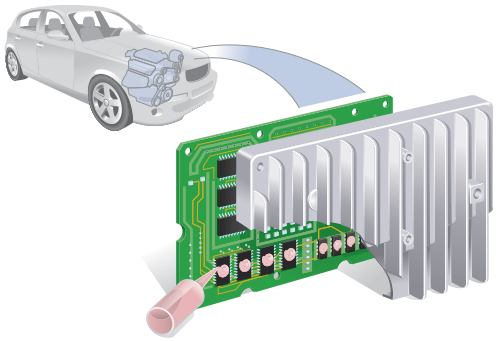
THERM-A-GAP™ GEL 8010 & GEL 30

High Performance Fully Cured Dispensable GELS



Description

Parker Chomerics fully cured dispensable GELs eliminate timeconsuming hand assembly, decreasing installation costs and reducing customer manufacturing and purchasing (logistical) complexity. These products require no mixing or curing, providing superior design flexibility.

- Provides low thermal impedance at thin and thick gaps, allowing use of common heat spreaders
- Proven reliability in extreme temperature cycling and shock & vibration
- Deflects easily under very low compressive forces, decreasing stress on components thus decreasing component failures.

Typical Applications

- Automotive Electronic Control Units (ECU's)
- Power Supplies & Semiconductors
- Memory & Power Modules
- Microprocessors / Graphics Processors
- Flat Panel Displays & Consumer Electronics

Features/Benefits

- Easily dispensable
- Fully-cured / No pump out
- High bulk thermal conductivity
- Low thermal impedance
- Ultra low compression force
- High tack surface & reworkable
- Proven long-term reliability

	Typical Properties	GEL 8010	GEL 30	Test Method
Physical	Color	White	Pink	Visual
	Flow Rate, grams/min - 30cc syringe with no tip attachment 0.100" orifice, 90psi (621 kPa)	60	20	Chomerics
	Specific Gravity	2.70	3.10	ASTM D792
	Percent Deflection @ Various Force Levels (See graph on following page)	% Deflection	% Deflection	Modified ASTM C165 Dispensed 1.0 cc of material Brought 1" x 1" probe down to 0.100" Test rate 0.025 in/min
	Typical minimum bondline thickness, in (mm)	0.002 (0.05)	0.004 (0.10)	Chomerics
Thermal	Thermal Conductivity, W/m-K	3.0	3.5	ASTM D5470
	Heat Capacity, J/g-K	1	1	ASTM E1269
	Coefficient of Thermal Expansion, ppm/K	150	150	ASTM E831
	Operating Temperature Range, °F (°C)	-67 to 392 (-55 to 200)	-67 to 392 (-55 to 200)	Chomerics
Electrical	Dielectric Strength, Vac / mil (KVac/mm)	200 (8.0)	200 (8.0)	ASTM D149
	Volume Resistivity, ohm-cm	10^{14}	10^{14}	ASTM D257
	Dielectric Constant @100 kHz	6.3	7.0	ASTM D150
	Dissipation Factor @ 100 kHz	0.002	0.002	Chomerics
Regulatory	Flammability Rating	V-0	V-0	UL 94
	RoHS Compliant	Yes	Yes	Chomerics Certification
	Outgassing, % TML (CVCM)	1.33 (0.34)	0.15 (0.05)	ASTM E595
	Shelf Life, months from date of manufacture	18	18	Chomerics

Parker Chomerics

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Product Attributes

GEL 8010

- Thin bondline gel (approximately 2-10 mils)
- Low thermal impedance gel
- Stencil printable with no pump out
- Ideal for high-volume dispensing
- Proven long-term reliability

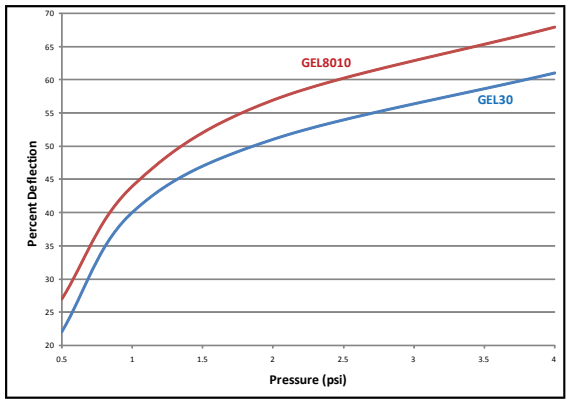
GEL 30

- Accommodates a variety of bond line thicknesses for application to multiple devices
- Gel 30 has been successfully used to fill a variety of different gap thickness. Please reference the Gel 30 Reliability test report for additional details and surface recommendations.
- High Bulk Thermal Conductivity
- Excellent performance-to-price
- Compatible with high volume, automated dispense processes
- Meets Telcordia (Bellcore) silicone specifications

Installation Guidelines

Thermal gels are supplied in plastic syringes and aluminum cartridges. Apply pressure to the rear of the cartridge, simply dispense the desired amount onto components or cooling plates. The gel is reworkable and excess material can be easily wiped off.

Since GEL 8010 gel is conformable, the gel can be stencil printed onto the plates. The thickness of the printed gel can be adjusted depending on the component type and size, but about 6mil thickness is recommended.



Percent Deflection vs. Pressure

Ordering Information

6W – XX – YYYYY – ZZZZ

W		XX	YYYYY	ZZZZ
GELS	5 = Standard Packaging	00	THERM-A-GAP GEL 8010 & GEL 30	0030 = 30cc Taper Tip Tube
				0300 = 300cc Aluminum Cartridge (Caulking Style)
	9 = Custom Configuration	11	33579	GEL 8010 = 1 Gallon Pail (2800cc, 7.6Kg)*
			28020	GEL 30 = 1 Gallon Pail (2800cc, 9Kg)*
			Custom Part Number	THERM-A-GAP GEL Material Code GEL 8010 & GEL 30

**High volume dispensing equipment required. Please contact Applications Engineering for additional support. Other custom container sizes may be available upon request*

Dispensing Equipment Options	Optional Supplier	Description
Hand-Gun Pneumatic Dispensing 300cc cartridges	Bergdahl Associates	SEMCO® Model 550
http://www.bergdahl.com		
Pneumatic Shot Size Controllers 30cc, 180cc and 300cc Shot Size Dispensing Equipment	EFD	Ultra 2400 Series
		Ultra 1400 Series
		Ultra 870 Series
30cc/55cc Adapter Assembly	EFD	10000D5152
Dispensing Sleeve to support 6oz (180cc) Semco Tubes	EFD	5192-6
http://www.efd-inc.com		

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