THERM-A-GAP™ GEL 40NS

High Performance Non-Silicone Fully Cured Dispensable GEL

Parker Chomerics THERM-A-GAP™ GEL 40NS is a high-performance, one-component, urethane based, dispensable thermal interface gel material with 4.0 W/m-K thermal conductivity, developed to conduct heat from electronics to a heat sink or enclosure. This non-silicone thermal gel, hence the "NS" suffix, is ideal for applications where silicone contamination is an issue, such as optical systems or where silicone use is restricted. THERM-A-GAP™ GEL 40NS requires no mixing or curing and is designed for easy application and rework.

THERM-A-GAP™ GEL 40NS requires very low compressive force to deform under assembly pressure subjecting components, solder joints and leads to minimal stresses. It can be dispensed at various bond line thicknesses to take up gaps created by assembly or manufacturing tolerances.

As with all Parker Chomerics thermal gels, it is formulated to accommodate today's high-performance and high-reliability electronics while being ideal for automated dispensing machines, and field repair situations.

Product Features

- Thermal conductivity: 4.0 W/m-K
- Non-silicone (urethane based) binder system
- Easily dispensed
- No secondary curing required
- No pump out
- Low thermal impedance
- Very low compression force
- Reworkable

Typical Applications

- Automotive electronic control units (ECUs)
- Telecommunications base stations
- Power suppliers and semiconductors
- Memory and power modules
- Flat panel displays and consumer electronics
- Microprocessors and graphics processors

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THERM-A-GAP GEL 40NS PRODUCT INFORMATION

	Typical Properties†	GEL 40NS	Test Methods
Physical	Color	Dark Grey	Visual
	Flow Rate, g/min - 30cc syringe with taper tip 0.170" orifice, 90psi (621 kPa)	15 - 25	Chomerics
	Specific Gravity	3.1	ASTM D792
	Typical Minimum Bondline Thickness, in (mm)	0.006 (0.15)	Chomerics
Thermal	Thermal Conductivity, W/m-K	4.0	ASTM D5470
	Heat Capacity, J/g-K	1	ASTM E1269
	Operating Temperature Range, °F (°C)	-58 to 257 (-50 to 125)	Chomerics
Electrical	Dielectric Strength, Vac/mil (kVac/mm)	200 (8.0)	Chomerics
	Volume Resistivity, ohm-cm	10^{14}	ASTM D257
	Dielectric Constant @ 1,000 kHz at 0.010" (0.25mm) thick	4.8	ASTM D150
	Dissipation Factor @ 1,000 kHz at 0.010" (0.25mm) thick	0.020	Chomerics
Regulatory	Flammability Rating	V-0	UL 94
	RoHS Compliant	Yes	Chomerics Certification
	Outgassing, % TML (% CVCM)	0.18 (0.03)	ASTM E595
	Shelf Life, months from date of manufacture	12	Chomerics
	Storage Conditions, °F (°C) @ 50% Relative Humidity	50 to 90 (10 to 32)	Chomerics

† Typical properties: these are not to be construed as specifications.

THERM-A-GAP GEL 40NS ORDERING INFORMATION

Part Number	Typical Standard Fill Volume (cc)	Typical Standard Fill Mass (g)	Packaging Description
65-00-GEL40NS-0010	10	31	10cc Luer-Lock™ manual syringe
65-05-GEL40NS-0030	27	84	30cc tapered tip cartridge with 0.170" diameter orifice
65-02-GEL40NS-0180	150	465	6oz (180cc) EFD plastic cartridge
65-00-GEL40NS-0300	290	899	12oz (300cc) aluminum cartridge
65-01-GEL40NS-0600	570	1,767	600cc SEMCO cartridge
65-02-GEL40NS-0600	570	1,767	600cc EFD cartridge
65-1P-GEL40NS-2500	2500	7,750	1 U.S. gal. pail

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