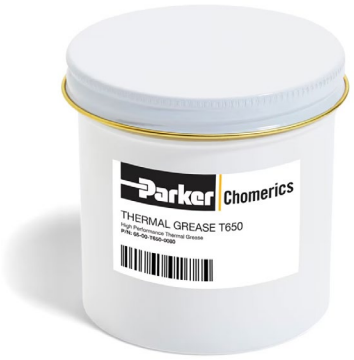
THERMAL GREASES

High Reliability, Thin Bondline Thermal Grease

Parker Chomerics thermal greases offer a range of performance covering the simplest to the most demanding thermal requirements. These materials are screened, stenciled or dispensed and require virtually no compressive force to conform under typical assembly pressures.

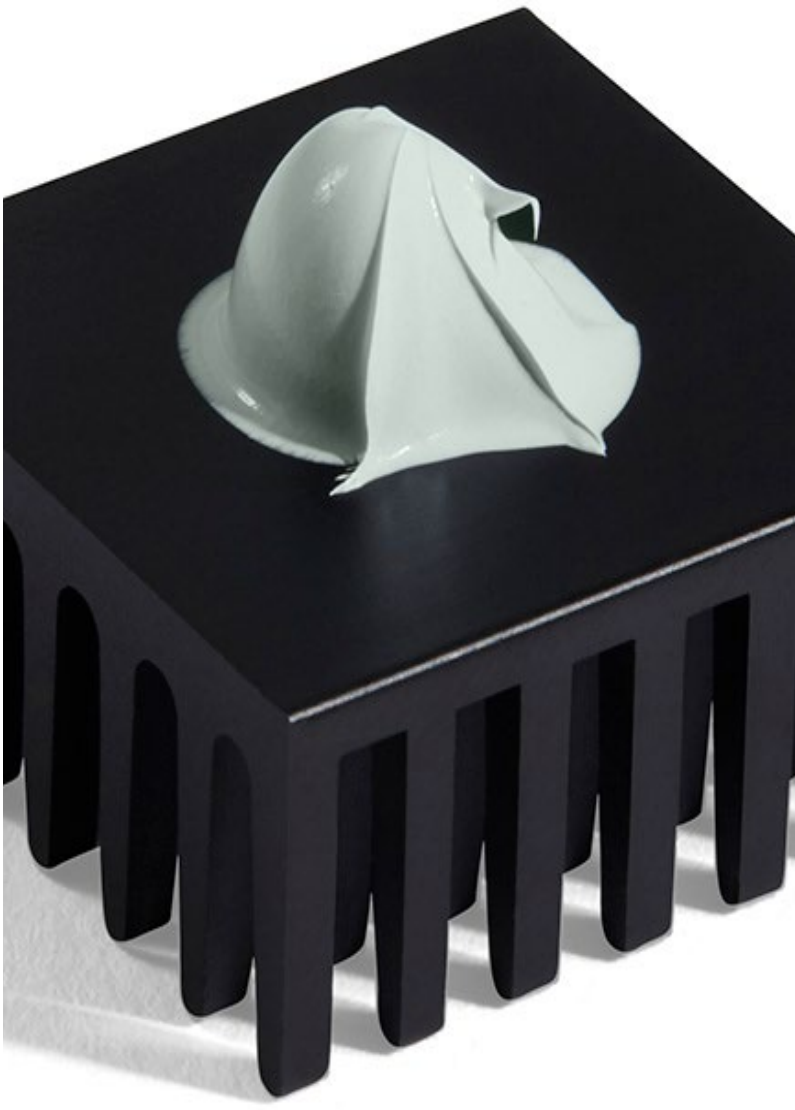


Product Features

- Silicone based materials conduct heat between a hot component and a heat sink or enclosure
- Fills interface variable tolerances in electronics assemblies and heat sink applications
- Dispensable, highly conformable materials require no cure cycle, mixing or refrigeration
- Thermally stable and require virtually no compressive force to deform under typical assembly pressures
- Supports high power applications requiring material with minimum bond line thickness and high conductivity
- Ideal for rework and field repair situations

Typical Applications

- Mobile, desktop, server CPUs
- Engine and transmission control modules
- Memory modules
- Power conversion equipment
- Power supplies and UPS
- Power semiconductors



Parker Chomerics

THERMAL GREASE PRODUCT INFORMATION

	Typical Properties†	T650	T660	T670	Test Method
Physical	Color	Pale Blue	Light Gray	White	Visual
	Specific Gravity	2.3	2.4	2.6	ASTM D792
	Viscosity, cps	190,000	170,000	350,000	--
	Operating Temperature Range, ºF (ºC)	-58 to 392 (-50 to 200)	-58 to 392 (-50 to 200)	-58 to 392 (-50 to 200)	--
	Phase Transition Temperature, ºF (ºC)	N/A	144 (62)	N/A	ASTM D3418
	Weight Loss % @ 150˚C, 48 Hours	0.21	0.17	<0.2	Thermogravimetric Analysis
Thermal	Thermal Conductivity, W/m-K	0.8	0.9	3.0	ASTM D5470
	Thermal Impedance,˚C-in²/W (˚C-cm²/W) @ 100 psi	0.02 (0.13) @ 50˚C 0.02 (0.13) @ 65˚C	0.02 (0.13) @ 50˚C 0.009 (0.06) @ 65˚C	0.01 (0.07) @ 50˚C 0.01 (0.07) @ 65˚C	ASTM D5470
	Heat Capacity, J/g-K	1	1	1	ASTM E1269
	Minimum Bond Line Thickness (MBLT) Inches (mm)	0.0003 (0.008)	0.0003 (0.008)	0.0003 (0.008)	--
Electrical	Volume Resistivity, ohm-cm	10^{14}	N/A	10^{14}	ASTM D257
	Voltage Breakdown, Vac/mil (kVac/mm)	150* (6)	N/A*	150* (6)	ASTM D149
Regulatory	Flammability Rating	Not Tested	Not Tested	Not Tested	UL 94
	RoHS Compliant	Yes	Yes	Yes	Chomerics Certification
	Outgassing, % TML	0.21	0.17	<0.2	ASTM E595
	Shelf Life, months from date of manufacture**	24	24	24	Chomerics
	Storage Conditions, ˚F (˚C) @ 50% Relative Humidity	50 to 90 (10 to 32)	50 to 90 (10 to 32)	50 to 90 (10 to 32)	Chomerics

† Typical properties: these are not to be construed as specifications.
* Not recommended for dielectric applications.
** Material may settle during storage, remixing may be required.

MATERIAL APPLICATION

T650

Material is supplied in various syringe or bulk packaging (see ordering information) for dispensing onto components or heat sinks. Excess material can be wiped with a clean cloth and suitable solvent.

T660

Packaging the same as T650. For optimum performance, the processor should be allowed to reach temperatures greater than 65ºC (149°F). This causes the solder fillers to melt and conform to the mating surfaces, obtaining a minimum bondline thickness at the interface. This process only needs to occur one time to achieve optimum thermal performance of the grease.

T670

T670 high performance thermal grease is supplied in easy access metal cans or pails. Mix with a spatula and remove the desired amount onto the component or stencil screen. Stencil desired pad part size onto heat sink for immediate assembly or shipping.

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THERMAL GREASE ORDERING INFORMATION

PART NUMBER: **65** – **00** – **YYYY** – **ZZZZ**

Material Type
T670
T660
T650

Vessel Size
Volume in cc
0080 = 80 cc in 8 ounce container
0160 = 160 cc in 8 ounce container
3790 = 1 gallon pail

Part Number Examples
65-00-T650-0160 = T650 Material (160 cc) in an 8 ounce container
65-00-T670-3790 = T670 Material in a 3790 cc (gallon) pail

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