

# SILTEL SG-TC1.2

## Thermally Conductive Gap Filler Pad

Thermal Conductivity: 1.2 W/m-K

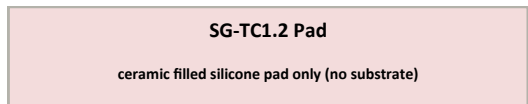
SILTEL SG-TC1.2 is an *ultrasoft* electrically insulating thermally conductive silicone gap filler material ideal for use in applications where thermal transfer over large gaps (large tolerances) or different stack ups must be achieved. Due to the specific formulation and ceramic particle filler, SG-TC1.2 demonstrates reliable thermal conductivity through its ultrasoft compliant features and overall elastomer design.

Through SG-TC1.2's softness, the pad perfectly mates to irregular surfaces thus filling gaps and operates at low pressure offering low thermal resistance. The natural tackiness of the material allows for an easy and reliable pre-assembly.

- Ultrasoft and Compliant Pad Design
- Operates at Low Pressure
- Low Cost Gap Pad Filling Solution
- Shock Absorbing
- Excellent Chemical Resistance and Stability
- Natural low tack surface

### Standard SILTEL SG-TC1.2 Cross Section

Standard is Natural Tack Both Sides



### Typical Applications

- SMD Packages
- Through-hole Vias
- RDRAMs Memory Modules
- Capacitors
- Interfaces with Large Gaps / Tolerances
- Electronics to Heat Pipe Assemblies

### Standard Thickness Options

SG.50-TC1.2.....	0.020" (0.50mm)
SG1.0-TC1.2.....	0.039" (1.00mm)
SG2.0-TC1.2.....	0.078" (2.00mm)
SG3.0-TC1.2.....	0.118" (3.00mm)

Additional 0.158" (4mm) and 0.197" (5mm) thicknesses available

### SG-TC1.2 General Properties

Thermal Conductivity.....	1.2 W/m-K
Color.....	Pink
Hardness.....	15 (Shore 00)
Dielectric Strength.....	> 6.5 kV/mm
Volume Resistivity.....	$1.0 \times 10^{12}$
Operating Temperature.....	-40°C to 150°C

### 0.020" / 0.50mm Thermal Resistance

Thermal Impedance @ 7 PSI.....	0.480 °C in <sup>2</sup> / Watt
Thermal Impedance @ 15 PSI.....	0.390 °C in <sup>2</sup> / Watt
Thermal Impedance @ 35 PSI.....	0.310 °C in <sup>2</sup> / Watt

### 0.039" / 1.00mm Thermal Resistance

Thermal Impedance @ 7 PSI.....	1.030 °C in <sup>2</sup> / Watt
Thermal Impedance @ 15 PSI.....	0.900 °C in <sup>2</sup> / Watt
Thermal Impedance @ 35 PSI.....	0.750 °C in <sup>2</sup> / Watt

### 0.078" / 2.00mm Thermal Resistance

Thermal Impedance @ 7 PSI.....	2.070 °C in <sup>2</sup> / Watt
Thermal Impedance @ 15 PSI.....	1.810 °C in <sup>2</sup> / Watt
Thermal Impedance @ 35 PSI.....	1.200 °C in <sup>2</sup> / Watt

### 0.118" / 3.00mm Thermal Resistance

Thermal Impedance @ 7 PSI.....	2.800 °C in <sup>2</sup> / Watt
Thermal Impedance @ 15 PSI.....	2.540 °C in <sup>2</sup> / Watt
Thermal Impedance @ 35 PSI.....	1.950 °C in <sup>2</sup> / Watt

Characteristic	SILTEL SG-TC1.2
Base Material	Ceramic Filled Silicone
Substrate	NONE
Color	Pink
Available Formats	Sheets or Cut Pads
Standard Sheet Sizes	7.87" x 15.75" (200mm x 400mm)
Optional Adhesive	Yes (A1 PSA laminated 1 side)
TIMTEL Cutting Capabilities	Plotter Cut for Gap Filler Pads
TIMTEL Die Cut Delivery Formats	Individuals or Multiples per Master Sheet
TIMTEL Die Cut Dimensional Tolerances	0.010"(0.25mm) to 0.020"(0.51mm) (depending on thickness)
Storage	Cool, dry location at or below 80F/ 27C
Shelf Life	2 years from date of manufacture

Thermal material evaluation is always critical when designing in a new material or developing a new product. These sheet samples of SILTEL are intended to determine the optimal SILTEL thickness as well as overall material construction and performance best suited within the scope of your application requirements.

Please contact us for more information on how to order specific sizes and shapes for your final design requirements.

**TIMTEL**  
Thermal Management Materials

Supplied By:

**PowerComp**®