



Kapton and Silicone Rubber Flexible Heaters



Kapton and Silicone Rubber Specifications

Kapton and Silicone Rubber Heaters - Description

Kapton® flexible heaters offer superior tensile strength and tear resistance, with precision heat distribution. They are ideal for extreme temperature environments, from -319°F to +392°F (-195°C to +200°C). Heaters are in stock standard at 0.0007" (0.2mm) thick and up to 20"x26" (.508m x .660m) areas. Watt density is 5W/in² (0.8W/cm²) standard, with units available to 50W/in² (7.8W/cm²). Kapton® is an organic polymer with very high dielectric capabilities, while providing superior resistance to most solvents, oils, even radiation. With low out gassing, these heaters are useful in vacuum environments.

Etched foil heating elements, with 12" (305mm) long Kapton or Teflon® leads, are standard. Silicone leads, as well as custom lengths, cord and plug sets available.

Being transparent, Kapton® film also allows easy visual inspection on the internal structures. Pressure-sensitive adhesive (PSA) backing surface is not standard, but NPH will customize your Kapton® heaters with special adhesives or mounting holes, as the application requires. Mechanical fasteners such as hooks, grommets, spring-loaded latches, snaps and Velcro® patches are also available. Minimum radius flexibility 1/32" (0.88mm) standard with weight of 1 1/2oz/ft² (0.05g/cm²).

Kapton® Flexible Heaters

The particular application conditions of aerospace, medical, composite fabrication, optical equipment and computers often require **flexible heating elements**. NPH offers a wide assortment of in-stock and custom **flexible heaters** in **Kapton®** and **silicone rubber** materials to suit most any of these needs.

Silicone Rubber heaters permit composite bonding and curing, as well as repair and fabrication operations. Equal length circuits and a cool tab are provided, while a fiberglass reinforced **heater** cover means long service life and increased durability. Standard watt density is 5W/in² (0.8W/cm²).

All standard **heaters** are UL Recognized. Many sizes in stock from 6" x 6" to 20" x 20" (152.4 mm x 152.4 mm to .508 m x .508 m).

Kapton® flexible heaters offer superior tensile strength and tear resistance, with precision heat distribution. They are also ideal for applications with extreme temperature environments, -319°F to 392°F (-195°C to 200°C). **Heaters** in stock standard at 0.007" (0.2 mm) thick and up to 20" x 26" (.508 m x .660 m) area. Watt density is 5W/in² (0.8W/cm²) standard.

Applications for these products include the following and many more:

Heating of Electronic Components- ATM's and Photocopiers

Heating of Aerospace Instrumentation-Satellites and Spacecraft

Semiconductor Wafer Processing

Autoclaves, Incubators and Sterilizers

Vacuum Chambers

Medical Imaging, Medical Diagnostic Instruments and Analyzers

Outdoor Electric Boxes, Fluid Line Freeze Protection

Kapton and silicone rubber heaters are extremely versatile and operate efficiently in many environments.

Some distinct advantages are:

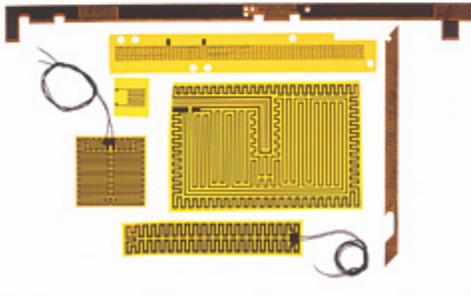
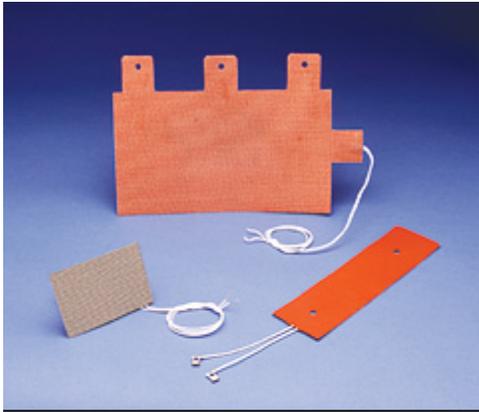
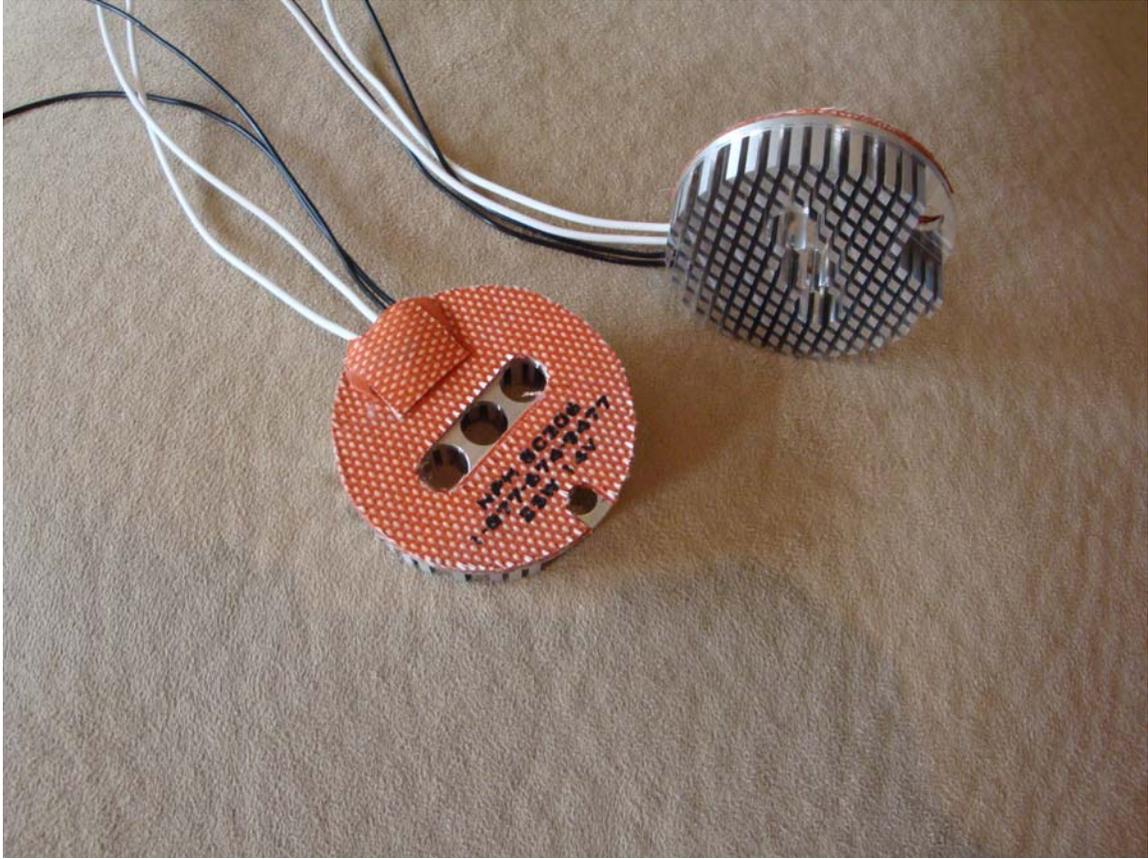
- Moisture resistance**
- Oil and solvent resistance**
- Chemical resistance**
- Outdoor exposure**
- Extremely thin profiles**
- Conform to almost any shape**

All heaters are built to order, but rush delivery is available. In most cases, NPH can deliver custom heaters within 48-72 hours.

All NPH flexible heaters are available with custom design modification.

Shown here are various styles, sizes and leadwire extensions available from NPH on its lines of Kapton® and SR flexible heaters. Many types are in stock and custom designs are welcome. Please contact us with your requirements.





Custom Kapton and Silicone Rubber Heaters - Specifications

How To Order

Maximum Dimensions:

36" x 120"

Contact NPH for longer lengths

Thickness:

.006" — .055"

Termination area will be slightly larger

Temperature Range:

-60°F to 450°F

-50°C to 230°C

Max Voltage:

600 Volts

Dielectric Strength:

1000VAC

Watt Density:

5 Watts per in/sq

typical

60 Watts per in/sq

Dependent on application

Wattage Tolerance:

+5% — -10%

Leadwire:

12" Teflon standard

Dimensional Tolerance:

Less than 12" ± .062

Greater than 12" ± .125



National Plastic Heater,

Sensor and Control Inc.

1-877-674-9744

www.nphheaters.com

