



## PROPERTIES AND APPLICATIONS

TESNIT® BA-F is a gasket material which combines very good thermal property and chemical resistance to steam, oils, gases, fuels, lubricants, alkaline media and weak acids. TASNIT® BA-F is especially recommended for the chemical, petro-chemical, construction and OEM industries as well as power plants.

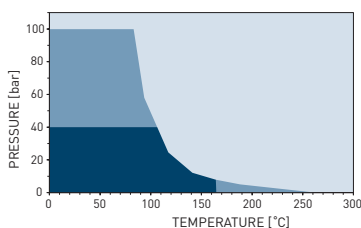
Composition	Synthetic fibers, graphite, NBR
Colour	Black
Approvals	BAM (Oxygen)

## TECHNICAL DATA Typical values for a thickness of 2 mm

<b>Density</b>	DIN 28090-2	g/cm <sup>3</sup>	1.6
<b>Compressibility</b>	ASTM F36J	%	10
<b>Recovery</b>	ASTM F36J	%	55
<b>Tensile strength</b>	ASTM F152	MPa	11
<b>Stress resistance</b>	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	32
16 h, 50 MPa, 300 °C		MPa	25
<b>Specific leak rate</b>	DIN 3535-6	mg/(s·m)	0.08
<b>Thickness increase</b>	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	8
<b>Compression modulus</b>	DIN 28090-2		
At room temperature: $\epsilon_{KSW}$		%	/
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	/
<b>Percentage creep relaxation</b>	DIN 28090-2		
At room temperature: $\epsilon_{KRW}$		%	/
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	/
<b>Max. operating conditions</b>			
Peak temperature		°C/°F	350/662
Continuous temperature		°C/°F	280/536
- with steam		°C/°F	250/482
Pressure		bar/psi	100/1450

## P-T DIAGRAM

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



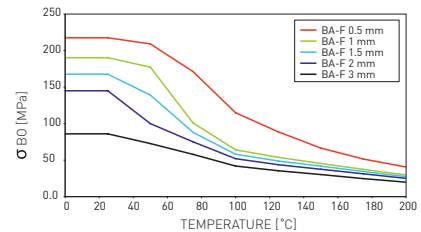
- General suitability applying common installation practices under the condition of chemical compatibility.
- Maximum performance is ensured through appropriate measures for joint design and gasket installation. Consultation is recommended.
- Limited application area. Technical consultation is mandatory.

Surface finish	Surface finish is 2AS. Optional graphite or PTFE finish on request.
Dimensions of standard sheets	Sheet size (mm): 1500 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%	+	Diphtyl (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 chloride	?	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-Toluenediacetonate	?
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	+
Diethyl phthalate	?	Octane	+	Xylenol	-
Dimethylacetamide (DMA)	?	Oils (Essential)	+	Zinc sulfate	+
Dimethylformamide (DMF)	?	Oils (Vegetable)	+		

## σ<sub>B0</sub> DIAGRAM

DIN 28090-1



σ<sub>B0</sub> diagrams represent σ<sub>B0</sub> 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.

**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 as a guideline for the selection of the suitable gasket type. As the function and durability of products is dependent 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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