

## GC HEAT SINK COMPOUNDS

### Meets Your Great Demands

The technology of today's electronic devices has increased current handling capacity. The additional heat buildup places great demands on heat sink materials. GC offers a complete line of heat sink compounds to meet these demands. The HTC product offers over twice the thermal conductivity of conventional products and is available in silicone and non-silicone versions. The water-soluble heat sink grease offers excellent thermal conductivity and easy cleanup. The standard silicone and non-silicone products continue to meet most requirements. See chart for typical properties.



### Silicone (Z9)



Industry standard zinc oxide filled silicone heat sink grease for most applications. Will not soften at elevated temperatures or dry out or harden. Meets Mil. Spec. C-47113.

<b>Part No. 10-8109</b>	1 fl. oz. Tube
<b>Part No. 10-8108</b>	6.5 gms. Tube
<b>Part No. 10-8106</b>	1 lb. Can
<b>Part No. 10-8106-5GL</b>	5 gal. can



### Water Soluble



Easy clean-up, non-migrating. Eliminates use of solvents, is non-reactive, exhibits excellent dielectric properties.

<b>Part No. 10-8132</b>	1 oz. Syringe
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### Type 44 Non-Silicone



Compounded with 100% synthetic base stocks. Features excellent heat transfer efficiency, thermal stability, high flow rate, no separation, bleed or migration typical of silicone based greases. MIL-C-47113 Type 2.

<b>Part No. 10-8118</b>	1/2 fl. oz. Jar
<b>Part No. 10-8120</b>	1 fl. oz. Tube
<b>Part No. 10-8126</b>	1 lb. Jar



### HTC (High Thermal Conductivity)

Higher thermal conductivity formula has all the same benefits of conventional heat sink greases, plus is exceptionally stable in high humidity applications. Available in silicone and non-silicone versions.

<b>Part No. 10-8135</b>	Silicone Based, 1 oz. Syringe
<b>Part No. 10-8135-1</b>	Silicone Based, 1lb. Jar

### Heat Sink Properties (Typical)

Tests	Test Methods	10-8106 10-8108 10-8109 Standard Silicone	10-8118 10-8120 10-8126 Standard Non-Silicone	10-8135 H.T.C. Silicone	10-8132 Water Soluble Non-Silicone
Appearance	Visual	White Paste	White Paste	Off-White Paste	White Paste
Consistency Penetration 60 Strokes @ 77°F	ASTM D-217	290	260	250-350	250-350
Specific Gravity	ASTM D-70	2.4	2.5	2.7	2.8
Bleed, 24 Hrs. %Wt. 150°C 200°C	FTM-321 PTM-791.321	1/10%	<0.5	0.3	1.00
Evaporation, 24 Hr. %Wt. 150°C 200°C	FTM-321 PTM-791.321-3M	3/10%	0.1	0.3	1.00
Thermal Conductivity CAL/SEC cm °K	Modified DSC	1.8 x 10 <sup>-3</sup>	1.8 x 10 <sup>-3</sup>		
	Hot Wire Method			4.35 x 10 <sup>-3</sup>	2.82 x 10 <sup>-3</sup>
Dielectric Strength 0.050" gap volts/mil.	ASTM D-149	400	420	343	265
Dielectric Constant 1000 Hz	ASTM D-150	4.9	4.5	5.14	
Dissipation Factor 50 Hz, Ohm-cm 1,000 Hz, Ohm-cm	ASTM D-150	0.005 0.001	0.0029 0.0029	0.0031	0.0022
Volume Resistivity Ohm-cm	ASTM D-257	2 x 10 <sup>15</sup>	2 x 10 <sup>15</sup>	1 x 10 <sup>15</sup>	3.36 x 10 <sup>13</sup>
Operating Range		-40°F to 400°F	-22°F to 390°F	-55°C to 205°C	-40°C to 150°C
Arc Resistance, RT Unit: SEC	ASTM D-495	77	130	250	
Shelf Life Months		60	60	60	

**MATERIAL SAFETY DATA SHEET**

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Type: Silicone  
 Product Name: **Heat Sink Compound**  
 Part Number(s): **10-8106**  
**10-8109**  
**10-8108**

**Section 1 - Identification of Product**

HMIS	NFPA	Least	0
Health: 1	Fire 0	Slight	1
Flammability: 0	Health 1	Moderate	2
Reactivity: 0	Reactivity 0	High	3
Personal Protection: I	Spec Hazard No	Extreme 4	4
		Gloves, Safety Glasses	B

**Section 2 - Hazardous Ingredients**

	CAS #
Zinc Oxide	1314-13-2
00840600 #5000P	(Trade Secret)
00840600 #5037P	(Trade Secret)

•Based on the data available to GC Electronics, this product is not considered a hazard under OSHA Hazard Communication Standard 29 CFR 1910.1200.

•The Zinc Oxide in this product is in paste form and will not pose a dust hazard.

**Section 3 - Physical Data**

Solubility in Water (@20 C):	Insoluble
Specific Gravity (water=1):	2.4
Vapor Pressure (mmHg @ 20 C):	Not Available
Evaporation Rate :	< 0.01 (butyl acetate = 1)
Percent Volatile (by weight):	Zero
Vapor Density (air=1):	Not Available
Boiling Point (Deg. F):	Not Available
Appearance and Odor:	White paste, odorless
Freezing Point:	-40°F/-40°C

**Section 4 - Fire & Explosion Hazard Data**

Flash Point (method):	>400°F/204°C (COC)
Flammable Limits-LEL:	Not determined
Flammable Limits-UEL:	Not determined
Extinguishing Agents:	Dry Chemical, CO2 fire extinguishers, foam are acceptable.
Fire Fighting Procedures and Equipment:	Wear self-contained breathing apparatus for enclosed or confined areas.
Unusual Fire & Explosion Hazards:	None known.

**Section 5 - Health Hazard Data**

## Potential Health Effects and Symptoms from Short Term/Acute Exposure:

Eyes:	May cause irritation.
Skin:	Prolonged exposure may cause irritation.
Inhalation:	None known.
Ingestion:	Unknown
First Aid Measures:	
Eye Contact:	Flush eye with water.
Skin Contact:	Wash skin.
Ingestion:	If ingested, do not induce vomiting. Consult a physician.

**Section 6 - Reactivity Data**

Stability:	Product is stable Hazardous polymerization will not occur.
Materials and Conditions to Avoid:	Strong oxidizing agents.
Hazardous Decomposition Products::	None known.

**Section 7 - Spill or Leak Procedures**

Clean-Up Measures:	Collect product and repackage in a container.
Disposal:	Incinerate or dispose of materials in accordance with local, state and federal regulations.

**Section 8 - Special Protection Information**

Eye Protection:	Safety glasses are not necessary.
Skin Protection:	Gloves are not necessary.
Respiratory Protection:	Not necessary.
Engineering Controls: Ventilation:	Under normal conditions, no special ventilation is needed.
Work/Hygenic Practices:	Safety glasses and gloves are recommended.

**Section 9 – Special Precautions**

Handling: Storage temperatures:	Ambient.
Storage Pressure:	Atmospheric.
General:	Keep container closed.
Disposal:	Incinerate or dispose of materials in accordance with local, state and federal regulations.

**Section 10 - Regulatory Information**

DOT Hazardous Material Information:	Not a hazardous material for DOT shipping.
Toxic Substances Control Act:	The components of this product are listed on the TSCA inventory list or are not required to be listed. If you export this product, please ensure that the ingredients meet the inventory listing requirement of the receiving company. .