

HIGHEST THERMAL CONDUCTIVITY SILICONE-FREE GAP FILLER AVAILABLE

Tflex[™] SF800 is a high-performance, compliant, silicone free thermal interface material. By coupling extremely high thermal conductivity with exceptional wetting characteristics, Tflex[™] SF800 provides some of the lowest thermal resistance values in the industry. This makes it well-suited for applications where silicone based pads are traditionally used as well as those applications which are silicone sensitive.

Tflex[™] SF800 is naturally tacky on both sides requiring no additional adhesive coating, which would inhibit thermal performance. The natural tack allows for the pad to be held in place during assembly.

FEATURES AND BENEFITS

- Silicone-free gap filler
- Thermal Conductivity of 7.8 W/mK
- Exceptionally low thermal resistance
- Available in thicknesses from 0.020-inch (0.50mm) through 0.040-inch (1.00mm) in 0.010-inch increments
- RoHS Compliant

APPLICATIONS

- Silicone-sensitive applications
- Automotive applications
- Optical components
- Flat panel displays
- Hard disk drives
- Medical devices
- Laser equipment
- Aerospace electronics
- Solar energy

Tflex™ 800 Series

Thermal Gap Filler

	Tflex™ SF800	TEST METHOD
Construction	Ceramic-filled, silicone-free gap filler	N/A
Color	Grey	Visual
Thermal Conductivity (W/mK)	7.8	Hot Disk
Thermal Resistance at 30 mil bondline (°Cin²/W)	0.19	ASTM D5470 (modified)
Thickness Range (inches / mm)	0.020 - 0.160 / 0.051 - 4.064	
Thickness Tolerance (%)	± 10	
Density (g/cc)	3.21	Helium Pycnometer
Hardness (Shore 00)	81 ; 3 seconds 75 ; 30 seconds	ASTM D2240
Volatile Siloxane (D3-D10)	None detected*	GC/MS
Weight Loss over time @ 120°C, 168 hrs (%)	< 0.2	TGA
Belcore (Telcordia) Silicone Extraction	Pass	TR-NWT-000930
UL Flammability Rating (UL 94)	V0	File E180840
Continuous Use Temperature (°C)	-20 to 120	TGA
CTE (ppm/°C)	106.1; 25°C to 120°C	IPC-TM-650 2.4.24
Heat Capacity at 50°C (J/g-K)	0.8	MDSC
Volume Resistivity (ohm-cm)	5 x 10 ¹²	ASTM D257
Dielectric Constant @ 1 kHz	16.6	
@ 1 MHz	15.9	ASTM D150
Dissipation Factor @ 1 kHz	0.09	
@ 1 MHz	0.03	ASTM D150

* Method detection limit = 40ppm

STANDARD THICKNESSES

Standard thickness is 0.020-inch (0.50 mm) through 0.16-inch (4.064mm) in 0.010-inch increments

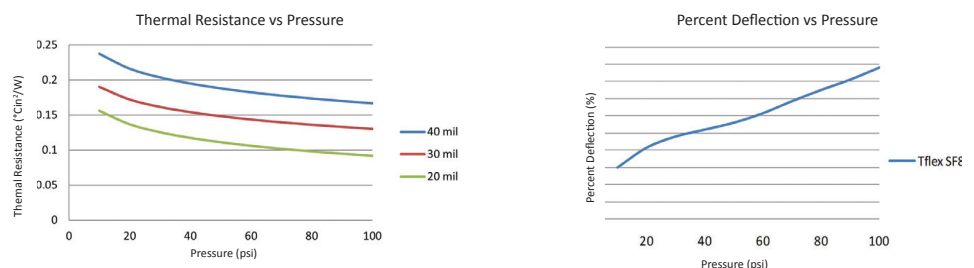
MATERIAL NAME AND THICKNESS

Tflex™ indicates Laird Technologies' gap filler product line. SF8XXX indicates Tflex™ SF800 product line with thickness in mils (0.001-inches).

EXAMPLES:

Tflex™ SF840 = standard 0.040-inch thick Tflex™ SF800 material.

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



THR-DS-TFLEX-SF800_07_2_14

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