

# KLINGER®top-chem 2003

High adaptability and tightness even at low surface loads

KLINGER®top-chem 2003 offers a high adaptability and tightness even at low surface loads. KLINGER®top-chem 2003 has excellent chemical resistance in strongly acidic and alkaline applications as well as very good properties at medium temperatures and loads. This material also meets FDA conformity.

Basis: PTFE gasket material filled with hollow glass microspheres.



## TYPICAL VALUES REFER TO 2.0 MM THICK MATERIAL UNLESS NOTED

|                                                                               |                       |
|-------------------------------------------------------------------------------|-----------------------|
| Compressibility ASTM F36 M                                                    | 18 %                  |
| Recovery ASTM F36 M                                                           | 35 %                  |
| Stress relaxation DIN 52913<br>30 MPa, 16 h/150°C                             | 13 MPa                |
| KLINGER Cold/Hot Compression Test 25 MPa<br>Thickness Decrease 73°F (23°C)    | 10 %                  |
| Thickness Decrease 500°F (260°C)                                              | 39 %                  |
| Tightness DIN 28090-2                                                         | 0.01 mg/s x m         |
| Thickness/Weight Increase<br>H <sub>2</sub> SO <sub>4</sub> , 100%, 18 h/23°C | 1 / 1 %               |
| HNO <sub>3</sub> , 100%, 18 h/23°C                                            | 0 / 5 %               |
| NaOH, 33%, 72 h/110 °C                                                        | 1 / 5 %               |
| Density                                                                       | 1.7 g/cm <sup>3</sup> |
| Average surface resistance pO                                                 | 9x10E12 Ω             |
| Average specific volume resistance pD                                         | 2.6x10E12 Ω cm        |
| Average dielectric strength E <sub>d</sub>                                    | 16.7 kV/mm            |
| Average power factor 50 Hz                                                    | 0.085 tanδ            |
| Average dielectric coefficient 50 Hz                                          | 2.8 εr                |
| Thermal conductivity λ                                                        | 0.18 W/mK             |
| Color                                                                         | Off-white             |

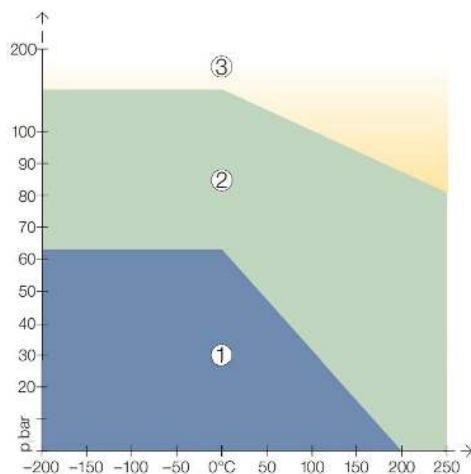
## KLINGER®top-chem 2003

|                                     |                  |                                 |
|-------------------------------------|------------------|---------------------------------|
| <b>CERTIFICATES &amp; APPROVALS</b> | » BAM tested     | » DNV GL                        |
|                                     | » DIN-DVGW       | » TA-Luft (Clean air)           |
|                                     | » DIN-DVGW W 270 | » FDA conformity                |
|                                     | » KTW-Guideline  | » Regulation (EU) No. 1935/2004 |

|                                    |                                   |                                |
|------------------------------------|-----------------------------------|--------------------------------|
| <b>KEY FEATURES &amp; BENEFITS</b> | » High compressibility            | » Superior chemical resistance |
|                                    | » Resistant to cold flow          | » Conforms easily              |
|                                    | » Consistent material composition | » No ageing of the material    |
|                                    | » Excellent sealing at low stress |                                |

The pressure/temperature graphs shown are the most current method of determining the suitability of a gasket material in a known environment. However, chemical compatibility must also be considered.

pT diagram for thickness 2.0 mm:



In area ① the gasket material is suitable using common installation practices subject to chemical compatibility.

In area ② appropriate measures are necessary for installation of the gasket to ensure maximum performance. Please call or refer to KLINGERexpert for assistance.

In area ③ do not install gaskets in these applications without first referring to KLINGERexpert or contacting KLINGER's technical support service.

The ability of a gasket to make and maintain a seal depends not only on the style and quality of the gasket material, but also on medium being sealed, the flange design, the amount of pressure applied to the gasket by the bolts and how the gasket is assembled onto the flanges and tightened. These factors are beyond the manufacturer's control.

**KLINGER Thermoseal**

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