

Thermal Gap Fillers TGF10-TGF25

Thermal gap fillers are a reliable heat transfer media which conform to surface gaps and irregularities to fill the air gaps and conduct heat from a heat source to another surface, or heat sink. Where space exists between two mating surfaces varies, whether from different shapes or rough surface textures, a thermal transfer concern is often present. Available in a wide variety of shapes, sizes, and thermal conductivities, thermal gap fillers are a cost-effective solution for some of the most difficult and delicate thermal situations in a broad range of applications.

| Thermal Properties | TGF10 | TGF10S* | TGF15 | TGF20 | TGF20SF** | TGF25 | Test Method |
|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|-------------------------------|-------------|
| Thermal Conductivity, W/m-K | 1.0 ± 0.2 | 1.0 ± 0.2 | 1.5 ± 0.2 | 2.0 ± 0.2 | 2.0 ± 0.2 | 2.5 ± 0.2 | ASTM D5470 |
| Thermal Resistance, °C-in ² /W | 2.0 max | 3.0 max | 1.5 max | 1.2 max | 0.7 max | 1.0 max | ASTM D5470 |
| Physical Properties | | | | | | | |
| Color | White Grey | White | Pink | Light Blue | White Grey | Yellow | Visual |
| Thickness, in (mm) | 0.008 - 0.551 (0.2 - 14.0) | 0.020 - 0.118 (0.5 - 3.0) | 0.008 - 0.551 (0.2 - 14.0) | 0.012 - 0.551 (0.3 - 14.0) | 0.020 - 0.118 (0.5 - 3.0) | 0.012 - 0.551 (0.3 - 14.0) | ASTM D374 |
| Density, lb/in ³ (g/cc) | 0.085 ± 0.018 (2.35 ± 0.5) | 0.085 ± 0.018 (2.35 ± 0.5) | 0.094 ± 0.018 (2.62 ± 0.5) | 0.101 ± 0.018 (2.8 ± 0.5) | 0.098 ± 0.018 (2.7 ± 0.5) | 0.105 ± 0.018 (2.93 ± 0.5) | ASTM D792 |
| Hardness, Shore C | 8 - 60 | 5 - 15 | 10 - 55 | 10 - 55 | 30 - 40 | 10 - 55 | ASTM D2240 |
| Compression Ratio, % @ 50 psi | 25 min | 40 min | 25 min | 25 min | 25 min | 20 min | ASTM D575 |
| Tensile Strength, MPa | 0.3 min | 1.50 min | 0.25 min | 0.25 min | 0.15 min | 0.20 min | ASTM D412 |
| Elongation, % | 80 min | 5 min | 80 min | 70 min | 80 min | 70 min | ASTM D412 |
| Operating Temperature, °F (°C) | -58 - 392 (-50 - 200) | -40 - 302 (-40 - 150) | -58 - 392 (-50 - 200) | -58 - 392 (-50 - 200) | -40 - 302 (-40 - 150) | -58 - 392 (-50 - 200) | - |
| Electrical Properties | | | | | | | |
| Volume Resistivity, Ω-cm | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | ASTM D257 |
| Breakdown Voltage, kV | 8 min | 8 min | 8 min | 8 min | 8 min | 8 min | ASTM D149 |
| Dielectric Constant @ 1 MHz | 2 min | 2 min | 2 min | 2 min | 2 min | 2 min | ASTM D150 |
| Dielectric Loss | 0.1 max | 0.1 max | 0.1 max | 0.1 max | 0.1 max | 0.1 max | ASTM D150 |
| Regulatory | | | | | | | |
| Flammability Rating | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | UL94 |
| RoHS Compliant | Yes | Yes | Yes | Yes | Yes | Yes | - |
| Shelf Life, months | 24 | 24 | 24 | 24 | 24 | 24 | - |

*S = Soft | **SF = Silicone Free | ***BN = Boron Nitride

Applications

- LED Lighting
- Micro Processors
- Integrated Circuits
- Mobile Electronics
- Power Conversions
- Heat Sink Interface

Benefits

- Low Cost
- Short Lead Times
- Custom Shapes
- Self Tacking
- Increased Reliability
- Wide Range of Thermal Conductivity
- UL 94 V-0 Rated

Material

- Aluminum Oxide Filled Silicone
- Silicone Free (Acrylic Based) Available
- Boron Nitride Filled Silicone

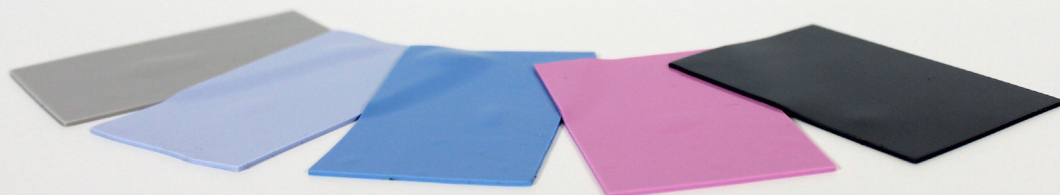


Thermal Gap Filler

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ISO 9001: 2008
CERTIFIED

RoHS
COMPLIANT



Thermal Gap Fillers TGF30-TGF60

Thermal gap fillers are a reliable heat transfer media which conform to surface gaps and irregularities to fill the air gaps and conduct heat from a heat source to another surface, or heat sink. Where space exists between two mating surfaces varies, whether from different shapes or rough surface textures, a thermal transfer concern is often present. Available in a wide variety of shapes, sizes, and thermal conductivities, thermal gap fillers are a cost-effective solution for some of the most difficult and delicate thermal situations in a broad range of applications.

| Thermal Properties | TGF30 | TGF30BN*** | TGF30SF** | TGF35 | TGF40 | TGF50 | TGF60 | Test Method |
|---|-------------------------------|------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|-------------|
| Thermal Conductivity, W/m-K | 3.0 ± 0.25 | 3.0 ± 0.5 | 3.0 ± 0.25 | 3.5 ± 0.25 | 4.0 ± 0.25 | 5.0 ± 0.5 | 6.0 ± 0.5 | ASTM D5470 |
| Thermal Resistance, °C-in ² /W | 0.9 max | 1.2 max | 0.6 max | 0.8 max | 0.75 max | 0.7 max | 0.5 max | ASTM D5470 |
| Physical Properties | | | | | | | | |
| Color | Sky Blue | White | White Grey | Green | Purple | White | Gray | Visual |
| Thickness, in (mm) | 0.012 - 0.551 (0.3 - 14.0) | 0.020 - 0.157 (0.5 - 4.0) | 0.020 - 0.118 (0.5 - 3.0) | 0.020 - 0.157 (0.5 - 4.0) | 0.020 - 0.157 (0.5 - 4.0) | 0.020 - 0.118 (0.5 - 3.0) | 0.020 - 0.118 (0.5 - 3.0) | ASTM D374 |
| Density, lb/in ³ (g/cc) | 0.107 ± 0.018 (2.95 ± 0.5) | 0.054 ± 0.018 (1.5 ± 0.5) | 0.105 ± 0.018 (2.9 ± 0.5) | 0.110 ± 0.018 (3.05 ± 0.5) | 0.112 ± 0.018 (3.12 ± 0.5) | 0.112 ± 0.018 (3.2 ± 0.5) | 0.116 ± 0.018 (3.2 ± 0.5) | ASTM D792 |
| Hardness, Shore C | 15 - 55 | 35 - 45 | 30 - 40 | 30 - 60 | 30 - 55 | 35 - 50 | 35 - 45 | ASTM D2240 |
| Compression Ratio, % @ 50 psi | 20 min | 20 min | 25 min | 15 min | 15 min | 15 min | 15 min | ASTM D575 |
| Tensile Strength, MPa | 0.15 min | 0.15 min | 0.15 min | 0.15 min | 0.15 min | 0.15 min | 0.15 min | ASTM D412 |
| Elongation, % | 60 min | - | 80 min | 60 min | 60 min | 60 min | 50 min | ASTM D412 |
| Operating Temperature, °F (°C) | -58 - 392 (-50 - 200) | -58 - 320 (-50 - 160) | -40 - 302 (-40 - 150) | -58 - 356 (-50 - 180) | -58 - 356 (-50 - 180) | -58 - 356 (-50 - 180) | -58 - 356 (-50 - 180) | - |
| Electrical Properties | | | | | | | | |
| Volume Resistivity, Ω-cm | 1.0x10 ⁸ min | 1.0x10 ¹⁰ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | 1.0x10 ⁸ min | ASTM D257 |
| Breakdown Voltage, kV | 8 min | 10 min | 8 min | 8 min | 8 min | 7 min | 3 min | ASTM D149 |
| Dielectric Constant @ 1 MHz | 2 min | 3.5 min | 2 min | 2 min | 2 min | 2 min | 5 min | ASTM D150 |
| Dielectric Loss | 0.1 max | 0.002 max | 0.1 max | 0.1 max | 0.1 max | 0.1 max | 0.1 max | ASTM D150 |
| Regulatory | | | | | | | | |
| Flammability Rating | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | V-0, 5V | UL94 |
| RoHS Compliant | Yes | Yes | Yes | Yes | Yes | Yes | Yes | - |
| Shelf Life, months | 24 | 24 | 24 | 24 | 24 | 24 | 24 | - |

*S = Soft | **SF = Silicone Free | ***BN = Boron Nitride

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