

TF400 SERIES

Thermally Conductive Silicone-Coated Fabric

Saint-Gobain® ThermaCool® TF400 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.

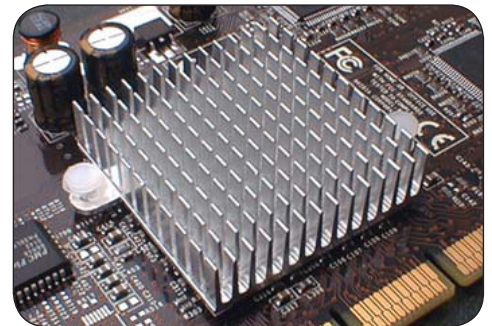
The **ThermaCool** TF400 series is specially designed to provide the following features:

- 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
- Mil Spec 49456A, Type 1 (Grade) is 3

Available Sizes

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

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



APPLICATIONS

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

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 | 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).



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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.**

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