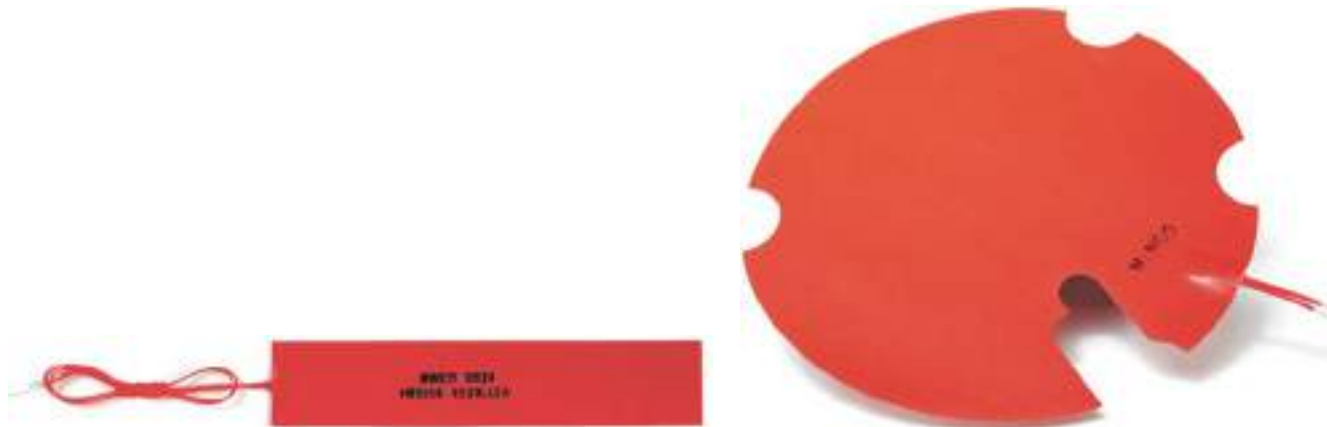


Silicone Rubber Thermofoil™ Heaters

Rugged and flexible to 235°C



Overview

Silicone rubber is a rugged, flexible elastomer material with excellent temperature properties. It is most suited to larger heaters and industrial applications.

- Rugged construction provides high reliability in a wide range of heating applications.
- Optional custom profiled heat density creates a uniform heatsink temperature which can improve processing yields.
- Factory vulcanization and high temperature capability allows higher wattage levels for faster processing.
- High temperature capability to 235°C (455°F)
- UL component recognition available
- Resistant to many chemicals
- Not suitable for radiation, vacuum, or prolonged exposure to oil
- Most economical in large sizes

Configure Minco heaters and order online at:
www.minco.com/heater_config/

Typical applications

- Thermal developing in graphic imaging equipment
- Prevent condensation in instrument cabinets
- Heat outdoor electronics
- Food service equipment
- Medical respirators
- Laminators
- Drums and other vessels
- Airplane engine heaters

Custom options

- Custom shapes and sizes to 22 × 72" (560 × 1830 mm)
- Custom resistance to 200 Ω/in² (30 Ω/cm²)
- Minco can factory vulcanize rubber heaters to metal shapes for best economy and performance
- Heaters can have integral snaps, straps, or Velcro® for removable installation
- Heaters can include thermostats, temperature sensors and cutouts, wiring harnesses, and connectors
- TÜV or UL approval is optional

Silicone Rubber Thermofoil™ Heaters

Specifications

Temperature range: -45 to 235°C (-50 to 455°F).
 With UL component recognition: -45 to 220°C (-50 to 428°F).

Material: Fiberglass reinforced silicone rubber,
 0.008" (0.20 mm).

Resistance tolerance: ±10% or ±0.5 Ω, whichever is greater.

Dielectric strength: 1000 VRMS.

Minimum bend radius: 0.125" (3.2 mm).

Leadwire: Red PTFE insulated, stranded.

Current capacity (based on 100°C max. ambient temp.):

AWG 30	AWG 26	AWG 24	AWG 20
3.0 A	5.0 A	7.5 A	13.5 A

Maximum heater thickness:

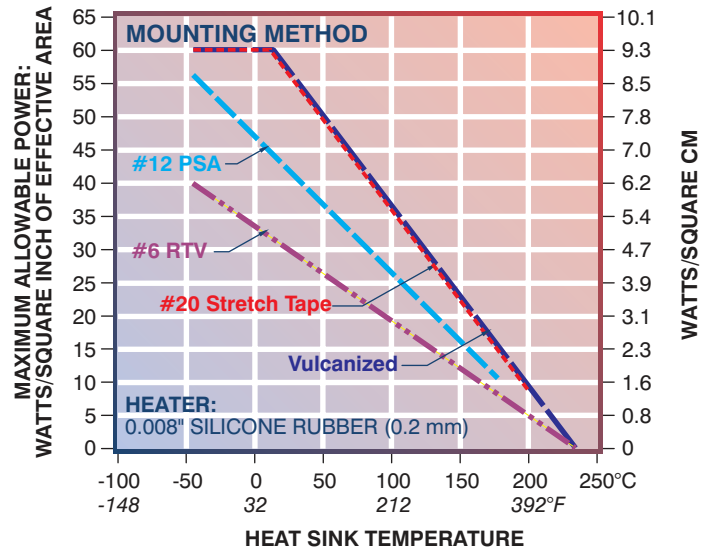
	No adhesive (A):	#12 PSA (B):
Over element	0.020" (0.5 mm)	0.025" (0.6 mm)
Over leads		
AWG 30 (0.057 mm ²)	0.070" (1.8 mm)	0.085" (2.2 mm)
AWG 26 (0.141 mm ²)	0.080" (2.0 mm)	0.095" (2.4 mm)
AWG 24 (0.227 mm ²)	0.090" (2.3 mm)	0.105" (2.7 mm)
AWG 20 (0.563 mm ²)	0.120" (3.0 mm)	0.135" (3.4 mm)

Add 0.005" (0.1 mm) to above dimensions for foil backing.

Dimensional tolerance:

6" (150 mm) or less	±0.03" (±0.8 mm)
6.01 to 12" (150 to 300 mm)	±0.06" (±1.5 mm)
Over 12" (300 mm)	±0.12" (±3.0 mm)

Maximum Watt Density, Rubber Heaters



Example: At 100°C, the maximum power of a vulcanized heater is 36 W/in².

Worldwide Headquarters
 7300 Commerce Lane
 Minneapolis, MN 55432 USA
 Tel: 1.763.571.3121
 Fax: 1.763.571.0927
 sales@minco.com
 www.minco.com

European Headquarters
 Usine et Service
 Commercial, Z.I.
 09310 Aston, France
 Tel: (33) 5 61 03 24 01
 Fax: (33) 5 61 03 24 09

Asia Pacific Headquarters
 20 Science Park Road
 #02-31 Teletech Park
 Singapore Science Park II
 Singapore 117674
 Tel: (65) 6511 3388
 Fax: (65) 6511 3399

ISO 9001:2000 / AS9100B
 HTR01052606R0
 © Minco 2006

MINCO
 A critical component of your success™

Flex Circuits
 Thermofoil™ Heaters
 Sensors
 Instruments