



**Product
Bulletin**

**GR104 THERMALLY-CONDUCTIVE HEAT-SINK COMPOUND
TRANSISTOR SILICONE GREASE**

GENERAL DESCRIPTION

GR104 is a one-component, non-drip, thermally conductive grease used to reduce thermal-impedance of the air gap present between the mating surfaces of a semi-conductor and heat sink. It is also used in automotive temperature-sensing devices. GR-104 is used to coat the bases of power transistors as they are connected to heat sinks. The grease is heat conductive and will draw the heat away from the transistor allowing it to run cooler.

ADVANTAGES

GR104 has excellent thermal conductivity and is non-dripping. Easy to clean, easy application, and will not harden, dry out, or melt after 1,000 hours at 200°C.

SUGGESTED USES

- Semi Conductors
- Temperature-Sensors
- Potting
- Power Transistors

SHELF LIFE

1 year in a closed container (mix before use)

TYPICAL PROPERTIES

Color:	White/Opaque
Viscosity:	Paste
Specific Gravity per ASTM D70 Test Method:	2.45 @ 25°C (20.4 lbs./gal)
Service Temperature	280 Penetration, un-worked after 24 hrs., Maximum: 270 Bleed, 24 hrs./200°C (392°F), % Maximum: 1.5 Evaporation, 24 hrs./200°C (392°F)
Service Temperature:	-45°C to 210°C/-40°F to 392°F
Volume Resistivity:	2.0 x 10 ¹⁵ ohm/cm
Dielectric Strength:	450 volts/mil
Thermal Conductivity:	0.00177 gm cal/(sec)(cm ²)(°C/cm) 5.1 BTU/(hr)(ft ²)(°F/in)
Bleed:	0.0% after 24 hours @ 200°C
Evaporation:	0.5% after 24 hours @ 200°C
Press Flow @ 42.5 psi:	13 seconds @ 25°C through a .105 orifice
Tangent of loss angel at 1 kHz (AS D 150)	5x10 ⁻³
Drop Point, C (F) (AS D 566)	None
Flash Point (TCC Method)	None

Chemical Components

Zinc Oxide, USP.....(1314-13-2) > 70%
 This material is not considered to be hazard
 Products of this type are sold to customers over the counter

Environmental Policy

ALFA is committed to developing products that have minimal effects on the environment. We will continue to meet and sustain the regulations of all federal state, and local governments.

Packaging and Availability

60 pounds plastic pails
 21 pound gallon
 5 pound Quart

The information given and the recommendations made herein are based on our research and are believed to be accurate but no guarantee of their accuracy is made. In every case we urge and recommend that purchasers before using any product in full scale production make their own tests to determine to their own satisfaction whether the product is of acceptable quality and is suitable for their particular purposes under their own operation conditions. No representative of ours has any authority to waive or change the foregoing provisions but, subject to such provisions, our engineers are available to assist purchasers in adapting our products to their needs and to the circumstances prevailing in their business. Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention governed by any patent, without the authority from the owner of this patent. We also expect purchasers to use our products in accordance with the guiding principles of the Chemical Manufacturers Association's Responsible Care® program.



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