



TESNIT®

DONIFLEX®

GRAFILIT®

DONIFLON®

MICALIT®

WE ARE
A TRUE
PARTNER
FOR YOUR
SUCCESS

DONIT® Sealing technologies

As a leader in gaskets, gasket sheets, and advanced sealing technologies, we offer the optimum solution with a perfect fit for your most challenging sealing requirements. Backed by decades of excellence in understanding of sealing problems, extensive know how in application engineering, and consistent manufacturing of reliable high quality products, we are in position to respond quickly and efficiently to your inquiry.

WE ARE A TRUE PARTNER FOR YOUR SUCCESS

With a wide experience in problem-solving and unshaken commitment to high quality standards, we are dedicated to provide you the best service and products. In addition, through customer-driven innovation, our strong R&D team is qualified to successfully design the adequate sealing solution.

Our customer satisfaction rests upon four pillars:

- Complete production chain and international sales network
- Quality assurance and safety
- Application engineering
- Technical training courses and seminars

THE DONIT® PHILOSOPHY

Our philosophy is based building long-term business relationship with our customers that extends across many sectors of industries. Customer satisfaction is our driving-force which is attained through the constant supply of reliable and high quality products embracing product improvement and support.

DONIT® gasket sheets and sealing solutions are high quality products which have received several industrial quality approvals. Our products support the environmental legislation without compromising their sealing performance.

EMPLOYEES

Over 200 employees dedicated to you:

We strive for permanent professional and personal growth. We promote teamwork and diversity.

Our international team supports you regardless your geographical location.

80% - Secondary school / technical school or lower

18% - Bachelor or equivalent

2% - Doctoral or equivalent

CERTIFIED QUALITY

We assure high quality, environmentally friendly products to our customers. Quality and care for the environment is embedded in both our minds and our organization.

Care for the environment is embedded in our tradition. DONIT TESNIT d.o.o. is certified by international ISO 9001 and ISO 14001 standards.



We also ensure that product quality and safety is in accordance with a number of widely recognized international standards such as:

DVGW (DIN 3535-6, VP 401), SVGW (DIN 3535-6), DVGW KTW, DVGW W270, BAM, WRAS, TA-Luft (VDI 2440), API 6FA / API 607, ABS, Germanischer Lloyd





TESNIT® BA-202



TESNIT® BA-202 is suitable for non-demanding applications in particular the water supply industry. As such, TESNIT® BA-202 has been designed with good mechanical and sealing properties.

PROPERTIES

SUPERIOR			
EXCELENT			
VERY GOOD	SEALABILITY PERFORMANCE		
GOOD	MECHANICAL RESISTANCE		
MODERATE			

APPROPRIATE INDUSTRIES & APPLICATIONS

- GENERAL PURPOSE
- WATER SUPPLY
- SHIPBUILDING

Composition	Cellulose fibres, inorganic fillers, NBR binder. Optional steel wire mesh insert on request.		
Colour	Pink / Red		
Approvals	Please inquire.		

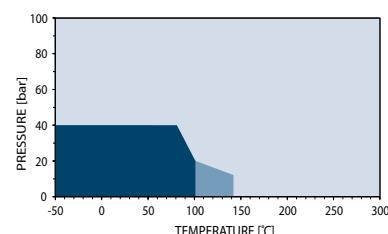
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.8
Compressibility	ASTM F36J	%	9
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	8
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	20
16 h, 50 MPa, 300 °C		MPa	/
Specific leak rate	DIN 3535-6	mg/(s·m)	0.04
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	10
ASTM Fuel B, 5 h, 23 °C		%	10
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	/
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	/
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	/
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	/
Max. operating conditions			
Peak temperature		°C/°F	180/356
Continuous temperature		°C/°F	140/284
- with steam		°C/°F	120/248
Pressure		bar/psi	40/580

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.

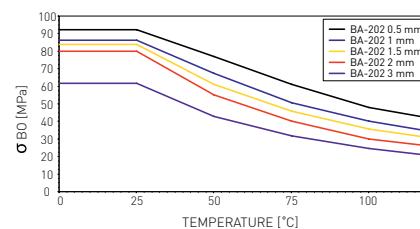
Surface finish	Surface finish is 2AS. Optional graphite or PTFE finish on request.
Dimensions of standard sheets	Sheet size (mm): 1500 x 1500 3000 x 1500 4500 x 1500 Thickness (mm): 0.5 1.0 1.5 2.0 3.0 Other dimensions and thicknesses are available on request.
Tolerances	± 5 % on length and width On thickness up to 1.0 mm ± 0.1 mm On thickness above 1.0 mm ± 10 %

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

All information and data quoted are based upon years 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} diagrams represent σ_{Bo} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BA202-05-2015



TESNIT® BA-203



TESNIT® BA-203 is designed for less demanding applications particularly for shipbuilding.
TESNIT® BA-203 also has good thermal resistance.

PROPERTIES

SUPERIOR			
EXCELENT			
VERY GOOD			
GOOD	MECHANICAL RESISTANCE	THERMAL RESISTANCE	CHEMICAL RESISTANCE
MODERATE	██████	██████	██████

APPROPRIATE INDUSTRIES & APPLICATIONS

- GENERAL PURPOSE
- WATER SUPPLY
- SHIPBUILDING

Composition	Aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh insert on request.
Colour	Yellow
Approvals	Germanischer Lloyd

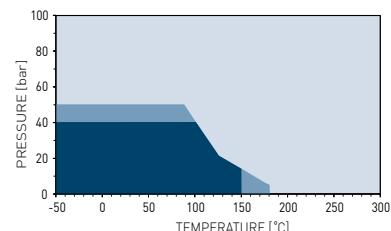
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.8
Compressibility	ASTM F36J	%	10
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	8
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	25
16 h, 50 MPa, 300 °C		MPa	/
Specific leak rate	DIN 3535-6	mg/(l·s·m)	0.08
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	8
ASTM Fuel B, 5 h, 23 °C		%	10
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	/
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	/
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	/
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	/
Max. operating conditions			
Peak temperature		°C/°F	250/482
Continuous temperature		°C/°F	200/392
- with steam		°C/°F	160/320
Pressure		bar/psi	50/725

P-T DIAGRAM

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



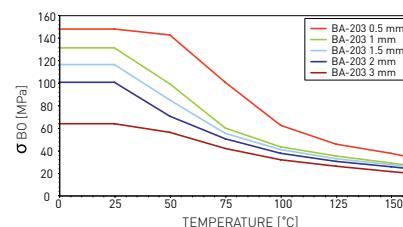
- ████ General suitability - Under common installation practices and chemical compatibility.
- ██ Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- █ Limited suitability - Technical consultation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

Surface finish	Surface finish is 2AS. Optional graphite or PTFE finish 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 %

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	?
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	?
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	?
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	?
Malic acid	?
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Milk	+
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	+
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite (Bleach)	?
Sodium silicate (Water glass)	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BA203-05-2015



TESNIT® BA-50



TESNIT® BA-50 has good thermal and chemical resistance, which makes it appropriate for use in a wide range of applications. TESNIT® BA-50 is well suited for use with potable water supply and shipbuilding.

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

	GENERAL PURPOSE
	FOOD INDUSTRY
	WATER SUPPLY
	AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
	POTABLE WATER SUPPLY
	SHIPBUILDING
	GAS SUPPLY

Composition	Aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh insert on request.		
Colour	Light green		
Approvals	DIN-DVGW DIN 3535-6, SVGW DIN 3535-6, DVGW KTW, DVGW W270, TA-Luft (VDI 2440), WRAS, Germanischer Lloyd, EC 1935/2004		

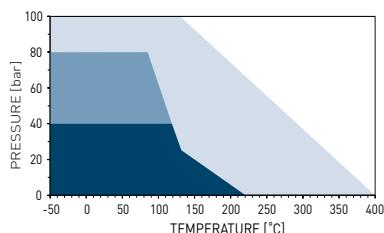
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.8
Compressibility	ASTM F36J	%	9
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	11
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	25
16 h, 50 MPa, 300 °C		MPa	/
Specific leak rate	DIN 3535-6	mg/(s·m)	0.07
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	8
ASTM Fuel B, 5 h, 23 °C		%	10
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	8.5
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	25
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	5.1
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	1.2
Max. operating conditions			
Peak temperature		°C/°F	280/536
Continuous temperature		°C/°F	220/428
- with steam		°C/°F	180/356
Pressure		bar/psi	80/1160

P-T DIAGRAM

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



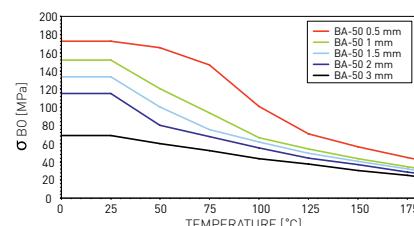
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	?
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	?
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	?
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	?
Malic acid	?
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	+
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite [Bleach]	?
Sodium silicate [Water glass]	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BA50-05-2015



TESNIT® BA-55 is specifically manufactured for heating systems that utilise steam or mineral oils, however it is also suitable for other applications. TESNIT® BA-55 has very good thermal and chemical resistance.

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

	GENERAL PURPOSE
	GAS SUPPLY
	WATER SUPPLY
	FOOD INDUSTRY
	POTABLE WATER SUPPLY
	SHIPBUILDING
	STEAM SUPPLY
	HEATING SYSTEMS

Composition	Engineered bio-soluble mineral fibres, aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh insert on request.
Colour	Dark green
Approvals	DIN-DVGW DIN 3535-6, SVGW DIN 3535-6, DVGW VP 401, DVGW VP 401 (5 bar), DVGW KTW, DVGW W270, BAM (Oxygen), EC 1935/2004, BS 7531 Grade X

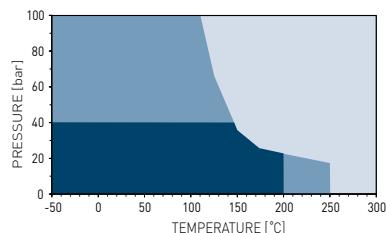
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.8
Compressibility	ASTM F36J	%	7
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	7
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/(l·s·m)	0.06
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	8
ASTM Fuel B, 5 h, 23 °C		%	10
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	7.6
At elevated temperature: $\epsilon_{WSW/200\text{ }^{\circ}\text{C}}$		%	11.4
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	3.2
At elevated temperature: $\epsilon_{WRW/200\text{ }^{\circ}\text{C}}$		%	0.8
Max. operating conditions			
Peak temperature		°C/°F	350/662
Continuous temperature		°C/°F	270/518
- with steam		°C/°F	230/446
Pressure		bar/psi	100/1450

P-T DIAGRAM

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



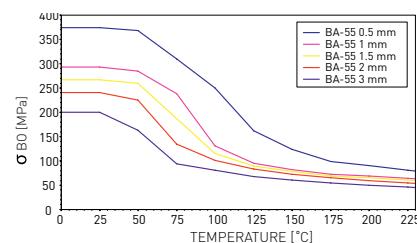
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	?
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	?
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	?
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	?
Malic acid	?
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	+
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum (Crude oil)	+
Phenol (Carbolic acid)	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite (Bleach)	?
Sodium silicate (Water glass)	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BA55-05-2015



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

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

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

Composition	Aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh or expanded steel insert on request.
Colour	Blue
Approvals	DIN-DVGW DIN 3535-6, SVGW DIN 3535-6, DVGW VP 401, DVGW KTW, DVGW W270, TA-Luft (VDI 2440), BAM (Oxygen), WRAS, Germanischer Lloyd, ABS, AGA 8140 G (Class III) , EC 1935/2004

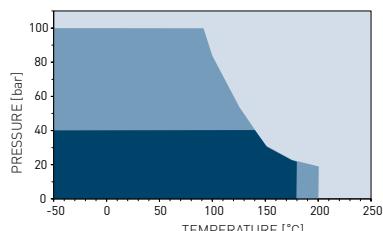
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.7
Compressibility	ASTM F36J	%	11
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	10
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	27
16 h, 50 MPa, 300 °C		MPa	23
Specific leak rate	DIN 3535-6	mg/(s·m)	0.05
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	2
ASTM Fuel B, 5 h, 23 °C		%	5
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	9.5
At elevated temperature: $\epsilon_{WSW/200\text{ }^{\circ}\text{C}}$		%	16.1
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	4.7
At elevated temperature: $\epsilon_{WRW/200\text{ }^{\circ}\text{C}}$		%	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.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

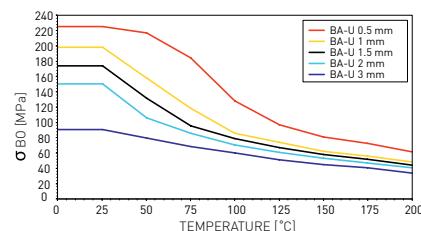
Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia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

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

Oleic acid	+
Olum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones [oil/grease]	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite [Bleach]	?
Sodium silicate [Water glass]	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAU-05-2015

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



PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

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

Composition	Carbon fibres, inorganic fillers, NBR binder. Optional steel wire mesh or expanded steel insert on request.
Colour	Black
Approvals	DIN-DVGW DIN 3535-6, DVGW VP 401, DVGW KTW, BAM [Oxygen], Germanischer Lloyd, BS 7531 Grade X

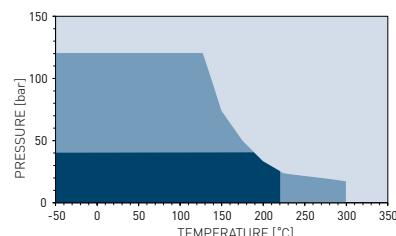
TECHNICAL DATA

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)	0.09
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: $\epsilon_{WSW/200\text{ °C}}$		%	8.3
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	3.6
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	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



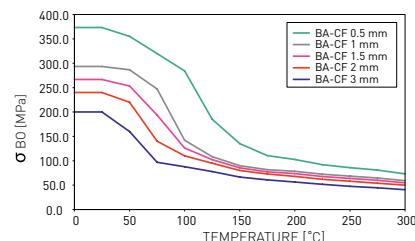
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	?
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	?
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	?
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	?
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	?
Malic acid	?
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	+
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite [Bleach]	?
Sodium silicate [Water glass]	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BACF-05-2015



TESNIT® BA-M possesses excellent thermal resistance and mechanical properties [especially bolt torque retention], which allows TESNIT® BA-M to be utilised in a very wide range of applications, particularly steam supply, heating and cooling systems.

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

	POTABLE WATER SUPPLY		SHIPBUILDING
	STEAM SUPPLY		POWER PLANT
	GAS SUPPLY		REFRIGERATION AND COOLING
	PETROCHEMICAL INDUSTRY		HEATING SYSTEMS
	FOOD INDUSTRY		HIGH TEMP. APPLICATIONS
	PAPER AND CELLULOSE INDUSTRY		

Composition	Engineered bio-soluble mineral fibres, aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh or expanded steel insert on request.
Colour	Grey / Green
Approvals	DIN-DVGW DIN 3535-6, DVGW VP 401, DVGW KTW, BAM (Oxygen), TA-Luft (VDI 2440), EC 1935/2004, BS 7531 Grade X

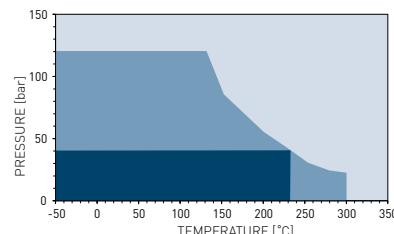
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.7
Compressibility	ASTM F36J	%	10
Recovery	ASTM F36J	%	60
Tensile strength	ASTM F152	MPa	13
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	35
16 h, 50 MPa, 300 °C		MPa	27
Specific leak rate	DIN 3535-6	mg/(l·s·m)	0.05
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	6
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	10.8
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	11.0
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	4.1
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	0.8
Max. operating conditions			
Peak temperature		°C/°F	440/824
Continuous temperature		°C/°F	350/662
- with steam		°C/°F	300/572
Pressure		bar/psi	120/1740

P-T DIAGRAM

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



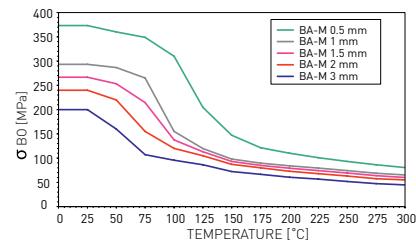
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	?
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	?
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	?
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	?
Malic acid	?
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Milk	+
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	+
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite (Bleach)	?
Sodium silicate (Water glass)	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAM-05-2015



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

PROPERTIES

	MECHANICAL RESISTANCE	THERMAL RESISTANCE	SEALABILITY PERFORMANCE	CHEMICAL RESISTANCE
SUPERIOR	High	High	Very Good	High
EXCELLENT	Very Good	Very Good	Excellent	Very Good
VERY GOOD	Good	Good	Good	Good
GOOD	Moderate	Moderate	Moderate	Moderate
MODERATE	Low	Low	Low	Low

APPROPRIATE INDUSTRIES & APPLICATIONS

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

Composition	Glass fibres, aramid fibres, inorganic fillers, NBR binder. Optional steel wire mesh or expanded steel insert on request.		
Colour	Greenish-blue/Green		
Approvals	DIN-DVGW DIN 3535-6, DVGW VP 401, DVGW KTW, BAM (Oxygen), TA-Luft (VDI 2440), API 607, Germanischer Lloyd, WRAS, EC 1935/2004, BS 7531 Grade X		

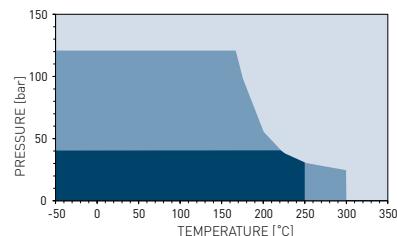
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	1.8
Compressibility	ASTM F36J	%	7
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	11
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	38
16 h, 50 MPa, 300 °C		MPa	33
Specific leak rate	DIN 3535-6	mg/(s·m)	0.03
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	3
ASTM Fuel B, 5 h, 23 °C		%	5
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	6.9
At elevated temperature: $\epsilon_{WSW/200\text{ }^{\circ}\text{C}}$		%	7.9
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	3.3
At elevated temperature: $\epsilon_{WRW/200\text{ }^{\circ}\text{C}}$		%	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



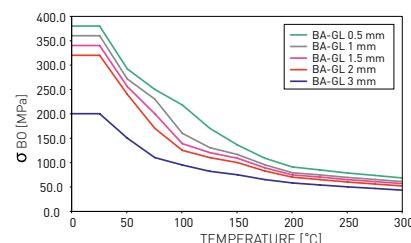
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish 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 %

Acetamide	+
Acetic acid, 10%	+
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	?
Acrylonitrile	-
Adipic acid	+
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	+
Aluminium acetate	+
Aluminium chloride	?
Aluminium chloride	?
Aluminium sulfate	?
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	+
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	?
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	+
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	?
Borax	+
Boric acid	+
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	+
Calcium chloride	+
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	?
Copper acetate	+
Copper sulfate	+
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	+
Formic acid, 85%	?
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	+
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	?
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	+
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	?
Lead acetate	+
Lead arsenate	+
Magnesium sulfate	+
Maleic acid	?
Malic acid	?
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Milk	+
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	?
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	+
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	?
Oxygen (gas)	-
Palmitic acid	+
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	?
Phosphoric acid, 85%	-
Phthalic acid	+
Potassium acetate	+
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	+
Potassium cyanide	+
Potassium dichromate	?
Potassium hydroxide	?
Potassium iodide	+
Potassium nitrate	+
Potassium permanganate	?
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	?
Seawater/brine	+
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	+
Sodium carbonate	+
Sodium chloride	+
Sodium cyanide	+
Sodium hydroxide	?
Sodium hypochlorite [Bleach]	?
Sodium silicate [Water glass]	+
Sodium sulfate	+
Sodium sulfide	+
Starch	+
Steam	+
Stearic acid	+
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	?
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAGL-05-2015



TESNIT® BA-R has very good mechanical properties (resistance to high internal and surface pressure). TESNIT® BA-R is designed for the automotive and engine-building industries.

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

	AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
	SHIPBUILDING

Composition	Aramid fibres, inorganic fillers, NBR binder, carbon steel wire mesh insert.		
Colour	Black		
Approvals	BAM (Oxygen), Germanischer Lloyd		

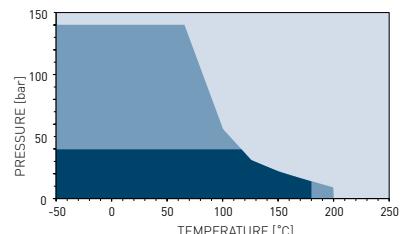
TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	2.0
Compressibility	ASTM F36J	%	8
Recovery	ASTM F36J	%	55
Tensile strength	ASTM F152	MPa	17
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	30
16 h, 50 MPa, 300 °C		MPa	25
Specific leak rate	DIN 3535-6	mg/(s·m)	/
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	8
ASTM Fuel B, 5 h, 23 °C		%	/
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	8.5
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	15.8
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	4.2
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	0.7
Max. operating conditions			
Peak temperature		°C/°F	400/752
Continuous temperature		°C/°F	350/662
- with steam		°C/°F	/
Pressure		bar/psi	140/2030

P-T DIAGRAM

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



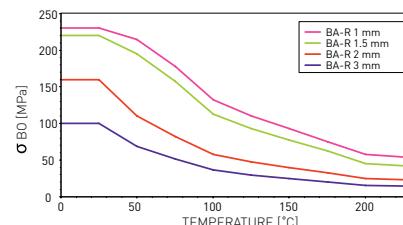
- General suitability - Under common installation practices and chemical compatibility.
- Conditional suitability - Appropriate measures ensure maximum performance for joint design and gasket installation. Technical consultation is recommended.
- Limited suitability - Technical consultation is mandatory.

Surface finish	Surface finish is 2G. Optional graphite or PTFE finish on request.
Dimensions of standard sheets	Sheet size (mm): 1000 x 1500 1500 x 1500 Thickness (mm): 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	+
Acetic acid, 10%	-
Acetic acid, 100% (Glacial)	-
Acetone	?
Acetonitrile	-
Acetylene (gas)	+
Acid chlorides	-
Acrylic acid	-
Acrylonitrile	-
Adipic acid	-
Air (gas)	+
Alcohols	+
Aldehydes	?
Alum	?
Aluminium acetate	-
Aluminium chloride	-
Aluminium chloride	-
Aluminium sulfate	-
Amines	-
Ammonia (gas)	?
Ammonium bicarbonate	+
Ammonium chloride	-
Ammonium hydroxide	+
Amyl acetate	?
Anhydrides	-
Aniline	-
Anisole	?
Argon (gas)	+
Asphalt	+
Barium chloride	-
Benzaldehyde	-
Benzene	+
Benzoic acid	?
Bio-diesel	+
Bio-ethanol	+
Black liquor	-
Borax	+
Boric acid	-
Butadiene (gas)	+
Butane (gas)	+
Butyl alcohol (Butanol)	+
Butyric acid	-
Calcium chloride	-
Calcium hydroxide	+
Carbon dioxide (gas)	+
Carbon monoxide (gas)	+
Cellosolve	?
Chlorine (gas)	-
Chlorine (in water)	-
Chlorobenzene	?
Chloroform	-
Chloroprene	?
Chlorosilanes	-
Chromic acid	-
Citric acid	-
Copper acetate	-
Copper sulfate	-
Creosote	?
Cresols (Cresylic acid)	-
Cyclohexane	+
Cyclohexanol	+
Cyclohexanone	?
Decalin	+
Dextrin	+
Dibenzyl ether	?
Dibutyl phthalate	?
Dimethylacetamide (DMA)	?
Dimethylformamide (DMF)	?
Dioxane	-
Diphyl (Dowtherm A)	+
Esters	?
Ethane (gas)	+
Ethers	?
Ethyl acetate	?
Ethyl alcohol (Ethanol)	+
Ethyl cellulose	?
Ethyl chloride (gas)	-
Ethylene (gas)	+
Ethylene glycol	+
Formaldehyde (Formalin)	?
Formamide	?
Formic acid, 10%	-
Formic acid, 85%	-
Formic acid, 100%	-
Freon-12 (R-12)	+
Freon-134a (R-134a)	+
Freon-22 (R-22)	?
Fruit juices	-
Fuel oil	+
Gasoline	+
Gelatin	+
Glycerine (Glycerol)	+
Glycols	+
Helium (gas)	+
Heptane	+
Hydrocarbons	+
Hydrochloric acid, 10%	-
Hydrochloric acid, 37%	-
Hydrofluoric acid, 10%	-
Hydrofluoric acid, 48%	-
Hydrogen (gas)	+
Iron sulfate	-
Isobutane (gas)	+
Isooctane	+
Isoprene	+
Isopropyl alcohol (Isopropanol)	+
Kerosene	+
Ketones	?
Lactic acid	-
Lead acetate	-
Lead arsenate	-
Magnesium sulfate	+
Maleic acid	-
Malic acid	-
Methane (gas)	+
Methyl alcohol (Methanol)	+
Methyl chloride (gas)	?
Methylene dichloride	?
Methyl ethyl ketone (MEK)	?
N-Methyl-pyrrolidone (NMP)	?
Milk	+
Mineral oil (ASTM no.1)	+
Motor oil	+
Naphtha	+
Nitric acid, 10%	-
Nitric acid, 65%	-
Nitrobenzene	-
Nitrogen (gas)	+
Nitrous gases (NOx)	-
Octane	+
Oils (Essential)	+
Oils (Vegetable)	+
Oleic acid	-
Oleum [Sulfuric acid, fuming]	-
Oxalic acid	-
Oxygen (gas)	-
Palmitic acid	-
Paraffin oil	+
Pentane	+
Perchloroethylene	-
Petroleum [Crude oil]	+
Phenol [Carbolic acid]	-
Phosphoric acid, 40%	-
Phosphoric acid, 85%	-
Phthalic acid	-
Potassium acetate	-
Potassium bicarbonate	+
Potassium carbonate	+
Potassium chloride	-
Potassium cyanide	-
Potassium dichromate	-
Potassium hydroxide	?
Potassium iodide	-
Potassium nitrate	-
Potassium permanganate	-
Propane (gas)	+
Propylene (gas)	+
Pyridine	-
Salicylic acid	-
Seawater/brine	-
Silicones (oil/grease)	+
Soaps	+
Sodium aluminate	+
Sodium bicarbonate	+
Sodium bisulfite	-
Sodium carbonate	+
Sodium chloride	-
Sodium cyanide	-
Sodium hydroxide	?
Sodium hypochlorite (Bleach)	-
Sodium silicate (Water glass)	?
Sodium sulfate	+
Sodium sulfide	-
Starch	+
Steam	?
Stearic acid	-
Styrene	?
Sugars	+
Sulfur	?
Sulfur dioxide (gas)	?
Sulfuric acid, 20%	-
Sulfuric acid, 98%	-
Sulfuryl chloride	-
Tar	+
Tartaric acid	-
Tetrahydrofuran (THF)	-
Titanium tetrachloride	-
Toluene	+
2,4-Toluenediisocyanate	?
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} diagrams represent σ_{BO} values for different gasket material thicknesses. These values indicate the maximum in-service compressive pressures which can be applied on the compressed gasket area in-service without destroying 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 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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAR-05-2015



TESNIT® BA-REM



TESNIT® BA-REM has excellent mechanical properties (resistance to high internal and surface pressure and blowout safety), which make it suitable for the highly demanding industries of steam supply and shipbuilding.

PROPERTIES

	MECHANICAL RESISTANCE	THERMAL RESISTANCE	CHEMICAL RESISTANCE
SUPERIOR	High	Medium	Medium
EXCELENT	Medium	High	Medium
VERY GOOD	Medium	Medium	Medium
GOOD	Medium	Medium	Medium
MODERATE	Medium	Medium	Medium

APPROPRIATE INDUSTRIES & APPLICATIONS

	STEAM SUPPLY
	PETROCHEMICAL INDUSTRY
	HIGH TEMP. APPLICATIONS
	SHIPBUILDING

Composition	Glass fibres, aramid fibres, inorganic fillers, NBR binder, expanded galvanized steel sheet insert.
Colour	Green
Approvals	Please inquire.

TECHNICAL DATA

Typical values for a thickness of 1.5 mm

Density	DIN 28090-2	g/cm ³	2.2
Compressibility	ASTM F36J	%	7
Recovery	ASTM F36J	%	50
Tensile strength	ASTM F152	MPa	35
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	43
16 h, 50 MPa, 300 °C		MPa	38
Specific leak rate	DIN 3535-6	mg/(s·m)	/
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	8
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	6.5
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	5.8
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	3.2
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	0.5
Max. operating conditions			
Peak temperature		°C/°F	460/860
Continuous temperature		°C/°F	370/698
- with steam		°C/°F	250/482
Pressure		bar/psi	150/2175

Surface finish	Surface finish is 4AS. Optional graphite or PTFE finish on request.
Dimensions of standard sheets	Sheet size (mm): 1000 x 1500 1500 x 1500 Thickness (mm): 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	-
Acetic acid, 10%	-	Diphyl (Dowtherm A)	+
Acetic acid, 100% (Glacial)	-	Esters	?
Acetone	?	Ethane (gas)	+
Acetonitrile	-	Ethers	?
Acetylene (gas)	+	Ethane acetate	?
Acid chlorides	-	Ethyl alcohol (Ethanol)	+
Acrylic acid	-	Ethyl cellulose	?
Acrylonitrile	-	Ethyl chloride (gas)	-
Adipic acid	-	Ethylene (gas)	+
Air (gas)	+	Ethylene glycol	+
Alcohols	+	Formaldehyde (Formalin)	?
Aldehydes	?	Formamide	?
Alum	?	Formic acid, 10%	-
Aluminium acetate	-	Formic acid, 85%	-
Aluminium chlorate	-	Formic acid, 100%	-
Aluminium chloride	-	Freon-12 (R-12)	+
Aluminium sulfate	-	Freon-134a (R-134a)	+
Amines	-	Freon-22 (R-22)	?
Ammonia (gas)	?	Fruit juices	-
Ammonium bicarbonate	+	Fuel oil	+
Ammonium chloride	-	Gasoline	+
Ammonium hydroxide	+	Gelatin	+
Amyl acetate	?	Glycerine (Glycerol)	+
Anhydrides	-	Glycols	+
Aniline	-	Helium (gas)	+
Anisole	?	Heptane	+
Argon (gas)	+	Hydraulic oil (Glycol based)	+
Asphalt	+	Hydraulic oil (Mineral type)	+
Barium chloride	-	Hydraulic oil (Phosphate ester based)	?
Benzaldehyde	-	Hydrazine	-
Benzene	+	Hydrocarbons	+
Benzoic acid	?	Hydrochloric acid, 10%	-
Bio-diesel	+	Hydrochloric acid, 37%	-
Bio-ethanol	+	Hydrofluoric acid, 10%	-
Black liquor	-	Hydrofluoric acid, 48%	-
Borax	+	Hydrogen (gas)	+
Boric acid	-	Iron sulfate	-
Butadiene (gas)	+	Isobutane (gas)	+
Butane (gas)	+	Isooctane	+
Butyl alcohol (Butanol)	+	Isoprene	+
Butyric acid	-	Isopropyl alcohol (Isopropanol)	+
Calcium chloride	-	Kerosene	+
Calcium hydroxide	+	Ketones	?
Carbon dioxide (gas)	+	Lactic acid	-
Carbon monoxide (gas)	+	Lead acetate	-
Cellosolve	?	Lead arsenate	-
Chlorine (gas)	-	Magnesium sulfate	+
Chlorine (in water)	-	Maleic acid	-
Chlorobenzene	?	Malic acid	-
Chloroform	-	Methane (gas)	+
Chloroprene	?	Methyl alcohol (Methanol)	+
Chlorosilanes	-	Methyl chloride (gas)	?
Chromic acid	-	Methylene dichloride	?
Citric acid	-	Methyl ethyl ketone (MEK)	?
Copper acetate	-	N-Methyl-pyrrolidone (NMP)	?
Copper sulfate	-	Milk	+
Creosote	?	Mineral oil (ASTM no.1)	+
Cresols (Cresylic acid)	-	Motor oil	+
Cyclohexane	+	Naphtha	+
Cyclohexanol	+	Nitric acid, 10%	-
Cyclohexanone	?	Nitric acid, 65%	-
Decalin	+	Nitrobenzene	-
Dextrin	+	Nitrogen (gas)	+
Dibenzyl ether	?	Nitrous gases (NOx)	-
Dibutyl phthalate	?	Octane	+
Dimethylacetamide (DMA)	?	Oils (Essential)	+
Dimethylformamide (DMF)	?	Oils (Vegetable)	+

All information and data quoted are based upon years 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.

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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAREM-05-2015



TESNIT® BA-R300



TESNIT® BA-R300 has outstanding dynamic and thermal resistance. TESNIT® BA-R300 is designed for use in high temperature applications, like those within ships' engines.

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS



STEAM SUPPLY

AUTOMOTIVE AND ENGINE
BUILDING INDUSTRY

SHIPBUILDING

POWER PLANT

HIGH TEMP. APPLICATIONS

Composition

Engineered bio-soluble mineral fibres, inorganic fillers, NBR binder, tough carbon steel wire mesh insert.

Colour

Black

Approvals

Germanischer Lloyd

TECHNICAL DATA

Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	3.2
Compressibility	ASTM F36J	%	10
Recovery	ASTM F36J	%	40
Tensile strength	ASTM F152	MPa	/
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	46
16 h, 50 MPa, 300 °C		MPa	40
Specific leak rate	DIN 3535-6	mg/(s·m)	/
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	/
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	11.1
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	6.9
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	3.4
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	0.4
Max. operating conditions			
Peak temperature		°C/°F	550/1022
Continuous temperature		°C/°F	450/842
- with steam		°C/°F	/
Pressure		bar/psi	/

Surface finish	Surface finish is 2G. Optional graphite or PTFE finish on request.
Dimensions of standard sheets	Sheet size (mm): 1500 x 1400 Rolls Thickness (mm): 0.7 1.0 1.2 1.4 2.0 2.5 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	-
Acetic acid, 10%	-	Diphenyl (Dowtherm A)	+
Acetic acid, 100% (Glacial)	-	Esters	?
Acetone	?	Ethane (gas)	+
Acetonitrile	-	Ethers	?
Acetylene (gas)	+	Ethyl acetate	?
Acid chlorides	-	Ethyl alcohol [Ethanol]	+
Acrylic acid	-	Ethyl cellulose	?
Acrylonitrile	-	Ethyl chloride (gas)	-
Adipic acid	-	Ethylene (gas)	+
Air (gas)	+	Ethylene glycol	+
Alcohols	+	Formaldehyde (Formalin)	?
Aldehydes	?	Formamide	?
Alum	?	Formic acid, 10%	-
Aluminum acetate	-	Formic acid, 95%	-
Aluminum chlorate	-	Formic acid, 100%	-
Aluminium chloride	-	Freon-12 (R-12)	+
Aluminium sulfate	-	Freon-134a (R-134a)	+
Amines	-	Freon-22 (R-22)	?
Ammonia (gas)	?	Fruit juices	-
Ammonium bicarbonate	+	Fuel oil	+
Ammonium chloride	-	Gasoline	+
Ammonium hydroxide	+	Gelatin	+
Amyl acetate	?	Glycerine [Glycerol]	+
Anhydrides	-	Glycols	+
Aniline	-	Helium (gas)	+
Anisole	?	Heptane	+
Argon (gas)	+	Hydraulic oil [Glycol based]	+
Asphalt	+	Hydraulic oil [Mineral type]	+
Barium chloride	-	Hydraulic oil [Phosphate ester based]	?
Benzaldehyde	-	Hydrazine	-
Benzene	+	Hydrocarbons	+
Benzoic acid	?	Hydrochloric acid, 10%	-
Bio-diesel	+	Hydrochloric acid, 37%	-
Bio-ethanol	+	Hydrofluoric acid, 10%	-
Black liquor	-	Hydrofluoric acid, 48%	-
Borax	+	Hydrogen (gas)	+
Boric acid	-	Iron sulfate	-
Butadiene (gas)	+	Isobutane (gas)	+
Butane (gas)	+	Isooctane	+
Butyl alcohol (Butanol)	+	Ioprene	+
Butyric acid	-	Isopropyl alcohol (Isopropanol)	+
Calcium chloride	-	Kerosene	+
Calcium hydroxide	+	Ketones	?
Carbon dioxide (gas)	+	Lactic acid	-
Carbon monoxide (gas)	+	Lead acetate	-
Cellosolve	?	Lead arsenate	-
Chlorine (gas)	-	Magnesium sulfate	+
Chlorine (in water)	-	Maleic acid	-
Chlorobenzene	?	Malic acid	-
Chloroform	-	Methane (gas)	+
Chloroprene	?	Methyl alcohol [Methanol]	+
Chlorosilanes	-	Methyl chloride (gas)	?
Chromic acid	-	Methylene dichloride	?
Citric acid	-	Methyl ethyl ketone (MEK)	?
Copper acetate	-	N-Methyl-pyrrolidone (NMP)	?
Copper sulfate	-	Mineral oil (ASTM no.1)	+
Creosote	?	Motor oil	+
Cresols (Cresylic acid)	-	Naphtha	+
Cyclohexane	+	Nitric acid, 10%	-
Cyclohexanol	+	Nitric acid, 65%	-
Cyclohexanone	?	Nitrobenzene	-
Decalin	+	Nitrogen (gas)	+
Dextrin	+	Nitrous gases (NOx)	-
Dibenzyl ether	?	Octane	+
Di-butyl phthalate	?	Oils (Essential)	+
Dimethylacetamide (DMA)	?	Oils (Vegetable)	+
Dimethylformamide (DMF)	?		

All information and data quoted are based upon years 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.

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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAR300-05-2015



TESNIT® BA-R302



TESNIT® BA-R302 has superior thermal resistance coupled with excellent mechanical properties and blowout safety. TESNIT® BA-R302 is designed for the most demanding high temperature applications like those within ships' engines.

PROPERTIES

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

APPROPRIATE INDUSTRIES & APPLICATIONS

	STEAM SUPPLY
	AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
	SHIPBUILDING

Composition	Tanged carbon steel sheet sandwiched with BA-R300.
Colour	Black
Approvals	Germanischer Lloyd

TECHNICAL DATA

 Typical values for a thickness of 2 mm

Density	DIN 28090-2	g/cm ³	3.7
Compressibility	ASTM F36J	%	8
Recovery	ASTM F36J	%	45
Tensile strength	ASTM F152	MPa	/
Stress resistance	DIN 52913		
16 h, 50 MPa, 175 °C		MPa	48
16 h, 50 MPa, 300 °C		MPa	45
Specific leak rate	DIN 3535-6	mg/(s·m)	/
Thickness increase	ASTM F146		
Oil IRM 903, 5 h, 150 °C		%	5
ASTM Fuel B, 5 h, 23 °C		%	/
Compression modulus	DIN 28090-2		
At room temperature: ϵ_{KSW}		%	7.1
At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$		%	6.3
Percentage creep relaxation	DIN 28090-2		
At room temperature: ϵ_{KRW}		%	2.2
At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$		%	0.5
Max. operating conditions			
Peak temperature		°C/°F	650/1202
Continuous temperature		°C/°F	600/1112
- with steam		°C/°F	/
Pressure		bar/psi	/

Surface finish	Surface finish is 2G. Optional graphite or PTFE finish on request.
Dimensions of standard sheets	Sheet size (mm): 500 x 1400 Thickness (mm): 1.4 1.6 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%	-	Diphenyl [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 [Carboxylic 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-Toluenediisocyanate	?
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	+
Dibenzy ether	?	Nitrous gases (NOx)	-	Xylenes	+
Diethyl phthalate	?	Octane	+	Xylenol	-
Dimethylacetamide [DMA]	?	Oils [Essential]	+	Zinc sulfate	-
Dimethylformamide (DMF)	?	Oils [Vegetable]	+		

All information and data quoted are based upon years 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.

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



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

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TDS-BAR302-05-2015



A perfect fit
of **TRUST**
COMMITMENT
POSSIBILITIES

Customer and challenge
driven innovation

High level of flexibility

Adapt to new changes

Broad portfolio of gasket materials and products

**BEST PRACTICE
SOLUTIONS**

Slovenia**DONIT TESNIT, D.O.O.**

Cesta komandanta Staneta 38, 1215
Medvode, Slovenia
Phone: +386 (0)1 582 33 00
E-mail: info@donit.eu

China**SUZHOU DONIT SEALING MATERIALS**

Import and Export Co., Ltd.
No. 8 Suzhou Avenue West,
Bank of China Building, Room 1904,
SIP, 215021, P.R. China
Phone: +86 (0)512 659 535 29
E-mail: sales.suzhou@donit.eu

India**DONIT TESNIT INDIA**

C-406, Mantri Lavendula Mulshi
Road,
Bavdan Khurd, Pune - 411 021, India
Phone: +91 20 6520 7558
E-mail: sales.india@donit.eu

Middle East**DONIT TESNIT MIDDLE EAST**

SM - Office- F1- 216B Ajman Free
Zone Authority,
Ajman, United Arab Emirates
E-mail: sales.middleeast@donit.eu

North America**DONIT TESNIT NORTH AMERICA**

Donit Tesnit North America, LLC
1549 Stone Ridge Drive
Stone Mountain
Georgia 30083
E-mail: sales.northamerica@donit.eu

Latin America**DONIT TESNIT LATIN AMERICA**

E-mail: sales.latinamerica@donit.eu

Slovenia**DONIT TESNIT, D.O.O.**

Donit Industrial Sealing Solutions
Paradiž 4, 8210 Trebnje, Slovenia
Phone: +386 (0)8 205 50 44
E-mail: salesgaskets@donit.eu

Belgium**DISS-EUROPE BVBA**

Donit Industrial Sealing Solutions
Bannerlaan 50
2280 Grobbendonk, Belgium
Phone: +32 (0)14 302 100
E-mail: sales@disseurope.be

For disclaimer please visit <http://donit.eu/disclaimer/>

Copyright © DONIT TESNIT, d.o.o.

All rights reserved

Date of issue: 08.2016 / TTDB-05-2015

www.donit.eu