Technical Data Sheet

BERGQUIST HI FLOW THF 900

Known as BERGQUIST HI-FLOW 105
April 2020

PRODUCT DESCRIPTION

Phase Change Coated Aluminum.

Technology	Phase Change
Appearance	Dark gray
Reinforcement Carrier	Aluminum
Total Thickness , ASTM D374	0.139 mm
Application	Thermal management, Thermally conductive adhesive
Operating Temperature	130 °C

FEATURES AND BENEFITS

- Thermal impedance: 0.37ºC-in²/W @ 25 psi
- Used where electrical isolation is not required
- Low volatility – less than 1%
- Easy to handle in the manufacturing environment
- Flows but doesn't run like grease

TYPICAL APPLICATIONS

- Power semiconductors
- Microprocessors mounted on a heat sink
- Power conversion modules
- Spring or clip mount applications where thermal grease is used

BERGQUIST HI FLOW THF 900 is a phase change material coated on both sides of an aluminum substrate. It is designed specifically to replace grease as a thermal interface, eliminating the mess, contamination and difficult handling associated with grease.

BERGQUIST HI FLOW THF 900 is tack-free and scratch resistant at room temperature and does not require a protective liner in shipment when attached to a heat sink.

At 65°C (phase change temperature), BERGQUIST HI FLOW THF 900 changes from a solid and flows, thereby assuring total wet-out of the interface. The thixotropic characteristics of BERGQUIST HI FLOW THF 900 reduce the pump-out from the interface.

BERGQUIST HI FLOW THF 900 has thermal performance equal to grease with 0.10°C-in2/W contact thermal resistance.

TYPICAL PROPERTIES

Physical Properties	
Phase Change Temperature, ASTM D3418, ºC	65
Flammability Rating, UL 94	V-0
Electrical Properties	
Dielectric Constant , ASTM D150 @ 1,000 Hz	3.2
Thermal Properties	
Thermal Conductivity , ASTM D5470, W/(m-K) (1)	0.7
Thermal Performance vs. Pressure	
TO-220 Thermal Performance, ºC/W:	
@ 10 psi	0.95
@ 25 psi	0.8
@ 50 psi	0.74
@ 100 psi	0.69
@ 200 psi	0.64
Thermal Impedance, ASTM D5470, ºC-in²/W (2):	
@ 10 psi	0.39
@ 25 psi	0.37
@ 50 psi	0.36
@ 100 psi	0.33
@ 200 psi	0.3

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 900 is supplied in:

- Sheet form, roll form and die-cut parts
- With or without pressure-sensitive adhesive

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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