

# TF1818

## Thermally Conductive Silicone Coated Fabric

Saint-Gobain Performance Plastics **ThermaCool® TF1818** is a silicone coated fabric 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 saves space while providing electrical isolation.

### Physical Properties

Property	Test Method	TF1818
Color	Visual	Gray
Thickness (mils)	ASTM D374	18.0
Thermal Conductivity (W/mK)	ASTM E1530	1.0
Thermal Impedance (°C in. <sup>2</sup> /W)	ASTM E1530 @ 300 psi	0.71
Break Strength (psi)	ASTM D412	60
Elongation (%)	ASTM D412	<5
Dielectric Strength (volts, total)	ASTM D149	9,000
Volume Resistivity (ohm-cm)	ASTM D257	1 x 10 <sup>14</sup>
Operating Temperature (°F)		-80 to 400
UL Listing Recognition	UL94	V-0

All properties are typical values and should not be used for writing specifications.

### Recommended Uses

TF1818 is a thermally conductive coated fabric material designed to provide a thermal path between a power device and a metallic heat sink. This material also offers 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

TF1818 is available in 18" 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. Other thicknesses can be manufactured with minimum requirements, please contact customer support for special thickness requirements.

**Limited Warranty:** For a period of 6 months from the date of first sale, Saint-Gobain Performance Plastics Corporation warrants this product(s) to be free from defects in manufacturing. Our only obligation will be to provide replacement product for any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risks, if any, including the risk of injury, loss or damage, whether direct or consequential, arising out of the use, misuse, or inability to use this product(s). SAINT-GOBAIN PERFORMANCE PLASTICS DISCLAIMS ANY AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

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### 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
- Extra smooth surface finish provides a clean thermal path

### Applications

- Power Supplies
- Power Devices
- Computers
- Telecommunication
- Automotive Electronics
- Electrical Insulation
- Military
- Medical

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AFF-1286-PDF-0705-SGCS