Technical Data Sheet

BERGQUIST HI FLOW THF 700UT

Known as BERGQUIST HI-FLOW 225UT
April 2020

PRODUCT DESCRIPTION

Un-Reinforced, Pressure Sensitive Phase Change Thermal Interface Material.

Technology	Phase Change
Appearance	Black
Reinforcement Carrier	None
Total Thickness , ASTM D374	0.077 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature	120 °C

FEATURES AND BENEFITS

- Thermal impedance: 0.08ºC-in²/W @ 25 psi
- 55°C phase change composite with inherent tack characteristics
- High-visibility protective tabs
- Pressure sensitive phase change thermal interface material

TYPICAL APPLICATIONS

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

BERGQUIST HI FLOW THF 700UT is designed as a pressure sensitive thermal interface material for use between a high performance processor and a heat sink.

BERGQUIST HI FLOW THF 700UT is a thermally conductive 55°C phase change composite with inherent tack. The material is supplied on a polyester carrier liner and is available with high-visibility protective tabs.

Above its phase change temperature, BERGQUIST HI FLOW THF 700UT wets-out the thermal interface surfaces and flows to produce the lowest thermal impedance. The material requires pressure of the assembly to cause flow. BERGQUIST HI FLOW THF 700UT coatings will resist dripping.

TYPICAL PROPERTIES

Physical Properties

Phase Change Temperature, ASTM D3418, ºC	55
Flammability Rating, UL 94	V-0

Thermal Properties

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

Thermal Performance vs. Pressure

TO-220 Thermal Performance, ºC/W:	
@ 10 psi	0.6
@ 25 psi	0.53
@ 50 psi	0.46
@ 100 psi	0.4
@ 200 psi	0.35
Thermal Impedance, ASTM D5470, ºC-in²/W (2):	
@ 10 psi	0.09
@ 25 psi	0.08
@ 50 psi	0.07
@ 100 psi	0.06
@ 200 psi	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.

GENERAL INFORMATION

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

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.

APPLICATION METHODS

1. Hand-apply BERGQUIST HI FLOW THF 700UT to a room- temperature heat sink.
2. The BERGQUIST HI FLOW THF 700UT pad exhibits inherent tack and can be hand-applied similar to an adhesive pad.
3. The tab liner can remain on the heat sink and pad throughout shipping and handling until is it is ready for final assembly.

CONFIGURATIONS AVAILABLE

BERGQUIST HI FLOW THF 700UT is supplied in:

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

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

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