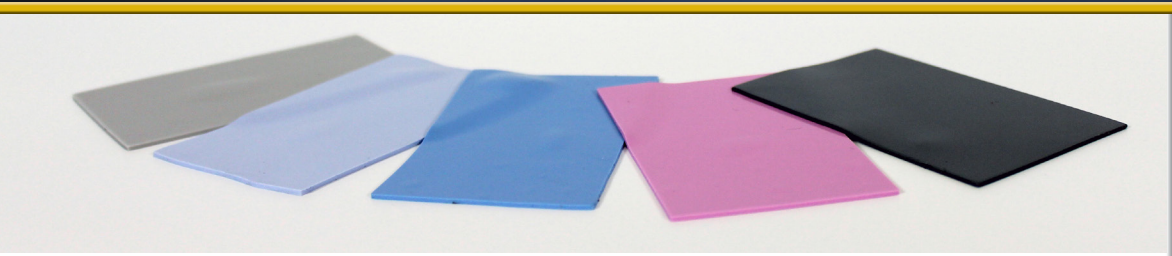
LT Product Profile

Thermal Gap Fillers

LEADER TECH a HEICO company

The Leading Edge in EMI Shielding Technology



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							
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)	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

TGF

THERMAL GAP FILLER

A passion in all we do

www.LeaderTechInc.com

ISO 9001: 2008 CERTIFIED

RoHS COMPLIANT

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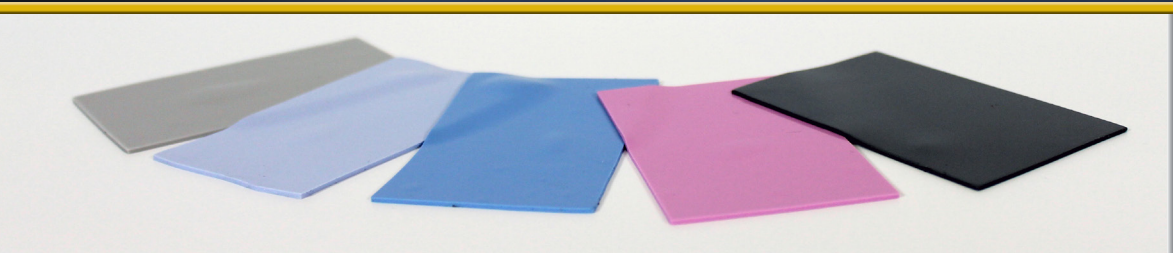

Thermal Gap Fillers TGF30-TGF60

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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