Technical Data Sheet

BERGQUIST HI FLOW THF 700FT

Known as BERGQUIST HI-FLOW 225FT
April 2020

PRODUCT DESCRIPTION

Reworkable, Pressure Sensitive Phase Change Material.

Technology	Phase Change
Appearance	Black
Reinforcement Carrier	Aluminum
Total Thickness , ASTM D374	0.102 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature	120 °C

FEATURES AND BENEFITS

- Thermal impedance: 0.1ºC-in²/W @ 25 psi
- Reworkable pressure sensitive
- Tabbed parts for easy application
- Compliant foil allows easy release and rework

TYPICAL APPLICATIONS

- Computer and peripherals
- High performance computer processors
- Burn-in testing
- Heat pipes
- Mobile processors

Reworkable BERGQUIST HI FLOW THF 700FT thermal interface material provides a low thermal resistance path between hot components such as high performance processors and heat sinks. The material consists of a 55°C phase change compound bonded to one side of a conformable metal foil.

This pressure sensitive material is easily applied to the heat sink and securely conforms to many mounting surfaces. Its compliant foil allows for easy release and reworking without leaving residue on CPU surfaces.

Above the 55°C phase change temperature, BERGQUIST HI FLOW THF 700FT wets-out the heat sink interface and flows to produce exceptional thermal performance. The thixotropic design of BERGQUIST HI FLOW THF 700FT requires pressure of the assembly to cause displacement and/or flow.

TYPICAL PROPERTIES

Physical Properties

Phase Change Temperature, ASTM D3418, ºC	55
Flammability Rating, UL 94	V-0
Carrier Thickness, ASTM D374, mm	0.025

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K) (1)	0.7

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W:	
@ 10 psi	0.93
@ 25 psi	0.74
@ 50 psi	0.63
@ 100 psi	0.52
@ 200 psi	0.42
Thermal Impedance, ASTM D5470, ºC-in²/W (2):	
@ 10 psi	0.13
@ 25 psi	0.1
@ 50 psi	0.09
@ 100 psi	0.07
@ 200 psi	0.06

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.

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

DIRECTIONS FOR USE

Application Method:

BERGQUIST HI FLOW THF 700FT pads are easily removed from the carrier liner and can be hand-applied to a room temperature heat sink, foil-side exposed. To reposition the heat sink assembly, simply lift gently to remove and reapply.

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

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CONFIGURATIONS AVAILABLE

BERGQUIST HI FLOW THF 700FT is supplied in:

- Roll form with tabs, kiss-cut parts – no holes
- Custom thicknesses available upon request
- BERGQUIST HI FLOW THF 700FT is limited to a square or rectangular part design. Dimensional tolerance is +/- 0.020 inch (0.5mm)

Conversions

(°C x 1.8) + 32 = °F
kV/mm x 25.4 = V/mil
mm / 25.4 = inches
N x 0.225 = lb/F
N/mm x 5.71 = lb/in
psi x 145 = N/mm²
MPa = N/mm²
N·m x 8.851 = lb·in
N·m x 0.738 = lb·ft
N·mm x 0.142 = oz·in
mPa·s = cP

Disclaimer

Note:
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