

# SILTEL SP Series

## Polyimide Supported Thermally Conductive Silicone Film

0.0043" (0.11mm) or 0.006" (0.15mm)

SILTEL SP is an electrically insulating thermally conductive film consisting of a high voltage resistant polyimide film support coated on both sides with a thermally conductive silicone coating optimizing heat transfer between electronic packages and heat sinks. Excellent thermal performance is reached through the design of the specifically formulated ceramic filled silicone coating. When subjected under pressure, low thermal impedance is reached packaged with reliable dielectric strength.

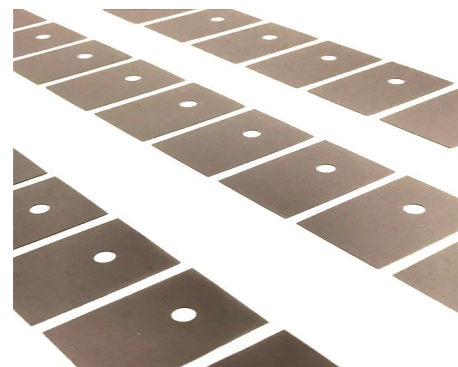
The polyimide substrate allows SILTEL SP to maintain its mechanical stability and good cut thru resistance. With the ability to apply optional pressure sensitive adhesive to one or both sides of the SILTEL film for assembly allows SILTEL SP to be a cost-effective thermal interface material solution for a wide range of electronic assembly applications.

SILTEL SP is available in log rolls, slit rolls of TIMTEL die cuts to match a variety of industry standard outlines or customer defined outlines.

- Excellent Thermal Contact
- High and Reliable Dielectric Strength
- Polyimide Support—Excellent Handling
- Offers High Mechanical Stability
- Optional Adhesive (single or both sides)
- Sheets or TIMTEL Cut Parts (Standard or Custom)

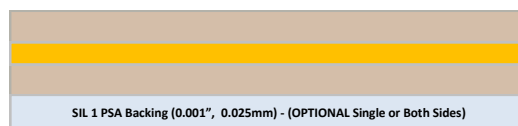
### Typical Applications

- MOSFET or IGBT's
- Power Diodes or AC/DC Converters
- Power Modules
- Motor or Power Control Units
- Automotive Engine Management
- UPS Systems / Solar Systems



Standard SILTEL SP Cross Section

Optional SIL1 Pressure Sensitive Adhesive



Reference FastelTack SIL data sheet for PSA technical information

### SILTEL SP General Properties

Color..... Brown / Orange Tint

Operating Temperature.....-65°C to 180°C

### Standard Thickness Options

SP.11.....0.0043" (0.110mm)

SP.11-SIL1.....0.0053" (0.135mm) - single side

SP.11-SIL1DC.....0.0063" (0.160mm) - double side

SP.15.....0.0060" (0.150mm)

**SP.15-SIL1.....0.0070" (0.177mm) - single side**

SP.15-SIL1DC.....0.0080" (0.200mm) - double side

SIL1 = 0.001"/0.025mm silicone PSA—available single side or double side

### 0.0043" / 0.11mm Properties

Thermal Impedance @ 30 PSI.....0.550 °C in<sup>2</sup> / Watt

Thermal Impedance @ 150 PSI.....0.290 °C in<sup>2</sup> / Watt

Breakdown Voltage .....6.00 kV AC

### 0.006" / 0.15mm Properties

Thermal Impedance @ 30 PSI.....0.750 °C in<sup>2</sup> / Watt

Thermal Impedance @ 150 PSI.....0.400 °C in<sup>2</sup> / Watt

Breakdown Voltage .....>6.0 kV AC

Characteristic	SILTEL SP
Coating	Ceramic Filled Silicone
Substrate	Polyimide Film
Color	Gray / Orange Tint
Available Formats	Master Rolls / Slit Rolls / Die Cuts (pieces or reels)
Maximum Roll Width	12.60" (32.00cm) Standard
Slit Rolls	Customer Defined
Standard Sheet Sizes	18.00" x 12.60" (45.72cm x 32.00cm)
Custom Sheet Sizes	Yes, customer defined
TIMTEL Die Cutting Capabilities	Steel Rule Die / Flexible Die / Rotary Die / Laser Cutting
TIMTEL Die Cut Delivery Formats	Individuals, Multiples per Card or Continuous Reel
TIMTEL Die Cut Dimensional Tolerances	0.010"(0.25mm) to 0.020"(0.51mm) (determined at design review)
Storage (no SIL1 backing)	Cool, dry location at or below 95F / 35C
Storage (with SIL1 backing)	Cool, dry location at or below 80F/ 27C. Store away from UV
Shelf Life (no SIL1 backing)	Indefinite if stored per conditions above

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** Supplied By:

