

Red Ice 613

High Temperature Resistance Silicone Thermal Compound

Product Description

Red Ice 613 is formulated with highly stable, high temperature silicone fluids and unique fillers. This compound provides minimal out gassing, high thermal conductivity, low bleed and high temperature stability.

Red Ice 613 is specifically designed to eliminate Standard Silicone compound "dry-out" problems due to the continuous exposure to temperatures exceeding 200°C(392°F) and intermittent temperatures to 250°C (482°F). This Silicone thermal grease compound insures rapid and efficient heat transfer and dissipation for the full operational life of your hardware.

Key Features and Benefits

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| • <i>Rated for up to 250 °C (482 °F) Operation</i> |
| • <i>Low Interface Thermal Resistance. 0.04 °C-In² /W.</i> |
| • <i>High Thermal Conductivity, High dielectric strength.</i> |
| • <i>Exceptionally low bleed and evaporation.</i> |
| • <i>Low Out Gassing.</i> |

- Will Not Harden, Dry Out or Melt.
- Excellent Wetting Property.
- Re-workable/Easy to Remove.
- Easy to Dispense.

Typical Applications

Red Ice 613 is designed for use in applications where Service temperature rated for up to 250 °C (482 °F) or device wattage's can exceed 100W and where device may later need to be easily removed from heat sink. Also use with High temperature rated thermistors, RTD, and thermocouple wells. It has shown outstanding performance where heating coils/plate or calrod use in portable heaters, tank heaters or electric frying pan where heat transfer medium required to fill uneven surface gaps. Other typical device applications include multi-chip module transistors, diodes, and silicone-controlled rectifier.

Shelf-Life

Red Ice 613 has a shelf-life of 5 years at room temperature (25°C) in unopened containers. Slight settling of the filler may occur during long-term storage. In this case, it is recommended to re-dispersed by hand or mechanical mixing. Refrigerate material at 0-10°C to avoid any settling.

Clean Up

Standard approved clean-up and disposal procedures should be followed in every situation. The use of disposable containers and utensils are recommended whenever possible to simplify and expedite clean-up. However, when disposable containers are impractical, *Red Ice 613* can be removed by cleaning solvents with such as Mineral Spirit (Paint Thinner), Heptane or Isopropyl Alcohol.

Typical Properties

| Property | Value |
|--|------------------------|
| Viscosity: | Thixotropic Paste |
| Specific Gravity, @ 25°C: | 2.3 |
| Color: | White |
| Evaporation, @ 200°C, 24 Hrs, %/Wt. | 0.4 |
| @ 300°C, 24 Hrs, %/Wt. | 1.5 |
| Thermal Conductivity, (ASTM D5470) | |
| Cal/Sec. Cm.°C | 29 x 10 ⁻⁴ |
| BTU.In/(Hr.Ft ² .°F) | 8 |
| W/m.°K | 1.2 |
| Thermal Resistance (°C-In²/W) | 0.04 |
| Electrical Properties: | 415 |
| Dielectric strength. (ASTM D150) 0.05" gap, V/mil | |
| Dielectric constant. (ASTM D150) 25°C @ 1,000 Hz. | 4.5 |
| Dissipation factor. (ASTM D150) 25°C @ 1,000 Hz. | 0.0025 |
| Volume Resistivity. (ASTM D257) Ohm-cm. | 1.8 x 10 ¹⁴ |
| Operating Temperature Range: | -55°C to 250°C |