Graphite Laminate SLN



Klinger® Graphite Laminate SLN - the graphite laminate with smooth nickel insert

This material combines pure exfoliated graphite laminated on a smooth nickel insert. It exhibits excellent sealing performance on sensitive flanges like enamel and glass. and ease of cutting. It is also suitable for the sealing of liquid level gauges. The amount of adhesive used is less than 1% which preserves the excellent properties of the expanded graphite.



Basic composition	Expanded graphite with a 0.013 mm thick smooth nickel insert, with anti-stick coating upon request			
Colour	grey			
Certificates		-] 		

Sheet size	1000 x 1000 mm or on rolls				
Thickness	0.6 mm, 0.8 mm, 1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm				
Tolerances					
Thickness	± 5 %				
Length Width	± 5 mm ± 5 mm				

Industries

Technical data - Typical values for a thickness of 2.0 mm and "B" Quality graphite. Other graphite qualities are available upon request, see the Klinger "Graphite Product Manual" for more details.

Density of the graphite layer	DIN 28090-2	g/cm ³	1.0
Purity of graphite	DIN 51903	%	≥ 99.0
Oxidation rate	DIN 28090-2	%/h	≤ 4
Chloride content of graphite layer	EN 15408	ppm	≤ 40
Fluoride content of graphite layer	EN 15408	ppm	≤ 50
Sulphur content of graphite layer	EN 15408	ppm	≤ 750
Reinforcement	Smooth		Nickel
	Thickness	mm	0.013
	Number of inserts		1
Compressibility	ASTM F36A	%	40 - 50
Recovery	ASTM F36A	%	10 - 15
Maximum gasket stress Q _{smax} at RT	EN 13555	MPa	100
Maximum gasket stress Q _{Smax} at 300°C	EN 13555	MPa	80
Minimum required gasket stress in assembly Q _{min(0.1)} at RT and 40 bar	EN 13555	MPa	-
Cold compressibility	DIN 28090-2	%	40 - 50
Cold recovery	DIN 28090-2	%	3 - 5
Hot creep	DIN 28090-2	%	0.5 - 2
Hot recovery	DIN 28090-2	%	2 - 4

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P-T diagram



suitable subject to chemical compatibility.

In area one, the gasket material is normally

The area of the P-T diagram

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

The graph shows the required stress at assembly to seal a certain tightness class. The determination of the graph is based on the EN13555 test procedure which applies 40 bar 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:

						A: small or	no attack	B: weak till	moderate att	ack	C: strong attack
Paraffinic hydrocarbon	Motor fuel	Aromates	Chlorinated hydrocarbon fluids	Motor oil	Mineral lubricants	Alcohol	Ketone	Ester	Water	Acid (diluted	d) Base (diluted)
А	А	А	А	А	А	А	А	А	А	В	В

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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