



# TF1870 Series Thermally Conductive Silicone Coated Fabric

Saint-Gobain Performance Plastics **ThermaCool® TF1870** Series are thermally conductive, silicone coated fabrics offering high temperature capability and conformability in a low cost heat sink gasket. Fiberglass fabric supports the thermally conductive silicone rubber impregnation and adds dimensional stability and cut-through resistance. The thin cross-sections keep thermal resistance low and save space while providing electrical isolation.

## Physical Properties

Property	Test Method	TF1877	TF1879
Colour	Visual	Green	Green
Thickness, mil (mm)	ASTM D374	7.0 (0.18)	9.0 (0.23)
Thermal conductivity, W/mK	ASTM E1530	1.2	1.2
Thermal impedance, °C in. <sup>2</sup> /W	ASTM E1530 @300 psi	0.23	0.29
Break strength, psi (kPa)	ASTM D412	100 (689)	100 (689)
Elongation, %	ASTM D412	<5	<5
Dielectric strength, volts, total	ASTM D419	3,000	3,500
Volume resistivity, ohm-cm	ASTM D257	1 x 10 <sup>14</sup>	1 x 10 <sup>14</sup>
Operating t°, °F (°C)		-80 to 400	(-60 to 205)
UL listing recognition	UL94	V-0	V-0

Values shown are typical and should not be used for writing specifications.

## Recommended Uses

TF1870 Series are thermally conductive coated fabric materials designed to provide a thermal path between a power device and a metallic heat sink. These materials also offer electrical isolation to protect the device from surges or short circuits. Typical end-uses include computer hardware, automotive control systems, power supplies, defense electronics, electronic components in business machines and consumer electronics.

## Availability

TF1870 Series are available in 914mm wide continuous yard goods. Also available with a low tack silicone pressure sensitive adhesive or a solvent resistant acrylic pressure sensitive adhesive on one side.

## Features/Benefits

- Assembly time reduced by 70% or more over mica and grease method.
- Optional pressure sensitive adhesive available for added ease of fabrication.
- UL listing simplifies completed electronic system approval (94 V-0).
- Non-toxic for increased safety and reliability.
- Total performance range available from standard to high end.
- Electrically isolates power sources from heat sink devices.

## Applications

- Electronic modules for power devices for power supplies
- Computers
- Telecommunication
- Automotive electronics
- Electrical insulation
- Military
- Medical



**Seal & Design**  
Corporate Headquarters  
Ph: (716)-759-3344  
Info@SealAndDesign.com  
[www.SealAndDesign.com](http://www.SealAndDesign.com)

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SPE-5190-PDF-0314