



LOW CONTACT RESISTANCE SILICONE-FREE GAP FILLER

Tflex™ SF200 is a compliant, silicone free, thermal interface material featuring extremely low contact resistance for effective heat transfer. While Tflex™ SF200 is exceptionally suited for silicone sensitive applications, its ease of handling and exceptional wetting properties make it an effective solution in applications where silicone pads are traditionally used.

Tflex™ SF200 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. Differential tack is available for easy assembly and rework.

FEATURES AND BENEFITS

- Silicone-free gap pad
- Low contact resistance for effective thermal transfer
- Easy to handle in all thicknesses
- Thermal Conductivity for material thicknesses of 10 to 30 mils is 1.8 W/mK
- Thermal Conductivity for material thicknesses of 40 to 140 mils is 2.0 W/mK
- Available in thicknesses from 0.010-inch (0.25 mm) through 0.140-inch (3.56 mm) in 0.010-inch increments

APPLICATIONS

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

global solutions: local support™

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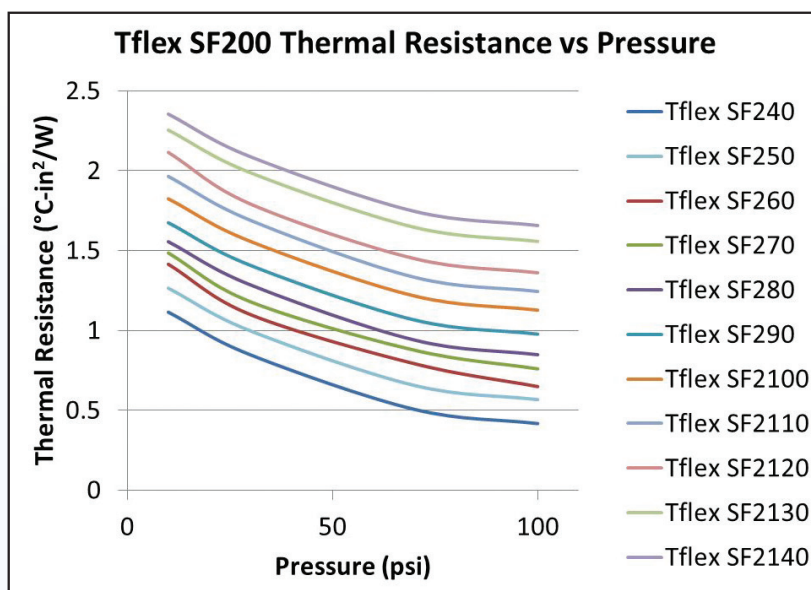
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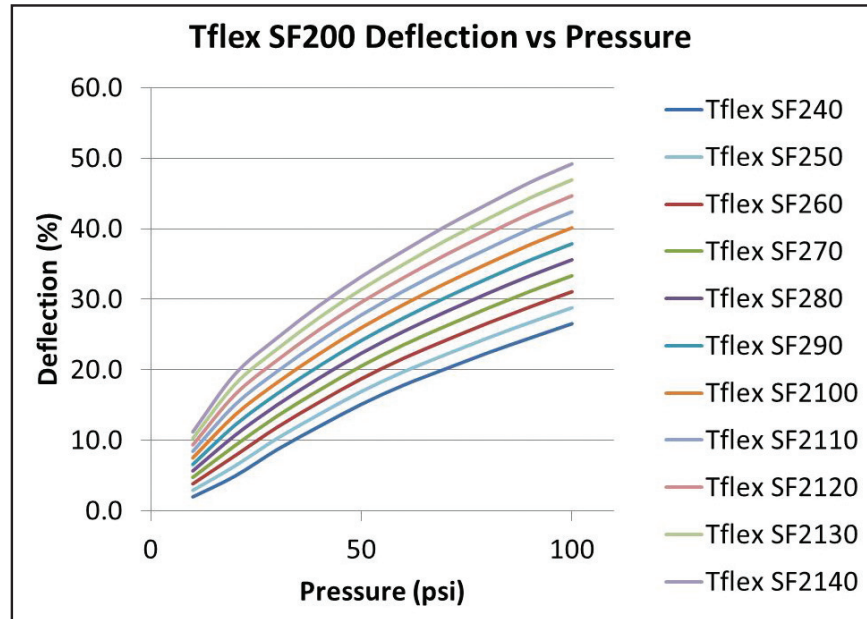
Tflex™ SF200 TYPICAL PROPERTIES

| | Tflex™ SF200 10 - 30 mils | Tflex™ SF200 40 - 140 mils | TEST METHOD |
|--|---|---|-------------------|
| Construction | Unreinforced, Ceramic filled pad | | |
| Color | Rose | Rose | Visual |
| Thermal Conductivity (W/mK) | 1.8 | 2.0 | Hot Disk |
| Thickness Range (inches/mm) | 0.010 - 0.030 / 0.25 - 0.75 | 0.040 - 0.140 / 1.00 - 3.56 | |
| Thickness Tolerance (%) | ± 10 | ± 10 | |
| Density (g/cc) | 2.8 | 2.8 | Helium Pycnometer |
| Hardness (Shore 00) | 73; 3 seconds 70; 30 seconds | 68; 3 seconds 65; 30 seconds | ASTM D2240 |
| Volatile Siloxane (D3-D10) | none detected* | none detected* | GC/MS in hexane |
| UL Flammability Rating (UL 94) | V0** | V0** | File E180840 |
| Continuous Use Temperature (°C) | -20 to 120 | -20 to 120 | TGA |
| CTE (ppm/°C) | 226.3; 25°C to 80°C 913.6; 80°C to 120°C | 226.3; 25°C to 80°C 913.6; 80°C to 120°C | IPC-TM-650 2.4.24 |
| Heat Capacity at 50°C (J/g-K) | 0.79 | 0.79 | ASTM E1269 |
| Volume Resistivity, ohm-cm | 10 ¹⁴ | 10 ¹⁴ | ASTM D257 |
| Dielectric Constant | 4.8 at 1kHz 1.7 at 1MHz | 5.8 at 1kHz 3.9 at 1MHz | ASTM D150 |
| Bellcore (Telcordia) Silicone Extraction | Pass | Pass | TR-NWT-000930 |
| Weight Loss at 120°C for 168 hrs (%) | <0.2 | <0.2 | TGA |

* Method detection limit = 40 ppm

** pending





STANDARD THICKNESSES

Standard thickness is 0.010-inch (0.25 mm) through 0.140-inch (3.56 mm) in 0.010-inch increments.

OPTIONS

Material is standard with both sides tacky; the -DF suffix indicates differential tack (one side not tacky).

MATERIAL NAME AND THICKNESS

Tflex™ indicates Laird Technologies' gap filler product line. SF2XXX indicates Tflex SF200 product line with thickness in mils (0.001-inches)

EXAMPLES

Tflex™ SF240 = standard 0.040-inch thick Tflex™ SF200 material

Tflex™ SF2100 = standard 0.100-inch thick Tflex™ SF200 material

Tflex™ SF260 DF = standard 0.060-inch thick material with DF

Data for design engineer guidance only. Observed performance varies in application.

Engineers are reminded to test the material in application.