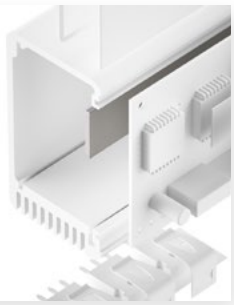
SILICONE GAP FILLER PAD TGF-USS-SI-A1

very soft, flexible / Low Volatile Siloxanes (LV)

HALA

TGF-USS-SI-A1 is an electrically insulating thermally conductive high performance LV silicone 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 heigths must be achieved. Due to the specific formulation and filling with ceramic articles the silicone elastomer has a very high thermal conductivity. Through its ultra softness and flexibility the material perfectly mates to irregular surfaces thus filling gaps at minimum 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 thermally conductive film.



Release 04 / 2025

PROPERTIES

- Ultra soft and compliable
- Low volatile siloxane content (LV)
- No paint wetting impairment
- Thermal conductivity: 3.3 W/mK
- Operates at minimum pressure
- Extraordinary chemical resistance and longterm stability
- Shock absorbing
- Easy mounting through self tackiness
- One-side self-tacky

AVAILABILITY

- Sheet 200 x 200 mm (1.0 – 3.0 mm)
- Sheet 200 x 400 mm (1.0 – 3.0 mm)
- Tacky on one side by film laminate (TGF-USSXXXX-SI-A1)
- Die cut parts
- Kiss cut parts on sheet

APPLICATION EXAMPLES

Thermal link of:

- SMD packages
- Through-hole vias
- RDRAMs memory modules
- Flip Chips, DSPs, BGAs, PPGAs

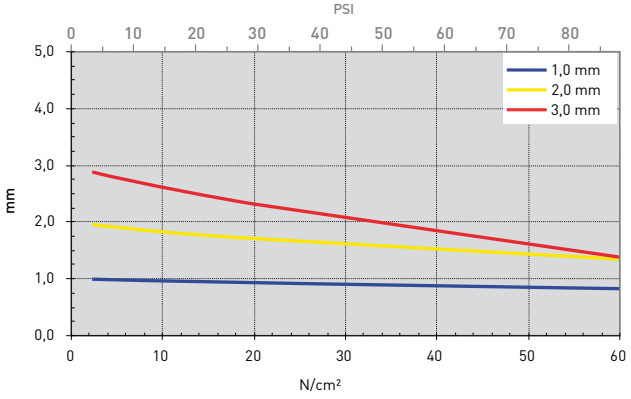
For use in Automotive applications / Laptops / Medicine engineering / Embedded boards

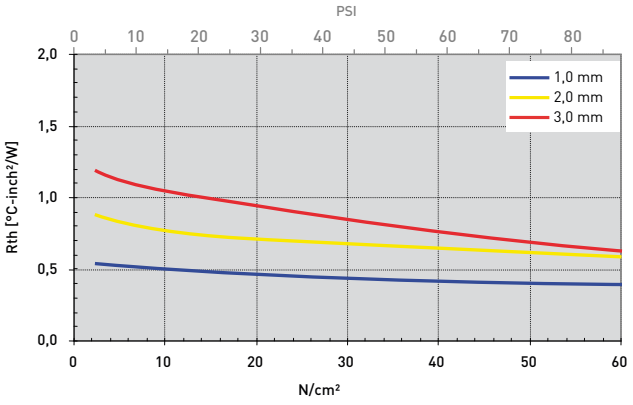
PROPERTY	UNIT	TGF-USS1000-SI-A1	TGF-USS2000-SI-A1	TGF-USS3000-SI-A1
MATERIAL		Ceramic filled silicone	Ceramic filled silicone	Ceramic filled silicone
Colour		Dark grey / Grey	Dark grey / Grey	Dark grey / Grey
Thickness	mm	1.0 $^{+0.20}_{-0.10}$	2.0 $^{\pm 0.20}$	3.0 $^{\pm 0.30}$
Hardness	Shore 00	45	45	45
No Paint Wetting Impairment Substances (PWIS)[1]		Passed	Passed	Passed
UL Flammability (Equivalent)	UL 94	V0	V0	V0
RoHS Conformity	2015 / 863 / EU	Yes	Yes	Yes
THERMAL				
Resistance[2] @ 60 PSI @ Thickness	°C-inch²/W (mm)	0.40 (0.87)	0.63 (1.55)	0.75 (1.84)
Resistance[2] @ 30 PSI @ Thickness	°C-inch²/W (mm)	0.45 (0.93)	0.70 (1.70)	0.94 (2.30)
Resistance[2] @ 10 PSI @ Thickness	°C-inch²/W (mm)	0.51 (0.99)	0.80 (1.85)	1.07 (2.68)
Thermal Conductivity[1]	W/mK	3.3	3.3	3.3
Operating Temperature Range	°C	- 40 to + 150	- 40 to + 150	- 40 to + 150
ELECTRICAL				
Breakdown Voltage	kV / mm	>10	>10	>10
Volume Resistivity	Ohm - cm	1.0 x 10^{10}	1.0 x 10^{10}	1.0 x 10^{10}

Test Methods: [1] P-VW 3-10.7 57650 Temp. Test, [2] 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

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





HALA Contec GmbH & Co. KG / Hans-Böckler-Straße 15 / D-73230 Kirchheim u.T. / Fon +49 7021 73141-0 / Fax +49 7021 73141-99 / contec@hala-tec.de / www.hala-tec.de