# TECHNICAL DATASHEET:
# BERGQUIST GAP PAD TGP 3000ULM

## PRODUCT DESCRIPTION

A 3.0 W/m·K, extremely soft Gap Pad with exceptional thermal performance at low pressures. BERGQUIST GAP PAD TGP 3000ULM is a soft gap filling material rated at a thermal conductivity of 3.0 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 to rough or irregular surfaces, allowing excellent wet-out at the interface. Protective liners are supplied on both sides for ease of use, and the top side has minimal tack for ease of handling. A non-fiberglass option is available for applications that require an additional reduction in stress.

## TYPICAL APPLICATIONS

- Telecommunications (routers, switches, base stations)
- Optical transceivers
- ASICs and DSPs

## PRODUCT FEATURES & BENEFITS

- Thermal conductivity: 3.0 W/m·K
- High compliance, low compression stress
- Ultra-low modulus (105 kPa)
- Non-fiberglass option for an additional reduction in stress
- Top side minimal tack for ease of handling
- UL 94 V-0 flammability rating

## PRODUCT SPECIFICATIONS

| | |
|---|---|
| **Technology** | Silicone |
| **Appearance** | Blue |
| **Reinforcement Carrier** | Fiberglass (non-fiberglass option available) |
| **Inherent Surface Tack** | 2 sided |
| **Application** | Thermal Management / Gap Pad |
| **Operating Temperature Range** | -60 to 200°C |
| **Configurations Available** | Sheet size 8" x 16"; standard thicknesses 0.040, 0.060, 0.080, 0.100, 0.125, 0.160 in (1.0, 1.5, 2.0, 2.5, 3.18, 4.0 mm) |
| **Shelf Life (Optimal Storage)** | 365 days 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

| TECHNICAL DATA | VALUE | UNIT | TEST METHOD / STANDARD |
|---|---|---|---|
| **Physical Properties** | | | |
| **Hardness, Shore 00** | 20 | — | ASTM D2240 |
| **Density** | 2.9 | g/cc | ASTM D792 |
| **Inherent Surface Tack** | 2 sided | — | — |
| **Heat Capacity** | 0.8 | J/g·K | ASTM E1269 |
| **Young's Modulus** | 105 | kPa | — |
| **Shelf Life** | 365 | days | — |
| **Flammability** | V-0 | — | UL 94 |
| **Electrical Properties** | | | |
| **Volume Resistivity** | $1\times10^{12}$ | ohm·meter | ASTM D257 |
| **Dielectric Constant @ 1,000 Hz** | 9.2 | — | ASTM D150 |
| **Dielectric Breakdown Voltage (0.04 in sample)** | >6,000 | VAC | — |
| **Thermal Properties** | | | |
| **Thermal Conductivity** | 3.0 | W/(m·K) | ASTM D5470 |
| **Thermal Impedance @ 10% Deflection** | 0.55 | °C·in²/W | ASTM D5470 |
| **Thermal Impedance @ 20% Deflection** | 0.49 | °C·in²/W | ASTM D5470 |
| **Thermal Impedance @ 30% Deflection** | 0.43 | °C·in²/W | ASTM D5470 |

## STORAGE

Store product in the unopened container in a dry location. Optimal storage: 25°C (±3), 50% RH (±10) for a 365-day shelf life. Material removed from containers may be contaminated during use; do not return product to the original container.

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**