THERM-A-GAP™ GEL 50VT

High Performance High Reliability Fully Cured Dispensable Thermal Gel

Parker Chomerics THERM-A-GAP™ GEL 50VT is a reworkable, high performance, one-component silicone, dispensable thermal interface gel material with 5.2 W/m-K typical thermal conductivity. GEL 50VT was developed to conduct heat away from electronics to heat sinks or enclosures and to perform reliably in vertical and/or high vibration applications. The "VT" suffix in the product name stands for "Vertical Tackiness."

During development, GEL 50VT was tested to a number of rigorous long term reliability tests such as automotive slump, high vibration testing, and telecommunications thermal verification processes. The long-term reliability of GEL 50VT provides confidence for mission critical applications that rely on consistent thermal performance over many years of continuous operation.

THERM-A-GAP™ GEL 50VT requires no mixing or secondary curing and is designed for easy application and rework. It can be dispensed at various bond line thicknesses typically up to 0.160in (4mm) to take up gaps created by assembly or manufacturing tolerances. As with all Parker Chomerics thermal gels, GEL 50VT is formulated to accommodate today's high-performance and high- reliability electronics while being ideal for automated dispensing machines, rework, and field repair situations.

Product Features

- Resistant to slump in vertical applications
- High vibrational reliability
- Typical thermal conductivity: 5.2 W/m-K
- High tackiness
- Very low compression force
- Reworkable
- No secondary cure required
- Single component

Typical Applications

- Telecommunications infrastructure
- Automotive sensors and modules
- Consumer devices
- Energy storage applications
- Defense electronics
- Industrial equipment

Contact Information

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THERM-A-GAP™ GEL 50VT Product Information

	Typical Properties†	GEL 50VT	Test Methods
Physical	Color	Light Gray	Visual
	Binder	Silicone	Chomerics
	Flow Rate, g/min - 30 cc syringe with no tip, 0.100" orifice, 90 psi (621 kPa)	20	Chomerics
	Specific Gravity	3.3	ASTM D792
	Typical Minimum Bond Line Thickness, in (mm)	0.006 (0.15)	Chomerics
Thermal	Thermal Conductivity (Bulk), W/m-K	5.2	ASTM D5470
	Heat Capacity, J/g-K	1	ASTM E1269
	Operating Temperature Range, °F (°C)	-67 to 392 (-55 to 200)	Chomerics
Electrical	Dielectric Strength, Vac/mil (kVac/mm)	200 (7.9)	ASTM D149
	Volume Resistivity, ohm-cm	10^{14}	ASTM D257
	Dielectric Constant @ 1,000 kHz at 0.030" (0.76 mm) thick	5.2	ASTM D150
	Dissipation Factor @ 1,000 kHz at 0.030" (0.76 mm) thick	0.003	Chomerics
Regulatory	Flammability Rating	V0 (Tested by Chomerics)	UL 94
	RoHS Compliant	Yes	Chomerics Certification
	Outgassing, % TML (% CVCM)	0.07 (0.02)	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 50VT Ordering Information

Part Number	Typical Standard Fill Volume (cc)	Typical Standard Fill Mass (g)	Packaging Description
65-00-GEL50VT-0010	10	33	10cc Luer-Lock™ manual syringe
65-02-GEL50VT-0030	27	89	30cc EFD plastic cartridge
65-02-GEL50VT-0180	150	495	6oz (180cc) EFD plastic cartridge
65-00-GEL50VT-0300	300	990	12oz (300cc) aluminum cartridge
65-1P-GEL50VT-2500	2500	8,250	1 U.S. gal. pail