



## EXCEPTIONALLY SOFT, HIGHLY COMPLIANT GAP FILLER

Tflex<sup>™</sup> 600 is an exceptionally soft, highly compliant gap filling interface pad with a thermal conductivity of 3 W/mK. These outstanding properties are the result of a proprietary boron nitride filler in the composition.

The high conductivity, in combination with extreme softness produces incredibly low thermal resistances.

Tflex<sup>™</sup> 600 is naturally tacky and requires no additional adhesive coating that can inhibit thermal performance. Tflex<sup>™</sup> 600 is electrically insulating, stable from -45°C to 200°C and meets UL 94 V0 rating.

## FEATURES AND BENEFITS

- Very high compliancy for low stress applications
- 3 W/mK thermal conductivity
- Available in thicknesses from 0.020" - 0.200" (0.5mm - 5.0mm)
- Naturally tacky, needs no further adhesive coating

## APPLICATIONS

- Cooling components to the chassis or frame
- High speed mass storage drives
- RDRAM memory modules
- Heat pipe thermal solutions
- Automotive engine control units
- Telecommunications hardware

# Tflex™ 600 Series

## Thermal Gap Filler

|                                                         | Tflex™ 600                              | TEST METHOD              |
|---------------------------------------------------------|-----------------------------------------|--------------------------|
| Construction & Composition                              | Boron nitride filled silicone elastomer |                          |
| Color                                                   | Blue-Violet                             | Visual                   |
| Thickness Range                                         | 0.020" (0.50mm) - 0.200" (5.08mm)       |                          |
| Thickness Tolerance                                     | ± 10%                                   |                          |
| Density (g/cc)                                          | 1.34                                    | Helium Pycnometer        |
| Hardness (Shore 00)                                     | 51; 3 seconds<br>48; 30 seconds         | ASTM D2240               |
| Tensile Strength                                        | 15 psi                                  | ASTM D412                |
| % Elongation                                            | 75                                      | ASTM D412                |
| Outgassing Conditions                                   | Post cured                              |                          |
| Outgassing TML (weight %)                               | 0.13%                                   | ASTM E595                |
| Outgassing CVCN (weight %)                              | 0.05%                                   | ASTM E595                |
| UL Flammability Rating                                  | 94 V0                                   | UL FILE E180840          |
| Temperature Range                                       | -45°C to 200°C                          |                          |
| Thermal Conductivity                                    | 3.0 W/mK                                | Hot Disk                 |
| Thermal Impedance<br>@ 40 mils, 10 psi<br>@ 1 mm, 69kPa | 0.62°C-in²/W<br>4.00°C-cm²/W            | ASTM D5470<br>(modified) |
| Thermal Expansion                                       | 430 ppm/°C                              | IPC-TM-650<br>2.4.24     |
| Volume Resistivity                                      | 2 x 10 <sup>13</sup> ohm-cm             | ASTM D257                |
| Dielectric Constant @ 1MHz                              | 331%                                    | ASTM D150                |

### STANDARD THICKNESSES

0.020 to 0.200-inch (0.5 to 5.0mm)

0.020 to 0.200-inch thick material available in 0.010-inch (0.25mm) increments

Inquire about availability of material and options above 0.200-inches

### STANDARD SHEET SIZES

9 x 9" (229 x 229mm). 18 x 18" (457 x 457mm). 9 x 9" only over 0.100" thickness. Tflex™ 600 can be die cut to individual shapes. Pressure sensitive adhesive is not applicable for Tflex™ 600 products.

### TACKY ONE SIDE ONLY

Tflex™ 600 is naturally tacky on both sides. Tflex™ 600 can be provided tacky on one side only. This is indicated by the suffix "DC1". This option offers good separation properties allowing the tacky side to stick to the heatsink/chassis/cold plate/etc. and the other "dry" side to release easily from the component(s).

### REINFORCEMENT

Fiberglass is required in 0.020" (0.51mm) and 0.030" (0.76mm). Thicknesses of 0.040" (1.02mm) and above do not require reinforcement. Data for design engineer guidance only. Observed performance varies in application. Engineers are reminded to test the material in application.

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