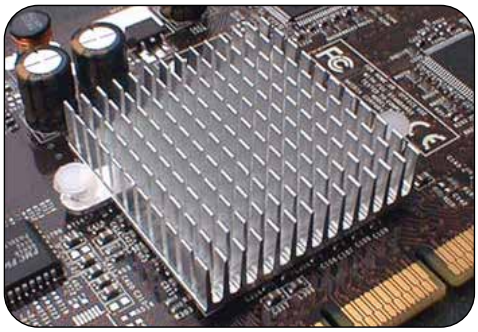
THERMACOOL®

TF400 SERIES

Thermally Conductive Silicone-Coated Fabric

Saint-Gobain® **ThermaCool**® TF400 Series are manufactured by **Saint-Gobain** Performance Plastics Corporation, Tape Solutions business, and come with thermally conductive, silicone-coated fabrics 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 is intended to keep thermal resistance low and save space while providing electrical isolation.



The **ThermaCool** TF400 Series is specially intended to provide the following features:

- Thermal conductivity rating of .9 W/mK (medium performance fabric)
- 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

Available Sizes

Standard thickness: 0.007 and 0.009 in. (.18 and .22 mm)

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

APPLICATIONS

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

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ThermaCool TF400 Series — 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 TF407	Value TF409
Color	Visual	Gray	Gray
Thickness: inch (mm)	ASTM D374	0.007 (.18)	0.009 (22)
Thermal Conductivity: W/mK	ASTM E1530	0.9	0.9
Thermal Impedance: °C in2/W	ASTM D1530	0.31	0.39
Break Strength: psi	ASTM D412	100	100
Elongation: %	ASTM D412	<5	<5
Dielectric Strength: volts	ASTM D149	3500	4000
Volume Resistivity: ohm-cm	ASTM D257	1×10^{14}	1×10^{14}
Operating Temperature: °F	—	-80 to 400	-80 to 400
UL Listing Recognition	UL94	V-0	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

120 months from date of shipment for base material when stored in original packaging at temperatures up to 70°F (21°C), < 50% relative humidity, and away from direct sources of heat and direct sunlight. (See the applicable data sheets for pressure sensitive adhesive options).

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IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain products for all intended uses and that the materials to be used comply with all applicable regulatory requirements. Saint-Gobain assumes no responsibility for any product failures that occur due to your actions or inactions, including your use, design, fabrication or application of the products into which the materials are incorporated.

WARRANTY: This document should not be considered a warranty or a guarantee. The descriptions of the Product provided hereinabove may vary based on specifications requested and testing protocols. Typically, Saint-Gobain warrants that product(s) will meet mutually agreed specifications at delivery and Saint-Gobain honors any breach of warranty claims for six (6) months from delivery of the products. If a product is determined to be nonconforming with its warranty, Saint-Gobain's sole obligation is, at its option, to either replace the nonconforming products or reimburse the purchase price for the same.

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