

# THERMAL TRANSFER MATERIALS

## Thermally Conductive Insulators and Gap Filling Media



ORION professionals are dedicated to the design and production of thermal transfer products that perform. ORION is an authorized fabricator for Bergquist thermal transfer materials. The Bergquist Company produces a wide variety of transfer material for grease replacement, gap filling, and thermally conductive insulators. If you have a thermal transfer application, ORION will provide you with the highest quality, most cost effective solution.

### Thermally Conductive Insulators

We are specialists in selecting the most appropriate material for applications. Design considerations typically include:

- Electrical properties
- Thermal performance
- Ease of fabrication and manufacturing tolerances
- Adhesive coating
- Puncture resistance

Sil-Pad® Materials commonly selected:

- Sil-Pad 400 (0.007" thk)
- Sil-Pad 2000 (0.010 - 0.060" thk)
- Sil-Pad K-10 (0.006" thk)



### Q-Pad® Materials

In some cases, a thermal transfer material does not need to be an electrical insulator. Here, Q-Pad II, and Q-Pad 3 grease replacements excel. Both are high performance materials with thermal resistances much lower than Sil-Pad. Q-Pad II uses an aluminum substrate for maximum thermal conductivity. Q-Pad 3 is a graphite imbedded polymer matrix, with fiberglass reinforcement to help it maintain its integrity.

### Gap Pad® Materials

Gap Pad is a thermally conductive material that acts as a thermal interface between a heat sink and an electronic device. The conformable nature of Gap Pad allows the pad to fill-in air gaps between PC boards and heat sinks or a metal chassis.

Gap Pad is available in a variety of styles with various levels of softness and in thicknesses ranging from 0.020" to 0.200"

GAP PADS		
Material	Thickness Range	Thermal Conductivity
Gap Pad V0 Soft	0.020" - 0.20" thk	0.8W/m-K
Gap Pad V0 Ultra Soft	0.020" - 0.20" thk	0.8W/m-K
Gap Pad 1500	0.020" - 0.16" thk	1.5W/m-K
Gap Pad 2000	0.020" - 0.20" thk	2.0W/m-K
Gap Pad 3000	0.020" - 0.20" thk	3.0W/m-K

Sil-Pad	Construction	Thermal Conductivity W/m-K
Sil-Pad 400	Silicone/Fiberglass	0.9 @ 0.007" thk
Sil-Pad 1000	Silicone/Fiberglass	1.2 @ 0.009" thk
Sil-Pad 2000	Silicone/Fiberglass	3.5 @ 0.015" thk
Sil-Pad K-4	Silicone/Film	0.9 @ 0.006" thk
Sil-Pad K-6	Silicone/Film	1.1 @ 0.006" thk
Sil-Pad K-10	Silicone/Film	1.3 @ 0.006" thk

Q-Pad	Construction	Thermal Conductivity W/m-K
Q-Pad II	Silicone/ Aluminum	2.5 @ 0.006" thk
Q-Pad 3	Silicone/ Fiberglass	2.0 @ 0.005" thk

### DIE CUT PARTS

ORION is an authorized distributor for Bergquist products. We supply a full line of standard die-cut thermal insulators from any Sil-Pad or Q-Pad material. Contact ORION for a full catalog of standard configurations.

Thickness ranges from 0.005" to 0.200"  
All materials available with pressure sensitive adhesive