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) RoHS

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.

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

Water Soluble Pb RoHS

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

Part No. 10-8132	1 oz. Syringe

Type 44 Non-Silicone RoHS

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.

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

RoHS

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.

Part No. 10-8135	Silicone Based, 1 oz. Syringe
Part No. 10-8135-1	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	1.8×10^{-3}	1.8×10^{-3}		
CAL/SEC cm °C	Hot Wire Method			4.35×10^{-3}	2.82×10^{-3}
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	2×10^{15}	2×10^{15}	1×10^{15}	3.36×10^{13}
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	

All quantities are single; BU's are packages of 10 Unless otherwise noted.

MATERIAL SAFETY DATA SHEET

Complies with OSHA Hazard Communication Standard 29 CFR 1910.1200

Product Type: Heat Sink Compound
Product Name: **HTC (High Thermal Conductivity)**
Part Number(s): **10-8135**
10-8135-1

Section 1 – Identification of Product

HMIS Ratings:		NFPA		Least	0
				Slight	1
Health	1	Fire	0	Moderate	2
Flammability	0	Health	1	High	3
Reactivity	0	Reactivity	0	Extreme	4
PPI		Spec Haz	No	Gloves, Safety Glasses	B

Section 2 – Hazardous Ingredients

	CAS Registry #
Zinc Oxide	1314-13-2
00840600 #5000P	(Trade Secret)
00840600 #5037P	(Trade Secret)
00840600 #5030P	(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

Vapor Pressure:	Not available
Vapor Density:	Not available
Specific Gravity:	2.7 (H_2O=1)
Evaporation Rate:	<0.01 (butyl acetate=1)
Solubility in Water:	Insoluble
Freezing Point:	-67°F / -55°C
Boiling Point:	Not available
pH:	Not available

Odor:	Odorless
Appearance:	Off-white
Viscosity:	Not available

Section 4 – Fire and Explosion Hazard Data

Flash Point & Method:	>400°F / 204°C (COC)
Flammable Limits:	LEL: Not determined UEL: Not determined
Auto-ignition Temperature:	Not available
Extinguishing Media:	Foam, carbon dioxide, dry chemical
Fire Fighting Instructions:	Wear self-contained breathing apparatus for enclosed or confined areas.
Unusual Fire & Explosion Hazards:	None known

Section 5 – Health Hazards Data

Overview: Odorless off-white paste

Potential Health Effects

Eye:	May cause irritation.
Skin:	Prolonged exposure may cause irritation.
Ingestion:	Unknown.
Inhalation:	None known.

First Aid Measures:

Eyes:	Flush with water.
Skin:	Wash skin.
Ingested:	Do NOT induce vomiting; consult a physician.

Section 6 – Reactivity Data

General:	Product is stable; hazardous polymerization will not occur.
Materials & Conditions to Avoid:	Strong oxidizing agents.
Hazardous Decomposition Products:	None known

Section 7 – Spill or Leak Procedures

Collect product and repackage in a container.

Section 8 – Special Protection Information

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

Section 9 – Special Precautions

Storage Temperature:	Ambient
Storage Pressure:	Atmospheric
General:	Keep container closed.

Incinerate or dispose of materials in accordance with local, state and federal regulations.

Section 10 – Regulatory Information

Not a hazardous material for DOT shipping.
All ingredients are on the Toxic Substances Control Act (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.