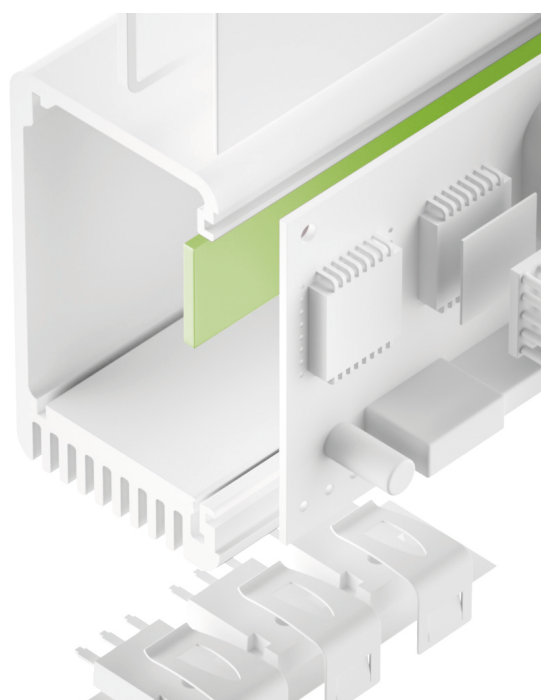


TERMISK LEDENDE MATERIALE

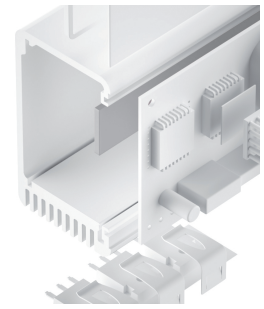


**GAP FILLER
SILICONE-FREE**

SILICONE-FREE GAP FILLER PAD TGF-R-NS

SILOXANE-FREE, SOFT ACRYLATE

TGF-R-NS is an electrically insulating highly thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The acrylate based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has a high thermal conductivity. Through its softness the material perfectly mates to irregular surfaces thus filling gaps and operates at low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable preassembly.



PROPERTIES

- Silicone-free acrylate
- No emission of volatile siloxanes
- Soft and compliant
- Thermal conductivity: 3.0 W/mK
- Shock absorbing
- Easy mounting through self-tackiness

AVAILABILITY

- Sheet 400 x 200 mm
- Double-side tacky (TGF-RXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

- SMD packages
- Through-hole vias
- RDRAMs memory modules
- Electronic parts to heat pipes

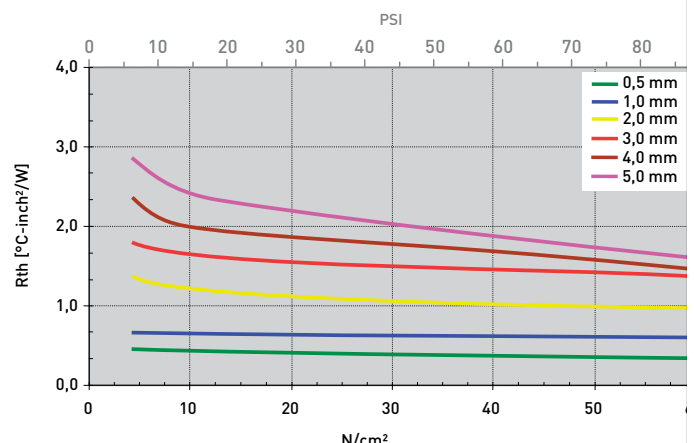
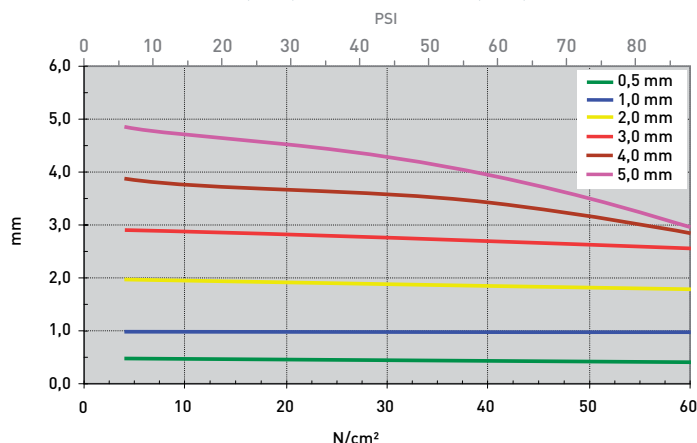
For use in Automotive applications
/ Laptops / Medicine engineering /
Industrial PCs

PROPERTY	UNIT	TGF-R0500-NS	TGF-R1000-NS	TGF-R2000-NS	TGF-R3000-NS	TGF-R5000-NS
MATERIAL		Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer
Colour		Light Grey	Light Grey	Light Grey	Light Grey	Light Grey
Specific Gravity	g/cm ³	2.9	2.9	2.9	2.9	2.9
Thickness	mm	0.5 ±0.05	1.0 ±0.10	2.0 ±0.20	3.0 ±0.30	5.0 ±0.50
Hardness	Shore 00	70	70	70	70	70
Flammability (Equivalent)	UL 94	V0	V0	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes	Yes
THERMAL						
Resistance ¹ @ 60 PSI @ Thickness	°C-inch ² /W (mm)	0.38 [0.44]	0.63 [0.97]	1.03 [1.85]	1.47 [2.71]	1.87 [3.96]
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.42 [0.46]	0.64 [0.98]	1.12 [1.91]	1.57 [2.81]	2.18 [4.53]
Resistance ¹ @ 10 PSI @ Thickness	°C-inch ² /W (mm)	0.45 [0.47]	0.65 [0.99]	1.25 [1.96]	1.72 [2.88]	2.60 [4.79]
Thermal Conductivity ¹	W/mK	3.0	3.0	3.0	3.0	3.0
Operating Temperature Range	°C	- 40 to +130	- 40 to +130	- 40 to +130	- 40 to +130	- 40 to +130
ELECTRICAL						
Dielectric Strength	kV / mm	7.8	7.8	7.8	7.8	7.8
Volume Resistivity	Ohm - cm	1 x 10 ¹³	1 x 10 ¹¹	1 x 10 ¹¹	1 x 10 ¹¹	1 x 10 ¹¹

Measurement technique according to: 'ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 2.0 mm / 3.0 mm / 4.0 mm / 5.0 mm

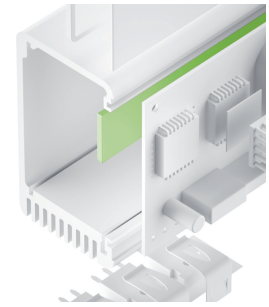
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-V-NS

SILOXANE-FREE, SOFT ACRYLATE

TGF-V-NS is an electrically insulating extremely thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The acrylate based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has an extremely high thermal conductivity. Through its softness the material perfectly mates to irregular surfaces thus filling gaps and operates at low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable pre-assembly. The material is double-side tacky or alternatively one-side tacky through lamination with a transparent film.



PROPERTIES

- Silicone-free acrylate
- No emission of volatile siloxanes
- Soft and compliant
- Thermal conductivity: 5 W/mK
- Shock absorbing
- Easy mounting through self-tackiness
- One or two-side self tacky

AVAILABILITY

- Sheet 510 x 210 mm
- Double-side tacky (TGF-XPXXX-NS) ≥ 1.0 mm
- Tacky on one side by film laminate (TGF-VXXX-NS-F) ≥ 0.5 mm
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

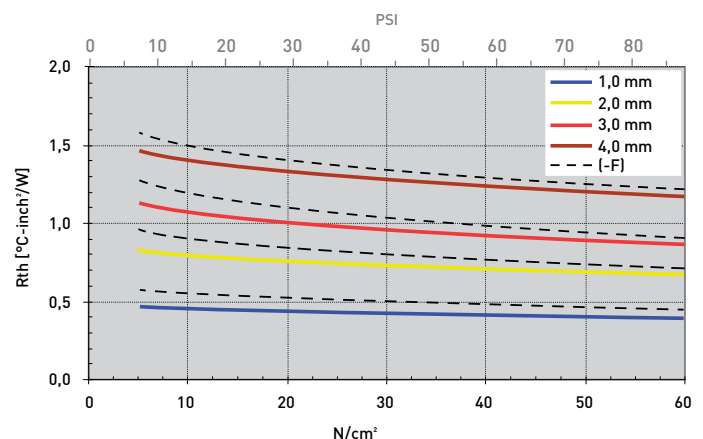
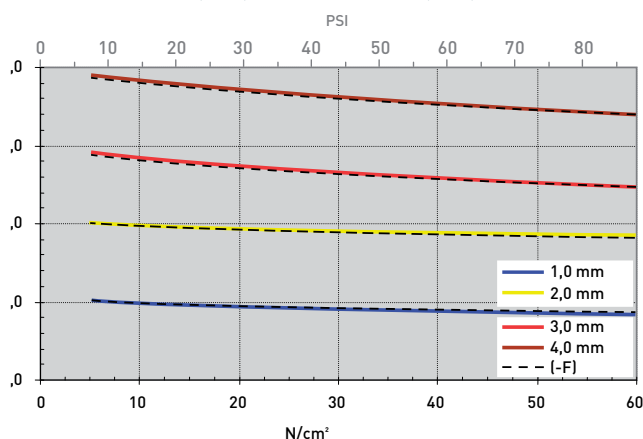
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTY	UNIT	TGF-V1000-NS	TGF-V2000-NS	TGF-V3000-NS	TGF-V4000-NS
MATERIAL		Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer
Colour		Light green	Light green	Light green	Light green
Specific Gravity	g/cm ³	2.89	2.89	2.89	2.89
Thickness	mm	1.0	2.0	3.0	4.0
Hardness	Shore 00	64	64	64	64
Flammability [Equivalent]	UL 94	V0	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes
THERMAL					
Resistance ¹ @ 60 PSI @ Thickness	°C-inch ² /W (mm)	0.42 [0.89]	0.73 [1.89]	0.93 [2.57]	1.25 [3.50]
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.45 [0.93]	0.77 [1.93]	1.01 [2.72]	1.33 [3.70]
Resistance ¹ @ 10 PSI @ Thickness	°C-inch ² /W (mm)	0.47 [0.96]	0.83 [1.97]	1.11 [2.86]	1.44 [3.90]
Thermal Conductivity ¹	W/mK	5	5	5	5
Operating Temperature Range	°C	- 40 to + 125	- 40 to + 125	- 40 to + 125	- 40 to + 125
ELECTRICAL					
Dielectric Strength	kV / mm	1.2	1.2	1.2	1.2
Volume Resistivity	Ohm - cm	1×10^{11}	1×10^{11}	1×10^{11}	1×10^{11}
Dielectric Constant	@ 1 MHz	18.2	18.2	18.2	18.2

Measurement technique according to: ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm / 4.0 mm

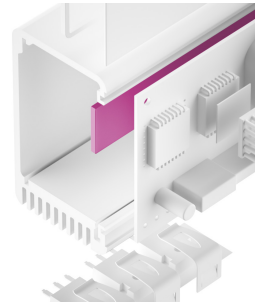
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-W-NS

SILOXANE-FREE, SOFT ACRYLATE

TGF-W-NS is an electrically insulating extremely thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The acrylate based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has an extremely high thermal conductivity. Through its softness the material perfectly mates to irregular surfaces thus filling gaps and operates at low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for a easy and reliable pre-assembly.



PROPERTIES

- Silicone-free acrylate
- No emission of volatile siloxanes
- Soft and compliant
- Thermal conductivity: 6.0 W/mK
- Shock absorbing
- Easy mounting through self-tackiness

AVAILABILITY

- Sheet 400 x 200 mm
- Double-side tacky (TGF-WXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

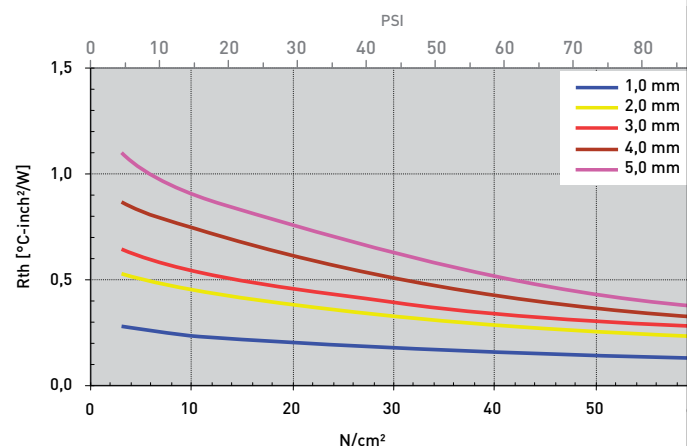
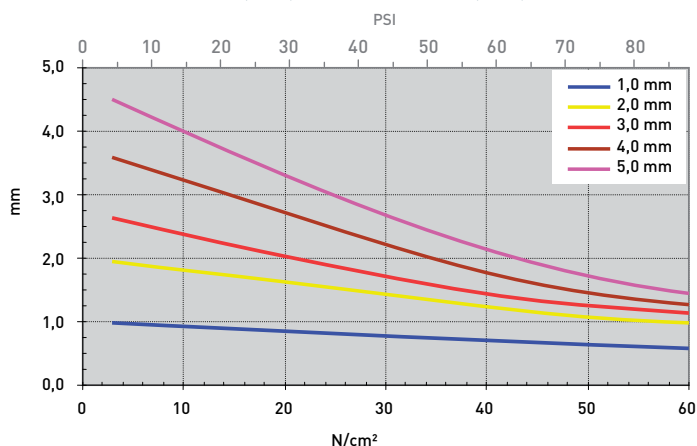
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications
/ Laptops / Medicine engineering /
Industrial PCs

PROPERTY	UNIT	TGF-W1000-NS	TGF-W2000-NS	TGF-W3000-NS	TGF-W4000-NS	TGF-W5000-NS
MATERIAL		Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer
Colour		Pink	Pink	Pink	Pink	Pink
Specific Gravity	g/cm ³	3.1	3.1	3.1	3.1	3.1
Thickness	mm	1.0 ±0.10	2.0 ±0.20	3.0 ±0.30	4.0 ±0.40	5.0 ±0.50
Hardness	Shore 00	70	70	70	70	70
Flammability (Equivalent)	UL 94	V0	V0	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes	Yes
THERMAL						
Resistance ¹ @ 60 PSI @ Thickness	°C-inch ² /W (mm)	0.16 [0.67]	0.28 [1.19]	0.35 [1.43]	0.43 [1.74]	0.52 [2.12]
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.22 [0.82]	0.39 [1.61]	0.46 [2.03]	0.62 [2.75]	0.77 [3.30]
Resistance ¹ @ 10 PSI @ Thickness	°C-inch ² /W (mm)	0.26 [0.93]	0.49 [1.83]	0.60 [2.50]	0.79 [3.40]	0.98 [4.20]
Thermal Conductivity ¹	W/mK	6.0	6.0	6.0	6.0	6.0
Operating Temperature Range	°C	- 40 to +130	- 40 to +130	- 40 to +130	- 40 to +130	- 40 to +130
ELECTRICAL						
Dielectric Strength	kV / mm	7.8	7.8	7.8	7.8	7.8
Volume Resistivity	Ohm - cm	1 x 10 ¹³	1 x 10 ¹³	1 x 10 ¹³	1 x 10 ¹³	1 x 10 ¹³

Measurement technique according to: 'ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm / 3.5 mm / 4.0 mm / 4.5 mm / 5.0 mm

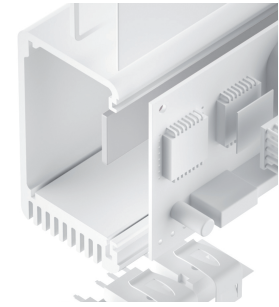
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-Y-NS

SILOXANE-FREE, SOFT ACRYLATE

TGF-Y-NS is an electrically insulating extremely thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The acrylate based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has an extremely high thermal conductivity. Through its softness the material perfectly mates to irregular surfaces thus filling gaps and operates at low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable pre-assembly.



PROPERTIES

- Silicone-free acrylate
- No emission of volatile siloxanes
- Soft and compliant
- Thermal conductivity: 8.0 W/mK
- Shock absorbing
- Easy mounting through self-tackiness

AVAILABILITY

- Sheet 400 x 200 mm
- Double-side tacky (TGF-YXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

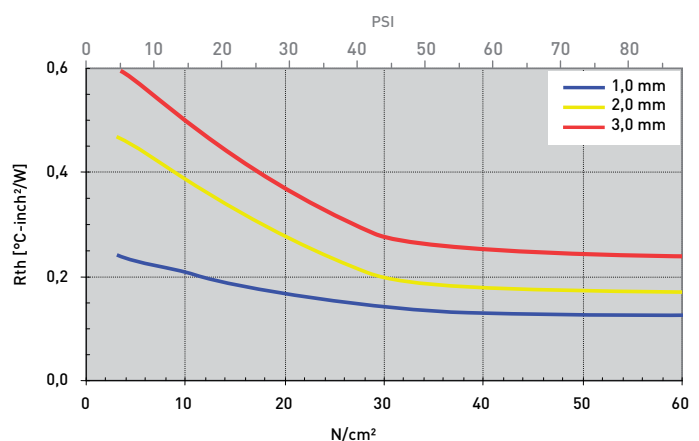
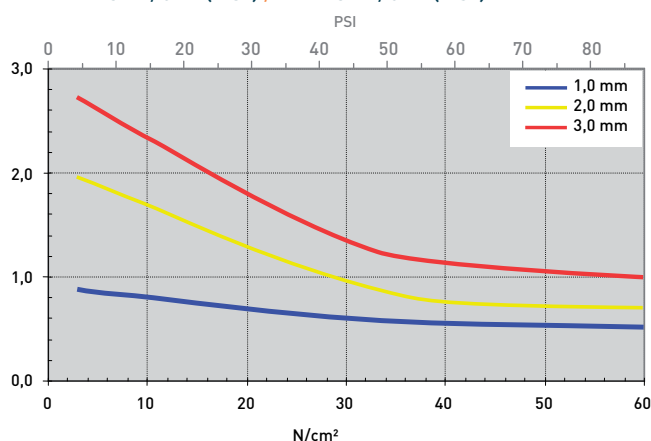
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTY	UNIT	TGF-Y1000-NS	TGF-Y2000-NS	TGF-Y3000-NS
MATERIAL				
		Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer
Colour		Light Grey	Light Grey	Light Grey
Specific Gravity	g/cm ³	3.4	3.4	3.4
Thickness	mm	1.0 ±0.10	2.0 ±0.20	3.0 ±0.30
Hardness	Shore 00	70	70	70
Flammability [Equivalent]	UL 94	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
THERMAL				
Resistance ¹ @ 60 PSI @ Thickness	°C-inch ² /W (mm)	0.13 [0.55]	0.18 [0.75]	0.25 [1.13]
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.17 [0.72]	0.28 [1.30]	0.37 [1.80]
Resistance ¹ @ 10 PSI @ Thickness	°C-inch ² /W (mm)	0.22 [0.83]	0.43 [1.80]	0.55 [2.52]
Thermal Conductivity ¹	W/mK	8.0	8.0	8.0
Operating Temperature Range	°C	- 40 to +120	- 40 to +120	- 40 to +120
ELECTRICAL				
Dielectric Strength	kV / mm	7.8	7.8	7.8
Volume Resistivity	Ohm - cm	1 x 10 ¹¹	1 x 10 ¹¹	1 x 10 ¹¹

Measurement technique according to: ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm / 3.5 mm / 4.0 mm / 4.5 mm / 5.0 mm

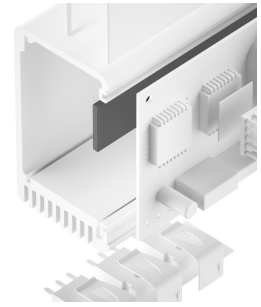
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-GUS-NS

SILOXANE-FREE, EXTREMELY ELASTIC TPE

TGF-GUS-NS is an electrically insulating thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The TPE polymer based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has a high thermal conductivity. Through its extreme softness the material perfectly mates to irregular surfaces thus filling gaps and operates at very low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable pre-assembly.



PROPERTIES

- Silicone-free TPE polymer
- Extremely soft and compliant
- Thermal conductivity: 1.5 W/mK
- Operates at very low pressure
- Shock absorbing
- Easy mounting through self tackiness
- Two-side self-tacky

AVAILABILITY

- Sheet 300 x 200 mm
- Tacky on both sides (TGF-GUSXXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

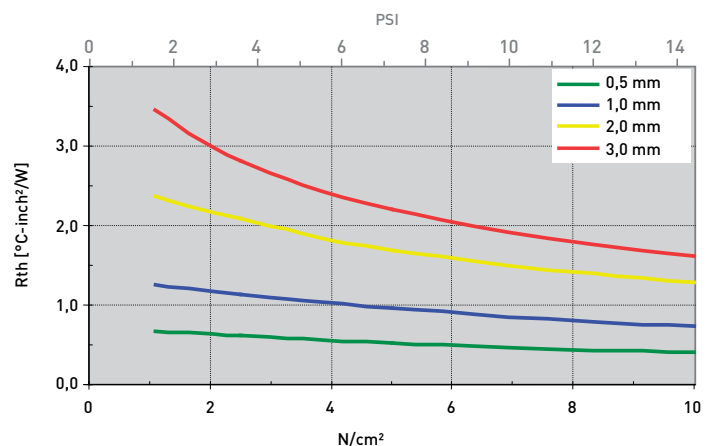
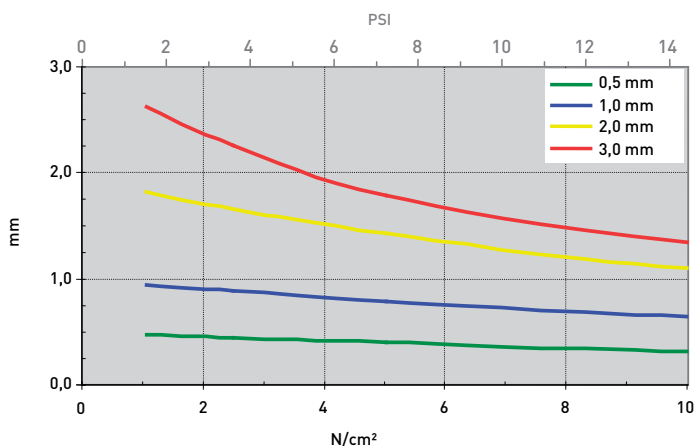
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications/
Laptops / Medicine engineering /
Industrial PCs

PROPERTY	UNIT	TGF-GUS0500-NS	TGF-GUS1000-NS	TGF-GUS2000-NS
MATERIAL				
		Ceramic filled silicone-free TPE elastomer	Ceramic filled , silicone-free TPE elastomer	Ceramic filled silicone-free TPE elastomer
Colour		Black	Black	Black
Thickness	mm	0.5 ^{+0.20} _{-0.10}	1.0 ^{+0.20} _{-0.10}	2.0 ^{+0.20} _{-0.10}
Specific Gravity	g/cm ³	1.7	1.7	1.7
Hardness	Shore 00	25	25	25
UL Flammability (Equivalent)	UL 94	VO	VO	VO
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
THERMAL				
Resistance ¹ @ 15 PSI @ Thickness	°C-inch ² /W (mm)	0.42 [0.32]	0.74 [0.63]	1.30 [1.11]
Resistance ¹ @ 7 PSI @ Thickness	°C-inch ² /W (mm)	0.54 [0.39]	0.98 [0.78]	1.70 [1.44]
Resistance ¹ @ 3 PSI @ Thickness	°C-inch ² /W (mm)	0.64 [0.45]	1.19 [0.90]	2.20 [1.72]
Thermal Conductivity	W/mK	1.5	1.5	1.5
Operating Temperature Range	°C	- 40 to + 120	- 40 to + 120	- 40 to + 120
ELECTRICAL				
Dielectric Strength	kV / mm	> 10	> 10	> 10
Volume Resistivity	Ohm - cm	1.0 x 10 ¹⁰	1.0 x 10 ¹⁰	> 1.0 x 10 ¹⁰

Measurement technique according to: 'ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm / 3.5 mm / 4.0 mm / 4.5 mm / 5.0 mm

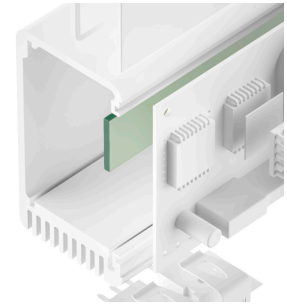
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-IXS-NS

SILOXANE-FREE, EXTREMELY SOFT ACRYLATE

TGF-IXS-NS is an electrically insulating thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The acrylate based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has a high thermal conductivity. Through its extreme softness the material perfectly mates to irregular surfaces thus filling gaps and operates at very low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable pre-assembly. The material is one-side tacky through lamination with a transparent film.



PROPERTIES

- Multilayer silicone-free acrylate: Soft-Ultrasoft-Film
- No emission of volatile siloxanes
- Extremely soft and compliant
- Thermal conductivity: 2 W/mK
- Operates at very low pressure
- Shock absorbing
- Easy mounting through self tackiness
- One-side self-tacky

AVAILABILITY

- Sheet 525 x 210 mm
- Tacky on one side by film laminate (TGF-IXSXXX-NS-F)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

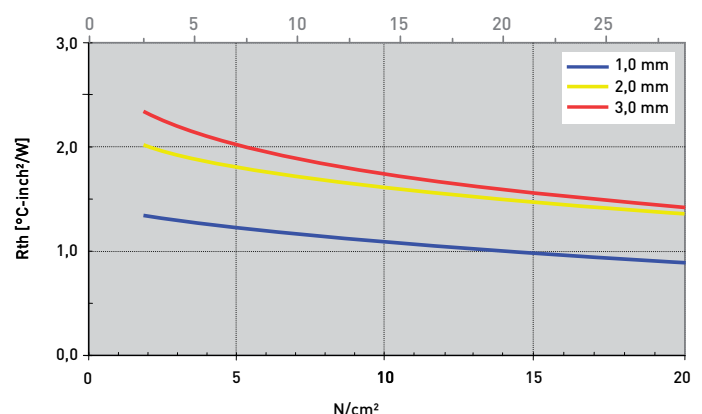
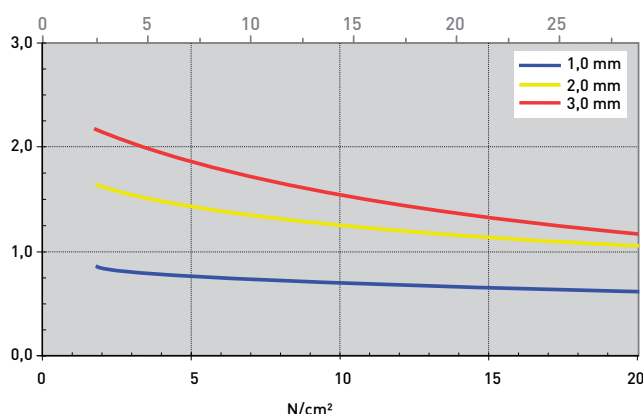
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTY	UNIT	TGF-IXS1000-NS-F	TGF-IXS2000-NS-F	TGF-IXS3000-NS-F
MATERIAL				
		Ceramic filled multilayer silicone-free acrylic elastomer	Ceramic filled multilayer silicone-free acrylic elastomer	Ceramic filled multilayer silicone-free acrylic elastomer
Colour		Dark green / White	Dark green / White	Dark green / White
Thickness	mm	1.0 ±0.1	2.0 ±0.2	3.0 ±0.3
Hardness (White layer)	Shore 00	29	29	29
UL Flammability (Equivalent)	UL 94	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
THERMAL				
Resistance ¹ @ 15 PSI @ Thickness	°C-inch ² /W (mm)	1.07 [0.70]	1.60 [1.25]	1.70 [1.52]
Resistance ¹ @ 7 PSI @ Thickness	°C-inch ² /W (mm)	1.22 [0.74]	1.78 [1.40]	2.20 [1.85]
Resistance ¹ @ 3 PSI @ Thickness	°C-inch ² /W (mm)	1.32 [0.83]	2.00 [1.60]	2.30 [2.13]
Thermal Conductivity ¹	W/mK	2	2	2
Operating Temperature Range	°C	- 40 to + 125	- 40 to + 125	- 40 to + 125
ELECTRICAL				
Dielectric Strength	kV / mm	2.0	2.0	2.0
Volume Resistivity	Ohm - cm	1.0 x 10 ¹¹	1.0 x 10 ¹¹	> 1.0 x 10 ¹¹

Measurement technique according to: ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 1.0 mm / 2.0 mm / 3.0 mm / 4.0 mm / 5.0 mm / 6.0 mm

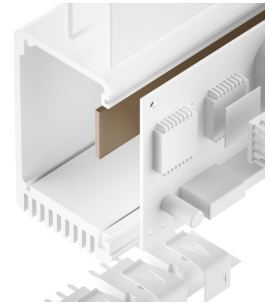
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-NSS-NS

SILOXANE-FREE, VERY SOFT ACRYLATE

TGF-NSS-NS is an electrically insulating thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The acrylate based elastomer does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has a high thermal conductivity. Through its extraordinary softness the material perfectly mates to irregular surfaces thus filling gaps and operates at very low pressure. By its use the total thermal resistance is minimised. The natural tackiness of the material allows for an easy and reliable pre-assembly. The material is double-side tacky or alternatively one-side tacky through lamination with a transparent film.



PROPERTIES

- Silicone-free acrylate
- No emission of volatile siloxanes
- Extremely soft and compliant
- Thermal conductivity: 2.5 W/mK
- Operates at very low pressure
- Shock absorbing
- Easy mounting through self tackiness
- One-side self-tacky

AVAILABILITY

- Sheet 510 x 210 mm
- Tacky on both sides (TGF-NSSXXX-NS) ≥ 2.0 mm
- Tacky on one side by film laminate (TGF-NSSXXX-NS-F)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

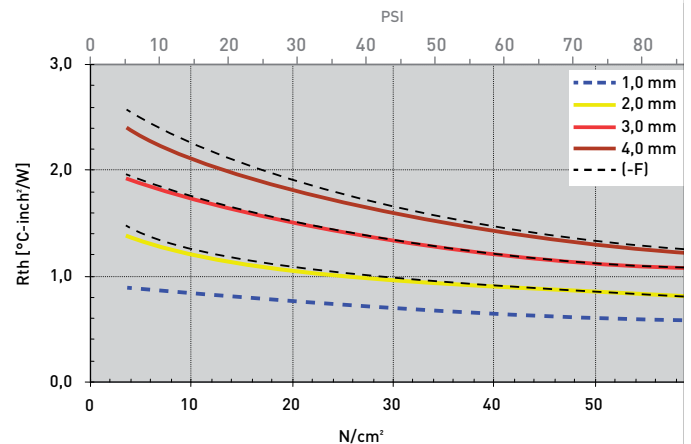
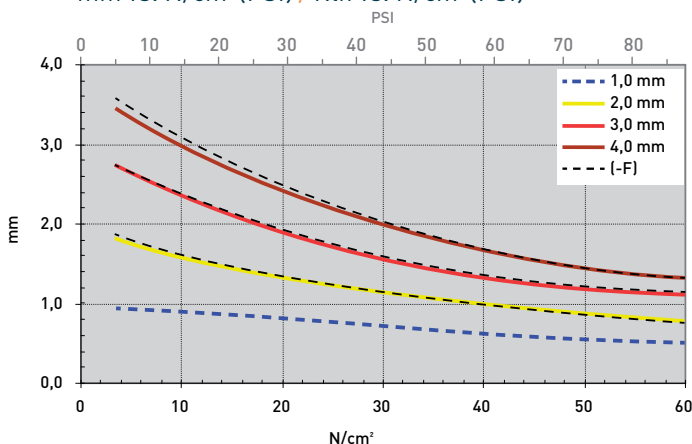
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTY	UNIT	TGF-NSS1000-NS-F	TGF-NSS2000-NS	TGF-NSS3000-NS	TGF-NSS4000-NS
MATERIAL					
		Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer
Colour		Brown	Brown	Brown	Brown
Thickness	mm	1.0	2.0	3.0	4.0
Specific Gravity	g/cm ³	2.33	2.33	2.33	2.33
Hardness	Shore 00	47	47	47	47
UL Flammability (Equivalent)	UL 94	VO	VO	VO	VO
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes
THERMAL					
Resistance ¹ @ 60 PSI @ Thickness	°C-inch ² /W (mm)	0.60 [0.62]	0.92 [0.99]	1.19 [1.32]	1.41 [1.64]
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.67 [0.80]	1.05 [1.33]	1.51 [1.90]	1.81 [2.41]
Resistance ¹ @ 10 PSI @ Thickness	°C-inch ² /W (mm)	0.80 [0.91]	1.28 [1.68]	1.79 [2.50]	2.20 [3.20]
Thermal Conductivity ¹	W/mK	2.5	2.5	2.5	2.5
Operating Temperature Range	°C	- 40 to + 125	- 40 to + 125	- 40 to + 125	- 40 to + 125
ELECTRICAL					
Dielectric Strength	kV / mm	2.1	1.9	1.9	1.9
Volume Resistivity	Ohm - cm	1.0 x 10 ¹¹	1.0 x 10 ¹¹	1.0 x 10 ¹¹	1.0 x 10 ¹¹
Dielectric Constant	@ 1 MHz	18.2	19.6	19.6	19.6

Measurement technique according to: 'ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm / 3.5 mm / 4.0 mm

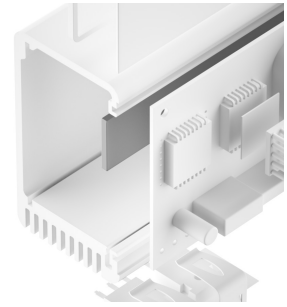
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE -FREE GAP FILLER PAD TGF-XP-NS

SILOXANE-FREE, PLASTIC

TGF-XP-NS is an electrically insulating extremely thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The butadiene elastomer as base does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has an extremely high thermal conductivity. Through its softness and plasticity the material perfectly mates to irregular surfaces thus filling gaps and operates at low pressure. By its use the total thermal resistance is minimised.



PROPERTIES

- Silicone-free
- No emission of siloxanes through silicone-freeness
- Soft and compliant
- Thermal conductivity: 7 W/mK

AVAILABILITY

- Sheet 100 x 100 mm
- Double-side tacky (TGF-XPXXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

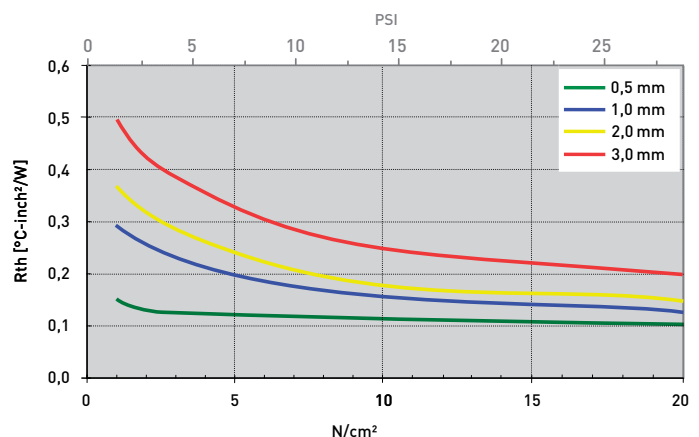
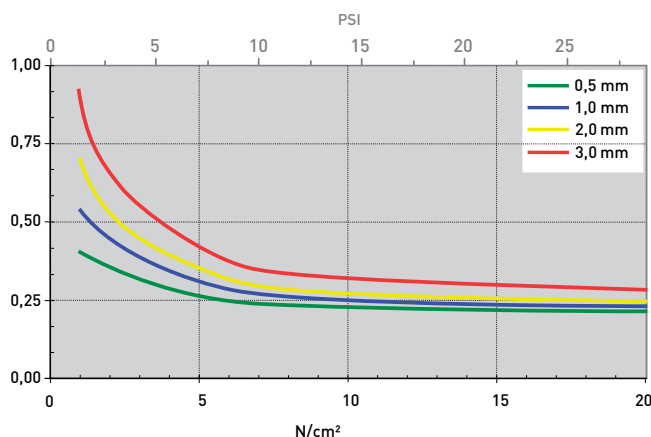
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTY	UNIT	TGF-XP0500-NS	TGF-XP1000-NS	TGF-XP2000-NS	TGF-XP3000-NS
MATERIAL					
Colour		Light Grey	Light Grey	Light Grey	Light Grey
Thickness	mm	0.5	1.0	2.0	3.0
Hardness	Shore 00	70	70	70	70
Flammability (Equivalent)	UL 94	HB	HB	HB	HB
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes
THERMAL					
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.11 [0.21]	0.13 [0.23]	0.15 [0.24]	0.20 [0.28]
Resistance ¹ @ 15 PSI @ Thickness	°C-inch ² /W (mm)	0.12 [0.23]	0.16 [0.25]	0.18 [0.27]	0.25 [0.32]
Resistance ¹ @ 7 PSI @ Thickness	°C-inch ² /W (mm)	0.13 [0.26]	0.20 [0.31]	0.24 [0.35]	0.33 [0.45]
Thermal Conductivity ¹	W/mK	7	7	7	7
Operating Temperature Range	°C	- 40 to + 150	- 40 to + 150	- 40 to + 150	- 40 to + 150
ELECTRICAL					
Dielectric Strength	kV / mm	5.8	5.8	5.8	5.8
Dielectric Constant	@ 1 MHz	3.8	3.8	3.8	3.8

Measurement technique according to: ¹ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm

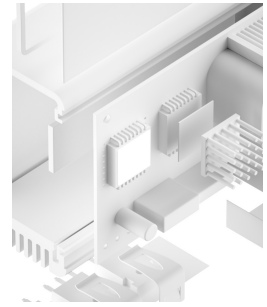
mm vs. N/cm² (PSI) / Rth vs. N/cm² (PSI)



SILICONE-FREE GAP FILLER PAD TGF-ZP-NS

SILOXANE-FREE, PLASTIC

TGF-ZP-NS is an electrically insulating extremely thermally conductive silicone-free gap filler. It is ideal for use in applications where thermal transfer over large gaps caused e.g. by big tolerances or different stack up heights must be achieved. The butadiene elastomer as base does not contain any volatile siloxanes which are inevitably emitted by silicones. Due to the specific formulation and filling with ceramic particles the material has an extremely high thermal conductivity. Through its softness and plasticity the material perfectly mates to irregular surfaces thus filling gaps and operates at low pressure. By its use the total thermal resistance is minimised.



PROPERTIES

- Silicone-free
- No emission of siloxanes through silicone-freeness
- Soft and compliant
- Thermal conductivity: 10 W/mK

AVAILABILITY

- Sheet 100 x 100 mm
- Double-side tacky (TGF-ZPXXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

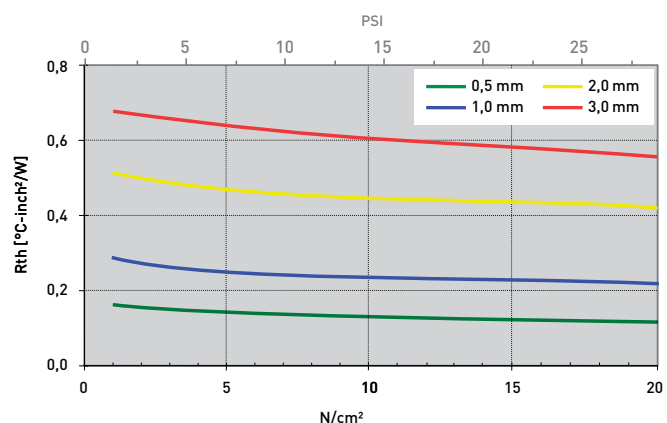
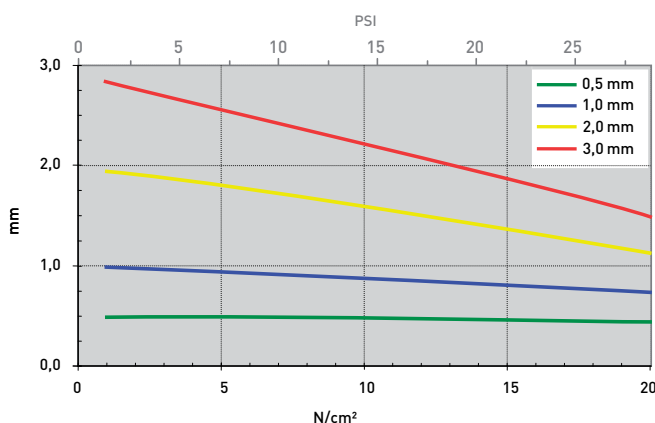
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTY	UNIT	TGF-ZP0500-NS	TGF-ZP1000-NS	TGF-ZP2000-NS	TGF-ZP3000-NS
MATERIAL					
Colour		White	White	White	White
Thickness	mm	0.5	1.0	2.0	3.0
Hardness	Shore 00	65	65	65	65
Flammability (Equivalent)	UL 94	HB	HB	HB	HB
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes
THERMAL					
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.12 (0.45)	0.22 (0.74)	0.43 (1.13)	0.56 (1.50)
Resistance ¹ @ 15 PSI @ Thickness	°C-inch ² /W (mm)	0.13 (0.48)	0.24 (0.89)	0.45 (1.60)	0.61 (2.23)
Resistance ¹ @ 7 PSI @ Thickness	°C-inch ² /W (mm)	0.14 (0.49)	0.25 (0.95)	0.48 (1.82)	0.65 (2.56)
Thermal Conductivity ¹	W/mK	10	10	10	10
Operating Temperature Range	°C	- 40 to + 150	- 40 to + 150	- 40 to + 150	- 40 to + 150
ELECTRICAL					
Dielectric Strength	kV / mm	4	4	4	4
Dielectric Constant	@ 1 MHz	3.8	3.8	3.8	3.8

Measurement technique according to: 'ASTM D 5470. All data without warranty and subject to change. Please contact us for further data and information.

Thicknesses: 0.5 mm / 1.0 mm / 1.5 mm / 2.0 mm / 2.5 mm / 3.0 mm

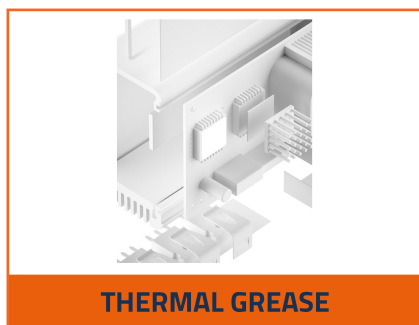
mm vs. N/cm² (PSI) / R_{th} vs. N/cm² (PSI)



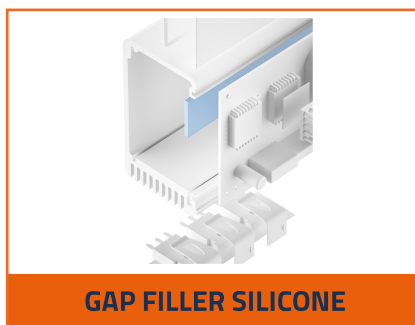


KØLEPROFILER

VORES PRODUKTSORTIMENT INKLUDERER:



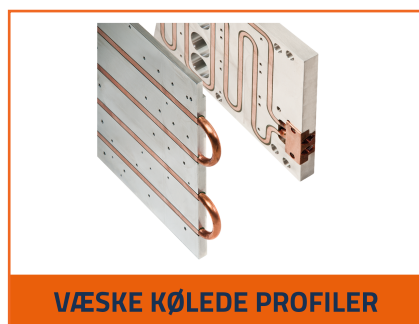
THERMAL GREASE



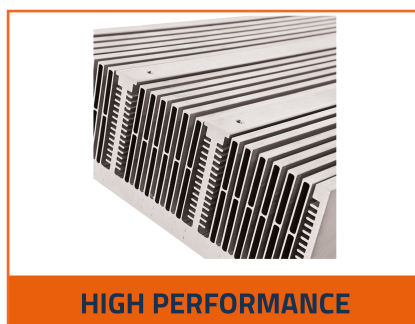
GAP FILLER SILICONE



TERMISK LEDENDE MATERIALE



VÆSKE KØLEDE PROFILER



HIGH PERFORMANCE



KØLEPROFILER

VI FØRER PRODUKTER INDENFOR KATEGORIERNE:



AUTOMATIK



**HVAC & BYGNINGS-
AUTOMATIK**



ELVARME

NEWTRONIC

Ove Jensens Alle 35 F
DK-8700 Horsens
Denmark
www.newtronic.eu
www.newtronic.dk
+45 7669 7090