TESNIT® BA-50

TESNIT® BA-50 is a special gasket material suitable for general applications.

PROPERTIES

Composition	Aramid fibers bonded with NBR. Available with wire reinforcement on request.
Colour	Light green
Properties	Excellent chemical resistance and good dynamic resistance. Good resistance to water, gases, fuels and oils.
Appropriate industries	Gas supply, food industry, chemical industry, potable water supply, shipbuilding.
Approvals	DIN-DVGW DIN 3535-6, DVGW KTW, Germanischer Lloyd, TA-Luft (VDI 2440), WRAS, EC 1935/2004, DVGW W270

SURFACE TREATMENTS

Surface treatment is 4AS.
Other surface treatments including graphite and PTFE are available on request.

DIMENSIONS OF STANDARD SHEETS

Sheet size (mm): 1500 x 1500 | 3000 x 1500 | 4500 x 1500
Thickness (mm): 0.5 | 1.0 | 1.5 | 2.0 | 3.0
Other dimensions and thicknesses are available on request.

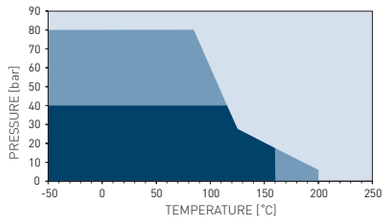
Tolerances:
+/- 5 % on length and width
On thickness up to 1.0 mm +/- 0.1 mm
On thickness above 1.0 mm +/- 10 %

TECHNICAL DATA Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm^3	1.8
Compressibility	ASTM F36J	%	8
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	11
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	25
16 h, 50 MPa, 300 °C		MPa	/
Specific leak rate	DIN 3535-6	mg/(s·m)	0.08
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	8
ASTM Fuel B, 5 h, 23 °C		%	10
Compression modulus	DIN 28090-2		
At room temperature: ε_{KSW}		%	/
At elevated temperature: $\varepsilon_{WSW/200\ °C}$		%	/
Percentage creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	/
At elevated temperature: $\varepsilon_{WRW/200\ °C}$		%	/
Max. operating conditions			
Peak temperature		°C/°F	280/536
Continuous temperature		°C/°F	220/428
- with steam		°C/°F	180/356
Pressure		bar/psi	80/1160

P-T DIAGRAM

EN 1514-1, Type IBC, PN 40, DIN 28091-2 / 3.8, 2.0 mm

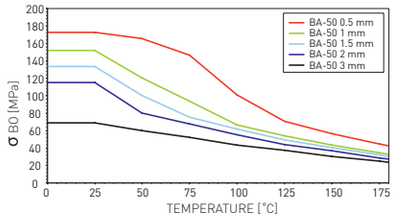


- General suitability using common installation practices under the condition of chemical compatibility.
- Maximum performance is ensured through appropriate measures for joint design and gasket installation. Consultation is recommended.
- Limited application area. Technical consultation is mandatory.

Pressure - Temperature diagrams are the most current method for determining the suitability of a gasket material in a known application. Maximum figures for temperature and pressure can be misleading. Max. temperature and max. pressure represent maximum values and should not be used simultaneously. They are given only for guidance, since these max. values depend not only on the type of gasket material used but also on the assembly conditions. Please use the Pressure - Temperature diagrams to check the suitability of the chosen gasket material for your application (combination of pressure and temperature).

σ_{BO} DIAGRAM

DIN 28090-1



This diagram describes characteristic values of gasket materials for static seal for use in flanged applications. Given the wide range of gasket applications, these values should merely be considered as a means of assembling the sealing behaviour of gasket under service conditions. Sigma diagram shows the maximal allowed surface pressure (maximum in-service compressive pressure) on gasket at operating service temperature for different material thicknesses.

CHEMICAL RESISTANCE CHART

The recommendations made here are intended to be a guideline for the selection of the suitable gasket quality. Because the function and durability of the products depend upon a number of factors, the data may not be used to support any warranty claims.

- ⊕ Recommended
- ? Recommendation depends on operating conditions
- ⊖ Not recommended

	BA-50
Acetamide	⊕
Acetic acid 10%	⊕
Acetic acid 100%	⊕
Acetic ester	?
Acetone	?
Acetylene	⊕
Adipic acid	⊕
Air	⊕
Alum	⊕
Aluminium acetate	⊕
Aluminium chlorate	⊕
Aluminium chloride	⊕
Ammonia	?
Ammonium bicarbonate	⊕
Ammonium chloride	⊕
Ammonium hydroxide	?
Amyl acetate	?
Aniline	⊖
Asphalt	⊕
Barium chloride	⊕
Benzene	?
Benzoic acid	⊕
Boric acid	⊕
Borax	⊕
Butane	⊕
Butyl alcohol	⊕
Butyric acid	⊕
Calcium chloride	⊕
Calcium hydroxide	⊕
Carbon dioxide	⊕
Carbon disulphide	⊖
Chloroform	?
Chlorine, dry	⊖
Chlorine, wet	⊖
Chromic acid	⊖
Citric acid	⊕
Copper acetate	⊕
Creosote	⊖
Cresol	?
Cyclohexanol	⊕
Cyclohexanone	⊖
Decalin	⊕
Dibenzyl ether	⊖
Dimethyl formamide	⊖
Dowtherm	?
Ethane	⊕

	BA-50
Ethyl acetate	?
Ethyl alcohol	⊕
Ethyl chloride	?
Ethylene	⊕
Ethylene glycol	?
Formic acid 10%	⊕
Formic acid 85%	?
Formaldehyde	⊕
Freon 12	⊕
Freon 22	?
Fuel oil	⊕
Gasoline	⊕
Glycerine	⊕
Heptane	⊕
Hydraulic oil (Mineral)	⊕
Hydraulic oil (Phosphate ester type)	?
Hydraulic oil (Glycol based)	⊕
Hydrazine	⊕
Hydrochloric acid 20%	⊖
Hydrochloric acid 36%	⊖
Hydrofluoric acid 10%	⊖
Hydrofluoric acid 40%	⊖
Hydrogen	⊕
Isobutane	⊕
Isooctane	⊕
Isopropyl alcohol	⊕
Kerosene	⊕
Lead acetate	⊕
Lead arsenate	⊕
Magnesium sulphate	⊕
Malic acid	⊕
Methane	⊕
Methanol	⊕
Methyl chloride	?
Methylene dichloride	⊖
Methyl ethyl ketone	?
Milk	⊕
Mineral oil type ASTM no.1	⊕
Naphtha	⊕
Nitric acid 20%	⊖
Nitric acid 40%	⊖
Nitric acid 96%	⊖
Nitrobenzene	⊖
Nitrogen	⊕
Octane	⊕
Oleic acid	⊕

	BA-50
Oleum	⊖
Oxalic acid	?
Oxygen	⊕
Palmitic acid	⊕
Pentane	⊕
Perchloroethylene	?
Phenol	⊖
Phosphoric acid	?
Potassium acetate	⊕
Potassium bicarbonate	⊕
Potassium carbonate	⊕
Potassium chloride	⊕
Potassium dichromate	⊕
Potassium hydroxide	?
Potassium iodide	⊕
Potassium nitrate	⊕
Potassium permanganate	⊕
Propane	⊕
Pyridine	⊖
R 134a	⊕
Salicylic acid	⊕
Silicone oil	⊕
Soap	⊕
Sodium aluminate	⊕
Sodium bicarbonate	⊕
Sodium bisulphite	⊕
Sodium carbonate	⊕
Sodium chloride	⊕
Sodium cyanide	⊕
Sodium hydroxide	?
Sodium sulphate	⊕
Sodium sulphide	⊕
Starch	⊕
Steam	⊕
Stearic acid	⊕
Sugar	⊕
Sulphuric acid 20%	⊖
Sulphuric acid 96%	⊖
Tar	⊕
Tartaric acid	⊕
Toluene	⊕
Transformer oil	⊕
Trichlorethylene	?
Water	⊕
White spirit	⊕
Xylene	?

All information and data quoted are based upon years of experience in the production and operation of sealing elements. This data may not be used to support any warranty claims. With its publication this latest edition supersedes all previous issues and is subject to change without further notice.

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