

# KLINGER® Graphite Laminate XSM

KLINGER® Graphite Laminate XSM is especially suitable for high temperatures up to 550°C.

Glueless gasket material consisting of a special oxidation protected expanded graphite and a 0.1mm thick tanged stainless steel insert.

The material is free from resins, impregnations or other organic compounds. Therefore it is free of eventual toxic risks.

Stable physical properties over the whole temperature range.

## Key features:

- » Special oxidation protected graphite foil
- » Excellent chemical resistance
- » Superior high temperature resistance
- » Mechanically bonded tanged stainless steel insert

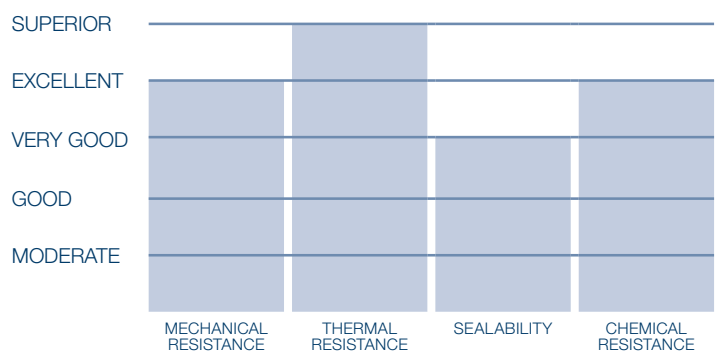
## Benefits:

- » Stable physical properties over the whole temperature range
- » Very good tightness
- » Suitable for high temperature applications

## Certificates and approvals:

- » DIN-DVGW

## Properties: referring to Graphite product range



## Industries:



## Typical technical data for KLINGER® Graphite Laminate XSM:

|  |                             |                   | 1.0 mm             | 1.5 mm  | 2.0 mm  |
|--|-----------------------------|-------------------|--------------------|---------|---------|
| Density of the graphite layer                    | DIN 28090-2                 | g/cm <sup>3</sup> | 1.0                | 1.0     | 1.0     |
| Purity of graphite <sup>1)</sup>                 | DIN 51903                   | %                 | ≥ 99.0             | ≥ 99.0  | ≥ 99.0  |
| Metallic reinforcement                           | Tanged metal                |                   | 1.4401 (or 1.4404) |         |         |
|  | Thickness                   | mm                | 0.10               | 0.10    | 0.10    |
|  | Number of sheets            |                   | 1                  | 1       | 1       |
| Compressibility ASTM F36 J                       | ASTM F36 J                  | %                 | 25 - 35            | 30 - 40 | 35 - 45 |
| Recovery ASTM F36 J                              | ASTM F36 J                  | %                 | 15 - 20            | 15 - 20 | 12 - 18 |
| Stress relaxation DIN 52913                      | 16 h/ 50 MPa/ 300°C         | MPa               | ≥ 46               | ≥ 46    | ≥ 46    |
| Klinger cold/hot compression 50 MPa              | Thickness decrease at 23°C  | %                 | 30 - 40            | 35 - 45 | 35 - 45 |
|  | Thickness decrease at 300°C | %                 | 1 - 3              | 1 - 3   | 1 - 3   |
| Specific leakrate λ                              | DIN 28090-2                 | mg/ s x m         | < 0.06             | < 0.10  | < 0.10  |
| Chloride content of graphite layer <sup>2)</sup> | DIN 28090-2                 | ppm               | ≤ 40               | ≤ 40    | ≤ 40    |

1) Nuclear quality with a purity of ≥99.8 available on request

2) Detailed specifications of the used graphite foils are found in our Graphite vade mecum, which will be sent to you on request with pleasure

## Dimensions of the standard sheets:

### Sizes:

Sheets: 1000 x 1000 mm

### Thicknesses:

Sheets: 1.0 mm, 1.5 mm, 2.0 mm

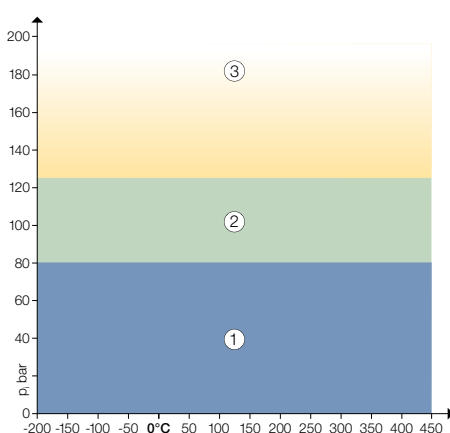
### Tolerances:

Thickness ± 5%

Length ± 4 mm, width ± 4 mm

Other thicknesses, sizes and inserts on request.

## pT diagram for thickness 2.0 mm:



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.

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