



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

NTE303A Silicone Thermal Compound 1 oz. Plunger Tube

Description:

The NTE303A is a non-reactive, silicone, thermally conductive grease with a high thermal conductivity and low thermal resistance with a soft, non-flowable consistency. The product is formulated with specialty binding agents to achieve the lowest amount of bleed and evaporation. It is designed for applications where a silicone thermal interface material is required and where the device may later need to be easily removed from the heat sink. The compound is ideally suited for use in thin cross-sectional thicknesses down to ≤ 1 mil.

Key Features and Benefits:

- Good Thermal Performance ($0.80\text{W/m}^2\text{K}$)
- Low Interface Thermal Resistance ($0.05^\circ\text{C-In}^2/\text{W}$)
- Thin Bond Lines to ≤ 1 mil
- Low Bleed and Evaporation
- Non-Toxic
- Reworkable/Easy to Remove
- Easy to Apply by Dispensing or Screen Printing/Stencil

Typical Properties:

Viscosity	Thixotropic Paste
Specific Gravity @ $+25^\circ\text{C}$	2.2
Color	White
Evaporation @ $+200^\circ\text{C}$, 24 Hours, %/Wt.	0.6
Thermal Conductivity, (ASTM D5470)	
Cal/Sec. Cm. $^\circ\text{C}$	19×10^{-4}
BTU.In/(Hr.Ft ² . $^\circ\text{F}$)	5.5
W/m. $^\circ\text{K}$	0.80
Thermal Resistance ($^\circ\text{C-In}^2/\text{W}$)	0.05

Electrical Properties:

Dielectric Strength (ASTM D150) 0.05" gap, V/mil	390
Dielectric Constant (ASTM D150) $+25^\circ\text{C}$ @ 1000Hz	4.40
Dissipation Factor (ASTM D150) $+25^\circ\text{C}$ @ 1000Hz	0.0021
Volume Resistivity (ASTM D257) Ohm-cm	2.8×10^{14}
Operating Temperature Range	-55° to $+205^\circ\text{C}$

Rev. 9-22



Typical Applications:

The NTE303A 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 of screen printing/stencil methods. NTE303A 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, wire-less, etc.), automotive and electrical.

Shelf-Life:

The NTE303A 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, NTE303A can be removed by cleaning solvents such as Mineral Spirit (Paint Thinner), Heptane or Isopropyl Alcohol.

