

20-1650

HIGH TEMPERATURE SILICONE POTTING AND ENCAPSULATING COMPOUND

DESCRIPTION:

20-1650 is a two component silicone elastomer designed for high temperature applications. Silicones offer thermal stability at high operating temperatures, but the 20-1650 is formulated with iron oxide to impart increased stability at elevated temperatures. It has a simple 1:1 mix ratio.

20-1650 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.

20-1650 is formulated without solvents or other toxic materials. It is therefore not regulated or considered hazardous for transportation.

FEATURES:

- High operating temperatures
- Easy 1:1 mix ratio
- Low viscosity
- Flexible
- Deep section curing (beyond 1-2 inches)
- Solvent free

BENEFITS:

- Good protection in extreme environmental applications
- Simple to use
- Dispenses and pours easily without air bubbles
- Low stress on components and vibration resistant
- No need for multiple pours due to low exotherm
- No by-products released during cure and safe to handle

TYPICAL SPECIFICATIONS:

Color	
Resin (Part A)	Red
Activator (Part B)	Clear
Viscosity, @ 25°C, cps	
Resin (Part A)	7,500
Activator (Part B)	6,500
Mixed	7,100
Specific Gravity, @ 25°C	
Resin (Part A)	1.04
Activator (Part B)	1.03
Pot Life, 25°C, 100 grams	20 minutes
Hardness, Shore A	30
Elongation, %	250%
Tensile Strength, psi	149
Tear Strength, pli	20
Thermal Conductivity, btu-in/hr-ft ² ·°F	1.1

TYPICAL SPECIFICATIONS (continued):

Coefficient of Thermal Expansion, per °C	2×10^{-4}
Volume Resistivity, ohm-cm, 25°C	1×10^{14}
Dielectric Constant @ 100 Hz	3.1
Dielectric Strength, V/mil	450
Operating Temperature, °C	-65 to +300°C

INSTRUCTIONS FOR USE:

1. Mix base and hardener separately since some settling of fillers may occur.
2. By weight or volume, mix 1 part base silicone to 1 part activator. 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:

25°C	24-48 Hours
65°C	2-4 Hours
100°C	1 Hour
150°C	20 Minutes

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, 20-1650 has a shelf life of approximately six months.

AVAILABILITY:

20-1650 silicone is available in quart, gallon, five gallon pail, and 55 gallon drums. It is also available in the popular TriggerBond® 50ml, 200ml, and 400 ml cartridges.

IMPORTANT:

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