

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
Colour	Visual	Grey
Thickness (mm)	ASTM D374	0.45
Thermal conductivity (W/mK)	ASTM E1530	1.0
Thermal impedance (°C in ² /W)	ASTM E1530 @ 300psi	0.71
Break strength (kPa)	ASTM D902	517
Dielectric strength (volts/mm)	ASTM D149	20,000
Volume resistivity (ohm-cm)	ASTM D257	1 x 10 ¹⁴
Operating temperature (°C)	-	-62 to 205
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 457mm 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.

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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