



TESNIT® BA-50 has good thermal and chemical resistance, which makes it appropriate for use in a wide range of applications. TSNIT® BA-50 is well suited for use with potable water supply and shipbuilding.

PROPERTIES

SUPERIOR				
EXCELENT				
VERY GOOD				CHEMICAL RESISTANCE
GOOD	MECHANICAL RESISTANCE	THERMAL RESISTANCE	SEALABILITY PERFORMANCE	
MODERATE				

APPROPRIATE INDUSTRIES & APPLICATIONS

	GENERAL PURPOSE		FOOD INDUSTRY
	WATER SUPPLY		AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
	POTABLE WATER SUPPLY		SHIPBUILDING
	GAS SUPPLY		

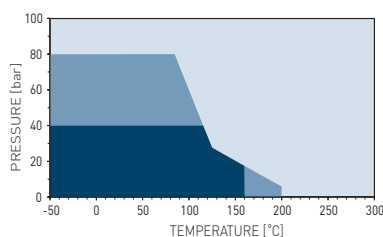
Composition	Aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh insert on request.
Colour	Light green
Approvals	DIN-DVGW DIN 3535-6, DVGW KTW, DVGW W270, TA-Luft (VDI 2440), WRAS, Germanischer Lloyd, EC 1935/2004

TECHNICAL DATA Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.8
Compressibility	ASTM F36J	%	9
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)	0.07
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}		%	8.5
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	25
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	5.1
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	1.2
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



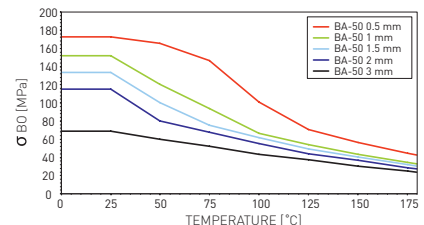
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

Acetamide	+	Dioxane	-	Oleic acid	+
Acetic acid, 10%	+	Diphyt (Dowtherm A)	+	Oleum (Sulfuric acid, fuming)	-
Acetic acid, 100% (Glacial)	-	Esters	?	Oxalic acid	?
Acetone	?	Ethane (gas)	+	Oxygen (gas)	-
Acetonitrile	-	Ethers	?	Palmitic acid	+
Acetylene (gas)	+	Ethyl acetate	?	Paraffin oil	+
Acid chlorides	-	Ethyl alcohol (Ethanol)	+	Pentane	+
Acrylic acid	?	Ethyl cellulose	?	Perchloroethylene	-
Acrylonitrile	-	Ethyl chloride (gas)	-	Petroleum (Crude oil)	+
Adipic acid	+	Ethylene (gas)	+	Phenol (Carbolic acid)	-
Air (gas)	+	Ethylene glycol	+	Phosphoric acid, 40%	?
Alcohols	+	Formaldehyde (Formalin)	?	Phosphoric acid, 85%	-
Aldehydes	?	Formamide	?	Phthalic acid	+
Alum	+	Formic acid, 10%	+	Potassium acetate	+
Aluminium acetate	+	Formic acid, 85%	?	Potassium bicarbonate	+
Aluminium chlorate	?	Formic acid, 100%	-	Potassium carbonate	+
Aluminium chloride	?	Freon-12 (R-12)	+	Potassium chloride	+
Aluminium sulfate	?	Freon-134a (R-134a)	+	Potassium cyanide	+
Amines	-	Freon-22 (R-22)	?	Potassium dichromate	?
Ammonia (gas)	?	Fruit juices	+	Potassium hydroxide	?
Ammonium bicarbonate	+	Fuel oil	+	Potassium iodide	+
Ammonium chloride	+	Gasoline	+	Potassium nitrate	+
Ammonium hydroxide	+	Gelatin	+	Potassium permanganate	?
Amyl acetate	?	Glycerine (Glycerol)	+	Propane (gas)	+
Anhydrides	?	Glycols	+	Propylene (gas)	+
Aniline	-	Helium (gas)	+	Pyridine	-
Anisole	?	Heptane	+	Salicylic acid	?
Argon (gas)	+	Hydraulic oil (Glycol based)	+	Seawater/brine	+
Asphalt	+	Hydraulic oil (Mineral type)	+	Silicones (oil/grease)	+
Barium chloride	+	Hydraulic oil (Phosphate ester based)	?	Soaps	+
Benzaldehyde	-	Hydrazine	-	Sodium aluminate	+
Benzene	+	Hydrocarbons	+	Sodium bicarbonate	+
Benzoic acid	?	Hydrochloric acid, 10%	?	Sodium bisulfite	+
Bio-diesel	+	Hydrochloric acid, 37%	-	Sodium carbonate	+
Bio-ethanol	+	Hydrofluoric acid, 10%	-	Sodium chloride	+
Black liquor	?	Hydrofluoric acid, 48%	-	Sodium cyanide	+
Borax	+	Hydrogen (gas)	+	Sodium hydroxide	?
Boric acid	+	Iron sulfate	+	Sodium hypochlorite (Bleach)	?
Butadiene (gas)	+	Isobutane (gas)	+	Sodium silicate (Water glass)	+
Butane (gas)	+	Isooctane	+	Sodium sulfate	+
Butyl alcohol (Butanol)	+	Isoprene	+	Sodium sulfide	+
Butyric acid	+	Isopropyl alcohol (Isopropanol)	+	Starch	+
Calcium chloride	+	Kerosene	+	Steam	+
Calcium hydroxide	+	Ketones	?	Stearic acid	+
Carbon dioxide (gas)	+	Lactic acid	?	Styrene	?
Carbon monoxide (gas)	+	Lead acetate	+	Sugars	+
Cellosolve	?	Lead arsenate	+	Sulfur	?
Chlorine (gas)	-	Magnesium sulfate	+	Sulfur dioxide (gas)	?
Chlorine (in water)	-	Maleic acid	?	Sulfuric acid, 20%	-
Chlorobenzene	?	Malic acid	?	Sulfuric acid, 98%	-
Chloroform	-	Methane (gas)	+	Sulfuryl chloride	-
Chloroprene	?	Methyl alcohol (Methanol)	+	Tar	+
Chlorosilanes	-	Methyl chloride (gas)	?	Tartaric acid	?
Chromic acid	-	Methylene dichloride	?	Tetrahydrofuran (THF)	-
Citric acid	?	Methyl ethyl ketone (MEK)	?	Titanium tetrachloride	-
Copper acetate	+	N-Methyl-pyrrolidone (NMP)	?	Toluene	+
Copper sulfate	+	Milk	+	2,4-Toluenedisocyanate	?
Creosote	?	Mineral oil (ASTM no.1)	+	Transformer oil (Mineral type)	+
Cresols (Cresylic acid)	-	Motor oil	+	Trichloroethylene	-
Cyclohexane	+	Naphtha	+	Vinegar	+
Cyclohexanol	+	Nitric acid, 10%	-	Vinyl chloride (gas)	-
Cyclohexanone	?	Nitric acid, 65%	-	Vinylidene chloride	-
Decalin	+	Nitrobenzene	-	Water	+
Dextrin	+	Nitrogen (gas)	+	White spirits	+
Dibenzyl ether	?	Nitrous gases (NOx)	?	Xylenes	+
Dibutyl phthalate	?	Octane	+	Xylenol	-
Dimethylacetamide (DMA)	?	Oils (Essential)	+	Zinc sulfate	+
Dimethylformamide (DMF)	?	Oils (Vegetable)	+		

σ_{BO} DIAGRAM

DIN 28090-1



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

P-T diagrams indicate the maximum allowed combination of internal pressure and service temperature which can be applied simultaneously for a given gasket depending on its material type, thickness, size and tightness class. Given the 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.

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 |



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