



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·in²/W	2.0 max	3.0 max	1.5 max	1.2 max	0.7 max	1.0 max	ASTM D5470						
Physical Properties 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/in³ (g/cc)	0.085 ± 0.018 (2.35 ± 0.5)	$\begin{array}{c} 0.085 \; \pm \; 0.018 \\ (2.35 \; \pm \; 0.5) \end{array}$	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



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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



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ISO 9001: 2008





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·in²/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/in³ (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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