BAM 6000 CIS

- *Excellent sealing, thermal and mechanical properties contribute to the reduction of "fugitive emissions"*
- *Free of hazardous fibres*
- *"N-nitrosamines free"*
- *Correspond to DIN 28091-2*

Environment – friendly gasket material with excellent resistance to steam featuring long term steam sealability.

DONIT TESNIT

Product range:

- *Compressed gasket materials*
  - *Standard Line*
  - *High Performance Line*
- *Composite sealing materials*
- *Flexible graphite sealing materials*
- *PTFE sealing products*
- *Elastomeric sealing products*
- *High temperature insulation and technical textile*
- *Packings*
- *Fiber-reinforced graphite sealing materials*
- *Gaskets*
  - *non metallic flat gaskets*
  - *metal jacketed gaskets*
  - *spiral wound gaskets*
  - *gaskets for heat exchangers*
  - *grooved gaskets*
  - *corrugated metal gaskets*
  - *PTFE gaskets*

In order to spread the most comprehensive knowlege of our products, our highly skilled group of experts organized in technical-service department can assist you by solving your sealing problem. If you need our help, contact us.

DONIT TESNIT

TÜV CERT ISO 9001

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... on All Continents

TESNIT BAM 6000

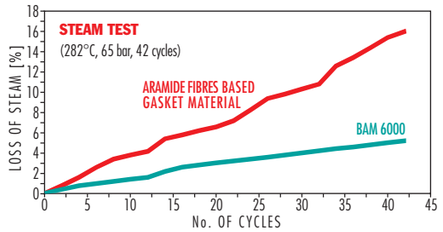
Environment – friendly gasket material with excellent resistance to steam featuring long term steam sealability.

BAM 6000 is a first-rate gasket material based on a combination of aramide fibres and non-hazardous biosoluble mineral wool fibres exonerated from classification according to Note Q in EU Commission Directive 97/69/EC. Carefully selected components in this material assure that it is free of N–nitrosamines that are hazardous to human health (certified by MRPRA). Gasket material BAM 6000 exhibits an outstanding thermal and steam resistance. When it is applied at higher temperatures no emission of hazardous degradation products has been detected.

Low leakage rates in application additionally contribute to decrease of fugitive emission levels. The new material has also excellent creep-relaxation properties, and it is likewise in compliance with DIN 28091-2 and BS 7531 Grade X requirements.

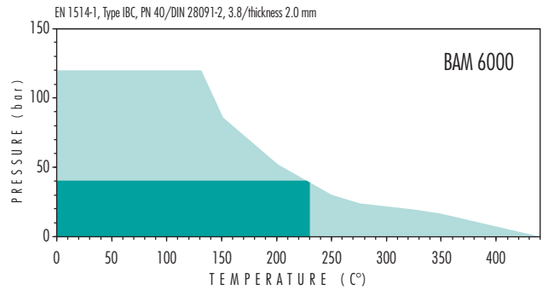
APPLICATION

Due to its superior resistance to steam and long-term steam sealability BAM 6000 is particularly recommended for all applications where thermal cycling, saturated or overheated steam are applied, e.g. heat exchangers, boilers, radiators, steam supply, power generation, etc. Special surface treatment provides simple replacement after use, while excellent torque retention properties, good chemical properties and sealability enable low maintenance costs and high gasket safety. BAM 6000 can be also used for sealing oils, fuels, gases, Freons, solvents, non-aggressive chemicals, hot water and other media in a variety of flanged joints.



P-T DIAGRAM

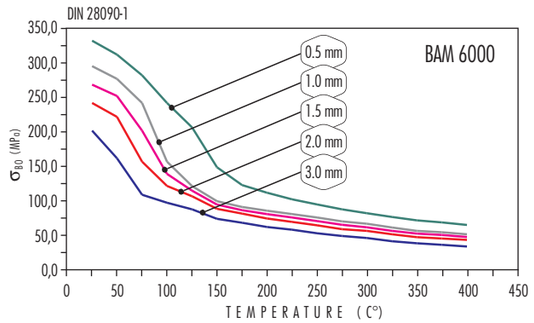
The Pressure - Temperature charts are the most current method of determining the suitability of a gasket material in a known application. Maximum figures for temperature and pressure can be misleading. Max. temperature and max. pressure represent maximum values and should not be used simultaneously.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



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

σ_{80} DIAGRAM

This diagram describes characteristic values of gasket materials for static seal for used 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 condition. σ_{80} shows you maximal allowed surface stress (maximum in service compressive stress) on gasket by operating service temperature for different material thickness.



GASKET CALCULATION PROGRAM

Computer program **DON** *demonstrates a successful tool for proper choice of gasket materials & gaskets and for solving a majority of sealing problems connected to the static sealing area.*

With Top Quality ...

BASIS

Composition	Biosoluble mineral fibres, NBR
DIN 28091-2	FA-M1- 0
Colour	Greenish blue / Gray

DIMENSION OF STANDARD SHEET

Sheet size	1000 mm x 1500 mm
	1500 mm x 1500 mm
	3000 mm x 1500 mm
	4500 mm x 1500 mm
Thickness*	0.5 mm, 0.8 mm, 1.0 mm, 1.5 mm,
	2.0 mm, 3.0 mm
Tolerances	Thickness: < 1.0 mm = ± 0.1 mm
	≥ 1.0 mm = ± 10 %
	Length: ± 50 mm
	Width: ± 50 mm

**Other thicknesses available on request.*

SURFACE

The standard version of BAM 6000 has a non-stick top and bottom layer. Additional surface treatment is in general unnecessary. Special treatment with graphite, silicone or PTFE on one or both sides is available on request.

APPROVALS

DIN-DVGW, HTB, KTW, WQc/WRAS, UDT, CRS, TARRC/MRPRA, BS 7531 Grade X

All information data quoted are based on years of experience in production and operation of sealing elements. However, in view of the wide variety of possible installation and operating conditions one cannot draw final conclusions in all application cases regarding the behaviour in a gasket joint. The data may not, therefore, be used to support any warranty claims. Whenever there is any doubt, our staff will be pleased to assist you in finding the optimum sealing solutions.

TECHNICAL DATA

General information for a thickness of 2 mm

Density	DIN 28090-2	1.7 – 1.9 g/cm³
Compressibility	ASTM F 36/J	6 – 9 %
Recovery	ASTM F 36/J	> 55 %
Tensile strength	DIN 52910	≈ 9 MPa
Stress resistance	DIN 52913	
16h, 300°C, 50 MPa		≈ 30 MPa
16h, 175°C, 50 MPa		≈ 35 MPa
Thickness increase	ASTM F 146	
ASTM Fuel B, 5h, 20°C		≤ 5 %
Oil IRM 903, 5h, 150°C		≤ 5 %
Specific leakage rate	DIN 3535/6	≈ 0.05 mg/(s·m)
Compression modulus:	DIN 28090-2	
• At room temperature: ε_{KSW}		5.5 – 9.4 %
• At elevated temperature: $\varepsilon_{WSW/200°C}$		6.5 – 11.0 %
Percentage creep relaxation:	DIN 28090-2	
• At room temperature: ε_{KRW}		> 4.0 %
• At elevated temperature: $\varepsilon_{WRW/200°C}$		≈ 1.0 %
Recovery R	DIN 28090-2	≈ 0.019 mm
***Max. operating conditions**		
Temperature:		
• Peak		440°C / 824°F
• Continuous		350°C / 662°F
• With steam		300°C / 572°F
Pressure		120 bar / 1740 psi

** Temperature and pressure represent maximum values and should not be used simultaneously. They are given only as guidance, since they depend not only on the type of gasket material but also on the assembly conditions. Very important factors are: thickness of material, nature of service medium, type of flange and surface stress. Steam application requires special consideration.*

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

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

This edition cancels all previous issues. Subject to change without notice.