TF500 Series
Thermally Conductive Silicone Coated Fabric

Saint-Gobain Performance Plastics **ThermaCool® TF500 Series** is a thermally conductive, silicone coated fiberglass fabric that offers high temperature resistance, overall toughness, and conformability as a low cost heat sink gasket. TF509 Series is formulated with a unique blend of ceramics that achieves low thermal impedance without sacrificing cost effectiveness. Fiberglass fabric provides improved dimensional stability and high cut-through resistance.

Physical Properties

Property	Test Method	TF509
Color	Visual	Blue
Thickness, (mil)	ASTM D374	9.0
Thermal Conductivity (W/mK)	ASTM E1530	2.0
Thermal Impedance (°C in.^{2}/W)	ASTM E1530 @ 300 psi	0.2
Break Strength (psi)	ASTM D412	100
Elongation (%)	ASTM D412	<5
Dielectric Strength (volts, AC)	ASTM D149	2500 est
Volume Resistivity (ohm-cm)	ASTM D257	1 x 10^{14}
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

Series TF500 are thermally conductive coated fabric materials 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. Replaces rigid ceramic insulators with flexible fabric

Availability

TF500 Series is available in 18" wide continuous yard goods.

Features/Benefits

- Unique filler blend provides low thermal impedance with favorable price-performance advantage
- Fiberglass 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

Applications

- Ideal for power electronics where elasticity, high torque resistance, electrical insulation, and high dielectric strength are required
- Electronic Modules for Power Devices for Power Supplies
- Computers
- Telecommunication
- Automotive Electronics
- Electrical Insulation
- Military
- Medical

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