TIMTRONICS
THERMAL INTERFACE MATERIAL

Data Sheet

Blue Ice 411

Non-Silicone Thermal Compound

Product Description

Blue Ice 411 Heat Sink Compound **specially** ***formulated with low viscosity and excellent wetting agent to achieve thinnest film possible to lower thermal resistance. Low viscosity makes it easy to dispense or screen print/stencil.***

Blue Ice 411 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

- ***Formulated with low viscosity for easy dispensing and screen printing/Stencil, and automated dispensing.***
- ***Thin Bond lines 0f 1-2 mil.***
- ***Non-Silicone Advantages/No creep or Migration over wide temperature range.***
- ***Low Interface Thermal Resistance. (0.03 °C-In^2 /W)***
- ***High Thermal Conductivity, High dielectric strength.***
- ***Exceptionally low bleed and evaporation.***
- ***Meets MIL-C-47113 & Mis-19846 specifications.***

Typical Applications

Blue Ice 411 **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 applied using either the dispensing or screen printing/stencil methods. ***Blue Ice 411*** can be used as a high-voltage corona suppressant/non-flammable coating, in connections for fly back transformers located in TV sets and similar design applications. It is also used in mounting semi-conductor devices; thermoelectric modules; power transistors and diodes; coupling entire heat generating assemblies to chassis; heat transfer medium on ballasts; thermal joints; thermocouple wells; mounting power resistors; and for any devices where efficient cooling is required in major industries Including, electronic (computer, appliance, wireless, etc.), automotive and electrical.

Shelf-Life

Blue Ice 411 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 refrigerate material at 0-10°C to avoid any settling.

Clean Up:

Standard approved clean-up and disposal procedures should be followed. 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 411*** 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	2.4
Color:	Blue or White
Evaporation, @ 200°C, 24 Hrs., %/Wt.	0.6
Thermal Conductivity, (ASTM D5470)	
Cal/Sec. Cm.°C	19 x 10^{-4}
BTU.In/(Hr.Ft^2.°F)	5.5
W/m.°K	**0.80**
Thermal Resistance (°C-In^2 /W)	**0.03**
Electrical Properties : Dielectric strength. (ASTM D150) 0.05" gap, V/mil	310
Dielectric constant. (ASTM D150) 25°C @ 1,000 Hz.	4.4
Dissipation factor. (ASTM D150) 25°C @ 1,000 Hz.	0.0021
Volume Resistivity. (ASTM D257) Ohm-cm.	1.54 x 10^{14}
Operating Temperature Range.	-55°C to 200°C

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