Laird TECHNOLOGIES

Innovative **Technology** for a **Connected** World

Tflex™ 500 Series
Thermal Gap Filler

COMPLIANT 2.8 W/mK THERMALLY CONDUCTIVE GAP FILLER

Tflex™ 500 is a compliant elastomer gap filler designed to provide excellent thermal performance while remaining cost effective. This soft interface pad conforms well with minimal pressure, resulting in little or no stress on mating parts. Tflex™ 500's unique silicone and filler combination has extremely low silicone extractables compared to many other silicone interface products. Tflex™ 500 meets NASA outgassing specification.

Tflex™ 500 is naturally tacky, no adhesive coating is required. Tflex™ 500 is electrically insulating, stable from -50°C to 200°C and is certified to UL 94V0 flammability rating.

FEATURES AND BENEFITS

- Thermal conductivity 2.8 W/mK
- Highly compliant and cost effective
- Low thermal resistance even at low pressure
- Available in thicknesses from 0.020-inch (0.25mm) through 0.200-inch (5.0mm) in 0.010-inch increments
- Naturally tacky for easy assembly
- Low silicone extractables

APPLICATIONS

- Cooling components to chassis
- Telecommunication hardware
- Thermal module for notebook computer
- LED solid state lighting
- Power electronics
- Computer servers
- Graphics cards
- Gaming systems
- LCD and PDP flat panel displays
- Industrial automation equipment
- Wireless infrastructure
- Fragile ASIC components
- Automotive engine control
- IT devices
- Military electronics

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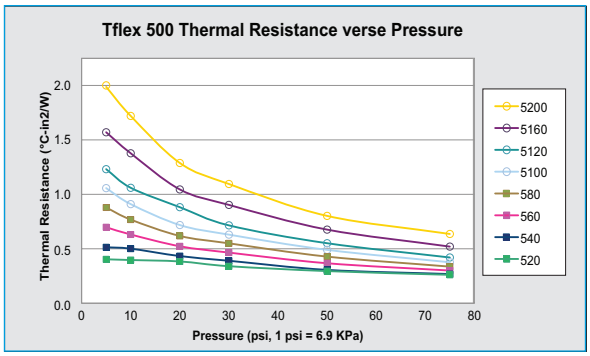
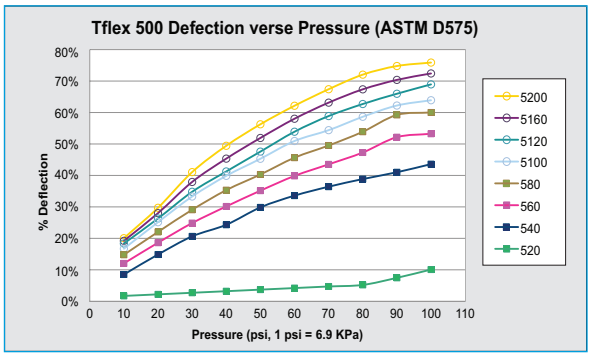
Tflex™ 500 TYPICAL PROPERTIES
Thermal Gap Filler Preliminary

	Tflex™ 500 Preliminary	TEST METHOD
Construction	Filled silicone elastomer	NA
Color	Light Blue	Visual
Thermal Conductivity	2.8 W/mK	ASTM D5470
Hardness (Shore 00)	40 (at 3 second delay)	ASTM D2240
Density	3.0 g/cc	Helium Pycnometer
Standard Thickness Range	0.020" - 0.200" (0.5 - 5.1mm)	
Thickness Tolerance	±10%	
UL Flammability Rating	94 V0	UL
Temperature Range	-50°C to 200°C	NA
Volume Resistivity	10^13 ohm-cm	ASTM D257
Outgassing TML	0.29%	ASTM E595
Outgassing CVCM	0.04%	ASTM E595
Coefficient Thermal Expansion (CTE)	37.4 ppm/°C 70°C-130°C	IPC-TM-650 2.4.24



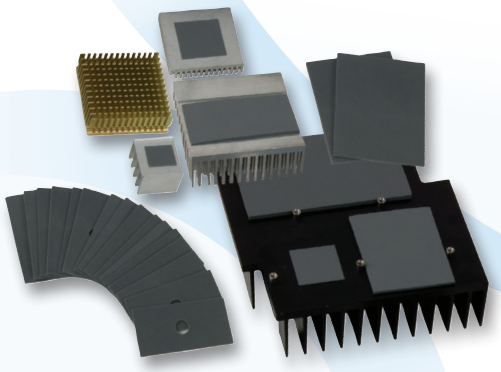


STANDARD THICKNESSES

0.020 to 0.200-inch (0.25 to 5.0mm).
0.020 to 0.030-inch (0.5 to 0.76mm) thick material come standard with fiberglass reinforcement.
0.020 through 0.200 thick material available in 0.010-inch (0.25mm) increments.

OPTIONS

Proprietary DC1 option available to eliminate tack from top side to aid in handling.



MATERIAL NAME AND THICKNESS

Tflex™ indicates Laird Technologies' brand thermally conductive elastomeric gap filler product. 5xxx indicates '500 series' 2.8 W/mK material, and xxx indicates thickness in -mil (0.001-inches); -DC1 designates proprietary tack eliminating option

Examples:

Tflex™ 5120 = 0.120-inch thick material
Tflex™ 5120-DC1 = 0.0120-inch thick material with proprietary DC1 option

THR-DS-Tflex-500 0110

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