



BERGQUIST HI FLOW THF 3000UT

Known as BERGQUIST HI-FLOW 565UT
April 2020

PRODUCT DESCRIPTION

Tacky, High Performance, Un-Reinforced Phase Change TIM.

Technology	Phase Change
Appearance	Blue
Reinforcement Carrier	None
Total Thickness , ASTM D374	0.127 to 0.254mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature	125 °C

FEATURES AND BENEFITS

- Thermal impedance: 0.05°C-in²/W @ 25 psi
- High Thermal Conductivity: 3.0 W/m-K
- Phase change softening temp 52°C
- Naturally tacky
- Tabulated for ease of assembly

TYPICAL APPLICATIONS

- Processor lid to heat sink
- FBDIMM to heat spreader
- Processor die to lid or heat sink

BERGQUIST HI FLOW THF 3000UT is a naturally tacky, thermally conductive phase change material which is supplied in an easy to use tabulated pad form. In the application the material undergoes a phase change softening, starting near 52°C.

The phase change softening feature improves handling characteristics prior to a facilitated assembly. At application temperatures and pressures, BERGQUIST HI FLOW THF 3000UT wets out the thermal interfaces producing a very low thermal impedance.

The thermal performance of BERGQUIST HI FLOW THF 3000UT is comparable to the best thermal greases. BERGQUIST HI FLOW THF 3000UT is provided at a consistent thickness to ensure reliable performance. BERGQUIST HI FLOW THF 3000UT can be applied in high volumes to the target surface via low pressure from a roller or manual application.

TYPICAL PROPERTIES

Physical Properties

Phase Change Temperature, ASTM D3418, °C	52
Flammability Rating, UL 94	V-0

Thermal Properties

Thermal Conductivity , ASTM D5470, W/(m-K) ⁽¹⁾ 3.0

Thermal Performance vs. Pressure

TO-220 Thermal Performance, °C/W:

@ 10 psi	0.37
@ 25 psi	0.35
@ 50 psi	0.34
@ 100 psi	0.3
@ 200 psi	0.26

Thermal Impedance, ASTM D5470, °C-in²/W ⁽²⁾:

@ 10 psi	0.09
@ 25 psi	0.05
@ 50 psi	0.03
@ 100 psi	0.02
@ 200 psi	0.02

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.

CONFIGURATIONS AVAILABLE

BERGQUIST HI FLOW THF 3000UT is supplied in:

- Tabulated in roll form, kiss-cut parts – no holes
- BERGQUIST HI FLOW THF 3000UT is limited to a square or rectangular part design. Dimensional tolerance is +/- 0.020 inch (0.5mm)



Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb/F}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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