# Tflex™ SF16 Series

## Thermal Gap Filler

## PRODUCT DESCRIPTION

Tflex™ SF16 is an innovative, ultra-high performing thermal material in Laird's gap filler portfolio. This non-silicone material measures 16 W/m•K in thermal conductivity and has excellent deflection properties which provides minimal pressure on components during deflection. Very little pressure is required to reach the lowest possible thermal resistance.

## FEATURES AND BENEFITS

- Non-silicone formulation
- Exceptionally low thermal resistance
- Low peak and residual pressure
- Excellent surface wetting for low contact resistance
- Thermoplastic matrix softens with application heat, further lowering contact resistance
- Naturally tacky surfaces
- Environmentally friendly solution that meets regulatory requirements including RoHS and REACH

## TYPICAL PROPERTIES

| PROPERTIES | TYPICAL VALUE | TEST METHOD |
|---|---|---|
| **Construction & Composition** | Ceramic filled non-silicone thermoplastic | N/A |
| **Color** | Light Grey | Visual |
| **Thickness Range** | 0.5mm – 5mm | N/A |
| **Thermal Conductivity** | 16 W/m•K | Hot Disk |
| **Density** | 3.09 g/cc | Helium Pycnometer |
| **Thermal Resistance(1.0mm)**<br>**@ 30% deflection, 50 $^{0}$C** | 0.55 °C•cm$^2$/W<br>0.085 °C •in$^2$/W | ASTM D5470 |
| **Temperature Range** | -40$^{0}$C to 125$^{0}$C | Laird Test Method |
| **Hardness Shore 00**<br>**(3 second)** | 40 (1mm-5mm)<br>62 (0.5mm-0.75mm) | ASTM D2240 |
| **Hardness Shore 00**<br>**(30 second)** | 8 (1mm-5mm)<br>39 (0.5mm-0.75mm) | ASTM D2240 |
| **Outgassing (TML%)** | 0.60 | ASTM E595 |
| **Outgassing (CVCM %)** | 0.22 | ASTM E595 |
| **Dielectric Constant @1MHz** | TBD | ASTM D150 |
| **Volume Resistivity (Ω cm)** | 10^14 | ASTM D257 |
| **UL Flammability Rating** | V-0 (pending) | UL 94 |

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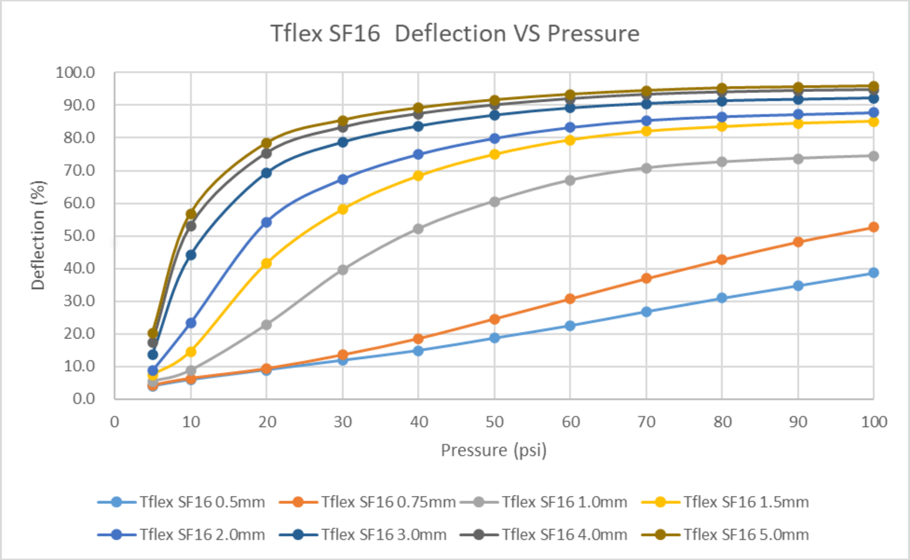

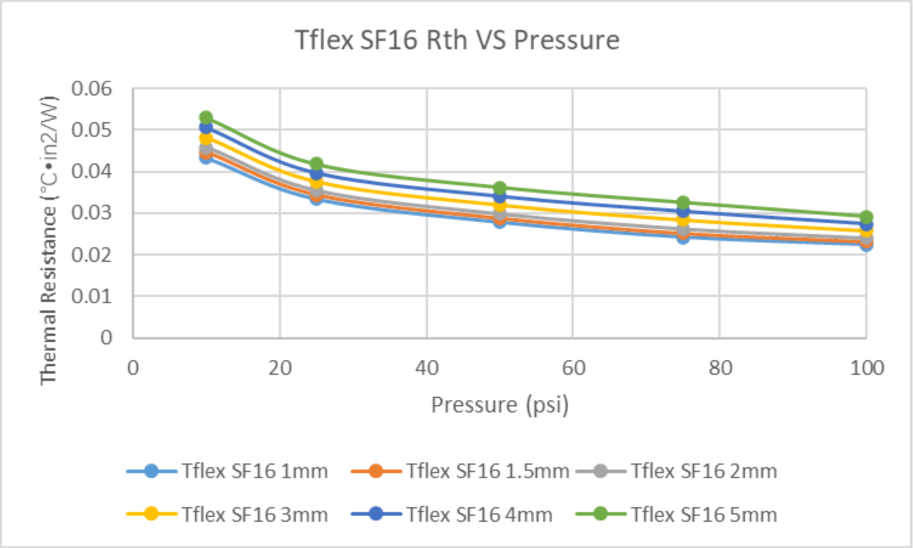

## AVAILABILITY

- 0.5 mm (0.020”) to 5.0 mm (0.200”) thick material available in 0.25mm (0.010”) increments
- Available in standard sheet sizes of 18” x18” and 9” x 9” or custom converted die cut parts
- DF option available to decrease tack on one side
- A1 option available to increase adhesion on one side

## PART NUMBER SYSTEM

Tflex™ indicates Laird elastomeric thermal gap filler product line. SF16 is a non-silicone 16 W/m•K material. Thickness of the sheet in mm is listed after the material name.

EXAMPLES:

- Tflex™ SF16,1.00 = 1.00mm thick Tflex SF16 material
- Tflex™ SF16DF,1.00 = 1.00mm thick Tflex SF16 material with only one side tacky

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