

THERM-A-GAP™ PAD 80LO

8.0 W/m-K High Performance, Low Oil Bleed, Low Relaxation Force Thermal Gap Filler Pad

Parker Chomerics THERM-A-GAP™ PAD 80LO is a high performance, low oil bleed, thermal gap filler pad with a typical thermal conductivity of 8.0 W/m-K. PAD 80LO was developed to be a high reliability and long-term solution for mission critical and high-performance electronics in nearly every market segment including advanced computing, defense electronics, telecommunications infrastructure, and automotive modules.

“LO” in the product name stands for “Low Oil”, indicating the very low silicone oil bleed and migration properties of this gap pad. PAD 80LO is meant to be used where the aesthetic or manufacturing issues of silicone oils can be a concern.

PAD 80LO has a hardness of 60 Shore 00 and exhibits excellent stress relaxation over time, with a nearly 90% reduction in compression force after just one hour. It is designed to impart minimal stress on components such as integrated circuits and provide physical protection such as vibration dampening while maintaining effective thermal contact where conformability in gaps or rough surface texture is a concern.

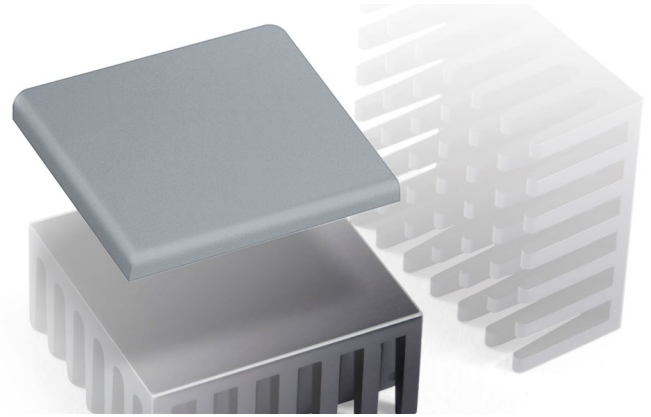
PAD 80LO can be provided in sheets or die cut to custom part sizes and is available in standard thicknesses as low as 0.040” to 0.200” (1.0 mm to 5 mm).

Product Features

- High thermal performance: 8.0 W/m-K conductivity
- Very low oil bleed and migration
- Very low compression force post-relaxation
- High tack surface reduces contact resistance
- Electrically isolating
- UL 94 V-0 flammability rating

Typical Applications

- High performance computing, GPUs, CPUs and memory modules
- 5G and Telecomm equipment
- Automotive sensors and devices
- Battery and energy storage modules
- Defense electronics



THERM-A-GAP PAD80LO PRODUCT INFORMATION

| Typical Properties† | | PAD 80LO | Test Method |
|---------------------|---|------------------------------|-------------------------|
| Physical | Color | Grey | Visual |
| | Carrier Options: No letter suffix = None (unsupported) | NA | -- |
| | Standard Thicknesses*, in. (mm) (See part number table for thickness limits by type of carrier.) | 0.040-0.200 (1.00-5.00) | ASTM D374 |
| | Specific Gravity | 3.4 | ASTM D792 |
| | Hardness, Shore 00 | 60 | ASTM D2240 |
| | Percent Deflection at various pressure (0.120 in thick unsupported sample) @ 5 psi (34 kPa) @ 10 psi (69 kPa) @ 25 psi (172 kPa) @ 50 psi (345 kPa) | 20% 36% 56%** 66%** | ASTM C165 MOD |
| Thermal | Operating Temperature Range, °F (°C) | -67 to 392 (-55 to 200) | Chomerics |
| | Thermal Conductivity, W/m-K | 8.0 | ASTM D5470 |
| | Heat Capacity, J/g-K | 1 | ASTM E1269 |
| Electrical | Dielectric Strength, V _{AC} /mil (kV _{AC} /mm) | 200 (8) | ASTM D149 |
| | Volume Resistivity, ohm-cm | 10 ³ | ASTM D257 |
| | Dielectric Constant @ 1,000 kHz and at 0.050" (1.2 mm) thick | 9.1 | ASTM D150 |
| | Dissipation Factor @ 1,000 kHz and at 0.050" (1.2 mm) thick | 0.001 | CHO-TM-TP13 |
| Regulatory | Flammability Rating (See UL File E482354 for Details) | V-0 | UL 94 |
| | RoHS Compliant | Yes | Chomerics Certification |
| | Outgassing, % TML (% CVCM) | 0.0480 (0.0034) | ASTM E595 |
| | Shelf Life, months from date of shipment | 24 | Chomerics |
| | Storage Conditions, °F (°C) @ 50% Relative Humidity | 50 to 90 (10 to 32) | Chomerics |

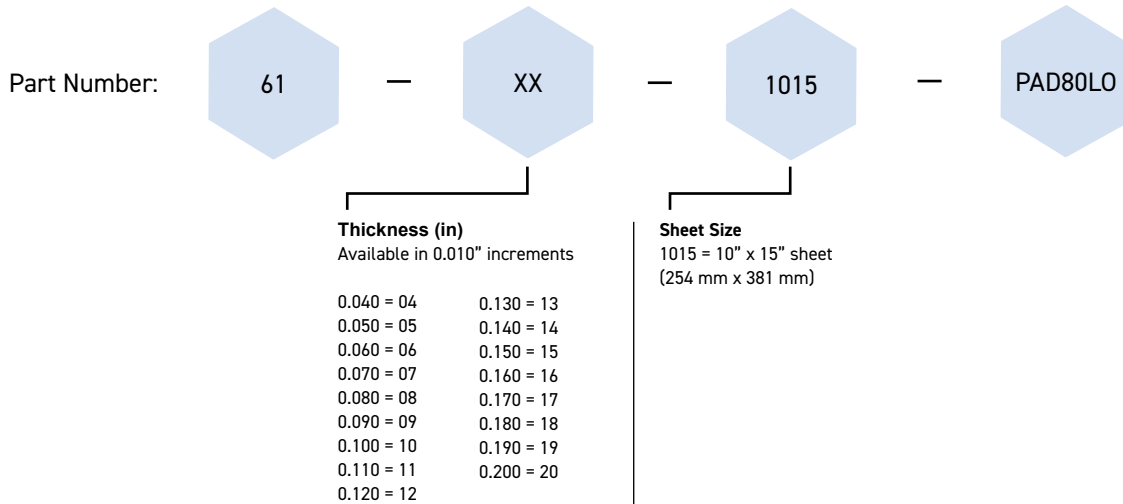
† Typical properties: these are not to be construed as specifications.

* 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 PAD 80LO is approximately 5 to 40%. Evaluation of the part in your specific application is recommended. Samples are available upon request.

THERM-A-GAP PAD80LO ORDERING INFORMATION

10" x 15" Sheets - THERM-A-GAP™ PAD 80LO



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.



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