

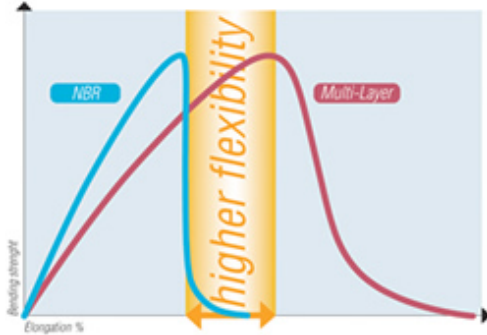
KLINGER[®]top-sil-ML1

- Revolutionary combination of synthetic fibers and different elastomers bound in a Multi-Layer structure
- Extended service life and less leakage at high temperatures
- High residual flexibility
- Delayed ageing
- Less creep
- High permissible load

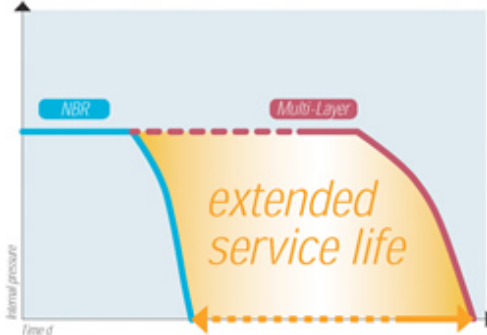
This patented material concept and production process produce a sealing material that stays flexible and pliable longer, has an extremely high load-bearing capacity, and seals better with an extended service life and less leakage in high temperature applications.



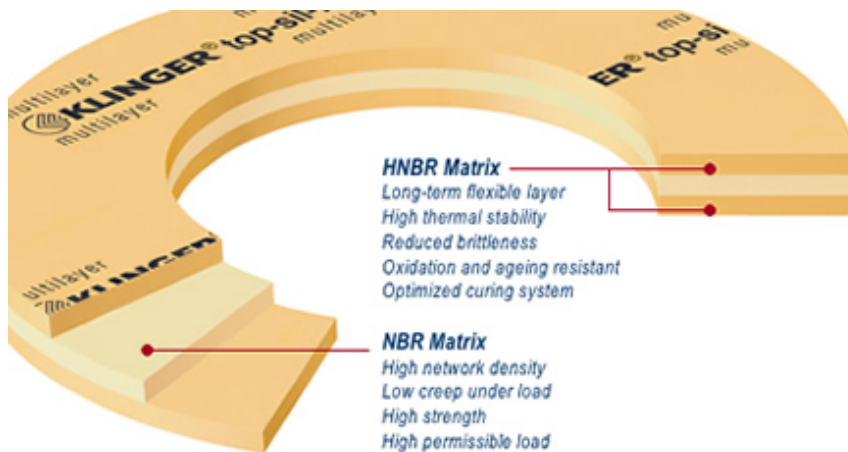
Elastic properties



Tightness behavior in saturated steam



The high content HNBR layers that contact the flanges are extremely conformable to flange irregularities and micro pores. This prevents interfacial leakage or leakage at the gasket-flange interface. Yet the denser thicker inner core helps prevent interstitial leakage or leakage through the gasket body.



Typical values refer to 2 mm thick material unless otherwise specified

See graphs for temperature & pressure limits

Compressibility ASTM F36J	9%
Recovery ASTM F36J	>50% minimum
Stress Relaxation DIN 52913	34 MPa
50 MPa, 16 h/175°C	28 MPa
50 MPa, 16 h/300°C	

KLINGER Cold/Hot Compression 50 MPa	8%
Thickness Decrease 73°F (23°C)	15%
Thickness Decrease 572°F (300°C)	

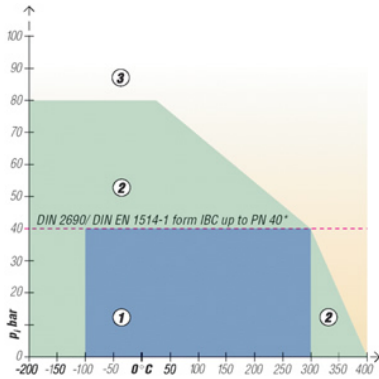
Tightness DIN 3535/6	<0.1 mg/s x m
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Thickness Increase After Fluid Immersion ASTM F146	
ASTM Oil IRM 903: 5 h/300°F (150°C)	4%
ASTM Fuel B: 5 h/73°F (23°C)	8%

Density	106.1lb/ft ³ (1.7 g/cm ³)
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Tests and Approvals	BAM
	DIN-DVGW
	TA-Luft
	Fire Safe according to DIN EN ISO 10498

Pressure & Temperature Graphs:
Material Thickness: 1/16"



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.



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