

Flexible Electric Heaters: When and How to Use Them

John Zerbo Sr., president of **PRIME INDUSTRIAL**, has been solving customer flexible heater applications since 1967. Although heaters manufactured with Silicone Rubber, Kapton, Polyester, and Foil are all flexible, they have very distinctive properties that dictate the application for which they are best suited.

Most flexible heaters can be bonded to metal parts, supplied with pressure sensitive adhesive, with or without holes and cutouts, and can have internal thermostats. This allows them to fit a variety of items such as valves, pipes, tanks, etc. When to use each type of flexible heater and how they can be used successfully is discussed below:

Silicone Rubber Heaters

Silicone Rubber Heaters can be internal wire wound or have etched foil construction. Both type heaters are very flexible and typically have a maximum operating temperature from -60°F to 450°F. Silicone Rubber Heaters resist outdoor exposure, vibration, and are very suitable to be molded to metal parts or adhered with pressure sensitive adhesive to just about any size or shape. Silicone rubber heaters are the most commonly used flexible heater.



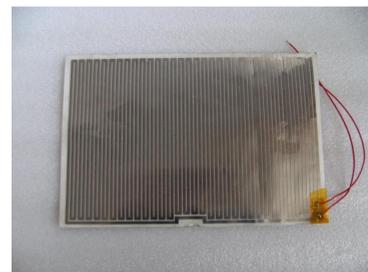
Kapton Polyimide Heaters

Kapton Polyimide Heaters are light weight flexible film heaters that have fast warm-ups and quick response due to their 0.005" thick mass. They are able to operate in -319°F to 500°F temperature and suitable for high humidity areas, washdown zones, and other harsh environments. A major characteristic of Kapton heaters is their extremely low out-gassing which makes them very suitable for vacuum environments.



Polyester Film Heaters

Polyester Film Heaters are designed and fabricated in many configurations for economically suitable applications. The maximum surface temperature for the UL rated units of polyester heaters is 221 °F. Polyester heaters can be



manufactured wire wound or etched foil. They have a lower cost than silicone rubber heaters, have excellent electrical properties and are very economical in large sizes.

Foil Heaters

Foil Heaters are self-contained one piece assemblies. Resistance wire is laminated between two layers of aluminum foil which can operate up to 300°F. The heaters can have widths from 1-1/4 inches to 36 inches and lengths from 4 inches to 60 inches. Foil heaters are the most economical of all flexible heaters.



Prime Industrial

PRIME has been providing solutions for all types of flexible electric heaters for satellite dish heating; 55 gallon drum heating; freeze protection for valves, pipes and tanks; keeping control panels warm; and much more. Please contact **PRIME** for technical assistance, literature, or samples of flexible heaters best suited for your application.

John Zerbo Sr. is available to discuss flexible heater benefits or to visit your facility, review your application in detail, and recommend the electric heater most suited for success.

Check out some of the electric heaters **PRIME** offers by clicking on the links below:



Contact:

PRIME INDUSTRIAL COMPONENTS
465 New Milford Ave
Oradell, NJ 07649
201-262-9090 (phone)
201-262-8294 (fax)
sales@prime-industrial.com (email)

.....

Check out Prime's
new line card by
[clicking here!](#)