EPOXIES
INNOVATIVE BONDING SOLUTIONS ETC.

TECHNICAL BULLETIN

50-1952
THERMALLY CONDUCTIVE SILICONE POTTING AND ENCAPSULATING COMPOUND

DESCRIPTION:

50-1952 is a two-component silicone potting and encapsulating compound. This silicone system is designed for quick thermal transfer away from heat generating electronic devices. The 50-1952 has a simple 1:1 mix ratio, can be cured in thick sections, is non-corrosive, and reversion resistant. The black silicone resin and white activator provide an excellent visual indication of a complete mix.

50-1952 is formulated without solvents or other toxic materials. It is therefore not regulated or considered hazardous for transportation. 50-1952 is REACH and RoHS Compliant.

FEATURES:	BENEFITS
• Flexible	• Low stress on components and vibration resistant
• Thermally conductive	• Quick heat dissipation extends electronic life
• Solvent free	• No by-products released during cure and safe to handle
• Deep section curing (beyond 1-2 inches)	• No need for multiple pours due to low exotherm
• High operating temperatures	• Good protection in extreme environmental applications
• Easy 1:1 mix ratio	• Simple to Use

TYPICAL PROPERTIES:

Viscosity, cps, 25 °C	
50-1952ABK Resin	60,000
50-1952BWH Activator	20,000
Mixed	30,000
Color	
50-1952ABK Resin	Black
50-1952BWH Activator	White
Mixed	Gray
Hardness, Shore A	75
Mix Ratio, By Weight	1:1
Operating Temperature Range, °C	-65 to +235
Pot Life, 25 °C, 100 grams	1.5 Hours
Specific Gravity, 25 °C	
50-1952ABK Resin	2.05
50-1952BWH Activator	2.12
Elongation, %	45
Tensile Strength, psi	500

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Coefficient of Thermal Expansion, per °C	2×10^{-4}
Thermal Conductivity, W/m· °K	1.1
Dielectric Constant, 1 MHz	5.0
Dielectric Strength, V/mil	450
Volume Resistivity, ohm-cm, 25 °C	1×10^{14}

INSTRUCTIONS FOR USE:

1. Mix base and hardener separately since some settling of fillers may occur.
2. By weight, mix 1 part 50-1952ABK resin to 1 part 50-1952CWH. 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. Degas, pour, and cure according to one of the following recommended cure schedules:
    a) 25 °C 2-7 Days
    b) 65 °C 2-4 Hours
    c) 100 °C 1 Hour
    d) 150 °C 20 Minutes

NOTES: For optimum properties, follow the initial cure with a post cure of 2 hours at 175 °C.

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, HANDLING, & SAFETY:

Store both components at 25 °C in original containers. The expected shelf life is 12 months in original containers.

Please read the Safety Data Sheet before using this or any other chemical.

AVAILABILITY:

50-1952 is available in quarts, gallons, 5-gallon pails, and 55-gallon drums.

IMPORTANT:

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