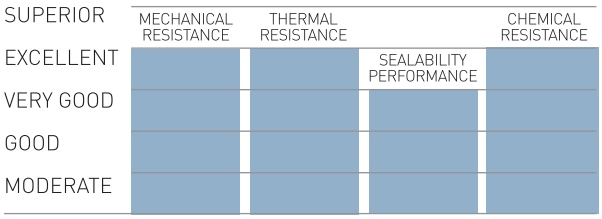
DONIT® | TESNIT® BA-GL

TESNIT® BA-GL combines excellent thermomechanical properties and chemical resistance, especially bolt torque retention. It is particularly suited for gas and steam supplies, heating systems, pumps and compressors.

PROPERTIES



APPROPRIATE INDUSTRIES & APPLICATIONS

- POTABLE WATER SUPPLY
- STEAM SUPPLY
- GAS SUPPLY
- PETROCHEMICAL INDUSTRY
- FOOD INDUSTRY
- SHIPBUILDING
- POWER PLANT
- REFRIGERATION AND COOLING
- HEATING SYSTEMS
- HIGH TEMP. APPLICATIONS
- COMPRESSORS AND PUMPS
- VALVES

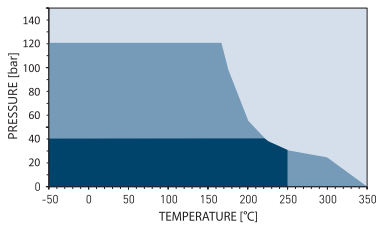
Composition	Glass and aramid fibers, inorganic fillers, NBR binder		
	Optional steel wire mesh or expanded steel reinforcement		
Color	Greenish - blue / Green		
Approvals	DVGW DIN 3535-6	DVGW DIN 30653	BAM (Oxygen)
	TA Luft (VDI 2440)	API 607	DVN GL
	WRAS	ISO 10497	BS 7531 Grade X
	ABS	ELL	EC 1935/2004

TECHNICAL DATA Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm³	1.8
Compressibility	ASTM F36J	%	7
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	11
Stress resistance	DIN 52913		
50 Mpa, 175 °C, 16 h		MPa	38
50 Mpa, 300 °C, 16 h		MPa	33
Specific leak rate	DIN 3535-6	mg/(s·m)	0.03
Thickness increase	ASTM F146		
Oil IRM 903, 150 °C, 5 h		%	3
ASTM Fuel B, 23 °C, 5 h		%	5
Compression modulus	DIN 28090-2		
At room temperature: ε_{KSW}		%	6.9
At elevated temperature: $\varepsilon_{WSW/200\ °C}$		%	7.9
Creep relaxation	DIN 28090-2		
At room temperature: ε_{KRW}		%	3.3
At elevated temperature: $\varepsilon_{WRW/200\ °C}$		%	1.2
Max. operating conditions			
Peak temperature		°C/°F	440/824
Continuous temperature		°C/°F	350/662
- with steam		°C/°F	250/482
Pressure		bar/psi	120/1740

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 %

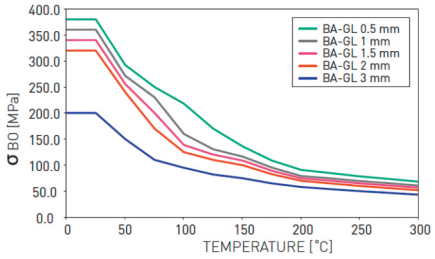
Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	o
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	o
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Aldehydes	o
Alum	+
Aluminium acetate	+
Aluminium chlorate	o
Aluminium chloride	o
Aluminium sulfate	o
Amines	-
Ammonia (gas)	o
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	o
Anhydrides	o
Aniline	-
Anisole	o
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	o
Bio-diesel	+
Bio-ethanol	+
Black liquor	o
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	o
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	o
Chloroform	-
Chloroprene	o
Chlorosilanes	-
Chromic acid	-
Citric acid	o
Copper acetate	+
Copper sulfate	+
Creosote	o
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	o
Decalin	+
Dextrin	+
Dibenzyl ether	o
Dibutyl phthalate	o
Dimethylacetamide (DMA)	o
Dimethylformamide (DMF)	o

Dioxane	-
Diphyl (Dowtherm A)	+
Esters	o
Ethane (gas)	+
Ethers	o
Ethyl acetate	o
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	o
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	o
Formamide	o
Formic acid, 10%	+
Formic acid, 85%	o
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	o
Fruit juices	o
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	o
Helium (gas)	+
Heptane	+
Hydraulic oil (Glycol based)	+
Hydraulic oil (Mineral type)	+
Hydraulic oil (Phosphate ester based)	o
Hydrazine	-
Hydrochloric acid, 10%	o
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	o
Lactic acid	o
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	o
Malic acid	o
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	o
Methylene dichloride	o
Methyl ethyl ketone (MEK)	o
N-Methyl-pyrrolidone (NMP)	o
Milk	o
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	o
Octane	+
Oils (Essential)	o
Oils (Vegetable)	o

Oleic acid	+
Oleum (Sulfuric acid, fuming)	-
Oxalic acid	o
Oxygen (gas)	o
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum (Crude oil)	+
Phenol (Carbolic acid)	-
Phosphoric acid, 40%	o
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	o
Potassium hydroxide	o
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	o
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	o
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	o
Sodium hydroxide	o
Sodium hypochlorite (Bleach)	o
Sodium silicate (Water glass)	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	o
Sugars	+
Sulfur	o
Sulfur dioxide (gas)	o
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	o
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	o
Transformer oil (Mineral type)	+
Trichloroethylene	-
Vinegar	+
Vinyl chloride (gas)	-
Vinylidene chloride	-
Water	+
White spirits	+
Xylenes	+
Xylenol	-
Zinc sulfate	+

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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