

# TF1818

## Thermally Conductive Silicone-Coated Fabric

**Saint-Gobain® ThermaCool®** TF1818 is a silicone-coated fabric offering high temperature capability and conformability in a 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.

TF1818 is specially designed to provide the following features:

- Thermal conductivity rating of .8 W/mK
- Very thick fabric for high puncture resistance
- 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

### Available Sizes

Standard thickness: 0.018 in. (.457 mm)

Master roll size: 18 in. x 36 yd. (457 mm x 33 meters)



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## APPLICATIONS

- Telecommunication
- Automotive electronics
- Electrical insulation
- Computers
- Power supplies
- Power devices
- Military
- Medical

**ThermaCool TF1818 - Properties**

Performance tests are run using standard test procedures. The values presented are typical values and should not be used for specification purposes.

Property	Test Method	Value
Color	Visual	Gray
Thickness: in.	ASTM D374	0.018
Thermal Conductivity: W/mK	ASTM E1530	1.0
Thermal Impedance: °C in. <sup>2</sup> /W	ASTM D1530 @ 300 psi	0.71
Break Strength: psi	ASTM D902	75
Dielectric Strength: volts/mil	ASTM D149	500
Volume Resistivity: ohm-cm	ASTM D257	1x10 <sup>14</sup>
Operating Temperature: °F	—	-80 to 400
UL Listing Recognition	UL 94	V-0

**Options** (subject to minimum order requirements)

Adhesive base: Low tack silicone pressure-sensitive adhesive and solvent-resistant acrylic pressure-sensitive adhesive on one side. (PSA increases thermal resistance by 0.05 C/W.)

**Important Instructions**

Because **Saint-Gobain** cannot anticipate or control every potential application, we strongly recommend testing of this product under individual application conditions prior to commercial use.

For PSA options, surfaces must be clean and free of oil, grease, moisture, dust and dirt. Isopropyl alcohol is good for cleaning the surface.

Recommended service temperature of base fabric is -80°F to 400°F (-62°C to 204°C).

**Shelf Life**

10 years after the date of manufacture when stored in original packaging at temperatures up to 95°F (35°C) and 70% relative humidity (see applicable data sheets for pressure-sensitive adhesive option).



**IMPORTANT:** It is the user's responsibility to ensure the suitability and safety of Saint-Gobain Performance Plastics products for all intended uses and that the materials to be used comply with all applicable regulatory requirements. Saint-Gobain Performance Plastics assumes no responsibility for any product failures that occur due to misuse of the materials it provides arising out of the design, fabrication or application of the products into which the materials are incorporated.

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