

## 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-DTL-47113 Type 2

<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. Jar plastic



### 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.

<b>Part No. 10-8135</b>	Silicone Based, 1 oz. Syringe
<b>Part No. 10-8135-0001</b>	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-DTL-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

### 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
Appearance	Visual	White Paste	White Paste	Off-White Paste
Consistency Penetration 60 Strokes @ 77°F	ASTM D-217	<b>340</b>	260	250-350
Specific Gravity	ASTM D-70	<b>2.2</b>	2.5	2.7
Bleed, 24 Hrs. %Wt. 150°C 200°C	FTM-321 PTM-791.321	<b>0.50</b>	<0.5	0.3
Evaporation, 24 Hr. %Wt. 150°C 200°C	FTM-321 PTM-791.321-3M	<b>0.50</b>	0.1	0.3
Thermal Conductivity CAL/SEC/cm °C	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>
Dielectric Strength 0.050" gap volts/mil.	ASTM D-149	400	420	343
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
Volume Resistivity Ohm-cm	ASTM D-257	<b>1.96</b> x 10 <sup>15</sup>	2 x 10 <sup>15</sup>	1 x 10 <sup>15</sup>
Operating Range		-67°F to 400°F	-22°F to 390°F	-55°C to 205°C
Arc Resistance, RT Unit: SEC	ASTM D-495	77	130	250
Shelf Life Months		60	60	60