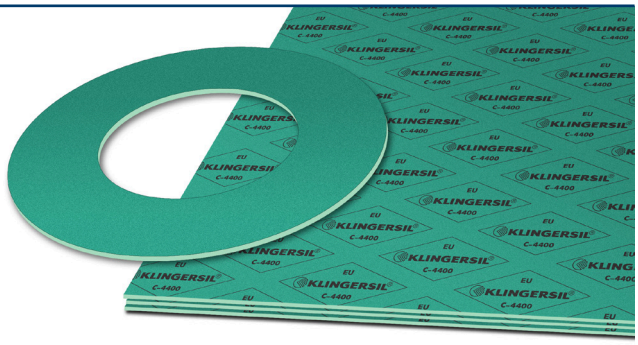
# KLINGERSIL® C-4400

KLINGER Denmark

**KLINGERSIL® C-4400 - leading soft gasket material for safe and reliable sealing.**

Consisting of aramid fibers bonded with NBR, this universal gasket material is a synonym for safe and reliable sealing. Its unique matrix makes it resistant to oils, water, steam, gases, salt solutions, fuels, alcohols, moderate organic and inorganic acids, hydrocarbons and lubricants as well as refrigerants.




| | |
|---|---|
| **Basis composition** | Aramid fibers bonded with NBR. |
| **Color** | Green |
| **Certificates** | BAM-tested, DIN-DVGW, DIN-DVGW W 270, DVGW VP 401, Elastomer-Guideline, ÖVGW, TA-Luft (Clean air), DNV GL approval, Fire-Safe acc. to DIN EN ISO 10497 |
| **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**

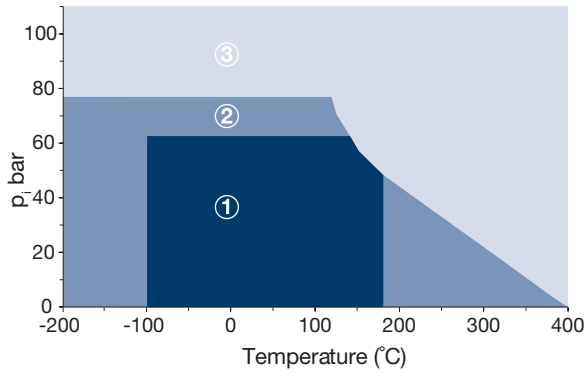
General industry / Chemical / Oil & Gas / Energy / Infrastructure / Pulp & Paper / Marine / Automotive / Food & Beverage

**TECHNICAL DATA** - Typical values for a thickness of 2.0 mm

| | | | |
|---|---|---|---|
| Compressibility | ASTM F 36 J | % | 11 |
| Recovery | ASTM F 36 J | % | 55 |
| Stress relaxation DIN 52913 | 50 MPa, 16 h/175°C | MPa | 37 |
| | 50 MPa, 16 h/300°C | MPa | 25 |
| Stress relaxation BS 7531 | 40 MPa, 16 h/300°C | MPa | 25 |
| KLINGER cold/hot compression | thickness decrease at 23°C | % | 10 |
| 50 MPa | thickness decrease at 300°C | % | 20 |
| Tightness | DIN 28090-2 | mg/(s x m) | 0.02 |
| Specific leakrate | VDI 2440 | mbar x l/(s x m) | 1.64E-08 |
| Thickness increase after fluid | oil IRM 903: 5 h/150°C | % | 3 |
| immersion ASTM F 146 | fuel B: 5 h/23°C | % | 5 |
| Density | | g/cm³ | 1.6 |
| Average surface resistance | ρO | Ω | 1.4x10E12 |
| Average specific volume resistance | ρD | Ω cm | 1.2x10E12 |
| Average dielectric strength | Ed | kV/mm | 21.6 |
| Average power factor | 50 Hz | tan δ | 0.131 |
| Average dielectric coefficient | 50 Hz | εr | 9.2 |
| Thermal conductivity | λ | W/mK | 0.42 |
| Classification acc. to BS 7531:2006 | Grade AY | | |
| ASME-Code sealing factors | | | |
| for gasket thickness 2.0 mm | tightness class 0.1mg/s x m | MPa | y 15 |
| | | | m 1.6 |

**KLINGERSIL®**
C-4400

## P-T diagram - thickness 2.0 mm




### The area of the P-T diagram

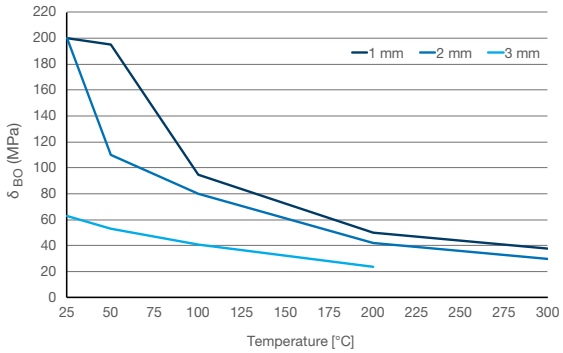
① In area one, the gasket material is normally suitable subject to chemical compatibility.

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.

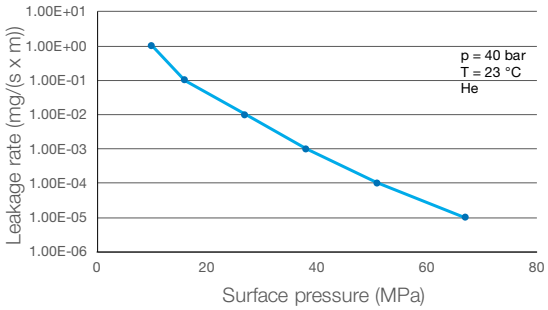
## Sigma BO




### 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:

**KLINGERSIL® C-4400** — **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 visit www.klinger.co.at.