

TF1870 SERIES

Thermally Conductive Silicone-Coated Fabric

Saint-Gobain® ThermaCool® TF1870 series are 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 keep thermal resistance low and save space while providing electrical isolation.

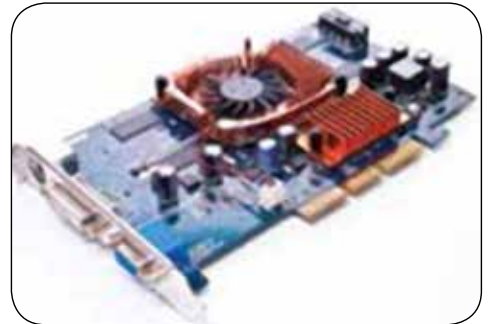
The TF1870 series is specially designed to provide the following features:

- Thermal conductivity rating of 1.3 W/mK (high thermal performance)
- 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

Available Sizes

Standard thickness: 0.0075 and 0.009 in. (.19 and .22 mm)

Master roll size: 36 in. x 36 yd. (914 mm x 33 meters)



APPLICATIONS

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

ThermaCool TF1870 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	TF1877	TF1879
Color	Visual	Green	Green
Thickness: mm	ASTM D374	0.22	0.22
Thermal Conductivity: W/mK	ASTM E1530	1.2	1.2
Thermal Impedance: °C in ² /W	ASTM D1530 @ 300 psi	0.23	0.29
Break Strength: psi	ASTM D412	100	100
Elongation: %	ASTM D412	<5	<5
Dielectric Strength: volts, total	ASTM D419	3000	3500
Volume Resistivity: ohm-cm	ASTM D257	1x10 ¹⁴	1x10 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

10 years after the date of manufacture when stored in original packaging at temperatures up to 95°F (35°C) and 70% relative humidity (see applicable data sheets for pressure-sensitive adhesive option).



Performance Plastics - Tape Solutions

North America | South America | Europe | Asia

For a full list of locations, please visit
tapesolutions.saint-gobain.com/contact-us

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

WARRANTY: For a period of 6 months, Saint-Gobain Performance Plastics warrants this product(s) to be free from defects in manufacturing. The only obligation under any applicable product warranty will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. SAINT-GOBAIN PERFORMANCE PLASTICS DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Form #1064 | © Saint-Gobain December 2017 | **Thermacool** and **Saint-Gobain** are trademarks of Saint-Gobain.