

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	2.3
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 °C	Modified DSC	1.8 x 10 ⁻³	1.8 x 10 ⁻³		
	Hot Wire Method			4.35 x 10 ⁻³	2.82 x 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 x 10 ¹⁵	2 x 10 ¹⁵	1 x 10 ¹⁵	3.36 x 10 ¹³
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	