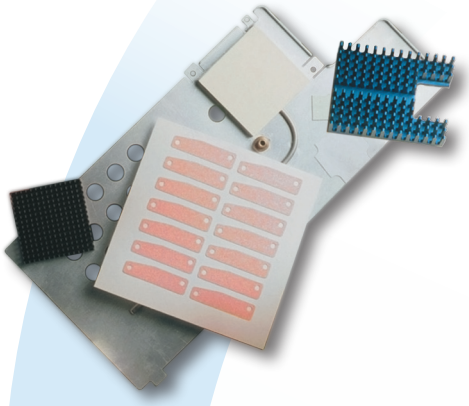
Laird TECHNOLOGIES

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

Tpli™ 200 Series
Gap Filler



EXCEPTIONALLY SOFT, HIGHLY COMPRESSIBLE GAP FILLER

Tpli™ 200 is a premium gap filler. A unique blend of boron nitride and silicone produce the highest performing interface pad.

Tpli™ 200's exceptional combination of high thermal conductivity and compliancy generate unmatched thermal resistances in a gap filling interface material.

Tpli™ 200 absorbs shock and relieves stresses, thus minimizing potential damage to components. Tpli™ 200 is electrically insulating, stable from -45°C to 200°C, and meets UL 94 HB rating.

FEATURES AND BENEFITS

- Thermal performance leader
- 6 W/mK thermal conductivity
- Soft and compliant
- Available in thicknesses from 0.010" - 0.200" (0.25mm - 5.0mm)

APPLICATIONS

- Notebook computers
- Handheld portable electronics
- Micro heat pipe thermal solutions
- Micro processors, memory chips, and graphic processors
- Automotive engine control modules
- Wireless communication hardware

global solutions: local support™

Americas: +1.800.843.4556
Europe: +49.8031.2460.0
Asia: +86.755.2714.1166

CLV-customerservice@lairdtech.com
www.lairdtech.com/thermal

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Gap Filler

	TPLI™ 210	TPLI™ 220	TPLI™ 240	TPLI™ 260	TPLI™ 2100	TEST METHOD
Construction & Composition	Reinforced boron nitride filled silicone elastomer	Boron nitride filled silicone elastomer	Boron nitride filled silicone elastomer	Boron nitride filled silicone elastomer	Boron nitride filled silicone elastomer	
Color	Rose	Blue	Yellow	Grey	Grey	Visual
Thickness	0.010" (0.25mm)	0.020" (0.51mm)	0.040" (1.02mm)	0.060" (1.52mm)	0.100" (2.54mm)	
Thickness Tolerance	± 0.001" (± 0.025mm)	± 0.002" (± 0.05mm)	± 0.003" (± 0.08mm)	± 0.004" (± 0.10mm)	± 0.007" (± 0.18mm)	
Density	1.44 g/cc	1.43 g/cc	1.43 g/cc	1.38 g/cc	1.36 g/cc	Helium Pycnometer
Hardness	75 Shore OO	70 Shore OO	70 Shore OO	70 Shore OO	70 Shore OO	ASTM D2240
Tensile Strength	N/A	35 psi	35 psi	20 psi	15 psi	ASTM D412
% Elongation	N/A	5	5	5	5	ASTM D412
Outgassing TML (Post Cured)	0.08%	0.07%	0.07%	0.10%	0.15%	ASTM E595
Outgassing CVCM (Post Cured)	0.03%	0.02%	0.02%	0.04%	0.07%	ASTM E595
UL Flammability Rating	94 HB	94 HB	94 HB	94 HB	94 HB	E180840
Temperature Range	-45°C to 200°C	-45°C to 200°C	-45°C to 200°C	-45°C to 200°C	-45°C to 200°C	
Thermal Conductivity	6 W/mK	6 W/mK	6 W/mK	6 W/mK	6 W/mK	ASTM D5470 (modified)
Thermal Impedance @ 20 psi @ 138KPa	0.16°C - in²/W 1.03°C - cm²/W	0.21°C - in²/W 1.35°C - cm²/W	0.37°C - in²/W 2.45°C - cm²/W	0.49°C - in²/W 3.35°C - cm²/W	0.84°C - in²/W 5.81°C - cm²/W	ASTM D5470 (modified)
Thermal Expansion	51 ppm/C	123 ppm/C	72 ppm/C	72 ppm/C	96 ppm/C	IPC-TM-650 2.4.24
Breakdown Voltage	1,000 Volts AC	4,000 Volts AC	>5,000 Volts AC	>5,000 Volts AC	>5,000 Volts AC	ASTM D149
Volume Resistivity	5 x 10^{13} ohm-cm	5 x 10^{13} ohm-cm	5 x 10^{13} ohm-cm	5 x 10^{13} ohm-cm	5 x 10^{13} ohm-cm	ASTM D257
Dielectric Constant @ 1MHz	3.21	3.21	3.26	3.26	3.4	ASTM D150

STANDARD THICKNESSES

0.010" (0.25mm)	0.015" (0.38mm)	0.020" (0.51mm)	0.025" (0.64mm)
0.030" (0.76mm)	0.040" (1.02mm)	0.050" (1.27mm)	0.060" (1.52mm)
0.070" (1.78mm)	0.080" (2.03mm)	0.090" (2.29mm)	0.100" (2.54mm)
0.110" (2.79mm)	0.120" (3.05mm)	0.130" (3.30mm)	0.140" (3.56mm)
0.150" (3.81mm)	0.160" (4.06mm)	0.170" (4.32mm)	0.180" (4.57mm)
0.190" (4.83mm)	0.200" (5.08mm)	Consult the factory for alternate thicknesses.	

STANDARD SHEET SIZES

8" x 8" (203mm x 203 mm) & 16" x 16" (406mm x 406mm). Tpli™ 200 may be die cut into individual shapes.

PRESSURE SENSITIVE ADHESIVE

Request no adhesive with "AO" suffix. Request adhesive on one side with "A1" suffix. Double sided adhesive is not available

REINFORCEMENT

Fiberglass is required in thicknesses of 0.010" (0.25mm) and 0.015" (0.38mm). Reinforcement is optional in thicknesses 0.020" (0.5mm) and 0.025" (0.63mm). Indicate fiberglass by "FG" suffix. Thicknesses above 0.025" (0.063mm) are not reinforced.

Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.