

# SILTEL SG-TC11.0S

**Thermally Conductive Putty Type Filler**  
Thermal Conductivity: 11.0 W/m-K

SILTEL SG-TC11.0S is an electrically insulating thermally conductive silicone putty type film ideal for use in electronic assembly applications where thermal transfer over large gaps (large tolerances) or different component stack ups must be achieved. Due to the specific formulation and ceramic particle filler, SG-TC11.0S demonstrates very high thermal conductivity through it's ultra-high compliance over a range of mounting pressures.

SG-TC11.0S perfectly mates to irregular surfaces thus filling gaps and is able to achieve low thermal resistance at low pressures. SG-TC11.0s is available with standard natural light tack both sides (standard) and demonstrates excellent long-term stability packaged with chemical resistance.

SILTEL SG-TC11.0S is available in sheets or TIMTEL cut parts to match a wide range of industry standard or customer defined outlines.

- High thermal conductivity of 11 W/m-K
- Extremely soft thermal pad
- Excellent chemical resistance and stability
- Operates at very low pressure
- Manage minimum gaps
- Natural light tack both sides (standard)

### Standard SILTEL SG-TC11.0S Cross Section



SG-TC11.0S: Standard 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

SG1.5-TC11.0S.....0.059" (1.00mm)  
SG2.0-TC11.0S.....0.078" (2.00mm)

### SG-TC11.0S General Properties

Thermal Conductivity.....11.0 W/m-K  
Color..... Light Gray  
Hardness.....See note 1  
Dielectric Strength.....11 kV/mm  
Dielectric Constant.....7.5 @ 1 MHz  
Volume Resistivity.....7 x 10<sup>7</sup> ohm-cm  
Operating Temperature.....-50°C to 180°C

Note 1: Due to putty type formulation design and ability to be compressed to low thickness Shore 00 value not available. Material will remain in its thin state even after pressure is removed.

### 0.059" / 1.50mm - Thermal Resistance

Therma Impedance @ 0.80mm.....0.140 °C in<sup>2</sup> / Watt

Thermal Impedance @ 0.50mm.....0.100 °C in<sup>2</sup> / Watt

Thermal Impedance @ 0.20mm.....0.060 °C in<sup>2</sup> / Watt

### 0.078" / 2.00mm - Thermal Resistance

Therma Impedance @ 1.50mm.....0.240 °C in<sup>2</sup> / Watt

Thermal Impedance @ 0.80mm.....0.140 °C in<sup>2</sup> / Watt

Thermal Impedance @ 0.50mm.....0.100 °C in<sup>2</sup> / Watt

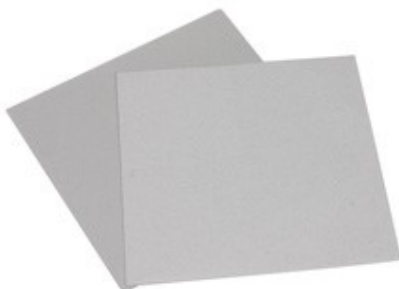
Thermal Impedance @ 0.20mm.....0.060 °C in<sup>2</sup> / Watt

Characteristic	SILTEL SG-TC11.0S
Base Material	Ceramic Filled Silicone
Substrate	NONE
Color	Light Gray
Available Formats	Sheets or Cut Pads
Standard Sheet Sizes	7.75" x 11.80"
TIMTEL Cutting Capabilities	Razor Plotter Cut for Gap Filler Pads
TIMTEL Die Cut Delivery Formats	Individual pads with release tabs or multiple pads 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. Sheet samples of SILTEL are available for preliminary testing to determine the optimal SILTEL thickness as well as overall material construction best suited within the scope of your application requirements.

**Want to test samples per your required die cut part?** Our razor plotter sampling machine allows us to provide customers SILTEL material already cut to their required outline for testing. Plotter formed samples provide our customers the ability to test not only the SILTEL material itself, but their required outline as well without incurring the expense of production tooling.

Contact TIMTEL to request sample sheets or plotter formed samples for testing.



**TIMTEL**  
Thermal Management Materials

**STREUTER**