

## SL

### Silicone Rubber Insulated Flexible Heater

- SL-N General Purpose Heaters
- SL-B Enclosure Heaters
- Flexible in Design and Application
- UL and CSA Recognized Components
- Square, Rectangular, Round and Custom Shapes
  - Max. size of a single piece: 36" Wide x 120" Long
  - Can join sections into longer length
- Up to 600 Volt
- Silicone Rubber Material Temp. Range -80°F to 390°F
- Myriad of Mounting Methods
- Standard Thickness Ranges from 0.030" to 0.060" Except at Lead Pad Which is 0.15" Thick Depending on Design.
- Standard Resistance Tolerance is -10% +5%.



FLEXIBLE

#### Description

Chromalox SL Silicone Rubber Insulated Heaters provide the greatest flexibility in meeting your application requirements. Ruggedness, dimensional stability, flexibility, and superior weather survivability are all characteristics of reinforced silicone rubber heaters. The thin profile and direct contact of the heaters provide fast, efficient heat transfer to your part and require less power than traditional heating methods.

#### Features

- Standard Heaters are available or made to order to exact electrical and contour specifications.
- Silicone Rubber can operate from -80°F to 392°F
- Silicone Rubber Material is UL Recognized for watt densities of:
  - 5 W/In<sup>2</sup> in open air
  - 10 W/In<sup>2</sup> attached with factory supplied PSA
  - 15 W/In<sup>2</sup> vulcanized to metal part.
- Up to 40 W/In<sup>2</sup> possible with proper temperature control.
- Fast heat-up and cool down.
- Wide choice of electrical termination: Solderless connectors and terminals, stranded lead wires, cords and plugs.
- Distributed wattage requirements can be met by design.

**Note** — With flexible heaters, less wattage is generally needed due to the direct contact of the elements to the part. In most cases of high watt density, you are adding power but

increasing the number of cycles the heater is going to experience. The same heat-up requirements can be met by decreasing wattage and increasing actual operation time. In addition, by decreasing on-off cycles, you will be lengthening the life of your element.

#### Ordering Information

Please refer to the matrix provided on the Flexible Heater Ordering Guidelines page which follows.

#### Options

- For Mounting Methods, Temperature Control and Termination Options. Consult the Flexible Heaters section.
- Grounding of the heating element can be easily achieved internally to the element or externally to your equipment. A wire-mesh screen can be vulcanized into the heater to provide a ground plane. Mounting plates, foil backing or flying ground wires are several options available for external grounding.
- Three methods of integral insulation can be provided. The most durable and one of greatest thermal insulation is to vulcanize a layer of silicone foam to the back of the heater. Silicone foam is available in thicknesses of 1/8, 1/4 or 1/2". Finally, Fiberglas<sup>®</sup> insulation can be encased in silicone rubber and serve as the outer two layers of the heating element. This method is not recommended for outdoor use since construction methods allow for moisture to permeate the insulation.