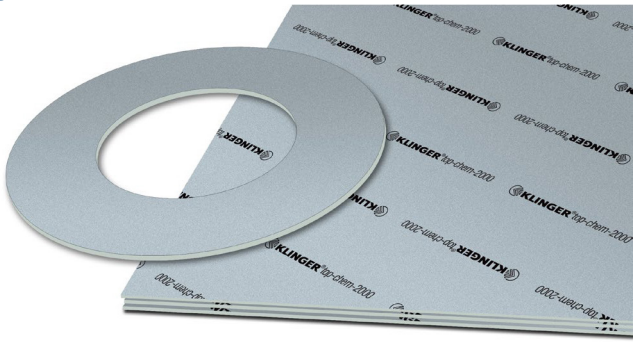
KLINGER TOP-CHEM 2003

DESCRIPTION

Consisting of PTFE filled with hollow glass-microspheres, this gasket material provides high adaptability and tightness even at low surface loads. Its chemical properties make it the ideal choice for strongly acidic and alkaline applications as well as for medium temperatures and loads.



ITEM		DATA
Basic composition		PTFE filled with hollow glass-microspheres.
Sheet size		1500 x 1500 mm
Colour		White
Thickness		1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm
Certificates		Oxygen-tested, DIN-DVGW, DVGW H2-ready (ZP 5123), DIN 16421 (W 270), KTW-BWGL, WRAS approval, TA-Luft (Clean air), Fire-Safe acc. to DIN EN ISO 10497, FDA compliant (PTFE), Regulation (EU) No. 1935/2004 (incl. 10/2011), DNV approval, VDI 2200 blowout
Tolerances	Thickness	according to DIN 28091-1
	Width	± 50 mm
	Length	± 50 mm
Industries		General industry, Chemical, Oil & Gas, Energy, Pulp & Paper, Marine, Infrastructure, Automotive, Food & Beverage, Pharma

TECHNICAL DATA

Typical values for a thickness of 2.0 mm

STRESS RELAXATION DIN 52913	30 MPa, 16 h/150°C	MPa	13
KLINGER COLD/HOT COMPRESSION 25 MPa	thickness decrease at 23°C	%	10
	thickness decrease at 260°C	%	39
TIGHTNESS	DIN 28090-2	mg/(s x m)	0.01
SPECIFIC LEAKRATE	VDI 2440	mbar x l/(s x m)	3.29E-06
THICKNESS/WEIGHT INCREASE	H_2SO_4, 100%: 18 h/23°C	%	1/1
	HNO_3, 100%: 18 h/23°C	%	0/5
	NaOH, 33%: 72 h/110°C	%	1/5
COMPRESSIBILITY	ASTM F36M	%	18
RECOVERY	ASTM F36M	%	35
DENSITY		g/cm3	1.7
AVERAGE SURFACE RESISTANCE	ρO	Ω	9x10E12
AVERAGE SPECIFIC VOLUME RESISTANCE	ρD	Ω cm	2.6x10E12
AVERAGE DIELECTRIC STRENGTH	Ed	kV/mm	16.7
AVERAGE POWER FACTOR	50 Hz	tan δ	0.085
AVERAGE DIELECTRIC COEFFICIENT	50 Hz	εr	2.8
THERMAL CONDUCTIVITY	λ	W/mK	0.18
ASME-CODE SEALING FACTORS	tightness class 0.1mg/s x m	MPa	y 8
			m 2.7

DS | 2003 | EN | 03/2026

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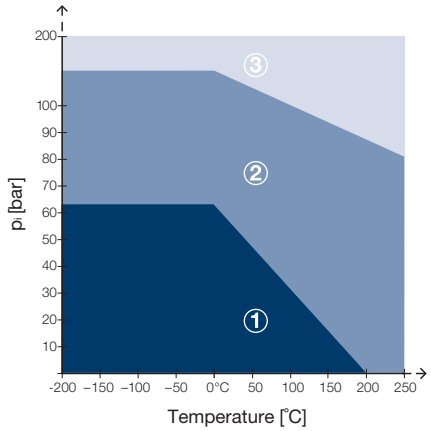
P-T DIAGRAM– THICKNESS 2.0 MM

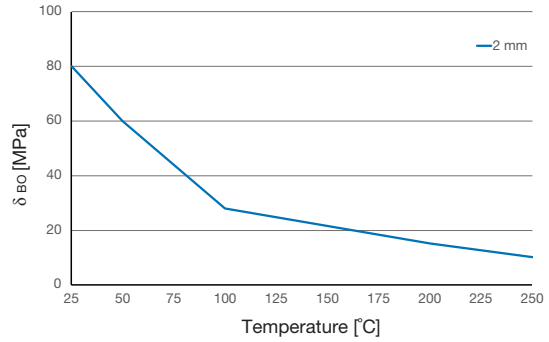


The area of the P-T diagram

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 technical evaluation.

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

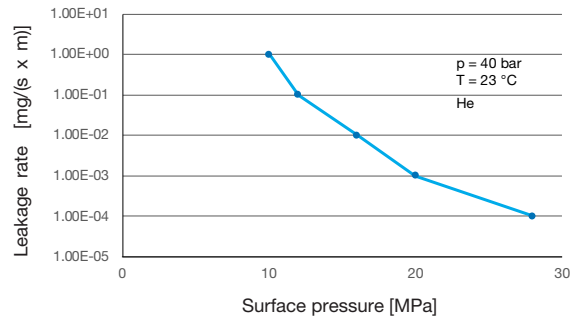
SIGMA BO



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 assembly to seal a certain tightness class. The determination of the graph is based on 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 to 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

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