



# KLINGER<sup>®</sup>top-sil-ML1

**Optimised, unique multi-layer combination of a HNBR and NBR Matrices. Premium quality jointing with high temperature resistance in steam and water as well as excellent resistance to oils and hydrocarbons.**

The Klinger group has been recognised as the market leader in gaskets and sealing for over a century. Our research and development laboratories have investigated over 250 different fibre forms in the search for asbestos free alternatives. The search has resulted in a range of high quality and high performance asbestos free materials that have been proven in service

## General Properties

- Excellent creep resistance
- Good steam resistance
- Resistant to oils, fuels, hydrocarbons etc.
- WRc approved for use in hot and cold potable water
- 3xA anti-stick finish on both sides

## Tests and Certifications

- BS 7531 Grade X
- WRc Approval
- DIN-DGVW 92.01e052
- BAM U W28 for use with oxygen 100 bar / 85°C
- KTW C55/94.Stf
- TA-Luft (Clean Air) certificate acc. VDI 2440

## Availability

Sheeting (m): 2.0 x 1.5\*, 4.0 x 1.5  
 Thickness (mm): 0.8, 1.0, 1.5, 2.0, 3.0

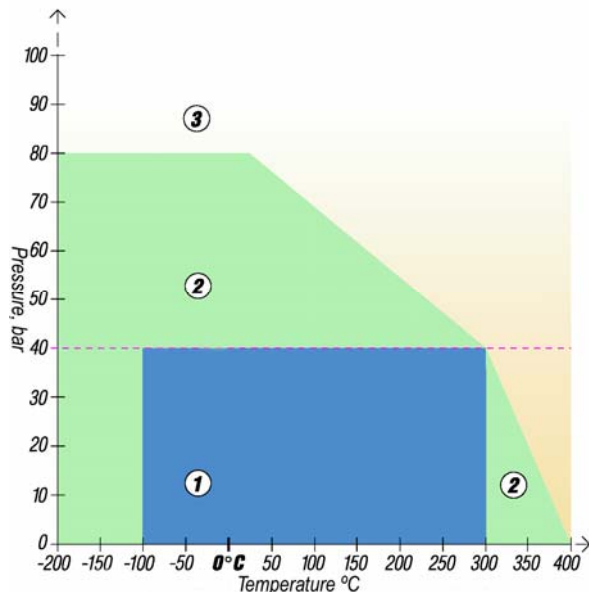
\* - Denotes standard sheet size



Certificate No. FM 10571



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### Application Guidelines

1. Usually satisfactory without reference.
2. Usually satisfactory, but suggest you refer to Klinger for advice
3. Caution: May be suitable but essential that you refer to Klinger for advice.

Chemical compatibility must be considered in all cases.

### Typical Specifications

Compressibility ASTM F 36 A		9%
Recovery ASTM F 36 A		>50%
Stress relaxation DIN 52913	50MPa, 16h/175°C	34MPa
	50MPa, 16h/300°C	28MPa
Klinger cold/hot compression (50MPa)	Thickness decrease 23°C	8%
	Decrease at 300°C	15%
Gas leakage according to DIN 3535/6		<0.1ml/min
Tightness Class L	DIN 28090-1	0.1
Specific leak rate $\lambda$	VDI 2440	- mbar x l/s xm
Cold Compression	DIN 28091-2	6-9%
Cold recovery	DIN 28091-2	3-5%
Hot compression	DIN 28091-2	<15
Hot recovery	DIN 28091-2	1.3%
Spring back R	DIN 20091-2	0.026mm
Thickness increase after fluid	Oil JRM 903 5h/150°C	4%
Immersion ASTM F 146	Fuel B:5h/23°C	8%
Density		1.7g/cm <sup>3</sup>

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