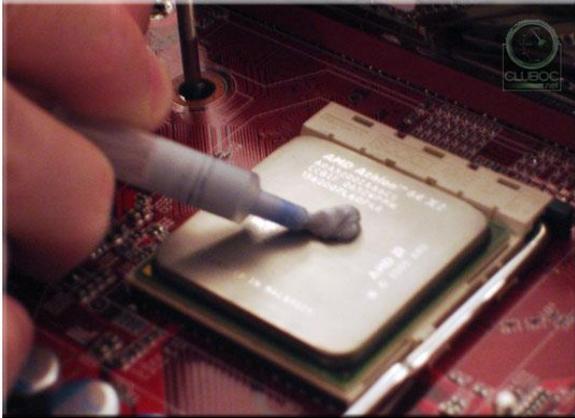


TECHNICAL PRODUCT BULLETIN



- *Non-Silicone Thermal Grease*
- *Excellent Thermal Resistance*
- *High Thermal Conductivity*
- *Meets MIL-C-47113 & MIS-19846 Specifications*

**TYPICAL PROPERTIES AND CHEMICAL CHARACTERISTICS**

Color	White
Specific Gravity, 25°C, gm/cc	2.45
Viscosity	Paste
Press Flow @ 42.5 PSI, 25°C sec	11 - 13
Penetration (Worked), mm	285 <sup>1</sup> / <sub>10</sub>
Evaporation 24 hrs @25°C, %	0.0
Evaporation @ 200°C 24H by weight,%	0.5
Bleed 24 Hours,%	0.6
<b>Electrical Properties</b>	
Dielectric Strength, volts/mil (ASTM D 150)	390
Dielectric Constant @ 100Hz (ASTM D150)	4.40
Dissipation Factor @ 100Hz (ASTM D150)	0.0021
Volume Resistivity, ohm-cm (ASTM D257)	1.38x10 <sup>14</sup>
<b>Thermal Properties</b>	
Thermal Conductivity W/m-K	0.88
Operating Temperature Range, °C	-60 to 205
Thermal Resistance °C-In <sup>2</sup> /W	0.04

**GENERAL DESCRIPTION**

TG-65NS is a non-silicone thermal grease heat sink compound, formulated from synthetic fluids with metal oxide fillers. It has grease like consistency and an opaque white color special binding agent has been used to control oil bleed, creep, and migration over a wide temperature range and to keep oil and fillers together.

TG-65NS was developed by ALFA in response to the growing demand in microelectronics for increased thermal transfer efficiency.

TG-65NS is a direct replacement for the most popular brands of non-silicone thermal grease on the market today.

TG-65NS thermal compound resists changes in consistency for temperatures up to 180°C; function as heat transfer media, durable dielectric insulation, barrier against environmental contaminants and as a stress-relieving shock and vibration absorber over a wide temperature and humidity range.

TG-65NS thermal paste is resistant to ozone and ultraviolet degradation and has good chemical and solvent stability, good interference between the heat producing device and the heat transfer media, and low surface tension that enables them to wet most surfaces. TG-65NS will not harden, dry, or melt after 1200 hours @ 205°C.

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TECHNICAL PRODUCT BULLETIN

POTENTIAL USES

Industrial Applications:

- Thermal Coupler for any heat sink device
• CPU to heat sink
• Temperature sensors
• Applied to the base and mounting studs of transistor, diodes and silicone controlled rectifiers
• Power transistors, Diodes, Semiconductors
• Potting
• Telecommunications
• High performance thermal product for the power electronics industry

STORAGE HANDLING & SHELF LIFE

TG-65NS has a shelf life of 5 years at room temperature (76°F) in an unopened container, settlings may occur during long term storage, it is recommended to re-mix the filler by hand or mechanical mixing. Keep container tightly closed store in cool area away from ignition sources and oxidizers, no special precautions need to be taken if product is handled according to directions. Shelf life is indicated on the product label, any special storage and handling instructions will be printed on the product container label.

PRODUCT FEATURES AND BENEFITS

- Meets MIL-C-47113 & MIS-19846 Specifications
• Compatible with metal and plastic components
• Excellent thermal conductivity and thermal resistance
• Wide operating temperature range with no creep or migration
• Will not dry, harden or melt in normal use
• Non-Flammable
• Non-Toxic
• Non-Corrosive
• Non-Sag or flowing
• Non-Hazardous polymerization
• Reworkable
• Easily removed
• Easy to apply via dispensing or screen printing
• Low surface tension that enables it to wet most surfaces, which can lower the thermal contact resistance between the substrate and material.

APPLICATION METHODS

Automated or manual dispensing

USAGE INSTRUCTIONS

For industrial use only Read MSDS carefully prior to use.

ENVIRONMENTAL IMPACT DATA

Table with 2 rows and 4 columns: ODP, None, VOC, None; HCFC, None, HFC, None

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.



ALFA INTERNATIONAL CORPORATION

[www.alfaadhesives.com](http://www.alfaadhesives.com)

**ALFA TG-65NS**

**Non- Silicone Thermally Conductive Heat Sink Compound Transistor Grease**

**TECHNICAL PRODUCT BULLETIN**

**CLEAN UP AND DISPOSAL**

TG-65NS can be removed by using solvents such as mineral spirit, heptane, or isopropyl alcohol. Dispose of in accordance with local, state and federal regulations for hazardous waste.

**AVAILABILITY**

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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.