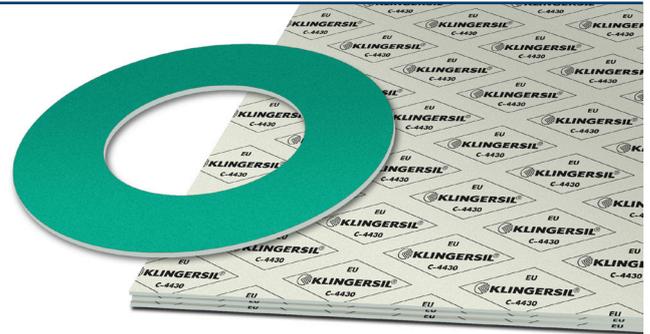




KLINGERSIL® C-4430 - offers excellent stress relaxation.

Consisting of synthetic fibers bonded with NBR and offering excellent stress relaxation, this gasket material is used in hot water and higher-temperature steam applications. It is resistant to oils, gases, salt solutions, fuels, alcohols, moderate organic and inorganic acids, hydrocarbons, lubricants and refrigerants.



Basis composition Optimum combination of synthetic fibers bonded with NBR.

Color White / Green

Certificates BAM-tested, DIN-DVGW, DIN-DVGW W 270, DVGW VP 401, Elastomer-Guideline, WRAS approval, TA-Luft (Clean air), DNV GL approval Fire-Safe acc. to DIN EN ISO 10497, Fire-Safe acc. to ISO 19921, AS4020 Potable Water, AGA-4623 - 2008, Class III, 2MPa

Sheet size 1000 x 1500 mm, 2000 x 1500 mm

Thickness 0.5 mm, 1.0 mm, 1.5 mm, 2.0 mm, 3.0 mm

Tolerances

Thickness according to DIN 28091-1

Length: ± 50 mm

Width: ± 50 mm

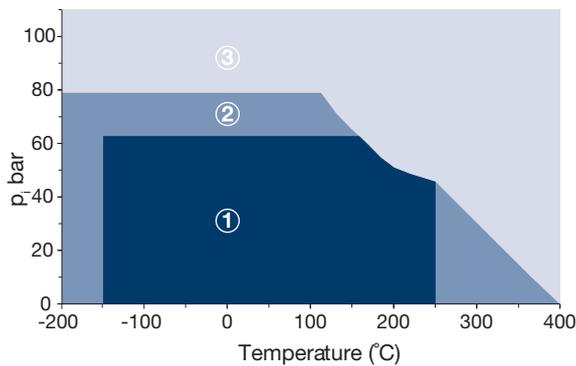
Industry

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

TECHNICAL DATA - Typical values for a thickness of 2.0 mm

| | | | |
|--|-----------------------------|------------------|-----------|
| Compressibility | ASTM F 36 J | % | 9 |
| Recovery | ASTM F 36 J | % | 55 |
| Stress relaxation DIN 52913 | 50 MPa, 16 h/175°C | MPa | 39 |
| | 50 MPa, 16 h/300°C | MPa | 35 |
| Stress relaxation BS 7531 | 40 MPa, 16 h/300°C | MPa | 31 |
| KLINGER cold/hot compression 50 MPa | thickness decrease at 23°C | % | 8 |
| | thickness decrease at 300°C | % | 11 |
| Tightness | DIN 28090-2 | mg/(s x m) | 0.05 |
| Specific leakrate | VDI 2440 | mbar x l/(s x m) | 2.13E-05 |
| Thickness increase after fluid immersion ASTM F 146 | oil IRM 903: 5 h/150°C | % | 3 |
| | fuel B: 5 h/23°C | % | 5 |
| Density | | g/cm³ | 1.8 |
| Average surface resistance | ρO | Ω | 4.1x10E13 |
| Average specific volume resistance | ρD | Ω cm | 4.5x10E12 |
| Average dielectric strength | Ed | kV/mm | 21.3 |
| Average power factor | 50 Hz | tan δ | 0.03 |
| Average dielectric coefficient | 50 Hz | εr | 6.7 |
| Thermal conductivity | λ | W/mK | 0.38 |
| Classification acc. to BS 7531:2006 | Grade AX | | |
| ASME-Code sealing factors for gasket thickness 2.0 mm | tightness class 0.1mg/s x m | MPa | y 20 |
| | | | m 1.6 |

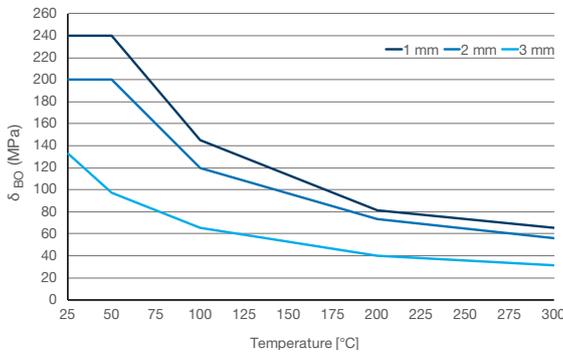
P-T diagram - thickness 2.0 mm



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.

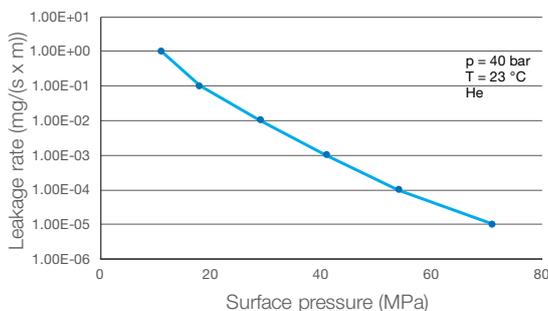
Sigma BO



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 Q_{smax} 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:

| KLINGERSIL® C-4430 | | | | | | 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 | B | C | C | A | B | A | C | C | A | A | A |

For more information on chemical resistance please contact us

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.

KLINGER Limited

AUSTRALIA

Western Australia - Head Office
38 McDowell Street
Welshpool WA 6106

Queensland
Unit 3, 5-7 Roseanna Street
Gladstone QLD 4680

Tel: 1300 798 279
(calls within Australia)

Tel: +61 8 92511688
(calls outside Australia)

NEW ZEALAND

Tel: +64 272 735 045

SINGAPORE

105 Cecil Street #07-01, The Octagon
Singapore 069534
Tel: +65 6827 9045

KLINGER Thailand

501/2 Moo 2, Tambol Mabyangporn
Amphur Ruak Daeng
Rayong 21140 Thailand
Tel: +66 3306 0154