



Unick Chemical Corp.

Silicon-based compound for thermo coupling of electronic components and heat sinks. High-heat conductive property allows heat to pass freely where heat dissipation and dispersion is important.

Temperature range: -200°C to 130°C

Thermal conductivity: 0.9W/mK

- The Unick Silicone Heat Transfer Compound is a grease-like silicone material that is heavily impregnated with heat conductive metal oxides (zinc oxide). This combination of base and fillers produces a material that has a high thermal conductivity. Together with low bleed properties, the compound facilitates heat transfer from semiconductors to heat sinks by covering and smoothening pits and lands along the metal surfaces, thereby transferring heat uniformly and efficiently away from those surfaces and avoiding the development of "hotspots".
- Uses and application: The compound is applied to the base and mounting studs of transistors, power diodes, CPUs and/or any component where excess heat is required to be drawn away. Ideally, this application should be done in a thin and uniform film without any break across the surface before coupling to a suitable metal heat sink is made.
- One 10g tube will do up to 30 TO-3 package transistors
- **Composition:**
 - - Dimethyl Polysiloxane (silicone) 28%
 - - Zinc Oxide 65%
 - - Submicroscopic Pyrogenic Silica 4%
 - - Stabilizer 3%
- **General Physical and Chemical Properties:**
 - - Colour: Opaque White
 - - Odour: None
 - - Consistency: Penetration, worked and measured within 1 minute after working (ASTM D-217) = 260
 - - Bleed (after 24 hours @ 200°C): 1.0%
 - - Evaporation (after 24 hours @ 200°C): 1.0%
 - - Specific Gravity at 25°C: 2.3
 - - Thermal Conductivity, K Factor, cal/cm²°C/sec/cm: 0.0015
 - - Dielectric Strength, kV at 0.1mm, ASTM D-149: 1.0
 - - Boiling Point: >250°C
 - - Melting Point: 1,970°C
 - - Flash Point: 230°C
 - - Auto-ignition Temperature: 425°C
 - - Vapour Pressure: >2hPa
 - - Relative Density: >= 2.1 (@ 20°C)