

**Description:**

Protect 1500FG™ is a insulator sheet composed of cured silicone rubber with functional additives formulated to deliver exceptional thermal, physical, and electrical properties.

Developed specifically for LED and Power applications where long-term reliability is a top concern. Protect™ insulators resistant heat, humidity, and shock while conforming to surface topography to maximize contact area at low fastener pressures. Maximizing contact area facilitates even heat transfer to reduce hot spots. Protect™ insulators are electrically insulating to isolate your LED PCB or power transistor from the heat sink. Protect™ insulators are UL listed with a UL94 V-0 flame rating and a 150°C relative thermal index (RTI) for both mechanical and electrical. Additionally, Protect™ insulators are RoHS compliant and free of halogenated flame retardants.

**Benefits:**

- Use with mechanical fasteners; clips, springs, or screws.
- Softer and more compliant than competitive insulators— wets out at lower pressures.
- Improves consistency of thermal path to heat sink.
- Easy to handle and apply.

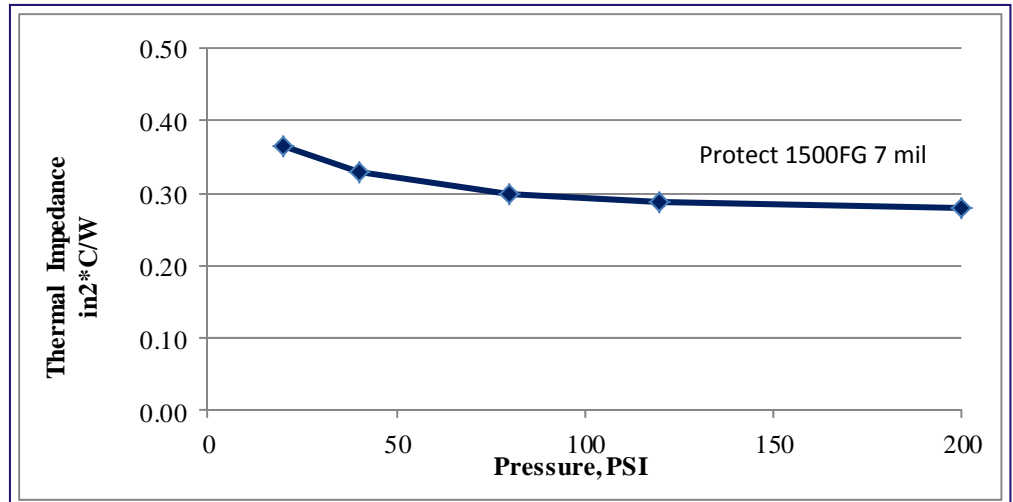
**Recommended Applications:**

- Thermally coupling power transistors to heat sinks.
- Thermally coupling LED light modules to heat sinks

**Standard Sizes:**

- 16 in. x 125 LY rolls
- Slit widths, cut pads, and die cuts
- Other sizes on request

Property	Typical Value		Test Method
	Imperial	Metric	
<b>Color</b>	Mauve or Gray		Visual
<b>Thickness</b>	7—20 mils	0.18—0.51 mm	ASTM D374
<b>Construction</b>	Supported		---
<b>Supporting Material</b>	Fiberglass		---
<b>Mechanical</b>			
<b>Hardness</b>	77 Shore A		ASTM D2240
<b>Tensile Strength</b>	850 PSI	5.9 MPa	ASTM D412
<b>Elongation, Machine Direction</b>	4%		ASTM D412
<b>Elongation, 45° Warp and Fill</b>	20%		ASTM D412
<b>Thermal</b>			
<b>Thermal Conductivity</b>	0.87 Btu/(hr*ft*F)	1.5 W/m-K	ASTM D5470
<b>Thermal Impedance @ 40 PSI</b>	0.3 in <sup>2</sup> *C/W	1.9e <sup>-4</sup> m <sup>2</sup> *K/W	ASTM D5470
<b>Glass Transition Temperature</b>	-180°F	-118°C	ASTM D3418
<b>Operating Range</b>	-150 to 400°F	-100 to 204°C	---
<b>Electrical</b>			
<b>Dielectric Strength, kVac</b>	> 500 V/mil	> 19 kV/mm	ASTM D149
<b>UL Certification (QMF22.E54153)</b>			
<b>Flammability Rating</b>	V-0		UL 94
<b>RTI, Mechanical</b>	300°F	150°C	UL 746
<b>RTI, Electrical</b>	300°F	150°C	UL 746
<b>Hot Wire Ignition (HWI)</b>	4 @ 7 mils 3 @ 20 mils	4 @ 0.17 mm 3 @ 0.51 mm	UL 746
<b>High Current Arc Ignition (HAI)</b>	3 @ 7 mils 2 @ 20 mils	3 @ 0.17 mm 2 @ 0.51 mm	UL 746



Thermal impedance measured per ASTM D5470. Values obtained depend on pressure and surface finish of fixture

Shelf Life is 5 years from DOM at 25°C +/- 3

