

TESNIT® BA-CF has excellent thermal and chemical resistance to strong alkaline media. It is suitable for high temperature applications, petrochemicals and for the paper and cellulose industries.

## PROPERTIES

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

## APPROPRIATE INDUSTRIES & APPLICATIONS

- POTABLE WATER SUPPLY
- PETROCHEMICAL INDUSTRY
- STEAM SUPPLY
- PAPER MILLS AND CELLULOSE INDUSTRY
- GAS SUPPLY
- SHIPBUILDING
- CHEMICAL INDUSTRY
- HIGH TEMP. APPLICATIONS

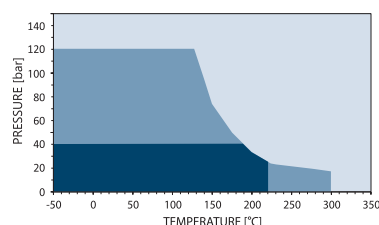
Composition	Carbon fibers, inorganic fillers, NBR binder		
	Optional steel wire mesh reinforcement		
Color	Black		
Approvals	DVGW DIN 3535-6	DVGW DIN 30653	BAM (Oxygen)
	DNV GL	BS 7531 Grade X	

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

<b>Density</b>	DIN 28090-2	g/cm <sup>3</sup>	1.7
<b>Compressibility</b>	ASTM F36J	%	9
<b>Recovery</b>	ASTM F36J	%	60
<b>Tensile strength</b>	ASTM F152	MPa	12
<b>Stress resistance</b>	DIN 52913		
50 Mpa, 175 °C, 16 h		MPa	35
50 Mpa, 300 °C, 16 h		MPa	30
<b>Specific leak rate</b>	DIN 3535-6	mg/(s·m)	0.09
<b>Thickness increase</b>	ASTM F146		
Oil IRM 903, 150 °C, 5 h		%	5
ASTM Fuel B, 23 °C, 5 h		%	5
<b>Compression modulus</b>	DIN 28090-2		
At room temperature: $\epsilon_{KSW}$		%	7.3
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	8.3
<b>Creep relaxation</b>	DIN 28090-2		
At room temperature: $\epsilon_{KRW}$		%	3.6
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	1.0
<b>Max. operating conditions</b>			
Peak temperature		°C/°F	400/752
Continuous temperature		°C/°F	300/572
- with steam		°C/°F	280/536
Pressure		bar/psi	120/1740

## P-T DIAGRAM

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



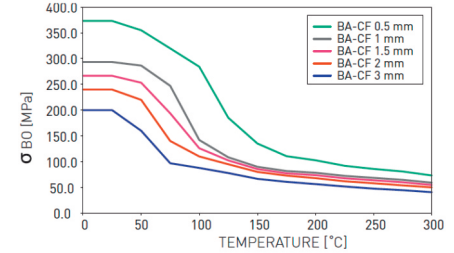
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

**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	+	Dioxane	-	Oleic acid	+
Acetic acid, 10%	+	Diphyl (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%	○
Aldehydes	+	Formaldehyde (Formalin)	○	Phosphoric acid, 85%	-
Alum	+	Formamide	○	Phthalic acid	+
Aluminium acetate	+	Formic acid, 10%	+	Potassium acetate	+
Aluminium chlorate	○	Formic acid, 85%	○	Potassium bicarbonate	+
Aluminium chloride	○	Formic acid, 100%	-	Potassium carbonate	+
Aluminium sulfate	○	Freon-12 (R-12)	+	Potassium chloride	+
Amines	-	Freon-134a (R-134a)	+	Potassium cyanide	+
Ammonia (gas)	○	Freon-22 (R-22)	○	Potassium dichromate	○
Ammonium bicarbonate	+	Fruit juices	+	Potassium hydroxide	○
Ammonium chloride	+	Fuel oil	+	Potassium iodide	+
Ammonium hydroxide	+	Gasoline	+	Potassium nitrate	+
Amyl acetate	○	Gelatin	+	Potassium permanganate	○
Anhydrides	○	Glycerine (Glycerol)	+	Propane (gas)	+
Aniline	-	Glycols	+	Propylene (gas)	+
Anisole	○	Helium (gas)	+	Pyridine	-
Argon (gas)	+	Heptane	+	Salicylic acid	○
Asphalt	+	Hydraulic oil (Glycol based)	+	Seawater/brine	+
Barium chloride	+	Hydraulic oil (Mineral type)	+	Silicones (oil/grease)	+
Benzaldehyde	-	Hydraulic oil (Phosphate ester based)	○	Soaps	+
Benzene	+	Hydrazine	-	Sodium aluminate	+
Benzoic acid	○	Hydrochloric acid, 10%	○	Sodium bicarbonate	+
Bio-diesel	+	Hydrochloric acid, 37%	-	Sodium bisulfite	+
Bio-ethanol	+	Hydrofluoric acid, 10%	-	Sodium carbonate	+
Black liquor	○	Hydrofluoric acid, 48%	-	Sodium chloride	+
Borax	+	Hydrogen (gas)	+	Sodium cyanide	○
Boric acid	+	Iron sulfate	+	Sodium hydroxide	○
Butadiene (gas)	+	Isobutane (gas)	+	Sodium hypochlorite (Bleach)	○
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	○	Steam	+
Carbon dioxide (gas)	+	Lactic acid	○	Stearic acid	+
Carbon monoxide (gas)	+	Lead acetate	+	Styrene	○
Cellosolve	○	Lead arsenate	+	Sugars	+
Chlorine (gas)	-	Magnesium sulfate	+	Sulfur	○
Chlorine (in water)	-	Maleic acid	○	Sulfur dioxide (gas)	○
Chlorobenzene	○	Malic acid	○	Sulfuric acid, 20%	-
Chloroform	-	Methane (gas)	+	Sulfuric acid, 98%	-
Chloroprene	○	Methyl alcohol (Methanol)	+	Sulfuryl chloride	-
Chlorosilanes	-	Methyl chloride (gas)	○	Tar	+
Chromic acid	-	Methylene dichloride	○	Tartaric acid	○
Citric acid	○	Methyl ethyl ketone (MEK)	○	Tetrahydrofuran (THF)	-
Copper acetate	+	N-Methyl-pyrrolidone (NMP)	○	Titanium tetrachloride	-
Copper sulfate	+	Milk	○	Toluene	+
Creosote	○	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	○	Nitric acid, 65%	-	Vinyl chloride (gas)	-
Decalin	+	Nitrobenzene	-	Vinylidene chloride	-
Dextrin	+	Nitrogen (gas)	+	Water	+
Dibenzyl ether	○	Nitrous gases (NOx)	○	White spirits	+
Dibutyl phthalate	○	Octane	+	Xylenes	+
Dimethylacetamide (DMA)	○	Oils (Essential)	○	Xylenol	-
Dimethylformamide (DMF)	○	Oils (Vegetable)	○	Zinc sulfate	+

## σ<sub>BO</sub> DIAGRAM DIN 28090-1



σ<sub>BO</sub> diagram represents σ<sub>BO</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.

## 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 |
- Recommendation depends on operating conditions |
- Not recommended |



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