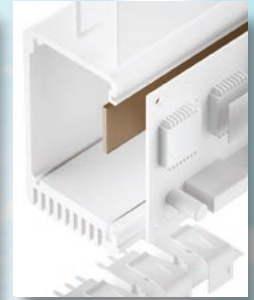


# SILICONE-FREE GAP FILLER TGF-HSS-NS



siloxane-free, very elastic

TGF-HSS-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 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 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 thermally conductive film.



Release 04 / 2014

## PROPERTIES

- Silicone-free
- No siloxanes through silicone-freeness
- Extraordinary soft and compliable
- Thermal conductivity: 2.0 W/mK
- Operates at very low pressure
- Shock absorbing
- Easy mounting through self tackiness
- One or two-side self-tacky

## AVAILABILITY

- Sheet 420 x 210 mm (0.5 – 2.0 mm)
- Sheet 200 x 200 mm (2.5 – 3.0 mm)
- Tacky on both sides (TGF-HSSXXX-NS)
- Tacky on one side by film laminate (TGF-HSSXXX-NS-A1)
- Die cut parts
- Kiss cut parts on sheet

## APPLICATION EXAMPLES

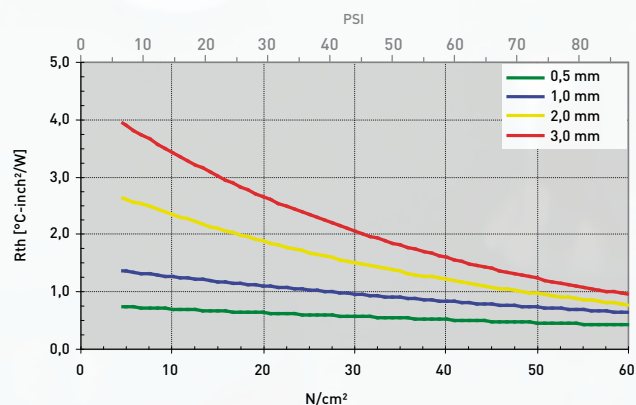
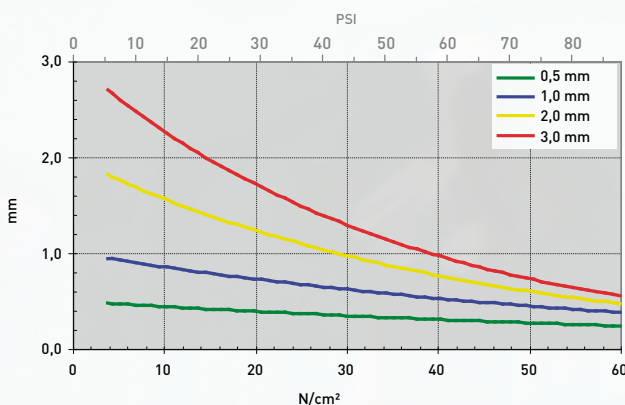
- Thermal link of:
- SMD packages
  - Through-hole vias
  - RDRAMs memory modules
  - Electronic parts to heat pipes
- For use in Automotive applications / Laptops / Medicine engineering / Industrial PCs

Property	Unit	TGF-HSS0500-NS	TGF-HSS1000-NS	TGF-HSS2000-NS	TGF-HSS3000-NS
<b>Material</b>		Ceramic filled silicone-free elastomer	Ceramic filled silicone-free elastomer	Ceramic filled silicone-free elastomer	Ceramic filled silicone-free elastomer
Colour		Brick-red	Brick-red	Brick-red	Brick-red
Thickness	mm	0.5	1.0	2.0	3.0
Specific Gravity	g/cm³	1.75	1.75	1.75	1.75
Hardness	Shore 00	45	45	45	45
UL Flammability	UL 94	V0	V0	V0	V0
RoHS Conformity	2002/95/EC	Yes	Yes	Yes	Yes
<b>Thermal</b>					
Resistance¹ @ 60 PSI @ Thickness	°C-inch²/W (mm)	0.54 (0.33)	0.86 (0.55)	1.27 (0.80)	1.68 (1.03)
Resistance¹ @ 30 PSI @ Thickness	°C-inch²/W (mm)	0.65 (0.42)	1.11 (0.76)	1.89 (1.27)	2.66 (1.74)
Resistance¹ @ 10 PSI @ Thickness	°C-inch²/W (mm)	0.74 (0.48)	1.33 (0.92)	2.48 (1.70)	3.67 (2.51)
Thermal Conductivity	W/mK	2.0	2.0	2.0	2.0
Operating Temperature Range	°C	- 40 to + 120	- 40 to + 120	- 40 to + 120	- 40 to + 120
<b>Electrical</b>					
Dielectric Strength	kV / mm	> 10	> 10	> 10	> 10
Volume Resistivity	Ohm · cm	1.0 x 10 <sup>10</sup>	1.0 x 10 <sup>10</sup>	1.0 x 10 <sup>10</sup>	1.0 x 10 <sup>10</sup>

Test Methods: 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 / 2.0 mm / 3.0 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. 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.