



# 50-1225

## THERMALLY CONDUCTIVE SILICONE RUBBER

### DESCRIPTION:

50-1225 is a low viscosity, room temperature curing silicone potting and encapsulating compound. When cured, this material forms a soft, highly flexible, flame retardant, and thermally conductive package.

50-1225 can be used for potting or encapsulating electronic packages that have sensitive components. Due to its low stress during and after cure, this material will not crush or damage delicate components. This silicone system will maintain its low durometer through aging and thermal cycling.

50-1225 provides high heat transfer and does not require a post cure. It may be used immediately after curing at operating temperatures of  $-65^{\circ}\text{C}$  to  $210^{\circ}\text{C}$ .

### FEATURES:

- Flexible
- Thermally conductive
- Solvent free
- Deep section curing (beyond 1-2 inches)
- High operating temperatures

### BENEFITS:

- Low stress on components and vibration resistant
- Quick heat dissipation extends electronic life
- No by-products released during cure and safe to handle
- No need for multiple pours
- Good protection in extreme environmental applications

### TYPICAL SPECIFICATIONS:

Color	White
Viscosity @ $25^{\circ}\text{C}$ cps	32,000
Pot Life, 100 gram mass @ $25^{\circ}\text{C}$	30 minutes
Specific Gravity, $25^{\circ}\text{C}$	2.0
Hardness, Shore A	35
Linear Shrinkage, 3 days at $25^{\circ}\text{C}$ , %	<0.2
Tensile Strength, $^{\circ}\text{C}$ , psi	850
Dielectric Strength, 1/16" V/mil	610
Dielectric Constant at $25^{\circ}\text{C}$ :	
100 Hz	5.2
1 KHz	5.2
Volume Resistivity, 500V DC, ohm-cm	$1.0 \times 10^{14}$
Thermal Conductivity, W/m- $^{\circ}\text{K}$	1.73
Elongation, %, die C psi	120
Thermal Shock, 10 cycles	Pass
Corrosion Resistance	Pass



### INSTRUCTIONS FOR USE:

1. Mix base and hardener separately since some settling of fillers may occur.
2. By weight, mix 10 parts 50-1225 hardener to 100 parts 50-1225 base silicone. Mix uniformly, scraping sides and bottom of mixing container. Do not whip air into mixture.
3. De-air by pulling vacuum on mixed material.
4. Pour and let cure overnight at room temperature or follow one of the schedules below:

65°C	4 Hours
100°C	1 Hours
150°C	.25 Hours

### SUBSTRATE NOTES:

Certain materials may inhibit the cure of this product. Materials that should be avoided include sulfur containing materials, nitrogen containing materials (i.e. amines) some silicones (tin cured), and butyl and chlorinated rubbers. If in doubt, a patch test should be done.

### STORAGE:

When stored in the original, unopened container, in a dry location at 65° - 80°F, 50-1225 has a shelf life of approximately six months.

### AVAILABILITY:

50-1225 silicone is available in quart, gallon, five gallon pail, and 55 gallon drum kits.

### IMPORTANT:

**EPOXIES, ETC. MAKES NO EXPRESS OR IMPLIED WARRANTIES OR MERCHANTABILITY, FITNESS OR OTHERWISE WITH RESPECT TO ITS PRODUCTS.** The information in this brochure is based on data obtained by our own research and is considered reliable. However, no warranty is expressed or implied regarding the accuracy of these data, the results to be obtained from the use thereof, or that any such use will not infringe any patent. The properties given are typical values and are not intended for use in preparing specifications. This information is furnished upon the condition that the person receiving it shall make his own tests to determine the suitability thereof for his particular purpose.

06/19