	200
TO-220 Thermal Performance, °C/W	0.97	0.93	0.90	0.86	0.83

1). The ASTM D5470 (Bergquist Corrected) test fixture was used and the test sample was conditioned at 60 °C prior to test. The recorded value includes interfacial thermal resistance. These values are given to the customer for reference only. Actual application performance is directly related to the surface roughness, flatness and pressure applied.

2). This is the measured thermal conductivity of the High Flow coating. It represents one conducting layer in a three-layer laminate. The High 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 are 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.

Application Methods:

Hand-apply to 40-50 °C heat sink. The heat sink is heated in oven or heat gun to between 40-50 °C, and then the Hi-Flow 300G pad is applied like an adhesive pad. The heat sink is cooled to room temperature and packaged.

Hand-apply to 20-35 °C heat sink. Hi-Flow 300G can be applied to a room temperature heat sink with the assistance of a foam roller. The pad is positioned onto the heat sink and a hand roller is used to apply pressure of 30 psi.

Automated equipment with 30 psi pressure. A pick and place automated dispensing unit can be used to apply Hi-Flow 300G to a room temperature heat sink. The placement head should have a soft silicone rubber pad, and apply 30 psi pressure to the pad on transfer to the 20-35 °C heat sink.

Revision: 11 5 03



Henkel Bergquist Preferred Converter

10135 Gottschalk Parkway
Chagrin Falls, Ohio 44023
sales@rico-inc.com
+1 440-543-9209

RICO PRODUCTS INC.

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.