Simply the coolest

THERMACOOL®

TF1870 Series
Thermally Conductive Silicone Coated Fabric

Saint-Gobain Performance Plastics **ThermaCool® TF1870** Series are thermally conductive, silicone coated fabrics 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 save space while providing electrical isolation.

Physical Properties

Property	Test Method	TF1877	TF1879
Colour	Visual	Green	Green
Thickness, mil (mm)	ASTM D374	7.0 (0.18)	9.0 (0.23)
Thermal conductivity, W/mK	ASTM E1530	1.2	1.2
Thermal impedance, °C in.²/W	ASTM E1530 @300 psi	0.23	0.29
Break strength, psi (kPa)	ASTM D412	100 (689)	100 (689)
Elongation, %	ASTM D412	<5	<5
Dielectric strength, volts, total	ASTM D419	3,000	3,500
Volume resistivity, ohm-cm	ASTM D257	1×10^{14}	1×10^{14}
Operating t°, °F (°C)		-80 to 400	(-60 to 205)
UL listing recognition	UL94	V-0	V-0

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

Recommended Uses

TF1870 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.

Availability

TF1870 Series are available in 914mm 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.

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.

Applications

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

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