

TECHNICAL MATERIAL DATA SHEET

TESNIT® BA-R



DESCRIPTION

Tesnit® BA-R has very good mechanical properties (resistance to high internal and surface pressure).
Tesnit® BA-R is designed for the automotive and engine-building industries.

Composition	Aramid fibers, inorganic fillers, NBR binder, carbon steel wire mesh insert
Color	Black (both sides)
Surface finish	Standard : 2G On demand : Graphite, PTFE
Approvals	BAM (oxygen) / DNV

PROPERTIES

Mechanical resistance	Very good
Thermal resistance	Moderate
Sealability performance	Moderate
Chemical resistance	Moderate

APPLICATIONS

Dynamic load	Automotive
Hydrocarbons	Gas
Steam	Shipbuilding

DIMENSIONS

Standard format (mm)	1500 x 1500 (+/-5%)
Other formats on demand (mm)	1000 x 1500 - 1500 x 3000 (+/-5%)
Thickness (mm)	0.60 - 0.80 - 1.00 - 1.50 - 2.00 - 3.00 (+/-10%)
Other thicknesses on demand (mm)	4.00 - 5.00 (+/-10%)
Tolerances	On length and width : +/-5% On thickness up to 1.00 mm : +/-0.10 mm On thickness above 1.00 mm : +/-10%



TECHNICAL DATA

Typical value for a thickness of 2mm

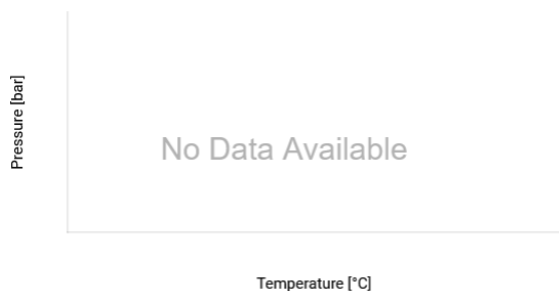
Test description	Standard	Unit	Value
Density	DIN 28090-2	g/cm ³	2.00
Compressibility	ASTM F36J	%	8
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	17
Stress resistance	DIN 52913		
16h, 50 MPa, 175°C		MPa	30
16h, 50 MPa, 300°C		MPa	25
Specific leak rate	DIN 3535-6		/
Thickness increase	ASTM F146		
Oil IRM 903, 5h, 150°C		%	8
ASTM Fuel B, 5h, 23°C		%	/
Compression modulus	DIN 28090-2		
At room temperature ϵ_{KSW}		%	8.5
At elevated temperature $\epsilon_{WSW/200^\circ C}$		%	15.8
Percentage creep relaxation	DIN 28090-2		
At room temperature ϵ_{KRW}		%	4.2
At elevated temperature $\epsilon_{WRW/200^\circ C}$		%	0.7
Max. operating conditions			
Peak temperature		°C/°F	400/752
Continuous temperature		°C/°F	350/662
- with steam		°C/°F	/
Pressure		bar/psi	140/2030



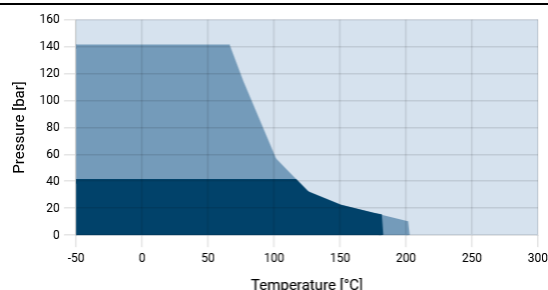
P-T DIAGRAM

EN 1514-1, Type IBC, PN40, DIN 28091-2 / 3.8, 2.0mm

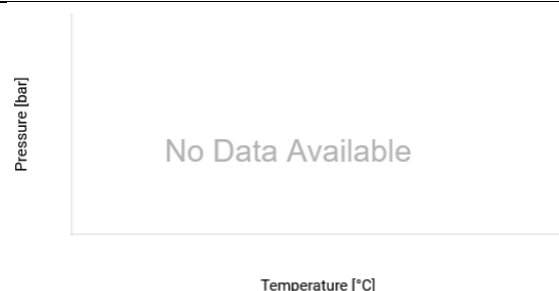
Agressive gasses



Steam & Gas



Liquids



General suitability – Under common installation practices and chemical compatibility.



Conditional suitability – Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.



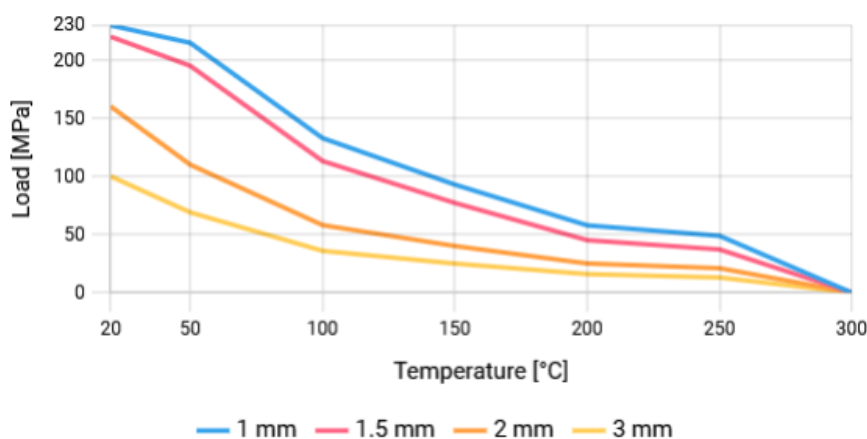
Limited suitability – Technical consultation is mandatory.

P-T Diagrams indicate the maximum permissible combination of internal pressure and service temperature which can be simultaneously applied for a given gasket according material type, thickness, size and tightness class. Given the wide variety of gasket applications and service conditions, these values should only be regarded as guidance for the proper gasket assembly. In general, thinner gaskets exhibit better P-T properties.



σ_{BO} DIAGRAM

DIN 28090-1



σ_{BO} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the gasket area involved without destructing or damaging the gasket material.

The technical specifications mentioned above are typical average values obtained using the test methods indicated and may therefore be subject to normal manufacturing variations.

They are provided for guidance only. They do not constitute a guarantee, and we recommend that you carry out a test before final implementation.