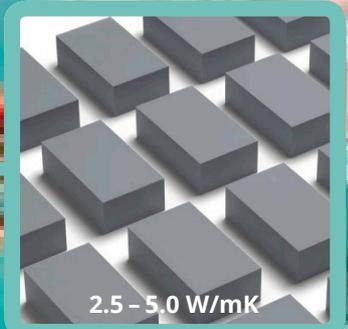


Cooperation partners



LATEST PRODUCT-LINE: NON-SILICONE GAPFILLER- SOFT-PAD-SF-HP- & EP-SERIES

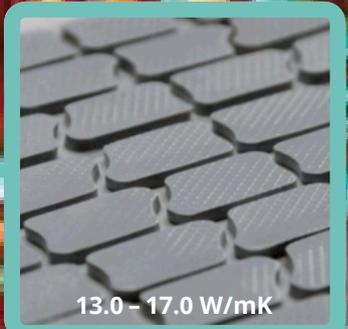
ICT-TC-GFSP-SF-5010 | 5011 | 5012 SERIES



ICT-TC-GFSP-SF-HP-5030 | 5031 | 5032 SERIES***



ICT-TC-GFSP-SF-EP-5040 | 5041 | 5042 SERIES****



**HIGH PERFORMANCE REQUIRES
EXCELLENT THERMAL MANAGEMENT**

NON-SILICONE-GAPFILLER-SOFT-PAD

LATEST T.I.M. GENERATION FROM ICT SUEDWERK

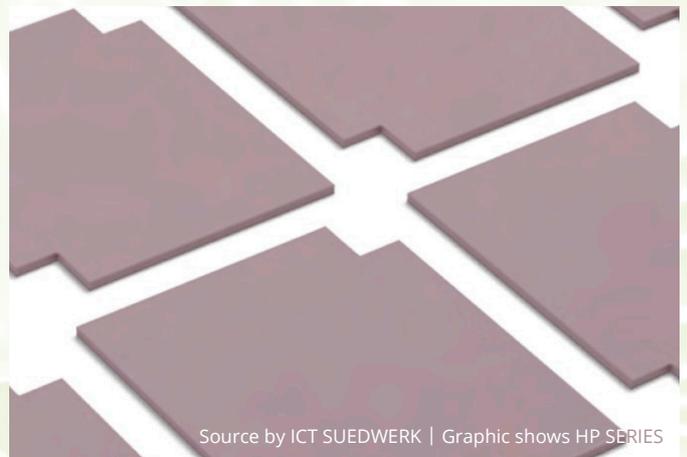
Non-silicone thermal pads, also known as silicone-free thermal pads, are specifically designed to avoid siloxane volatilization and silicone oil bleeding issues. This makes them suitable for silicone-sensitive applications such as optical, medical, and precision electronics industries. Although the cost is higher, they effectively prevent contamination and failure risks associated with silicone-based materials. Non-silicone thermal gap pads are intended for applications where silicone-based materials are not suitable, such as environments in which silicone contamination must be avoided. These pads offer comparable thermal conductivity and flexibility, while being manufactured from alternative materials that eliminate the risk of outgassing or contamination.

WHAT IS LOW-MOLECULAR-WEIGHT SILOXANE?

The chemical formula indicates that non-reactive cyclic polydimethylsiloxane $\text{HO}[\text{Si}(\text{CH}_3)_2\text{O}]_n\text{H}$ is volatile and may volatilize at any time. For example, when electronic products are operated in closed environments, low-molecular-weight siloxanes can interfere with electrical contacts.

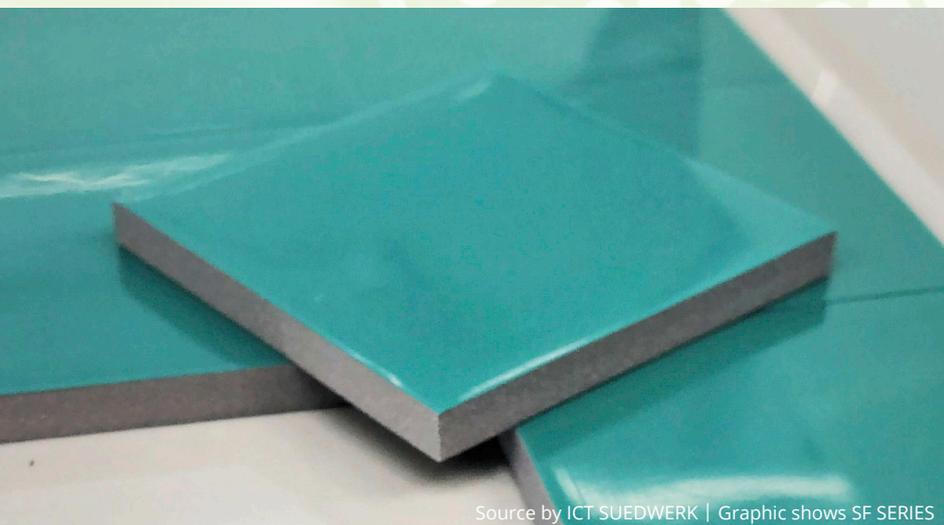
WHY ARE NON-SILICONE-THERMAL INTERFACE MATERIALS BE USED IN HIGH-TECH, SENSITIVE AREAS?

Non-silicone thermal interface materials are critically important in high-tech, sensitive fields such as optics, medical devices, and semiconductors. In these applications, even trace amounts of silicone outgassing can lead to serious failures or contamination. For example, in optical equipment, silicone volatiles may condense on component surfaces, causing fogging or degraded optical performance.



Source by ICT SUEDWERK | Graphic shows HP SERIES

In medical devices, silicone residues may trigger rejection issues or contaminate sensitive components, while in semiconductor manufacturing and packaging processes, silicone contamination can directly impact chip performance, reliability, and production yield.



Source by ICT SUEDWERK | Graphic shows SF SERIES



TECHNICAL CONSULTANCY

Do you have any questions or do you need additional information regarding product-specific data sheets?

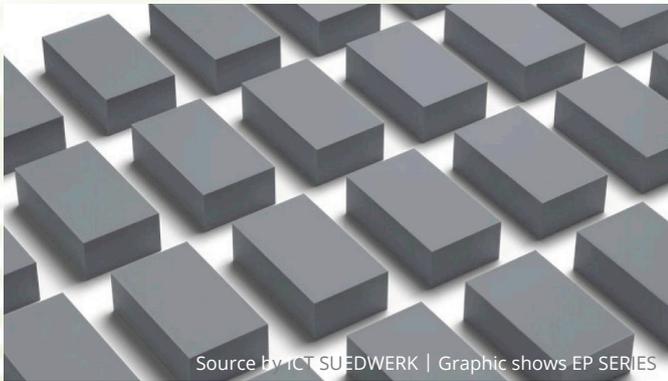
T +49 (0)89 21 23 102-0
info@ict-suedwerk.de

NON-SILICONE-GAPFILLER-SOFT-PAD

THE PERFECT THERMAL GAPFILLER SOLUTION

NON-SILICONE THERMAL GAPFILLER-SOFT-PAD & LOW OUTGASSING

In the field of thermal management for modern electronic devices, silicone-free thermal pads effectively address the low-molecular-weight siloxane (LMS) outgassing issues associated with traditional silicone-based materials. This prevents potential contamination of precision electronic and optical components, avoids electrical contact failures, and significantly enhances long-term reliability and performance stability.



Non-Silicon Gapfiller pads versus Silicone-based Gapfiller pads

SILICONE FREE THERMAL GAPFILLER SOFT-PAD, ENVIRONMENTAL COMPLIANCE & FLAME RESISTANCE:

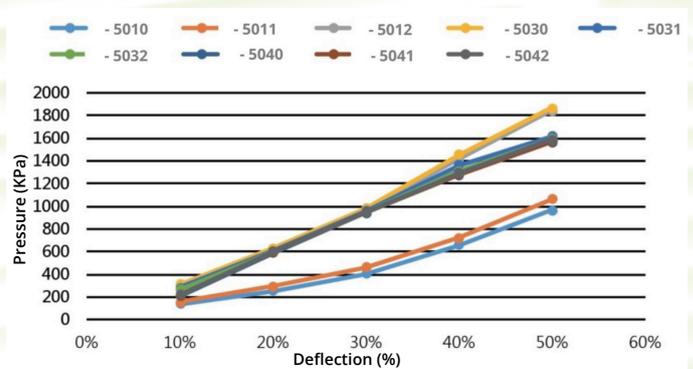
Non-silicone filling pads comply with REACH and RoHS directives in addition to silicone-based Gapfiller Pads and satisfy flame resistance requirements in accordance with UL 94 V-0, thereby ensuring a high level of safety and environmental compliance.



NON-SILICONE THERMAL GAPFILLER-SOFT-PAD: THE PERFECT THERMAL SOLUTION

The latest GAPFILLER Soft Pad series from ICT SUEDWERK, based on silicone-free EP resin and thermoplastic elastomers (TPE), is ideal for use in optical products and other sensitive electronic components where silicone must not interfere with electrical contacts. The ICT-TC-GFSP-SF-(HP|EP) series is rated at Shore 00 (hardness) 50–60 on the softness scale and offers excellent compressibility of 20–60%*, as measured according to ASTM D5470 (*at 30 psi).

These latest non-silicone GAPFILLER Soft Pad series products effectively fill gaps between contact surfaces, eliminate air pockets, and facilitate efficient heat transfer to heat sinks or external environments, reducing interfacial thermal resistance to 0.06–0.84 °Cinch²/W as measured in accordance with ASTM D5470 standards.



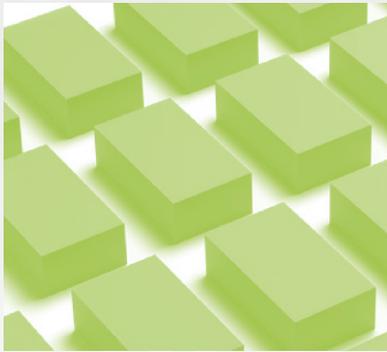
Source by ICT SUEDWERK | Graphic shows the SF, HP & EP SERIES



NON-SILICONE GAPFILLER-SOFT-PAD-SERIES

SIGNIFICANT TECHNICAL FEATURES

ICT-TC-GFSP-SF-5010 | 5011 | 5012 SERIES

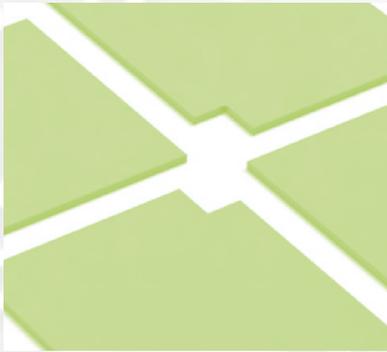


MAJOR TECHNICAL FEATURES

TYPE	HARDNESS Shore 00	SPEC. GRAVITY	R _{th} *	W/mK**	kv/mm	UL 94 V0
5010	60	2.4 g/cm ³	0.682	2.5	16	YES
5011	60	2.6 g/cm ³	0.543	3.0	16	YES
5012	55	3.2 g/cm ³	0.208	5.0	8	YES

LEGEND: * R_{th} = °C inch²/W | Material specimen thickness 1.00 mm (pressure 20 psi)
 **W/mK in according to ASTM D5470

ICT-TC-GFSP-SF-HP-5030 | 5031 | 5032 SERIES***



MAJOR TECHNICAL FEATURES

TYPE	HARDNESS Shore 00	SPEC. GRAVITY	R _{th} *	W/mK**	kv/mm	UL 94 V0
5030	60	3.3 g/cm ³	0.182	7.0	8	YES
5031	50	3.4 g/cm ³	0.166	9.0	8	YES
5032	50	3.3 g/cm ³	0.148	11.0	8	YES

LEGEND: * R_{th} = °C inch²/W | Material specimen thickness (pressure 20 psi)
 W/mK in according to ASTM D5470 *HP = High Performance Series

ICT-TC-GFSP-SF-EP-5040 | 5041 | 5042 SERIES****



MAJOR TECHNICAL FEATURES

TYPE	HARDNESS Shore 00	SPEC. GRAVITY	R _{th} *	W/mK**	kv/mm	UL 94 V0
5040	50	3.3 g/cm ³	0.131	13.0	00	YES
5041	50	3.3 g/cm ³	0.119	15.0	00	YES
5042	50	2.4 g/cm ³	0.103	17.0	00	YES

LEGEND: * R_{th} = °C inch²/W | Material specimen thickness (pressure 20 psi)
 W/mK in according to ASTM D5470 **EP = Excellent Performance Series



Source by ICT SÜEDWERK | Graphic shows HP SERIES

DELIVERY FORMS

All Products available in according to customized drawings and as standard dimension in sheetform & in different thicknesses from 0.50mm – 10.00 mm further thicknesses available at request.
www.ict-suedwerk.de

Please note that the information contained in this TDS (Technical-Data-Sheet/Print Flyer) does not go beyond the specifications described in this TDS and only explains or describes the typical performance of the product as a single component, therefore, the user must evaluate and test the suitability and installation of the product before using it. The information is provided „as is“ and the illustrations & technical features may differ from the original.