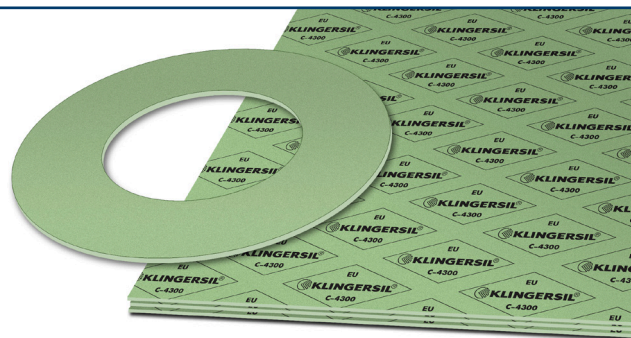




## KLINGERSIL® C-4300 - universal soft gasket material.

Consisting of aramid fibers bonded with NBR, this universal high-pressure gasket material is resistant to hot water, steam, oils, hydrocarbons and other chemicals. It provides increased plant safety for a wide range of applications.



**Basis composition** Aramid fibers bonded with NBR.

**Color** Olive green

**Certificates** DIN-DVGW, DIN-DVGW W 270, Elastomer-Guideline, DNV GL approval, SVGW approval

**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

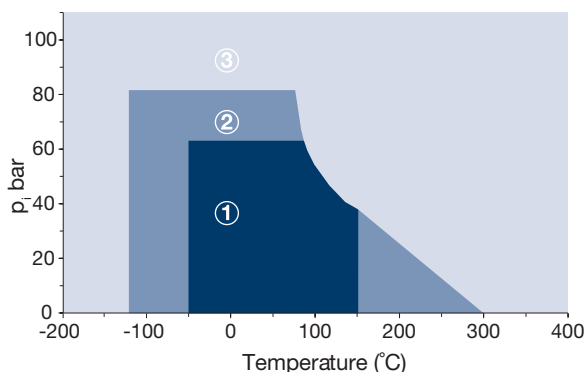
### Industry

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                 | %                 | 14        |
| Recovery                                                 | ASTM F 36 J                 | %                 | 50        |
| Stress relaxation DIN 52913                              | 50 MPa, 16 h/175°C          | MPa               | 32        |
|                                                          | 50 MPa, 16 h/300°C          | MPa               | 20        |
| Stress relaxation BS 7531                                | 40 MPa, 16 h/300°C          | MPa               | 23        |
| KLINGER cold/hot compression<br>50 MPa                   | thickness decrease at 23°C  | %                 | 10        |
|                                                          | thickness decrease at 300°C | %                 | 22        |
| Tightness                                                | DIN 28090-2                 | mg/(s x m)        | 0.03      |
| Thickness increase after fluid<br>immersion ASTM F 146   | oil IRM 903: 5 h/150°C      | %                 | 5         |
|                                                          | fuel B: 5 h/23°C            | %                 | 10        |
| Density                                                  |                             | g/cm <sup>3</sup> | 1.6       |
| Average surface resistance                               | ρO                          | Ω                 | 2.2x10E12 |
| Average specific volume resistance                       | ρD                          | Ω cm              | 1.2x10E12 |
| Average dielectric strength                              | Ed                          | kV/mm             | 10        |
| Average power factor                                     | 50 Hz                       | tan δ             | 0.082     |
| Average dielectric coefficient                           | 50 Hz                       | εr                | 7.4       |
| Thermal conductivity                                     | λ                           | W/mK              | 0.39      |
| Classification acc. to BS 7531:2006                      | Grade Y                     |                   |           |
| ASME-Code sealing factors<br>for gasket thickness 2.0 mm | tightness class 0.1mg/s x m | MPa               | y 15      |
|                                                          |                             |                   | m 3.0     |

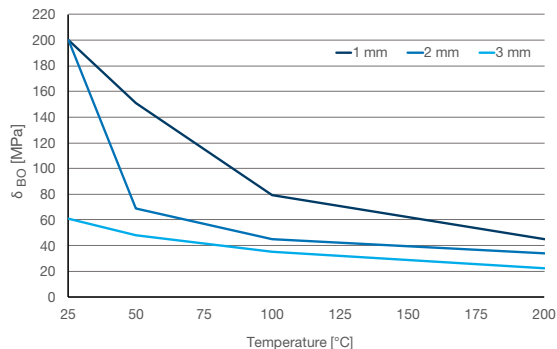
**P-T diagram - thickness 2.0 mm**



**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.

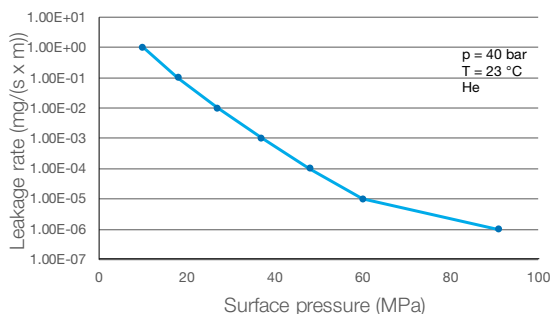
**Sigma BO**



**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-4300     |            |          |                                |           |                    | 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) |
| <b>A</b>               | <b>B</b>   | <b>C</b> | <b>C</b>                       | <b>A</b>  | <b>B</b>           | <b>A</b>              | <b>C</b>                     | <b>C</b>         | <b>A</b> | <b>A</b>       | <b>A</b>       |

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.

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