



ELECTRONICS, INC.
44 FARRAND STREET
BLOOMFIELD, NJ 07003
(973) 748-5089
<http://www.nteinc.com>

NTE424 Non-Silicone Heat Sink Compound 1 oz. Plunger Tube

Description:

NTE424 heat sink compound is a grease-like, non-silicone, non-migrating material heavily impregnated with heat-conductive metal oxides. This formulation provides high thermal conductivity, low bleed and high temperature stability.

NTE424 has been engineered to solve the problems of contamination and migration associated with silicone-based products. A unique poly synthetic-based thermal grease used to insure quick, efficient heat transfer and dissipation for the full operational life of your hardware.

Key Features and Benefits:

- Non-Silicone Advantages/No Creep or Migration over Wide Temperature Range
- Low Interface Thermal Resistance ($0.03^{\circ}\text{C}-\text{In}^2/\text{W}$)
- High Thermal Conductivity, High Dielectric Strength
- Exceptionally Low Bleed and Evaporation
- Will Not harden, Dry-Out or Melt
- Will Not Contaminate Solder bath or Other Devices
- Non-Toxic
- Reworkable/Easy to Remove
- Easy to Dispense

Common Uses:

- CPUs
- LED
- IGBT Modules
- Power Rectifiers

Typical Properties:

Viscosity	Thixotropic Paste
Specific Gravity @ +25°C	2.7
Color	White
Evaporation @ +200°C, 24 Hours, %/Wt.	0.3
Thermal Conductivity, (ASTM D5470)	
Cal/Sec. Cm. °C	23×10^{-4}
BTU.In/(Hr.Ft ² .°F)	6.9
W/m.°K	1.0
Thermal Resistance ($^{\circ}\text{C}-\text{In}^2/\text{W}$)	0.03

Electrical Properties:

Dielectric Strength (ASTM D150) 0.05" gap, V/mil	350
Dielectric Constant (ASTM D150) +25°C @ 1000Hz	4.65
Dissipation Factor (ASTM D150) +25°C @ 1000Hz	0.0026
Volume Resistivity (ASTM D257) Ohm-cm	1.8×10^{14}
Operating Temperature Range	-55° to +200°C



Rev. 9-20



Typical Applications:

The NTE424 heat sink compound is applied to the base and mounting studs of transistors, diodes and silicon controlled rectifiers (SCRs). In these situations, a small amount of the thermal grease is applied using either the dispensing or screen printing/stencil methods. NTE424 can be used as a high-voltage corona suppressant/non-flammable coating, in connections for flyback transformers located in TV sets and similar design 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 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:

The NTE424 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-disperse the filler by hand or mechanical mixing. Refrigerate material at 0° to +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, NTE424 can be removed by cleaning solvents such as Mineral Spirit (Paint Thinner), Heptane or Isopropyl Alcohol.