

## ThermaCool® TF509

### Thermally Conductive Silicone Coated Fabric

ThermaCool® TF509 is a thermally conductive, silicone coated fibreglass fabric that offers high temperature resistance, overall toughness, and conformability as a low cost heat sink gasket. TF509 is formulated with a unique blend of ceramics that achieves low thermal impedance without sacrificing cost effectiveness. Fibreglass fabric provides improved dimensional stability and high cut-through resistance.

#### Features/Benefits

- Unique filler blend provides low thermal impedance with favorable price-performance advantage
- Fibreglass reinforcement creates superior dimensional stability and high cut-through resistance
- Composite construction yields electrical insulation with high dielectric strength
- Flame retardancy achieved without use of halogens or heavy metals

#### Typical Properties

Property	TF509	Test Method
Colour	Blue	—
Thickness mm (in.)	0.229 (0.009)	ASTM D374
Thermal Conductivity W/m <sup>2</sup> K <sup>-1</sup>	2.0	ASTM E1530
Thermal Impedance @300 psi °C in. <sup>2</sup> /W	0.2	ASTM E1530
Break Strength MPa (psi)	0.69 (100)	ASTM D412
Elongation %	<5	ASTM D412
Volume Resistivity ohm-cm	1 x 10 <sup>14</sup>	ASTM D257
Dielectric Strength volts/mil	2500 est	ASTM D149
Operating Temperature °C	-62 to +204	—
UL Listing Recognition	V-0	UL94

**Applications**—TF509 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, defence electronics, electronic components in business machines and consumer electronics. Replaces rigid ceramic insulators with flexible fabric. TF509 is also ideal for:

- Power electronics where elasticity, high torque resistance, electrical insulation, and high dielectric strength are required
- Electronic modules for power devices or power supplies
- Telecommunications, military and medical applications
- Electrical insulation

**Availability**—TF509 is available in 457mm wide continuous rolls.

Saint-Gobain Performance Plastics sales, fabrication and distribution facilities are situated at the following locations:

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