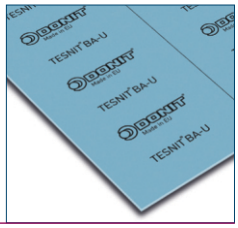
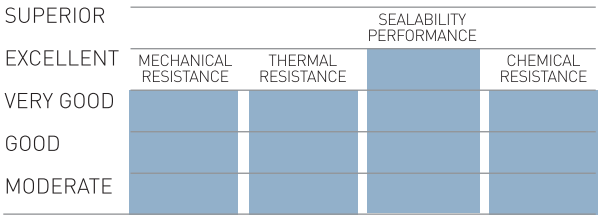
TESNIT® BA-U

TESNIT® BA-U combines very good thermal, chemical and mechanical properties that makes it a general - purpose gasket material. It is well designed for gas and portable water supplies.



PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

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

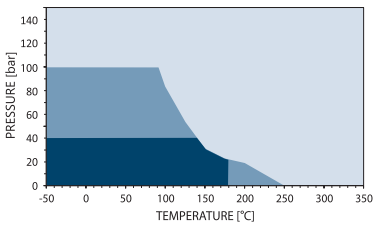
Composition	Aramid fibers, inorganic fillers, NBR binder		
	Optional steel wire mesh reinforcement		
Color	Blue		
Approvals	DVGW DIN 3535-6	SVGW DIN 3535-6	DVGW DIN 30653
	DVGW W270	ELL	TA Luft (VDI 2440)
	BAM (Oxygen)	WRAS	DNV GL
	ABS	AGA AS 4623	EC 1935/2004

TECHNICAL DATA Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm³	1.7
Compressibility	ASTM F36J	%	11
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	14
Stress resistance	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: $\varepsilon_{WSW/200\,°C}$		%	16.1
Creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	4.7
At elevated temperature: $\varepsilon_{WRW/200\,°C}$		%	0.8
Max. operating conditions			
Peak temperature		°C/°F	350/662
Continuous temperature		°C/°F	250/482
- 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, 2.0 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.

P-T diagram indicates the maximum permissible combination of internal pressure and service temperature which can be simultaneously applied for a given gasket's 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.

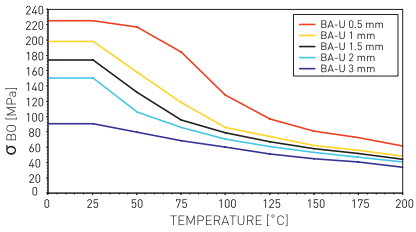
Surface finish	Standard: 4AS. Optional: graphite or PTFE
Sheet dimensions	Size (mm): 1500 x 1500 | 3000 x 1500 | 4500 x 1500 Thickness (mm): 0.5 | 1.0 | 1.5 | 2.0 | 3.0 Other sizes and thicknesses available on request
Tolerances	On length and width: ± 5 % On thickness up to 1.0 mm: ± 0.1 mm On thickness above 1.0 mm: ± 10 %

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

σ_{BO} DIAGRAM

DIN 28090-1



σ_{BO} diagram represents 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.

+ Recommended
o Recommendation depends on operating conditions
− Not recommended

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