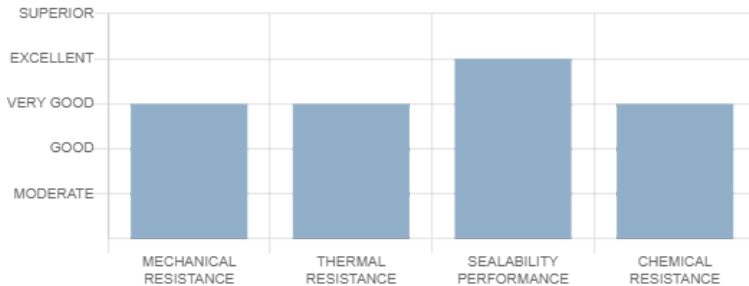


TESNIT® BA-U

TESNIT® BA-U combines very good thermomechanical properties and chemical resistance, making it a general-purpose gasket material. It is well-suited for gas and potable water supplies.



PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

- AUTOMOTIVE AND ENGINE BUILDING INDUSTRIES
- COMPRESSORS & PUMPS
- GAS SUPPLY
- HEATING SYSTEMS
- POTABLE WATER SUPPLY
- SHIPBUILDING
- WATER SUPPLY
- CHEMICAL INDUSTRY
- FOOD INDUSTRY
- GENERAL PURPOSE
- PETROCHEMICAL INDUSTRY
- REFRIGERATION & COOLING
- VALVES

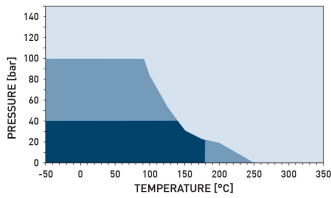
Composition	Aramid fibers, inorganic fillers, NBR binder. Optional steel wire mesh reinforcement.		
Color	Blue		
Approvals and compliances	ABS DNV GL EC 1935/2004 TA Luft (VDI 2440)	AGA AS 4623 DVGW DIN 30653 ELL (hot) TZW W270	BAM (oxygen) DVGW DIN 3535-6 SVGW DIN 3535-6 WRAS
Sheet dimensions	Size (mm): 1500 x 1500 3000 x 1500 4500 x 1500 Thickness (mm): 0.5 1.0 1.5 2.0 3.0 Other sizes and thicknesses available on request		
Tolerances	Length and width: ± 5 % Thickness ≤ 1.0 mm: ± 0.1 mm Thickness > 1.0 mm: ± 10 %		
Surface finish	Standard: 4AS. Optional: graphite or PTFE.		

TECHNICAL DATA

Typical values for 2 mm thickness

Density	DIN 28090-2	g/cm ³	1.7
Compressibility	ASTM F36J	%	11
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	12
Residual stress	DIN 52913		
50 MPa, 175°C, 16 h		MPa	27
50 MPa, 300°C, 16 h		MPa	23
Specific leak rate	DIN 3535-6	mg/(s·m)	0.02
Thickness increase	ASTM F146		
Oil IRM 903, 150°C, 5 h		%	2
ASTM Fuel B, 23°C, 5 h		%	5
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	9.5
At elevated temperature: $\epsilon_{WSW/200^\circ C}$		%	16.1
Creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	4.7
At elevated temperature: $\epsilon_{WRW/200^\circ C}$		%	0.8
Maximum operating conditions			
Peak temperature		°C/°F	350/662
Continuous temperature		°C/°F	250/482
Continuous temperature with steam		°C/°F	200/392
Pressure		bar/psi	100/1450

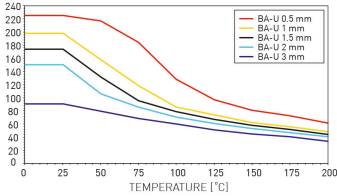
P-T diagram EN 1514-1, Type IBC, PN 40, DIN 28091-2 / 3.8, 2 mm



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

- 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.

σ_{BO} DIAGRAMS 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.

CHEMICAL RESISTANCE CHART

The recommendations made here are intended as a guideline for the selection of a suitable gasket type. As the function and durability of products are dependent upon a number of factors, the data may not be used to support any warranty claims. If there are specific type-approval regulations, these have to be complied with.

Legend: + Recommended ○ Recommendation depends on operating conditions, - Not recommended

Acetamide	+	Calcium chloride	+	Formamide	○	Methyl ethyl ketone (MEK)	○	Seawater/brine	+
Acetic acid, 10%	+	Calcium hydroxide	+	Formic acid, 10%	+	N-Methyl-pyrrolidone (NMP)	○	Silicones (oil/grease)	+
Acetic acid, 100% (Glacial)	+	Carbon dioxide (gas)	+	Formic acid, 85%	○	Milk	+	Soaps	+
Acetone	○	Carbon monoxide (gas)	+	Formic acid, 100%	-	Mineral oil type ASTM 1	+	Sodium aluminate	+
Acetonitrile	-	Castor oil	+	Freon-12 (R-12)	+	Motor oil	+	Sodium bicarbonate	+
Acetylene (gas)	+	Cellosolve	○	Freon-134a (R-134a)	+	Naphtha	+	Sodium bisulfite	+
Acid chlorides	-	Chlorine (dry)	+	Freon-22 (R-22)	+	Nitric acid, 10%	-	Sodium carbonate	+
Acrylic acid	○	Chlorine (in water)	○	Fruit juices	+	Nitric acid, 65%	-	Sodium chloride	+
Acrylonitrile	-	Chlorine, <0.5% in water	+	Fuel oil	+	Nitrobenzene	-	Sodium cyanide	+
Adipic acid	+	Chlorobenzene	○	Gasoline	+	Nitrogen (Gas)	+	Sodium hydroxide	○
Air (gas)	+	Chloroform	○	Gelatin	+	Nitrous gases (NOx)	○	Sodium hydroxide, 50%, rt	+
Alcohols		Chloroprene	○	Glycerine (Glycerol)	+	Octane	+	Sodium hypochlorite (Bleach)	○
Aldehydes	○	Chlorosilanes	-	Glycols	○	Oils (Essential)	○	Sodium silicate (Water glass)	+
Alum	+	Chromic acid	○	Helium (gas)	+	Oils (Vegetable)	○	Sodium sulfate	+
Aluminium acetate	+	Citric acid	+	Heptane	+	Oleic acid	+	Sodium sulfide	+
Aluminium chlorate	○	Copper acetate	+	Hydraulic oil (Mineral)	+	Oleum (Sulfuric acid, fuming)	-	Starch	+
Aluminium chloride	+	Copper sulfate	+	Hydraulic oil (Glycol based)	+	Oxalic acid	+	Steam	+
Aluminium sulfate	+	Creosote	○	Hydraulic oil (Phosphate ester-based)	○	Oxygen (gas)	+	Stearic acid	+
Amines	-	Cresols (Cresylic acid)	-	Hydrazine	+	Palmitic acid	+	Styrene	○
Ammonia (Gas)	+	Cyclohexane	+	Hydrocarbons	+	Paraffin oil	+	Sugars	+
Ammonium bicarbonate	+	Cyclohexanol	+	Hydrochloric acid, 10%	+	Pentane	+	Sulfur	+
Ammonium chloride	+	Cyclohexanone	○	Hydrochloric acid, 37%	-	Perchloroethylene	○	Sulfur dioxide (Gas)	○
Ammonium hydroxide	+	Decalin	+	Hydrofluoric acid, 10%	-	Petroleum (Crude oil)	+	Sulfuric acid, 10%	+
Amyl acetate	○	Dextrin	+	Hydrofluoric acid, 48%	-	Phenol (Carbolic acid)	-	Sulfuric acid, 20%	-
Anhydrides	○	Dibenzyl ether	○	Hydrogen (gas)	+	Phosphoric acid, 40%	+	Sulfuric acid, 98%	-
Aniline	-	Dibutyl phthalate	○	Iron sulfate	+	Phosphoric acid, 85%	+	Sulfuryl chloride	-
Anisole	○	Diesel oil	+	Isobutane (Gas)	+	Phthalic acid	+	Tar	+
Argon (gas)	+	Diethyl ether	+	Isocetane	+	Potassium acetate	+	Tartaric acid	+
Asphalt	+	Dimethylacetamide (DMA)	○	Isoprene	+	Potassium bicarbonate	+	Tetrahydrofuran (THF)	-
Barium chloride	+	Dimethylformamide (DMF)	○	Isopropyl alcohol (Isopropanol)	+	Potassium carbonate	+	Titanium tetrachloride	-
Benzaldehyde	-	Dioxane	-	Kerosene	+	Potassium chloride	+	Toluene	+
Benzene	+	Diphyl (Dowtherm A)	+	Ketones	○	Potassium cyanide	+	2,4-Toluenediisocyanate	○
Benzoic acid	○	Esters	○	Lactic acid	+	Potassium dichromate	○	Transformer oil (Mineral type)	+
Bio-diesel	+	Ethane (Gas)	+	Lead acetate	+	Potassium hydroxide	○	Trichloroethylene	○
Bio-ethanol	+	Ethers	○	Lead arsenate	+	Potassium hydroxide, 20%, 80°C	+	Vinegar	+
Black liquor	○	Ethyl acetate	○	Magnesium sulfate	+	Potassium iodide	+	Vinyl chloride (gas)	-
Borax	+	Ethyl alcohol (Ethanol)	+	Maleic acid	+	Potassium nitrate	+	Vinylidene chloride	-
Boric acid	+	Ethyl cellulose	○	Malic acid	+	Potassium permanganate	○	Water	+
Butadiene (gas)	+	Ethyl chloride (gas)	○	Methane (Gas)	+	Propane (gas)	+	White spirits	+
Butane (gas)	+	Ethylene (gas)	+	Methyl alcohol (Methanol)	+	Propylene (gas)	+	Xylenes	+
Butyl alcohol (Butanol)	+	Ethylene glycol	+	Methyl chloride (Gas)	○	Pyridine	-	Xylenol	-
Butyric acid	+	Formaldehyde (Formalin)	+	Methylene dichloride	○	Salicylic acid	+	Zinc sulfate	+

All information and data quoted are based upon decades 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.