Saint-Gobain Performance Plastics Thermacool® TF400 Series thermally conductive, silicone coated fabrics offer 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 insulation.

### Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Test Method</th>
<th>TF407</th>
<th>TF409</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Visual</td>
<td>Gray</td>
<td>Gray</td>
</tr>
<tr>
<td>Thickness, mil</td>
<td>ASTM D374</td>
<td>7.0</td>
<td>9.0</td>
</tr>
<tr>
<td>Thermal conductivity, W/mK</td>
<td>ASTM E1530</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Thermal impedance, °C in./W</td>
<td>ASTM E1530</td>
<td>0.31</td>
<td>0.39</td>
</tr>
<tr>
<td>Break strength, psi</td>
<td>ASTM D412</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Elongation, %</td>
<td>ASTM D412</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Dielectric strength, volts</td>
<td>ASTM D149</td>
<td>3,500</td>
<td>4,000</td>
</tr>
<tr>
<td>Volume resistivity, ohm-cm</td>
<td>ASTM D257</td>
<td>$1 \times 10^{14}$</td>
<td>$1 \times 10^{14}$</td>
</tr>
<tr>
<td>Operating t°, °F</td>
<td></td>
<td>-80 to 400</td>
<td>-80 to 400</td>
</tr>
<tr>
<td>UL listing recognition</td>
<td>UL94</td>
<td>V-0</td>
<td>V-0</td>
</tr>
</tbody>
</table>

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

### Recommended Uses

TF400 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. Replaces rigid ceramic insulators with flexible fabric.

### Availability

TF407 & TF409 are available in 36” wide continuous yard goods. Other thicknesses can be manufactured as custom products. Please consult Customer Support for minimum quantities, lead times and pricing.

TF400 can be supplied with a low tack silicone, or a solvent resistant acrylic pressure sensitive adhesive on one side. Pressure sensitive adhesive increases thermal resistance by 0.1°C in/W per 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.
- Improved formulation provides competitive thermal and dielectric strength values.
- Formulated for high value thermal performance.
- Mil Spec 49456A, Type 1 (Grade) is 3.

### Applications

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

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