Kapton® Material Offers Strength, Tear Resistance and Stability

A thin, lightweight organic polymer film, Kapton® provides excellent tensile strength, tear resistance and dimensional stability. This heater is ideal for applications requiring low outgassing in a vacuum, or resistance to radiation, fungus and chemicals. Kapton® is also very resistant to solvents.

**Performance Capabilities**

- For operating environments as low as -319°F (-195°C), heater temperature as high as 392°F (200°C)
- Watt densities to 50 W/in² (7.75 W/cm²)

**Applications**

- Military/aerospace, where low outgassing properties are required
- Medical, where thorough cleaning or sterilization is needed
- Laboratory research
- Photographic equipment
- Optical equipment
- LCD displays
- Computer equipment

**Features and Benefits**

**Excellent physical and electrical properties**
- Results in thermal stability over a wide temperature range

**Transparent Kapton® material**
- Allows inspection of internal details

**Resists radiation and fungus**
- Allows use in a wide range of applications

**UR® and cUR® recognitions**
- Available on many custom designs

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Kapton® is a registered trademark of E.I. du Pont de Nemours & Company.
KAPTON MATERIAL

Standard Specifications

**Thickness:**
- 0.007 inch (0.2 mm)

**Flexibility (min. radius):**
- ¼ inch (0.8 mm)

**Weight:**
- 1.5 oz./ft² (0.05 g/cm²)

**Operating temperature:**
- Maximum: 392°F (200°C)
- Minimum: -319°F (-195°C)

**Maximum operating watt density:**
- At 77°F (25°C) in open air: 7 W/in² (1 W/cm²)
- At 300°F (150°C): 10 W/in²

**Watt density rating on stock units:**
- 5 W/in² (0.8 W/cm²)

**Dielectric strength:**
- Minimum V~(ac): 1000

**Flammability rating:**
- Self-extinguishing

**Heater size limitations:**
- 20 x 26 inches (510 mm x 660 mm)

**Weight loss (outgassing):**
- 0.51 percent

**Standard lead length:**
- 12 inches (305 mm) Teflon® E

Options

**Stock**
- Pressure Sensitive Adhesive Surface (PSAS)
  (see page 165 in the Watlow Heater's catalog for more information)

**Made-to-Order**
- PSAS
- Factory bonding
- Holes, cutouts, notches
- Special leads

How to Order

Determine width, length, volts and watts. Specify the code number and quantity if the heater is listed in the stock list in the Watlow Heater’s catalog. Specify PSAS if needed. For Made-to-Order heaters, please provide the following:
- Quantity
- Size (dimensions)
- Voltage
- Wattage/watt density
- Operating temperature
- Options, such as holes, PSAS
- Will the heater be subject to flexing?

Availability

- Stock: Same day shipment of orders received by 11:00 a.m. CST
- Made-to-Order: Consult factory

Special Product Offering

*Kapton® Handy Heater Kit—For Quick Heating Solutions*

Watlow offers a convenient way to use Kapton® heaters. The Handy Heater Kit consists of a sheet of 16 Kapton® heaters—13 rectangular and three circular. The heaters come in different sizes and resistances. So when you need a small flexible heater in a hurry, you can pick the one that fits your application.

Other Features

- The heater sheet can be ordered with or without pressure sensitive adhesive (PSAS), depending on your needs.
- The kits come with instructions for wiring, lead attachment and selection, and installation. Pre-tinned solder pads are provided for easy lead connections.
- The instructions also show you how to dial in your desired wattage using a variable voltage transformer.
- The heaters can be wired individually, in series, or parallel for hundreds of variations to satisfy your special application.

Availability

Stock: Same day shipment of orders received by 11:00 a.m. CST.

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*Teflon® is a registered trademark of E.I. du Pont de Nemours & Company.

*We recommend maximum part temperature at 300°F (150°C).*