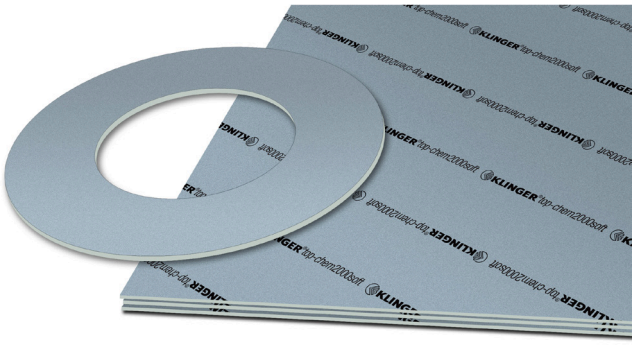
KLINGER®
top-chem 2000soft

KLINGER India

KLINGER®top-chem 2000soft - offers best mechanical properties combined with excellent compressibility.

A porous PTFE filled with silicon carbide, KLINGER®top-chem 2000soft combines best load bearing capacities with excellent compressibility. As a heavy-duty gasket material, it features superior chemical resistance in both strongly acidic and alkaline applications. Suited for high mechanical requirements at high temperatures, it maintains tight seal even at low surface loads.



Basis composition	Porous PTFE filled with silicon carbide.
Color	Grey
Certificates	TA-Luft (Clean air), FDA compliant (PTFE), Regulation (EU) No. 1935/2004 (incl. 10/2011)

Sheet size	1500 mm x 1500 mm
Thickness	1.5 mm, 2.0 mm, 3.0 mm

Tolerances

Thickness according to DIN 28091-1
Length: ± 50 mm
Width: ± 50 mm

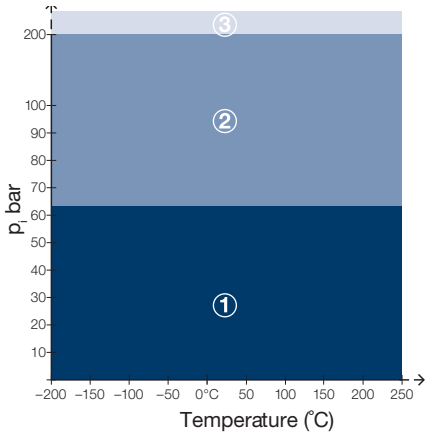
Industry

General industry / Chemical / Oil & Gas / Energy / Infrastructure / Pulp & Paper / Marine / Automotive / Food & Beverage / Pharma

TECHNICAL DATA - Typical values for a thickness of 2.0 mm

Compressibility	ASTM F 36 M	%	15
Recovery	ASTM F 36 M	%	20
Stress relaxation DIN 52913	50 MPa, 16 h/260°C	MPa	30
	30 MPa, 16 h/150°C	MPa	25
KLINGER cold/hot compression	thickness decrease at 23°C	%	17
50 MPa	thickness decrease at 260°C	%	20
Tightness	DIN 28090-2	mg/(s x m)	0.05
Thickness/weight increase	H_2SO_4, 100%: 18 h/23°C	%	1/1
	HNO_3, 100%: 18 h/23°C	%	1/2
	NaOH, 33%: 72 h/110°C	%	2/3
	H_2O: 5 h/100°C	%	1/1

P-T diagram - thickness 2.0 mm



The area of the P-T diagram

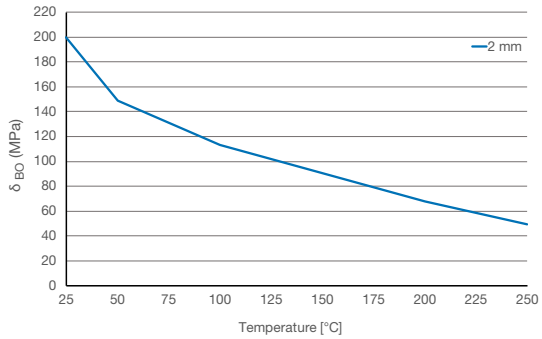
① In area one, the gasket material is normally suitable subject to chemical compatibility.

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 refer to the chemical resistance of the gasket to the media.

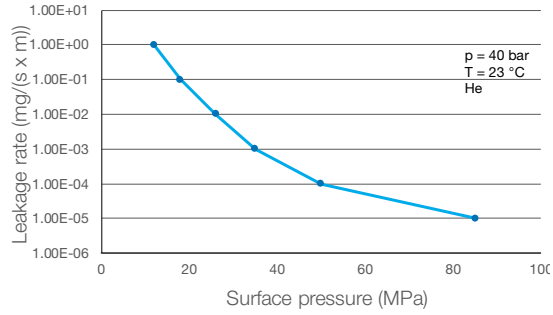
Sigma BO



Maximum surface pressure in operating conditions of Sigma BO

This diagram shows the maximum surface pressure in MPa with which the sealing material may be loaded, depending on the operating temperature. The characteristic curves apply to the specified sealing thicknesses. In contrast to Qsmax according to EN 13555, the surface pressures specified here are based on a maximum permissible reduction in thickness.

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®top-chem 2000soft — **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**	**A**	**A**

For more information on chemical resistance please visit www.klinger.in

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.

Certified acc. to DIN EN ISO 9001:2015 Subject to technical alterations.
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