# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

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Hi-Flow<sup>®</sup> II5-AC

#### **Features and Benefits**

- Thermal impedance: 0.37°C-in<sup>2</sup>/W (@25 psi)
- Can be applied directly to a cold heat sink
- One side adhesive-coated to aid in positioning
- Fiberglass reinforced



Bergquist Hi-Flow 115-AC is a thermally conductive fiber reinforced phase change material. The product consists of a thermally conductive 65°C phase change compound coated on a fiberglass web, and an adhesive coating on one side for attachment to a cold heat sink. There is no need to preheat the heat sink to apply the Hi-Flow 115-AC.

Hi-Flow 115-AC is designed as a thermal interface material between a computer processor and a heat sink. The pressure sensitive adhesive makes it simple to apply in high volume to heat sinks and the 65°C phase change temperature eliminates shipping and handling problems.

Hi-Flow 115-AC requires no protective liner for shipping or handling. The Hi-Flow coating has excellent handling characteristics at room temperature, and can withstand the handling and shipping process without protection.

Hi-Flow 115-AC handles like a Sil Pad at room temperature and flows like high-quality grease at elevated temperatures.

| 5  |                |      |                  |      |             |      |
|--|----------------|------|------------------|------|-------------|------|
| TYPICAL PROPERTIES OF HI-FLOW 115-AC   |                |      |                  |      |             |      |
| PROPERTY   | IMPERIAL VALUE |      | METRIC VALUE     |      | TEST METHOD |      |
| Color  | Gray           |      | Gray             |      | Visual      |      |
| Reinforcement Carrier  | Fiberglass     |      | Fiberglass       |      | _           |      |
| Thickness (inch) / (mm)  | 0.0055         |      | 0.139            |      | ASTM D374   |      |
| Elongation (%45° to Warp and Fill)   | 40             |      | 40               |      | ASTM D882A  |      |
| Tensile Strength (psi) / (MPa)   | 900            |      | 6                |      | ASTM D882A  |      |
| Continuous Use Temp (°F) / (°C)  | 302            |      | 150              |      |             |      |
| Phase Change Temp (°F) / (°C)  | 149            |      | 65               |      | ASTM D3418  |      |
| ELECTRICAL   |                |      |                  |      |             |      |
| Dielectric Breakdown Voltage (Vac)   | 300            |      | 300              |      | ASTM D149   |      |
| Dielectric Constant (1000 Hz)  | 3.5            |      | 3.5              |      | ASTM D150   |      |
| Volume Resistivity (Ohm-meter)   | 1010           |      | 10 <sup>10</sup> |      | ASTM D257   |      |
| Flame Rating   | V-O            |      | V-O              |      | U.L. 94     |      |
| THERMAL  |                |      |                  |      |             |      |
| Thermal Conductivity (W/m-K) (1)   | 0.8            |      | 0.8              |      | ASTM D5470  |      |
| THERMAL PERFORMANCE vs PRESSURE  |                |      |                  |      |             |      |
| Press  | sure (psi)     | 10   | 25               | 50   | 100         | 200  |
| TO-220 Thermal Performance (°C/W)  |                | 1.28 | 1.16             | 1.04 | 0.94        | 0.85 |
| Thermal Impedance (°C-in²/W) (2)   |                | 0.44 | 0.37             | 0.35 | 0.27        | 0.15 |
| I) This is the measured thermal conductivity of the Hi-Flow coating. It represents one conducting layer in a three-layer laminate. The |                |      |                  |      |             |      |

Fiberglass-Reinforced, Phase Change Thermal Interface Material

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 (Bergquist modified) 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
- As a thermal interface where bare die is exposed and needs to be heat sinked

#### **Configurations Available:**

- Sheet form, die-cut parts, and roll form
- With pressure sensitive adhesive

#### **Building a Part Number**



#### **Standard Options**

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

\_\_\_\_ = Standard configuration dash number, 1212 = 12" × 12" sheets, 12/250 = 12" × 250' rolls, or 00 = custom configuration

AC = Adhesive one side

Standard thicknesses available: 0.0055"

HF115AC = Hi-Flow 115-AC Phase Change Material

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

Hi- Flow<sup>®</sup>: U.S. Patents 6,197,859 and 5,950,066



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