

Blue Ice 414

Non-Silicone Thermal Compound

Product Description

Blue Ice 414 Heat Sink Compound is grease like NON-SILICONE, non-migrating material heavily thickened with heat-conductive powders. This compound provides high thermal conductivity, low bleed and high temperature stability.

Blue Ice 414 has been engineered to solve the problems of contamination and migration associated with silicone-based products. The compound is unique polysynthetic-based thermal grease used to insure rapid and efficient heat transfer and dissipation for the full operational life of your hardware.

Key Features and Benefits

• <i>Low Interface Thermal Resistance. (0.014 °C-In² /W)</i>
• <i>High Thermal Conductivity. (3.7 W/m. °K)</i>
• <i>Electrical Insulator</i>
• <i>Exceptionally low bleed and evaporation.</i>
• <i>Non-Silicone Advantages/No creep or Migration over wide temperature range.</i>
• Reworkable/Easy to Remove.
• Easy to Dispense.

Typical Applications

Blue Ice 414 Heat Sink Compound is applied to the base and mounting studs of transistors, diodes and silicone controlled rectifiers. In these situations, a small amount of thermal grease is using either dispensing or screen printing/stencil methods. *Blue Ice 414* can be used as a high-voltage corona suppressant/ non-flammable coating, in connections for fly back transformers located in TV sets and similar applications. It is also used in mounting semiconductor devices; thermoelectric modules; power transistors and diodes; coupling entire heat generating assemblies to chassis; heat transfer medium on ballast; thermal joints; thermocouple wells; mounting power resistors; for any devices where efficient cooling is required in major industries including, electronic (computer, appliance, wireless, etc.), automotive, electrical.

Shelf-Life

Blue Ice 413 has a shelf-life of 5 years at room temperature (25°C) in unopened containers. Slight settling of the fillers may occur during long-term storage. In this case, it is recommended to re-disperse the fillers by hand or with 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, *Blue Ice 414* can be removed by cleaning solvents with such as Mineral Spirit (Paint Thinner), Heptane or Isopropyl Alcohol..

Typical Properties

<i>Property</i>	<i>Value</i>
Viscosity:	Thixotropic Paste
Specific Gravity, @ 25°C	1.7
Color:	Black
Evaporation, @ 200°C, 24 Hrs., %/Wt.	0.2
Thermal Conductivity, (ASTM D5470)	
Cal/Sec. Cm.°C	88 x 10 ⁻⁴
BTU.In/(Hr.Ft. ² .°F)	26
W/m.°K	3.7
Thermal Resistance (°C-In²/W)	0.014
Electrical Properties :	290
Dielectric strength. (ASTMD-150) 0.05" gap, V/mil	
Dielectric constant. (ASTM-D150) 25°C @ 1,000 Hz.	2.8
Dissipation factor. (ASTM-D150) 25°C @ 1,000 Hz.	0.0012
Volume Resistivity. (ASTM-D257) Ohm-cm.	2.8 x 10 ¹²
Operating Temperature Range	-55°C to 200°C