

ThermaCool®

Thermal Interface Materials

ThermaCool® K271

Thermally Conductive, Silicone Coated KAPTON® Tape

ThermaCool® K271 is manufactured with a 0.025mm thick thermally conductive KAPTON® film. The film is coated on one side with 0.038mm of thermally conductive acrylic pressure sensitive adhesive, and on the other side with 0.051mm of thermally conductive silicone rubber. K271 is provided self wound in roll form with a release liner for ease of application. This product was designed for use in thermally conductive gaskets for high performance electronics where low thermal resistance and high dielectric strength are required.

Features/Benefits

- KAPTON polyimide film and silicone rubber provide excellent electrical isolation and high dielectric performance
- Silicone layer provides a compliant, non-stick surface to provide 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
- Polyimide film provides excellent resistance to cut-through
- Can be die-cut to size from convenient roll format

Typical Properties

Property	K271	Test Method
Available Colours	Green, White	—
Thickness mm (mils)	0.114 (4.5)	ASTM D1000
Thermal Conductivity W/m ⁻¹ K ⁻¹	0.60	ASTM E1530
Thermal Impedance @ 10 psi °C in. ² /W	0.30	ASTM E1530
Dielectric Strength volts	7000	ASTM D149
Adhesion to Steel N/cm (oz./in.)	2.74 (25.0)	ASTM D1000
Operating Temperature °C	-29 to +149	—

Applications

- Thermally conductive gaskets for high performance electronics
- Thermally conductive dielectric barrier
- Void filler where thermal transfer and electrical isolation is very important

Availability—Available as slit rolls or roll goods 406mm wide x 32.9m long.

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