

## GC HEAT SINK COMPOUNDS

Chem

### 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.

**Part No. 10-8109** 1 fl. oz. Tube

**Part No. 10-8108** 6.5 gms. Tube

**Part No. 10-8106** 1 lb. Can



### 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.

**Part No. 10-8135** Silicone Based, 1 oz. Syringe

**Part No. 10-8135-0001** Silicone Based, 1lb. Jar



### 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.

**Part No. 10-8118** 1/2 fl. oz. Jar

**Part No. 10-8120** 1 fl. oz. Tube

**Part No. 10-8126** 1 lb. 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>		
CAL/SEC cm °C	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		-67°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	