



ISO 9001-2008 Certified

Product Selection Guide – Thermal Grease (Heat Sink Compounds)

SILICONE THERMAL GREASES:

These products are formulated with special binding agents to reduce bleed & separation.

APPLICATIONS:

- CPU to heat sink
- Telecommunications hardware
- Transistor, diodes, rectifiers, motor control and semiconductor devices

| SILICONE | | | | | | | | |
|----------|-------------|------------------|-------|--|--|-------------------------------|---------------------------|-------------------------------|
| Product | Consistency | Specific Gravity | Color | Thermal Conductivity W/m ^{°K} | Thermal Resistance °C-in ² /W | Dielectric Strength Volts/mil | Volume Resistivity Ohm-cm | Maximum Operating Temperature |
| STG-40 | Paste | 2.2 | White | 0.8 | 0.05 | 390 | 2.6 x 10 ¹⁴ | 200°C |
| STG-41 | Paste | 2.5 | White | 2.0 | 0.025 | 410 | 2.2 x 10 ¹⁴ | 200°C |
| STG-44 | Paste | 1.7 | Black | 3.7 | 0.014 | 335 | 5.8 x 10 ¹² | 200°C |
| STG-45 | 70,000 cp | 2.2 | Gray | 3.2 | 0.014 | 225 | 2.6 x 10 ¹² | 200°C |

NON-SILICONE THERMAL GREASES:

These products are formulated with unique Poly-Synthetic Resins & have no oil migration to prevent component contamination. These proprietary formulations provide low bleed and evaporation with superior thermal performance.

APPLICATIONS:

- CPU to heat sink
- Telecommunications hardware
- Transistor, diodes, rectifiers, motor control and semiconductor devices

| NON-SILICONE | | | | | | | | |
|--------------|-------------|------------------|-------|--|--|-----------------------------|---------------------------|-------------------------------|
| Product | Consistency | Specific Gravity | Color | Thermal Conductivity W/m ^{°K} | Thermal Resistance °C-in ² /W | Dielectric Constant @ 1 KHz | Volume Resistivity Ohm-cm | Maximum Operating Temperature |
| TG-61 | Paste | 2.4 | White | 0.8 | 0.05 | 4.6 | 10 ¹⁴ | 200°C |
| TG-62M | Paste | 2.4 | White | 2.0 | 0.03 | 4.5 | 10 ¹⁴ | 200°C |
| TG-66 | 60,000 cp | 2.2 | Gray | 3.2 | 0.014 | 3.5 | 10 ¹² | 200°C |
| TG-64 | Paste | 1.7 | Black | 3.7 | 0.014 | 2.8 | 10 ¹² | 200°C |
| TG-67 | Paste | 2.4 | White | 1.2 | 0.012 | 4.8 | 10 ¹⁵ | 150°C |

DISCLAIMER: All data given here is offered as a guide to the use of these materials and not as a guarantee of their performance. The user should evaluate their suitability for own purposes. Properties are typical and should not be used in preparing specifications. Statements are not to be construed as recommendations to infringe any patent.



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HIGH TEMPERATURE THERMAL GREASES:

Provides high temperature stability up to 360°C – These products have excellent wetting properties and outstanding heat transfer capabilities. They will not harden, dry out or melt.

APPLICATIONS:

- Heater cartridges
- Thermistors, RTD, thermocouple wells
- Portable and tank heaters

| HIGH TEMPERATURE | | | | | | | | |
|-------------------------|--------------------|-------------------------|--------------|--|---|------------------------------------|----------------------------------|--------------------------------------|
| Product | Consistency | Specific Gravity | Color | Thermal Conductivity W/m²K | Thermal Resistance °C-in²/W | Dielectric Constant @ 1 KHz | Volume Resistivity Ohm-cm | Maximum Operating Temperature |
| HTG-71 | Paste | 2.9 | White | 1.0 | 0.05 | 358 | 1.1 x 10 ¹⁴ | 300°C |
| HTG-72 | Paste | 3.0 | White | 0.8 | 0.06 | 362 | 1.2 x 10 ¹⁴ | 360°C |
| HTG-73 | Paste | 2.3 | White | 1.2 | 0.04 | 415 | 1.8 x 10 ¹² | 250°C |

CONDUCTIVE THERMAL GREASES:

Unique formulations provide particle to particle contact using selected size and shape of fillers. They provide excellent electrical & high thermal conductivity.

APPLICATIONS:

- High power electrical components
- Power switches, circuit breakers
- Semiconductor components grounding
- High power CPU to heat sink

| CONDUCTIVE | | | | | | | | |
|-------------------|--------------------|-------------------------|--------------|--|---|------------------------------------|----------------------------------|--------------------------------------|
| Product | Consistency | Specific Gravity | Color | Thermal Conductivity W/m²K | Thermal Resistance °C-in²/W | Dielectric Constant @ 1 KHz | Volume Resistivity Ohm-cm | Maximum Operating Temperature |
| CTG-81 | Paste | 4.8 | Silver | 7.0 | 0.005 | NA | <0.01 | 200°C |
| CTG-82 | Paste | 1.3 | Black | 2.2 | 0.02 | NA | <25 | 200°C |
| CTG-83 | Paste | 1.3 | Black | 2.2 | 0.02 | NA | <25 | 200°C |
| CTG-84 | Paste | 2.0 | Gray | 0.5 | 0.1 | NA | NA | 150°C |
| CTG-85NS | Paste | 2.4 | Gray | 0.8 | 0.03 | NA | NA | 150°C |
| CTG-85S | Paste | 2.4 | Gray | 0.8 | 0.03 | NA | NA | 200°C |

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THERMALLY CONDUCTIVE PUTTY:

Our TCP (Thermally Conductive Putty) are NON-SILICONE based highly viscous putty. Naturally tacky, Non-Flowable, Non-Curable material heavily filled with heat-conductive metal oxides and proprietary binders. These combinations provide high thermal conductivity, low bleed, high temperature stability and no contamination properties.

These products are cost effective high performance Form in-Place, Thermally Conductive Gap filler putty. The highly thixotropic and highly conformable nature of the material allow to fill in air voids and air gaps between heat generating devices and heat sinks or metal chassis with rough surfaces and high stack up tolerances.

APPLICATIONS:

- Between chassis wall and other surface
- CDRAM Cooling
- Area where needs to be transferred heat to a frame, chassis, or other type of heat spreader
- Between CPU and Heat spreader
- Between semiconductor and heat sink

| Thermally Conductive Putty | | | | | | | | |
|-----------------------------------|--------------------|-------------------------|--------------|--|--------------------------------------|------------------------------------|----------------------------------|----------------------------|
| Product | Consistency | Specific Gravity | Color | Thermal Conductivity W/m²K | Weight Loss | Dielectric Constant @ 1 KHz | Volume Resistivity Ohm-cm | Service Temperature |
| TCP-101 | Paste | 2.7 | Grey | 2.1 | <0.1% (24 hrs @ 150°C) | 4.5 | 10¹² | -50°C to 200°C |
| TCP-101HT | Thick Paste | 2.2 | Grey | 2.2 | <0.5% (24 hrs @ 200°C) | 4.0 | 10¹² | -50°C to 200°C |

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