# KLINGERQuantum

- 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 ubranded

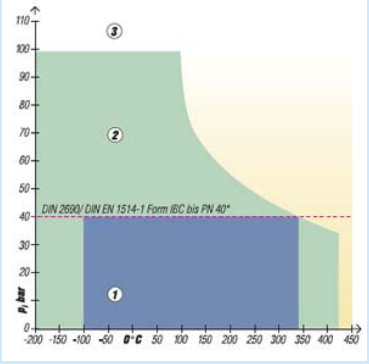

Typical values refer to 2.0 mm material unless otherwise specified.

See graphs for temperature & pressure limits

| | |
|---|---|
| **Compressibility** ASTM F36J | 10% |
| **Recovery** ASTM F36J | 60% |
| **Stress Relaxation** DIN 52913 | |
| 50 MPa, 16 h/300°C | 28 MPa |
| 50 MPa, 16 h/175°C | 32 MPa |
| **Stress Relaxation** BS 7531 1.5 mm | |
| 40 MPa 16 h/300°C | 27 MPa |
| **KLINGER Cold/Hot Compression 50 MPa** | |
| 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 | |
| Oil IRM 903: 5 h/150°C | 3% |
| Fuel B: 5 h/23°C | 5% |
| **Density** DIN 28090-2 | 1.7 g/cm³ |
| **ASTM F104 Line Call Out** | F712122B3E22M5 |
| **Tests and Approvals** | BAM DIN-DVGW TA-Luft<br>Fire-Safe accord. to DIN EN ISO 10497/ API 607, Fifth |

**Pressure & Temperature Graphs**

Material Thickness: 2.0 mm




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.