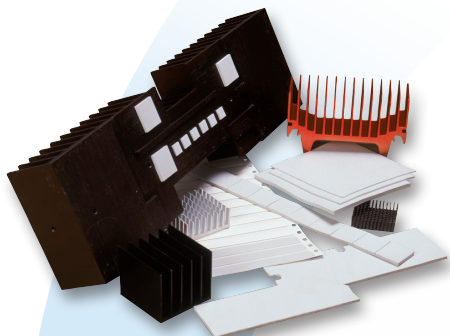




Innovative **Technology**  
for a **Connected** World

# Tflex™ 200 V0 Series Thermal Gap Filler



## SOFT, FREESTANDING GAP FILLER

Tflex™ 200 V0 is a very soft, freestanding gap filler that is more compliant than most other gap fillers. Combining good thermal conductivity of 1.1 W/mK with high conformability, this gap filler produces low thermal resistance. The alumina filler allows the product to remain a cost effective solution where moderate thermal performance is acceptable.

Naturally tacky and not requiring additional adhesive coating, the Tflex™ 200 V0 can inhibit thermal performance. This gap filler is both electrically insulating and stable from -40°C to 160°C and meets UL 94 V0 rating.

## FEATURES AND BENEFITS

- Soft and compressible for low stress applications
- Naturally tacky needing no further adhesive coating
- 1.1 W/mK thermal conductivity
- Available in thicknesses from 0.010" (0.25mm) to 0.200" (5.0mm)

## APPLICATIONS

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

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|                                           | Tflex™ 220 V0                                | Tflex™ 240 V0                     | Tflex™ 260 V0                     | Tflex™ 280 V0                     | Tflex™ 2100 V0                    | TEST METHOD           |
|-------------------------------------------|----------------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------|
| Construction & Composition                | Reinforced ceramic filled silicone elastomer | Ceramic filled silicone elastomer | Ceramic filled silicone elastomer | Ceramic filled silicone elastomer | Ceramic filled silicone elastomer |                       |
| Color                                     | Light Gray                                   | Light Gray                        | Light Gray                        | Light Gray                        | Light Gray                        | Visual                |
| Thickness                                 | 0.02" (0.508mm)                              | 0.04" (1.016mm)                   | 0.06" (1.524mm)                   | 0.08" (2.032mm)                   | 0.10" (2.54mm)                    |                       |
| Thickness Tolerance                       | ± 0.002"<br>(± 0.05mm)                       | ± 0.004"<br>(± 0.10mm)            | ± 0.006"<br>(± 0.15mm)            | ± 0.008"<br>(± 0.20mm)            | ± 0.010"<br>(± 0.25mm)            |                       |
| Density                                   | 1.75 g/cm³                                   | 1.73 g/cm³                        | 1.73 g/cm³                        | 1.73 g/cm³                        | 1.73 g/cm³                        | Helium Pycnometer     |
| Hardness                                  | 50 Shore 00                                  | 45 Shore 00                       | 45 Shore 00                       | 45 Shore 00                       | 45 Shore 00                       | ASTM D2240            |
| Tensile Strength                          | 464 psi                                      | 48 psi                            | 48 psi                            | 48 psi                            | 48 psi                            | ASTM D412             |
| % Elongation                              | 10.5                                         | 63.0                              | 60.6                              | 60.6                              | 60.6                              | ASTM D412             |
| Outgassing TML (Post Cured)               | 0.34%                                        | 0.34%                             | 0.34%                             | 0.34%                             | 0.34%                             | ASTM E595             |
| Outgassing CVCN (Post Cured)              | 0.10%                                        | 0.10%                             | 0.10%                             | 0.10%                             | 0.10%                             | ASTM E595             |
| UL Flammability Rating                    | 94 V0                                        | 94 V0                             | 94 V0                             | 94 V0                             | 94 V0                             | E180840               |
| Temperature Range                         | -45°C to 160°C                               | -45°C to 160°C                    | -45°C to 160°C                    | -45°C to 160°C                    | -45°C to 160°C                    |                       |
| Thermal Conductivity                      | 1.1 W/mK                                     | 1.1 W/mK                          | 1.1 W/mK                          | 1.1 W/mK                          | 1.1 W/mK                          | ASTM D5470 (modified) |
| Total Thermal Resistance @ 10 psi @ 69KPa | 0.80 °C-in²/W<br>5.13 °C-cm²/W               | 1.57 °C-in²/W<br>10.13 °C-cm²/W   | 2.05 °C-in²/W<br>13.23 °C-cm²/W   | 2.51 °C-in²/W<br>16.19 °C-cm²/W   | 2.93 °C-in²/W<br>18.90 °C-cm²/W   | ASTM D5470 (modified) |
| Coefficient of Thermal Expansion          | 229 ppm/°C<br>35°C to 130°C                  | 229 ppm/°C<br>35°C to 130°C       | 229 ppm/°C<br>35°C to 130°C       | 229 ppm/°C<br>35°C to 130°C       | 229 ppm/°C<br>35°C to 130°C       | IPC-TM-650 2.4.24     |
| Breakdown Voltage                         | 12,000 Volts AC                              | >27,000 Volts                     | >27,000 Volts                     | >27,000 Volts                     | >27,000 Volts                     | ASTM D149             |
| Volume Resistivity                        | 4 x 10 <sup>13</sup> ohm-cm                  | 4 x 10 <sup>13</sup> ohm-cm       | 4 x 10 <sup>13</sup> ohm-cm       | 4 x 10 <sup>13</sup> ohm-cm       | 4 x 10 <sup>13</sup> ohm-cm       | ASTM D257             |
| Dielectric Constant @ 1MHz                | 5.5                                          | 5.5                               | 5.5                               | 5.5                               | 5.5                               |                       |

### STANDARD THICKNESSES

|                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|
| 0.020" (0.51mm) | 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

9" x 9" (229mm x 229mm) Tflex™ 200V0 may be die cut into individual shapes. Pressure sensitive adhesive is not applicable for Tflex™ products.

### REINFORCEMENT

0.020" (0.51mm) and 0.030" (0.762mm) are fiberglass reinforced.

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

THR-DS-Tflex-200V0 0710

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