KLINGER Quantum
- HNBR Binder
- Synthetic Fiber
- High Performance with Outstanding High-Temperature Properties
- Maintains Flexibility at High Temperatures
- Suitable with a Broad Range of Media
- Simple Handling and Processing
- FDA Compliant when installed unbanded

Typical values refer to 2.0 mm material unless otherwise specified.

See graphs for temperature & pressure limits.

<table>
<thead>
<tr>
<th>Compressibility</th>
<th>Stress Relaxation</th>
<th>KLINGER Cold/Hot Compression 50 MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM F36J</td>
<td>10%</td>
<td>Thickness Decrease 23°C</td>
</tr>
<tr>
<td>Recovery ASTM F36J</td>
<td>60%</td>
<td>Thickness Decrease 300°C</td>
</tr>
<tr>
<td></td>
<td>50 MPa, 16 h/300°C</td>
<td>Thickness Decrease 400°C</td>
</tr>
<tr>
<td></td>
<td>28 MPa</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50 MPa, 16 h/175°C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>32 MPa</td>
<td></td>
</tr>
</tbody>
</table>

Stress Relaxation BS 7531 1.5 mm

<table>
<thead>
<tr>
<th>Stress Relaxation</th>
<th>KLINGER Cold/Hot Compression 50 MPa</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 MPa 16 h/300°C</td>
<td></td>
</tr>
<tr>
<td>27 MPa</td>
<td></td>
</tr>
</tbody>
</table>

KLINGER Cold/Hot Compression 50 MPa

<table>
<thead>
<tr>
<th>Thickness Decrease</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>23°C</td>
<td></td>
</tr>
<tr>
<td>300°C</td>
<td>14%</td>
</tr>
<tr>
<td>400°C</td>
<td>20%</td>
</tr>
</tbody>
</table>

Thickness Decrease 23°C: 10%
Thickness Decrease 300°C: 14%
Thickness Decrease 400°C: 20%

Tightness DIN 28090-2

0.02 mg/s x m

Thickness Increase After Fluid Immersion ASTM F146

<table>
<thead>
<tr>
<th>Material Thickness: 2.0 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil IRM 903: 5 h/150°C</td>
</tr>
<tr>
<td>Fuel B: 5 h/23°C</td>
</tr>
</tbody>
</table>

3% 5%

Density ASTM F104 Line Call Out

2.0 mm

1.7 g/cm³

F712122B3E22M5

Tests and Approvals

BAM  DIN-DVGW  TA-Luft

Fire-Safe accord. to DIN EN ISO 10497/ API 607, Fifth

The pressure/temperature graphs shown are the most current method of determining the suitability of a gasket material in a known environment. Use the pressure and temperature graphs to select the most suitable material for your application.

1. In area one, the gasket material is suitable using common installation practices subject to chemical compatibility.
2. In area two, appropriate measures are necessary for installation of the gasket to ensure maximum performance. Please call or refer to the KLINGER® expert software system for assistance.
3. In area three, do not install gaskets in these applications without first referring to the KLINGER® expert software system or contacting Thermoseal Inc.’s technical support service.

These graphs were developed from testing Klinger materials. Do not use them for competitors’ materials since non-asbestos gasketing materials do not have service equivalents.

Use: The limitations of use, as shown in the graphs, are for guidance only, and are based on 1/16” thick material. The limitations of use decrease significantly as gasket thickness increases. Do not use a thicker gasket material or “double gaskets” to solve a gasket problem without first consulting the manufacturer. The ability of a gasket material to make and maintain a seal depends not only on the 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 into the flanges and tightened.

Seal & Design
Able Division
5533 Steeles Avenue West Unit 11
Toronto, Ontario M9L 1S7
Ph: (416) 741-0750
Gasket@AbleSealAndDesign.com

Seal & Design
Corporate Headquarters
4015 Casillo Parkway
Clarence, NY 14031
Ph: (716) 759-2222
Info@SealAndDesign.com
www.SealAndDesign.com

Seal & Design
Higbee Division
6741 Thompson Rd N
Syracuse, NY 13221
Ph: (315) 432-8021
Sales@Higbee-Inc.com