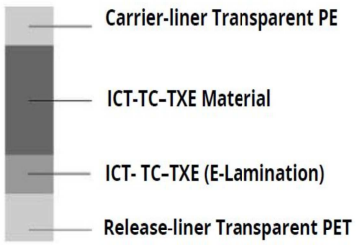
Thermally Conductive Silicone Based Gap-Filler / TXE Series

Coated by EC material on one side for **a better mechanical stability, second side is advesive for a better application**

The TC-TXE Series is a soft silicone soft foil filled with thermally conductive ceramics with very high thermal conductivity, dielectric strength and very good elasticity. **TXE material** is coated on one side with a so-called E-material (former non-glass fibre reinforced version of the EG product variant), thus ensuring for good mechanical stability. The other material side (backside) has a natural adhesion and therefore allows a very good pre-application through hand apply or the use with automated placement systems. Both sides are cover by protective release liner. Due to the softness and form adaptability of the soft silicone gap-filler, a very good thermal interface is achieved even at very low pressure on the surfaces to be contacted. The special formulation and filling of the silicone elastomerwith proprietary high-quality ceramic powder, which enables a very high thermal conductivity of 5 W/m*K



PROPERTIES

Very good thermal conductivity with Low overall thermal transfer resistance, Safe electrical insulation, Very high dielectric strength, Good mechanical stability, Clean, fast and process-reliable assembly, Residue-free removal after application, Non-flammable, Low outgassing behaviour, Very good surface adaptatio, Extremely resistant to ageing and chemicals

AVAILABILITY

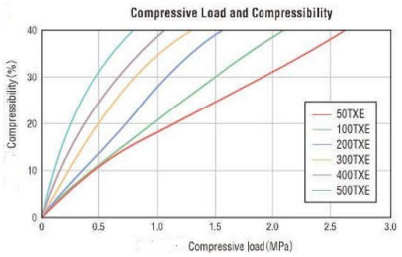
Available material thicknesses 0,50 mm| 1.00 mm|1.50 mm|2.00 mm|2.50 mm|3.00 mm|4.00 mm|5.00 mm. Sheet (Mat) dimension 300 mm x 400 mm. Manufacturing of specific cuttings according to consultation also possible in roll format (up to 1 mm material thickness)

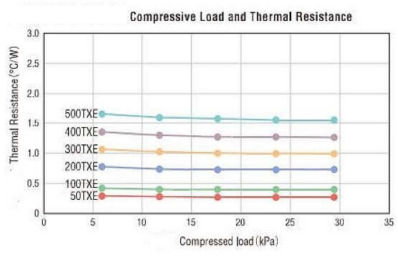
APPLICATION EXAMPLES

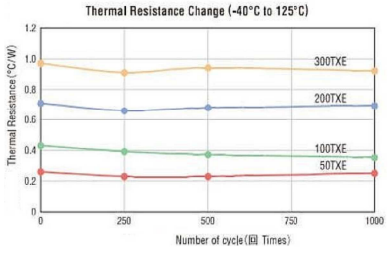
All power electronic, power supplies, servo drive, controller and inverters, battery units, UPS, welding, inducting heating etc. Increasing Visol of modules, cooling to the construction + insulation, overcoming large air gaps and unevenness

Properties	Unit	50-TXE	100-TXE	200-TXE	300-TXE	500-TXE
Material - soft Silicone elastomer		Lamination	Lamination	Lamination	Lamination	Lamination
Colour down side / upper side		Grey / Light Grey	Grey / Light Grey	Grey / Light Grey	Grey / Light Grey	Grey / Light Grey
Thickness	**mm**	0,50 (-0,05 to +0,15)	1,00 (-0,15 to +0,15)	2,00 (-0,25 to +0,25)	3,00 ((-0,25 to +0,25)	5,00 (-0,30 to +0,30)
Thermal and Electrical						
Thermal resistance (TO-3) /Shin-Etsu M	**°C/W**	0,27	0,48	0,71	1,00	1,55
Thermal conductivity (ISO 22007-2) Thermal conductivity (ASTM E1530)	**W/m*K** **W/m*K**	3,3 5,0				
Dielectric strenght (Voltage ramp 1000 V/s)	**V(AC)**	11000	21000	>21000	>21000	>21000
Dielectric strenght (Step by Step to breakdown)	**V(AC)**	8000	20000	>20000	>20000	>20000
Specific volume resistance	**Ωm**	2,30 x 10^{10}	5,10 x 10^{10}	1,20 x 10^{10}	5,10 x 10^{10}	5,10 x 10^{10}
Flame -retardant	**UL 94**	V-0				
Operating temperature	**°C**	-60 °C to 180 °C				
Mechanical						
Hardness **Shore 0** / **ASKER** (JIS K 6249)		74 / 20				
Tensile strength	**MPa**	0,35				
Density (JIS K 6249)	**g/cm³**	3,1				
Outgassing (LMW Siloxane)	**ppm**	Σ D3 - D10 = 240				

Test Methods: All data without warranty and subject to change. Please contact us for further data and information.







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