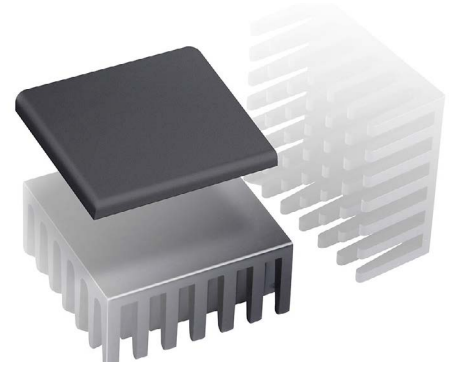


THERM-A-GAP™ PAD 70TP

7.0 W/m-K Thermally Conductive Very Low
Compression Force Thermal Putty Sheet Material



Customer Value Proposition

Parker Chomerics [THERM-A-GAP PAD 70TP](#) is a high performance, highly conformable thermally conductive gap filler pad with 7.0 W/m-K thermal conductivity. It provides superior thermal performance and long-term stability over conventional thermal pads with very low compression force.

THERM-A-GAP PAD 70TP is designed to provide effective heat transfer between electronic components and their associated cooling features such as heat sinks. The physical properties of this gap pad allow it to exhibit very high conformability and minimize the compressive load on underlying electronics. "TP" in the product name stands for "Thermal Putty" indicating that, unlike other gap pads, this material is meant for static, one-time assembly because it will permanently conform to displace air gaps caused by uneven surfaces or rough surface textures.

THERM-A-GAP PAD 70TP is offered as a standalone material, or with one of several carrier options; a woven glass carrier; either offset to one surface for a clean break feature (G carrier) or located approximately in the center of the part thickness (F carrier), both offering improved tear resistance and easier handling. There is also an aluminum foil carrier (A carrier) option with a pressure sensitive acrylic adhesive (PSA) on one side.

Contact Information

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Product Features

- High thermal conductivity 7.0 W/m-K
- Highly conformable, soft
- Low deflection force
- Electrically isolating
- Low oil bleeding
- One-time assembly

Typical Applications

- Telecom Equipment
- PC board to chassis
- Thermally enhanced BGAs
- Memory packages & modules
- GPU & CPU
- Industrial Devices

THERM-A-GAP™ PAD 70TP Product Information

	Typical Properties†	PAD 70TP	Test Method
Physical	Color	Dark Grey	Visual
	Carrier Options: G = Woven glass carrier - offset to one side. No pressure sensitive adhesive (PSA) option A = Aluminum foil carrier with pressure sensitive adhesive (PSA) F = Woven glass carrier - centered on thickness. No pressure sensitive adhesive (PSA) option No letter suffix = None (unsupported), No pressure sensitive adhesive (PSA)	PAD70TPG PAD70TPA PAD70TPF PAD70TP	--
	Standard Thicknesses*, in. (mm) (See part number table for thickness limits by type of carrier.)	0.030 - 0.200 (0.76 - 5.08)	ASTM D374
	Specific Gravity	3.3	ASTM D792
	Hardness, Shore 00	15	ASTM D2240
	Percent Deflection @ Various Pressures** (0.120 in thick unsupported sample) @ 5 psi (34 kPa) @ 10 psi (69 kPa) @ 25 psi (172 kPa) @ 50 psi (345 kPa)	% Deflected 18% 42% 63% ** 73% **	ASTM C165 MOD (1.0 in ² disc probe, 0.025 in/min rate)
Thermal	Operating Temperature Range, °F (°C)	-67 to 392 (-55 to 200)	Chomerics
	Thermal Conductivity, W/m-K	7.0	ASTM D5470
	Thermal Impedance, °C-in ² /W (°C-cm ² /W) @ 10 psi, 0.04 in. (1mm) thick G carrier	0.27 (1.7)	ASTM D5470
	Heat Capacity, J/g-K	0.72	ASTM E1269
	Coefficient of Thermal Expansion, ppm/K	150	ASTM E831
Electrical	Dielectric Strength, V _{AC} /mil (kV _{AC} /mm)	200 (8)	ASTM D149
	Volume Resistivity, ohm-cm	10 ¹³	ASTM D257
	Dielectric Constant @ 1,000 kHz and at 0.11" (2.8mm) thick	5.6	ASTM D150
	Dissipation Factor @ 1,000 kHz and at 0.11" (2.8mm) thick	0.001	CHO-TM-TP13
Regulatory	Flammability Rating (See UL File E140244 for Details)	V-0	UL 94
	RoHS Compliant	Yes	Chomerics Certification
	Outgassing, % TML (% CVMC)	0.10 (0.03)	ASTM E595
	Shelf Life, months from date of shipment (PAD70TPA)	24 (18)	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.

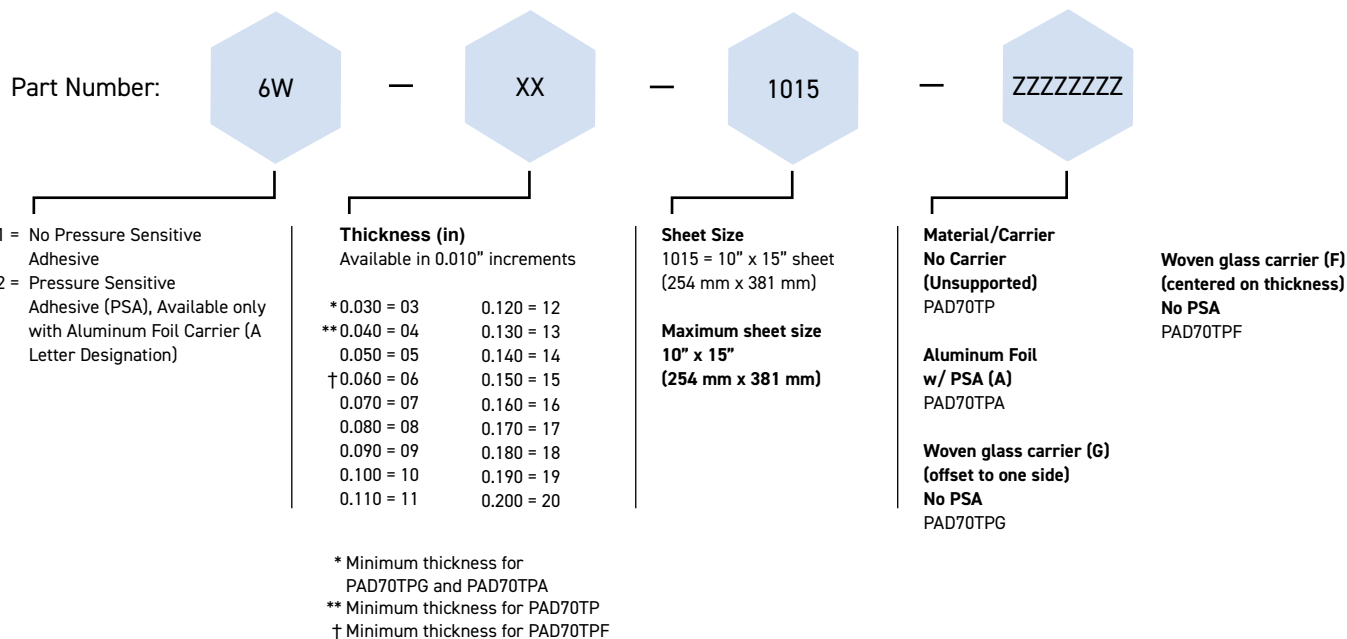
* Thickness tolerance, inches(mm) is ±10% of the nominal part thickness for parts 0.100" (2.5mm) thick or less; those parts greater than 0.100" (2.5mm) thick are held to ±0.010" (0.25mm).

** The typical deflection range of Therm-A-Gap 70TP is approximately 15% to 40% (or more depending on the carrier option and pad thickness. Evaluation of the part in your specific application is recommended.) Samples are available upon request.

THERM-A-GAP™ PAD 70TP Ordering Information

10" x 15" Sheets - THERM-A-GAP™ PAD 70TP

"A", "G", or "F" carriers and unsupported



Ordering Information: Custom Configurations

Sheet thickness tolerance is ± 10% of the nominal thickness OR ±0.010", whichever is smaller

Please contact Parker Chomerics for a pre-assigned part number, for custom widths, lengths and part sizes; etc

Available options include:

* Custom die-cut parts on sheets, or as individual parts

Handling Information

These products are defined by Parker Chomerics as "articles" according to the following generally recognized regulatory definition for articles:

An article is a manufactured item "formed to a specific shape or design during manufacturing," which has "end use functions" dependent upon its size and shape during end use and which has generally "no change of chemical composition during its end use."

In addition:

- There is no known or anticipated exposure to hazardous materials/substances during routine and anticipated use of the product.
- The product's shape, surface and design is more relevant than its chemical composition.

These materials are not deemed by Parker Chomerics to require an MSDS. For further questions, please contact Parker Chomerics at 781-935-4850.

parker.com/chomerics