KLINGER®
Graphite Laminate SLS

KLINGER Switzerland

KLINGER® Graphite Laminate SLS - the pure graphite gasket with smooth stainless steel insert.

Combining pure exfoliated graphite with stainless steel foil reinforcement, this gasket material promises improved cutting and handling. Thanks to its graphite-based conformability characteristics, it is suitable for low bolt-load and damaged flange scenarios. Resistant to virtually any type of medium, it is also temperature-resistant (up to 450°C) and highly compressible.



Basis composition	Expanded graphite and a plain glued stainless steel insert.
Color	Grey
Certificates	Fire Safe acc. to DIN EN ISO 10497, BAM tested

Sheet size	1000 x 1000 mm, 2000 x 1000 mm Per request also available as roll.
Thickness	0.6 mm, 0.8 mm, 1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm

Tolerances

Thickness:	± 5 %
Length:	± 5 mm
Width:	± 5 mm

Industry

General industry / Chemical / Oil & Gas / Energy / Pulp & Paper / Marine / Automotive

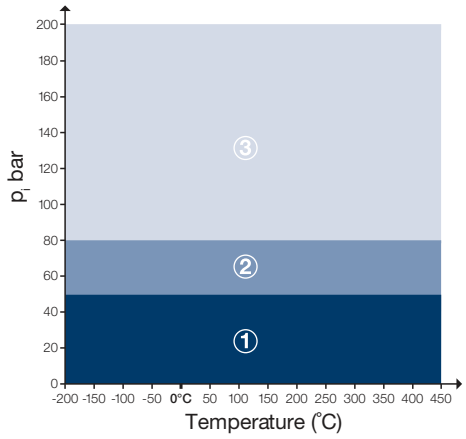
TECHNICAL DATA - Typical values for a thickness of 2.0 mm

Density of the graphite layer	DIN 28090-2	g/cm³	1.0
Purity of graphite[1)]	DIN 51903	%	≥ 99.0
Metallic reinforcement	Plain metal		AISI 316 (L)
	Thickness	mm	0.05
	Number of sheets		1
Compressibility	ASTM F36 A	%	35 - 50
Recovery	ASTM F36 A	%	10 - 15
Compression creep DIN 52913	16 h/ 50 MPa/ 300°C	MPa	≥ 45
Klinger cold/hot compression 50 MPa	Thickness decrease at 23°C	%	40 - 50
	Thickness decrease at 300°C	%	1 - 4
Specific leak rate	DIN 28090-2	mg/s x m	< 0.10
Chloride content of graphite layer[2)]	DIN 28090-2	ppm	≤ 40

1) High purity graphite quality of ≥99.8 available on request

2) Detailed specifications of the used graphite foils are found in our Graphite vade mecum, which will be sent to you on request with pleasure

P-T diagram - thickness 2.0 mm



The area of the P-T diagram

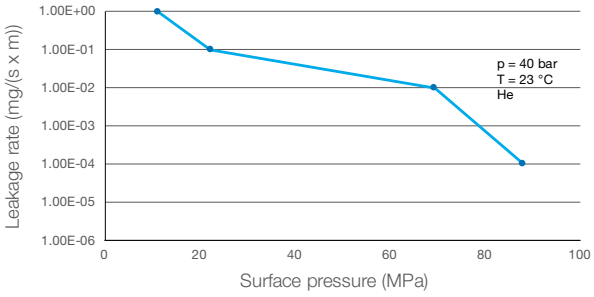
① In area one, the gasket material is normally suitable subject to chemical compatibility.

② In area two, the gasket material may be suitable but a technical evaluation is recommended.

③ In area three, do not install the gasket without a technical evaluation.

Always confirm the chemical resistance of the gasket to the media.

Tightness performance



The tightness performance graph

The graph shows the required stress at assembling to seal a certain tightness class. The determination of the graph is based on EN13555 test procedure which applies 40bar Helium at room temperature. The sloping curve indicates the ability of the gasket to increase tightness with raising gasket stress.

Chemical resistance chart

Simplified overview of the chemical resistance depending on the most important groups of raw materials:

KLINGER® SLS Multi Plus — **A**: small or no attack — **B**: weak till moderate attack — **C**: strong attack

Paraffinic hydrocarbon	Motor fuel	Aromates	Chlorinated hydrocarbon fluids	Motor oil	Mineral lubricants	Alcohol	Ketone	Ester	Water	Acid (diluted)	Base (diluted)
A	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**A**	**B**	**B**

For more information on chemical resistance please visit www.klinger-ag.ch.

All information is based on years of experience in production and operation of sealing elements. However, in view of the wide variety of possible installation and operating conditions one cannot draw final conclusions in all application cases regarding the behaviour in gasket joint. The data may not, therefore, be used to support any warranty claims. This edition cancels all previous issues. Subject to change without notice.

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