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.

Release 10/ 2022

PROPERTIES

- Silicone-free acrylate
- No emission of volatile siloxanes
- Soft and compliable
- 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-VXXXX-NS) ⩾ 1.0 mm
- Tacky on one side by film laminate (TGF-VXXXX-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

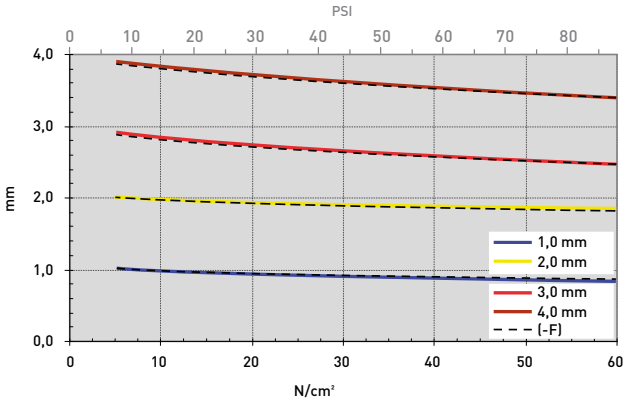
For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

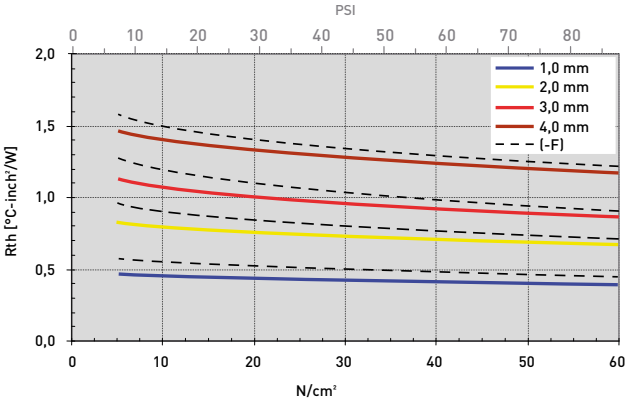
PROPERTY	UNIT	TGF-V1000-NS	TGF-V2000-NS	TGF-V3000-NS	TGF-V4000-NS
MATERIAL		Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer	Ceramic filled silicone-free acrylic elastomer
Colour		Light green	Light green	Light green	Light green
Specific Gravity	g/cm³	2.89	2.89	2.89	2.89
Thickness	mm	1.0 ±0.10	2.0 ±0.20	3.0 ±0.30	4.0 ±0.40
Hardness	Shore 00	64	64	64	64
Flammability	UL 94	V0	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes	Yes
THERMAL					
Resistance[1] @ 60 PSI @ Thickness	°C-inch²/W (mm)	0.42 (0.89)	0.73 (1.89)	0.93 (2.57)	1.25 (3.50)
Resistance[1] @ 30 PSI @ Thickness	°C-inch²/W (mm)	0.45 (0.93)	0.77 (1.93)	1.01 (2.72)	1.33 (3.70)
Resistance[1] @ 10 PSI @ Thickness	°C-inch²/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 x 10^{11}	1 x 10^{11}	1 x 10^{11}	1 x 10^{11}
Dielectric Constant	@ 1 MHz	18.2	18.2	18.2	18.2

Measurement technique according to: [1]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)





All technical data and information are without warranty and believed to be reliable and accurate corresponding to the latest state of the art. Since the products are not provided to conform with mutually agreed specifications and their use and processing are unknown we cannot guarantee results, freedom from patent infringement, or their suitability for any application. Product testing by the applicant is recommended. We reserve the right of changes.

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