TECHNICAL DATASHEET:
BERGQUIST GAP PAD TGP 6000ULM

PRODUCT DESCRIPTION

Highly conformable gap pad with exceptional thermal performance. BERGQUIST GAP PAD TGP 6000ULM is an extremely soft gap filling material rated at a thermal conductivity of 6.0 W/m·K. It is specially formulated for high-performance applications requiring low assembly stress, and offers exceptional thermal performance at low pressures due to its unique filler package and ultra-low modulus resin formulation. The material is highly conformal, even to surfaces with high roughness and/or topography, allowing for excellent interfacing and wet-out characteristics. It is offered with a higher natural inherent tack on both sides, eliminating the need for thermally impeding adhesive layers and allowing for stick-in-place characteristics during assembly; the top side has minimal tack for ease of handling and rework. Supplied with protective liners on both sides.

TYPICAL APPLICATIONS

- Telecommunications
- ASICs and DSPs
- Consumer electronics
- Thermal modules to heat sink assembly

PRODUCT FEATURES & BENEFITS

- Thermal conductivity: 6.0 W/m·K
- High compliance, low compression stress
- Ultra-low modulus (41.3 kPa)
- Higher natural tack on both sides; top side minimal tack for handling and rework
- UL 94 V-0 flammability rating
- Protective liners on both sides

PRODUCT SPECIFICATIONS

Technology	Silicone
Appearance	Gray
Reinforcement Carrier	Fiberglass
Interface Tack	2 sides
Thickness	1.016 to 3.175 mm
Application	Thermal Management / TIM (Thermal Interface Material)
Operating Temperature Range	-60 to 200°C
UL Flammability Rating	UL 94 V-0
Configurations Available	Sheet size 8" x 16"; standard thicknesses 0.040", 0.060", 0.080", 0.100", 0.125"
Shelf Life (Optimal Storage)	6 months at 25°C (±3), 50% RH (±10)

Specifications are believed to be accurate at the time of publication and are subject to change without notice. It is the responsibility of the end-user to test and determine suitability of this material for a particular application. H-O will provide samples for this purpose at no charge. **REV. 0**

TYPICAL PROPERTIES OF CURED MATERIAL

Young's modulus is calculated using a 0.01 in/min step rate of strain with a sample size of 0.79 in², after 5 minutes of compression at 10% strain on 1 mm thick material.

TECHNICAL DATA	VALUE	UNIT	TEST METHOD / STANDARD
Physical Properties			
Hardness, Shore 000	60	—	ASTM D2240
Heat Capacity	1.0	J/g·K	ASTM E1269
Density (bulk rubber)	3.2	g/cc	ASTM D792
Young's Modulus (10% strain, 1 mm, 0.01 in/min)	41.3 (6)	kPa (psi)	—
Flammability Rating @ 0.76 mm, 3.0 mm, 4.7 mm	V-0	—	IEC 60695-11-10 / UL 94
Electrical Properties			
Dielectric Strength	>5,000	VAC	ASTM D149
Dielectric Constant @ 1,000 Hz	6.5	—	ASTM D150
Volume Resistivity	1×10^{10}	ohm·meter	ASTM D257
Thermal Properties			
Thermal Conductivity	6.0	W/(m·K)	ASTM D5470
Thermal Impedance @ 0.040 in, 10% Deflection	0.34	°C·in²/W	ASTM D5470
Thermal Impedance @ 0.040 in, 20% Deflection	0.29	°C·in²/W	ASTM D5470
Thermal Impedance @ 0.040 in, 30% Deflection	0.26	°C·in²/W	ASTM D5470

STORAGE

Store product in an unopened container in a dry location. Optimal storage: 25°C (±3), 50% RH (±10) for a 6-month shelf life. Material removed from containers may be contaminated during use; do not return product to the original container.

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