



User Instructions for Silicone Rubber Heaters

EFH1009
Issue 3

GENERAL INFORMATION

Silicone Rubber heaters have wire-wound or etched foil heating circuits laminated between thin layers of fiberglass-reinforced, high temperature insulation, silicone rubber.

Silicone Rubber heaters are resistant to temperature extremes, moisture, weathering, radiation, fungus and chemical attack. They also have a high dielectric strength, flexibility, provide a cost-effective heating solution and are easily bonded or cemented to heat sinks or other parts to be heated.

INSTALLATION

⚠ WARNING

IMPROPER INSTALLATION

- Ensure the heater is installed by qualified personnel.
- Ensure the heater is not exposed to damaging or flammable chemicals, acids, alkalis, oils, fluids, liquids or other substances.
- Ensure the heater is not cut, pierced, folded or otherwise mishandled
- Ensure proper measures are taken to control heater temperature if heater is insulated.
- Ensure the heater is attached to an appropriate heat sink and not energized free standing in air.
- Ensure that the heater's exposed thermostat sensor is not damaged.
- Do not overlap heaters.
- Do not repair a damaged heater.

Failure to comply with these instructions could result in death or serious injury.

CAUTION

HEATER DAMAGE

- Ensure that the entire heater is in contact with the mounting surface (heat sink) with no air packets trapped underneath.

Failure to comply with these instructions could result in product damage.

1. Attach the heater to an appropriate heat sink (may be flat or curved) by one of the following means. Ensure that the heat sink is clean and oil/grease-free:
 - Mechanical clamping.
 - Factory-applied pressure sensitive adhesive (PSA).
 - A thin layer of room temperature vulcanizing (RTV) silicone.
2. Install a method of temperature control (such as a thermostat, thermocouple and temperature controller, or a variable voltage transformer).
3. Place the temperature sensor close enough to the heater to sense the heater temperature.

OPERATION

⚠ WARNING

IMPROPER OPERATION

- Ensure the heater is used by qualified personnel.
- Ensure the heater does not exceed:
 - Specified or rated voltage.
 - Maximum operating and surface temperature ratings.
- Ensure the heater is not exposed to damaging or flammable chemicals, acids, alkalis, oils, fluids, liquids or other substances.
- Ensure the heater is not immersed in liquids.
- Ensure the heater is not cut, pierced, folded or otherwise mishandled
- Ensure adequate safety controls are installed for unattended operating heaters.
- Ensure that the heater's exposed thermostat sensor is not damaged.
- Do not repair a damaged heater.

Failure to comply with these instructions could result in death or serious injury.

Silicone Rubber Heaters



Table 1. General Specifications

Characteristic	Value
Material and construction	fully vulcanized fiberglass-reinforced silicone rubber encapsulating a nickel alloy or thin foil heating element
Voltage	115V
Power densities available (at 115V)	2.5W/in. ² , 5W/in. ² , 10W/in. ²
Operating temperature range	-70°F to 450°F
Exposure temperature range	-70°F to 450°F
Resistance tolerance	±10%
Thickness	0.030in. to 0.070in. (except at lead exit)
Leads: gage insulation length	varies according heater wattage and voltage Teflon [®] unless specified 12.0in. min.
Component approvals	UL, CSA
High-potential dielectric testing (at 115V)	1250V
Serviceable parts	none

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