

## Non-Silicone Heat Transfer Compound



### 8610

- Special synthetic base, fortified with metal oxides and compounded to a paste-like consistency for ease of application
- High efficient thermal conductive properties
  - Means more rapid transfer of heat for longer component life
- High temperature stability
  - Provides physical properties of low bleed and low evaporation for long-term service in any application that requires Heat Sink Compound.
- Uses synthetic fluids and metal oxide fillers
  - Provides excellent conductive properties that exceed those of other heat sink formulas
- Will not dry, harden, melt or migrate in any heat sink application
- Compatible with metal and plastic components
- Meets MIL-DTL-47113D
- Also available in a [silicone version](#)



### Benefits of Non Silicone Heat Transfer Compound OVER Silicone

No migration and component contamination.

#### Applications

- Typically, Heat Transfer Compounds (heat sink compounds) are used in OEM Electronic Component Plants to insure fast, accurate heat transfer in electronic components and circuitry
- Other used:
  - Semiconductor Mounting Devices
  - Thermal joints
  - Ballast heat transfer mediums
  - Power resistor mountings
  - Thermocouple wells
  - Transistor diodes & silicone rectifier base and mounting studs
  - ALL electric and electronic devices where efficient heat



transfer cooling through thermal coupling is required

## Specifications

Physical Properties	Test Method	<u>Non Silicone</u> <u>8610</u>	<u>Silicone</u> <u>860</u>
Appearance	Visual	Off white / smooth paste	White paste
Consistency	ASTM D 217	310-320	
Specific Gravity @ 25°C (77°F)		2.5 min	2.3 min
Bleed % 24 hours @ 200°C	FTM-321	1.0% max	2.0% max
Bleed % 24 hours @ 200°C	FTM-321	1.0% max	2.0% max
Evaporation 24 hours @ 200°C	ASTM D-566	> 500°F (260°C)	
Max. operating temp.		200°C	200°C (consistent) 300°C intermittent
Electrical Properties	Test Method	<u>Non Silicone</u> <u>8610</u>	<u>Silicone</u> <u>860</u>
Thermal Conductivity	Hot Wire Method Heat Flow #36 °C	0.773 W/m•K	0.657 W/m•K
Dielectric Strength (0.051 gap)	ASTM D-149	350 V/MIL	400 V/MIL
Dielectric Constant @ 1000 Hz	ASTM D- 150	4.4	3.81
Dissipation Factor @ 1000 Hz	ASTM D 150	0.0021	0.0032
Resistivity @ 21°C	ASTM D 150	6.38 x 10 <sup>13</sup> Ohm/cm	1.5 x 10 <sup>15</sup> Ohm/cm

## Available Sizes

Catalog Number	Sizes Available	Description
8610-60G	60g (2 oz)	Liquid - TUBE
8610-1P	1 pint (2.5 lbs)	Tub

# Material Safety Data Sheet

## Section 1: Product Identification

**MSDS Code: 8610      Name: Non Silicone Heat Transfer Compound**

**Related Part Numbers: 8610-60G; 8610-1P; 8610-1KG; 8610-1GAL**

Use: A non-silicone compound for improving thermal connections.

## Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha PeI	Osha Stel
1314-13-2	Zinc oxide	60 - 100	10 mg / m <sup>3</sup>	N/e	N/e
-	Non hazardous	15 - 40	N/e	N/e	N/e

## Section 3: Hazards Identification

**WHMIS Codes:** D2B

**NFPA Ratings:** Health 1 Flammability 1 Reactivity 0

**HMIS Ratings:** Health 1 Flammability 1 Reactivity 0

**Eyes:** Causes moderate eye irritation.

**Skin:** May cause mild skin irritation.

**Inhalation:** Possible dust hazard if particles are separated from the polymeric matrix.

**Ingestion:** None known

**Chronic:** None known

## Section 4: First Aid Measure

**Eyes:** Remove contact lenses. Flush with water or saline for 20 minutes. Get medical aid if irritation persists.

**Skin:** Wash skin with large quantities of soap and water.

**Inhalation:** Move person to fresh air.

**Ingestion:** Rinse mouth with water several times.

## Section 5: Fire Fighting Measures

**Autoignition Temperature:** N/e      **Flash Point:** >204°C      **LEL / UEL:** N/a

**Extinguishing Media:** All standard extinguishing media.

**General Information:** Will burn if involved in a fire.

## Section 6: Accidental Release Measures

**Spill Procedure:** Wipe, scrape, or soak up in an inert material. Wash spill area with soap and water.

## Section 7: Handling and Storage

**Handling:** Wash thoroughly after handling. Avoid contact with eyes.

**Storage:** Store in a cool, dry, well-ventilated area, away from incompatible substances. Keep container closed.

## Section 8: Exposure Controls

**Routes of entry:** Eyes, ingestion, inhalation, and skin.

**Ventilation:** Not required.

**Personal Protection:** Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact.

## Section 9: Physical and Chemical Properties

<b>Physical State:</b>	Paste	<b>Odor:</b>	None	<b>Solubility:</b>	Insoluble	<b>Evaporation Rate:</b>	N/a		
<b>Boiling Point:</b>	204°C	<b>Specific Gravity:</b>	2.4	<b>Vapor Pressure:</b>	<1 PSI @21°C	<b>Vapor Density:</b>	N/a	<b>pH:</b>	N/a

## Section 10: Stability and Reactivity

**Stability:** Stable at normal temperatures and pressures.

**Conditions to avoid:** Incompatible substances.

**Incompatibilities:** Oxidizing agents

**Polymerization:** Will not occur.

**Decomposition:** Carbon monoxide and carbon dioxide.

## Section 11: Toxicological Information

**Sensitization:** (effects of repeated exposure) Not known to.

**Carcinogenicity:** (risk of cancer) The ingredients of this product are not classified as being carcinogenic by ACGIH (American Conference of Governmental industrial Hygienists) or IARC (International Agency for Research on Cancer), not regulated as carcinogens by OSHA (Occupational Safety and Health Administration), and not listed as carcinogens by NTP (National Toxicology Program)

**Teratogenicity:** (risk of malformation in an unborn fetus) No

**Reproductive Toxicity:** (risk of sterility) No

**Mutagenicity:** (risk of heritable genetic effects) No

<b>Lethal Exposure Concentrations:</b>	<b>Ingestion (LD50):</b>	N/e	<b>Inhalation (LC50):</b>	N/e	<b>Skin (LD50):</b>	N/e
--	--------------------------	-----	---------------------------	-----	---------------------	-----

## Section 12: Ecological Information

**General Information:** Avoid runoff into storms and sewers, which lead into waterways. Water runoff can cause environmental damage.

**Environmental Impact Data:** (percentage by weight)

**CFC:** 0      **HFC:** 0      **Cl.Solv:** 0      **VOC:** 100      **HCFC:** 0      **ODP:** 0

## Section 13: Disposal Information

**General Information:** Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

## Section 14: Transportation Information

**Ground:**

Not regulated.

**Air:**

Not regulated.

**Sea:**

Not regulated.

## Section 15: Regulatory Information

**This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.**

**SARA** (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

None of the chemicals in this product have a reportable quantity.

**EPCRA** (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product does not contain any chemicals subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

**TSCA** (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

**CAA** (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain any chemicals listed as hazardous air pollutants.

**California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

This product does not contain any chemicals listed.

**Health Canada**

Labeling and containers used in this product are listed in compliance with Consumer Chemicals and Container regulations.

**Environment Canada**

Chemicals in this product are listed on the Domestic Substances List in the Canadian Environmental Protection Act

This product does not contain any ozone depleting substances.

**Industry and Science Canada**

Labeling, product identity, net quantity declaration, minimum printing type size heights, and packaging of this product is in compliance with the Consumer Packaging and Labeling Act and Regulations. This product is not slack filled in accordance to chapter 4 prohibitions.