

K271

Thermally Conductive Silicone-Coated Kapton® Tape

Saint-Gobain® ThermaCool® K271 is manufactured by **Saint-Gobain** Performance Plastics Corporation, Tape Solutions business, and comes with with a 1.0 mil thick thermally conductive DuPont® **Kapton®** polyimide film. The film is coated with 1.5 mils of thermally conductive acrylic pressure-sensitive adhesive on one side, and 2.0 mils of thermally conductive silicone rubber on the other side. K271 is provided in roll form with a release liner for ease of application. This product was intended for use in thermally conductive gaskets for high performance electronics where low thermal resistance and high dielectric strength are required.

ThermaCool K271 is specially intended to provide the following features:

- **Kapton** polyimide film and silicone rubber provide excellent electrical isolation and high dielectric performance
- Silicone rubber layer provides a compliant, non-stick surface for excellent heat transfer and easy disassembly
- Thermally conductive adhesive provides excellent thermal transfer at low application pressures
- Adverse effects of surface roughness are minimized with the highly conformable pressure-sensitive adhesive and silicone layers
- **Kapton** film provides excellent cut-through resistance
- Can be die-cut to size from convenient roll format
- Thermally conductive acrylic adhesive can be thermoset for increased adhesion strength

Available Sizes

Standard thickness: .045 in. (.114 mm)

Master roll size: 16 in. × 18 yd. or 36 yd. (406 mm × 16.4 m or 33 m)



APPLICATIONS

- Telecommunication
- Automotive electronics
- Electrical insulation
- Computers
- Power supplies/devices
- Military
- Medical

ThermaCool K271 – 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
Color	Visual	Green/White
Thickness: in (mm)	ASTM D1000	0.0045 (0.114)
Thermal Conductivity: W/mk	ASTM E1530	0.60
Thermal Impedance @ 10 psi: (°C in ² /W)	ASTM D1530 @ 10	0.30
Dielectric Strength: volts	ASTM D149	7,000
Adhesion to Steel: oz/in	ASTM D1000	30.0
Operating Temperature Range (°F)	-	-20 to +300

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.

Surfaces must be clean and free of oil, grease, moisture, dust and dirt. Isopropyl alcohol is good for cleaning the surface.

Apply a uniform pressure of 15 psi (103 kPa) to promote good contact between the material to be bonded and the tape. The service temperature should be between -20°F and +300°F (-28°C to +149°C).

The adhesion between the substrate and the tape increases with time, typically reaching final bond strength in 72 hours. Heating the product above 105°F (40°C) will accelerate the adhesion process.

Shelf Life

24 months from date of shipment, 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.

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.

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 DISCLAIMS ALL OTHER EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR USE.

Form #1358 | © Saint-Gobain March 2025 | All the mentioned trademarks are registered trademarks of Saint-Gobain Tape Solutions or affiliates, part of Saint-Gobain group, except Kapton is registered and owned by Dupont.



TAPE SOLUTIONS

North America | South America
Europe | Asia

For more information, please visit
tapesolutions.saint-gobain.com