

SILICONE-FREE GAP FILLER TGF-Z-NS

siloxane-free, elastic

TGF-Z-NS is a low dielectric 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 olefin 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.



Release 11 / 2018

PROPERTIES

- Silicone-free
- No emission of siloxanes through silicone-freeness
- Soft and compliant
- Thermal conductivity: 15 W/mK
- Low dielectric
- Operates at low pressure
- Shock absorbing
- Easy mounting through self tackiness
- One or two-side self-tacky

AVAILABILITY

- Sheet 150 x 150 mm (Thickness 0.5 – 1.5 mm)
- Sheet 140 x 140 mm (Thickness 2.0 mm)
- Double-side tacky (TGF-ZXXXX-NS)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

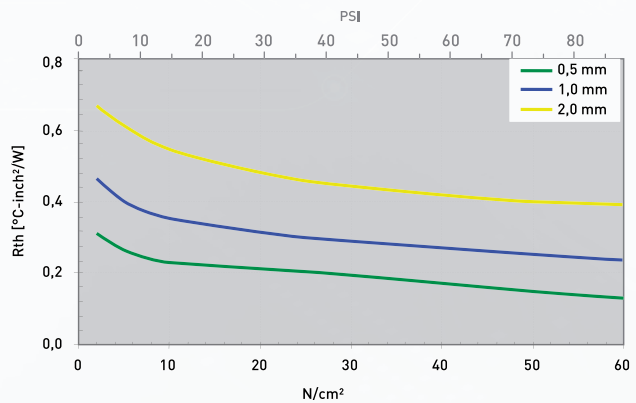
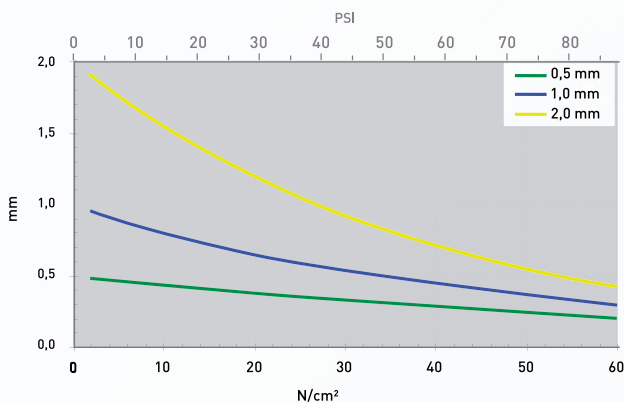
- Thermal link of:
- SMD packages
 - Through-hole vias
 - RDRAMs memory modules
 - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

PROPERTIES	Unit	TGF-Z0500-NS	TGF-Z1000-NS	TGF-Z2000-NS
Material		Ceramic filled silicone-free elastomer	Ceramic filled silicone-free elastomer	Ceramic filled silicone-free elastomer
Colour		Dark Brown	Dark Brown	Dark Brown
Thickness	mm	0.5	1.0	2.0
Hardness	Shore 00	70	70	70
Flammability (Equivalent)	UL 94	V0	V0	V0
RoHS Conformity	2011 / 65 / EU	Yes	Yes	Yes
Thermal				
Resistance ¹ @ 60 PSI @ Thickness	°C-inch ² /W (mm)	0.17 (0.28)	0.27 (0.45)	0.42 (0.74)
Resistance ¹ @ 30 PSI @ Thickness	°C-inch ² /W (mm)	0.21 (0.38)	0.32 (0.63)	0.49 (1.20)
Resistance ¹ @ 10 PSI @ Thickness	°C-inch ² /W (mm)	0.25 (0.45)	0.38 (0.84)	0.59 (1.68)
Thermal Conductivity	W/mK	15	15	15
Operating Temperature Range	°C	- 50 to + 110	- 50 to + 110	- 50 to + 110
Electrical				
Dielectric Strength	kV / mm	0.7	0.7	0.7
Volume Resistivity	Ohm - cm	≥ 1 x 10 ¹²	≥ 1 x 10 ¹²	≥ 1 x 10 ¹²

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

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.