

TESNIT® BA-CF is a soft, high grade carbon fiber gasket material and is the answer to the growing demands of aggressive chemical and higher thermal loads.

PROPERTIES

Composition	Carbon fibers bonded with NBR. On request available with wire reinforcement or expanded stainless steel.
Colour	Black
Properties	Excellent resistance to steam and strong alkaline media.
Appropriate industries	Chemical industry, petrochemicals, steam supply.
Approvals	BAM (Oxygen), DIN-DVGW DIN 3535-6, DVGW VP 401, DVGW KTW, Germanischer Lloyd

SURFACE TREATMENTS

Surface treatment is 4AS.
Other surface treatments including graphite and PTFE are available on request.

DIMENSIONS OF STANDARD SHEETS

Sheet size (mm): 1500 x 1500 | 3000 x 1500 | 4500 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 %

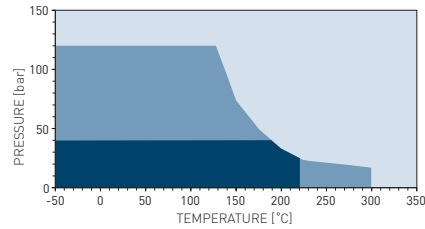
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.7
Compressibility	ASTM F36J	%	9
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	12
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	35
16 h, 50 MPa, 300 °C		MPa	30
Specific leak rate	DIN 3535-6	mg/(s·m)	0.1
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	5
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	7.3
At elevated temperature: $\epsilon_{WSW/200\text{ }^\circ\text{C}}$		%	8.3
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	3.6
At elevated temperature: $\epsilon_{WRW/200\text{ }^\circ\text{C}}$		%	1.0
Max. operating conditions			
Peak temperature		°C/°F	400/752
Continuous temperature		°C/°F	300/572
- with steam		°C/°F	280/536
Pressure		bar/psi	100/1450

P-T DIAGRAM

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

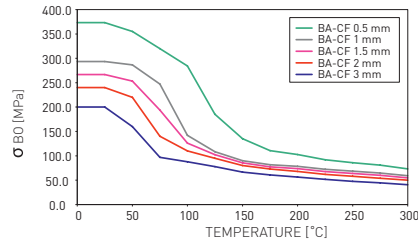


- General suitability using common installation practices under the condition of chemical compatibility.
- Maximum performance is ensured through appropriate measures for joint design and gasket installation. Consultation is recommended.
- Limited application area. Technical consultation is mandatory.

Pressure - Temperature diagrams are the most current method for determining the suitability of a gasket material in a known application. Maximum figures for temperature and pressure can be misleading. Max. temperature and max. pressure represent maximum values and should not be used simultaneously. They are given only for guidance, since these max. values depend not only on the type of gasket material used but also on the assembly conditions. Please use the Pressure - Temperature diagrams to check the suitability of the chosen gasket material for your application (combination of pressure and temperature).

σ_{BO} DIAGRAM

DIN 28090-1



This diagram describes characteristic values of gasket materials for static seal for use in flanged applications. Given the wide range of gasket applications, these values should merely be considered as a means of assembling the sealing behaviour of gasket under service conditions. Sigma diagram shows the maximal allowed surface pressure (maximum in-service compressive pressure) on gasket at operating service temperature for different material thicknesses.

CHEMICAL RESISTANCE CHART

The recommendations made here are intended to be a guideline for the selection of the suitable gasket quality. Because the function and durability of the products depend upon a number of factors, the data may not be used to support any warranty claims.

- ⊕ Recommended
- ⊙ Recommendation depends on operating conditions
- ⊖ Not recommended

	BA-CF		BA-CF		BA-CF
Acetamide	⊕	Ethyl acetate	⊙	Oleum	⊖
Acetic acid 10%	⊕	Ethyl alcohol	⊕	Oxalic acid	⊙
Acetic acid 100%	⊕	Ethyl chloride	⊙	Oxygen	⊕
Acetic ester	⊙	Ethylene	⊕	Palmitic acid	⊕
Acetone	⊙	Ethylene glycol	⊕	Pentane	⊕
Acetylene	⊕	Formic acid 10%	⊕	Perchloroethylene	⊙
Adipic acid	⊕	Formic acid 85%	⊕	Phenol	⊖
Air	⊕	Formaldehyde	⊕	Phosphoric acid	⊙
Alum	⊕	Freon 12	⊕	Potassium acetate	⊕
Aluminium acetate	⊕	Freon 22	⊙	Potassium bicarbonate	⊕
Aluminium chlorate	⊕	Fuel oil	⊕	Potassium carbonate	⊕
Aluminium chloride	⊕	Gasoline	⊕	Potassium chloride	⊕
Ammonia	⊕	Glycerine	⊕	Potassium dichromate	⊕
Ammonium bicarbonate	⊕	Heptane	⊕	Potassium hydroxide	⊕
Ammonium chloride	⊕	Hydraulic oil (Mineral)	⊕	Potassium iodide	⊕
Ammonium hydroxide	⊕	Hydraulic oil (Phosphate ester type)	⊙	Potassium nitrate	⊕
Amyl acetate	⊙	Hydraulic oil (Glycol based)	⊕	Potassium permanganate	⊕
Aniline	⊖	Hydrazine	⊕	Propane	⊕
Asphalt	⊕	Hydrochloric acid 20%	⊙	Pyridine	⊖
Barium chloride	⊕	Hydrochloric acid 36%	⊖	R 134a	⊕
Benzene	⊙	Hydrofluoric acid 10%	⊖	Salicylic acid	⊕
Benzoic acid	⊕	Hydrofluoric acid 40%	⊖	Silicone oil	⊕
Boric acid	⊕	Hydrogen	⊕	Soap	⊕
Borax	⊕	Isobutane	⊕	Sodium aluminate	⊕
Butane	⊕	Isocetane	⊕	Sodium bicarbonate	⊕
Butyl alcohol	⊕	Isopropyl alcohol	⊕	Sodium bisulphite	⊕
Butyric acid	⊕	Kerosene	⊕	Sodium carbonate	⊕
Calcium chloride	⊕	Lead acetate	⊕	Sodium chloride	⊕
Calcium hydroxide	⊕	Lead arsenate	⊕	Sodium cyanide	⊕
Carbon dioxide	⊕	Magnesium sulphate	⊕	Sodium hydroxide	⊕
Carbon disulphide	⊖	Malic acid	⊕	Sodium sulphate	⊕
Chloroform	⊙	Methane	⊕	Sodium sulphide	⊕
Chlorine, dry	⊙	Methanol	⊕	Starch	⊕
Chlorine, wet	⊙	Methyl chloride	⊙	Steam	⊕
Chromic acid	⊖	Methylene dichloride	⊙	Stearic acid	⊕
Citric acid	⊕	Methyl ethyl ketone	⊙	Sugar	⊕
Copper acetate	⊕	Milk	⊕	Sulphuric acid 20%	⊖
Creosote	⊖	Mineral oil type ASTM no.1	⊕	Sulphuric acid 96%	⊖
Cresol	⊙	Naphtha	⊕	Tar	⊕
Cyclohexanol	⊕	Nitric acid 20%	⊖	Tartaric acid	⊕
Cyclohexanone	⊙	Nitric acid 40%	⊖	Toluene	⊕
Decalin	⊕	Nitric acid 96%	⊖	Transformer oil	⊕
Dibenzyl ether	⊖	Nitrobenzene	⊖	Trichlorethylene	⊙
Dimethyl formamide	⊖	Nitrogen	⊕	Water	⊕
Dowtherm	⊙	Octane	⊕	White spirit	⊕
Ethane	⊕	Oleic acid	⊕	Xylene	⊙

All information and data quoted are based on years of experience in production and operation of sealing elements. The data may not be used to support any warranty claims. This edition cancels all previous issues and is a subject to change without further notice.



Contact information

DONIT TESNIT®, d.o.o.

Cesta komandanta Staneta 38
1215 Medvode
Slovenia

Phone:
+386 (0)1 582 33 00

Fax:
+386 (0)1 582 32 06
+386 (0)1 582 32 08

Web:
www.donit.eu
E-mail:
info@donit.eu

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