

# BAU 2000

- 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 specially balanced sealing, thermal, chemical and mechanical properties for universal application.*

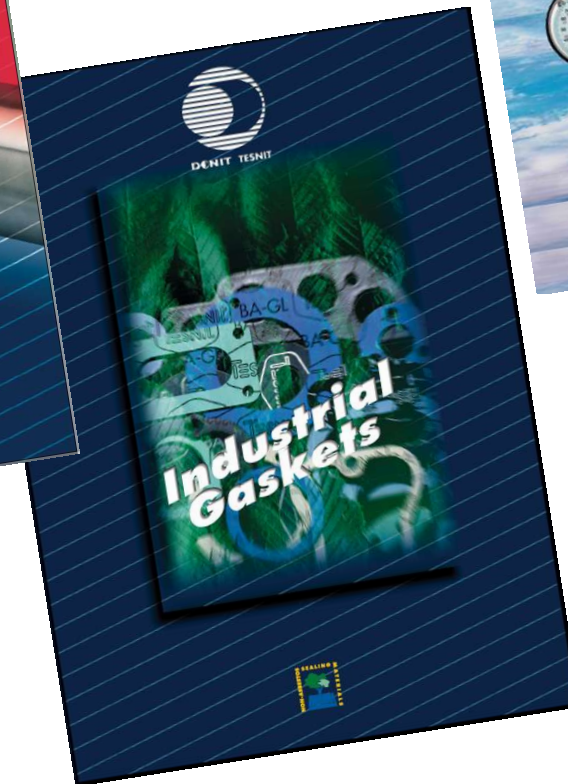


DONIT TESNIT



### 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

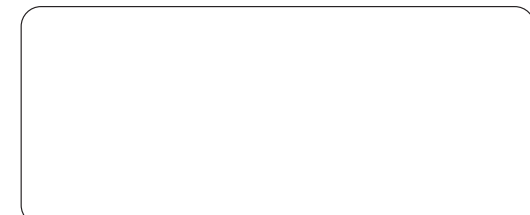


*In order to spread the most comprehensive knowledge of our products, our highly skilled group of experts organized in technical-service department can assist you by solving your sealing problem. If you need our help, contact us.*

## DONIT TESNIT




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# TESNIT®

## BAU 2000



BAU 2000 is a superior fibre gasket material composed of aramid fibres, fillers and elastomeric binders. With a well-considered selection of ingredients significant improvements in its sealing and thermal properties and chemical resistance have been achieved. Moreover, the new material is also free of N-nitrosamines (certified by MRPRA) and without fibres which are hazardous to human health. Additionally, when this material is subjected to high temperatures, no emission of hazardous degradation products has been detected. With better sealability an important decrease of fugitive emission levels has been reached. The new material has also very good creep-relaxation properties and is in compliance with DIN 28091-2 and BS 7531 Grade Y requirements.

**Environment – friendly gasket material with specially balanced sealing, thermal, chemical and mechanical properties for universal application.**

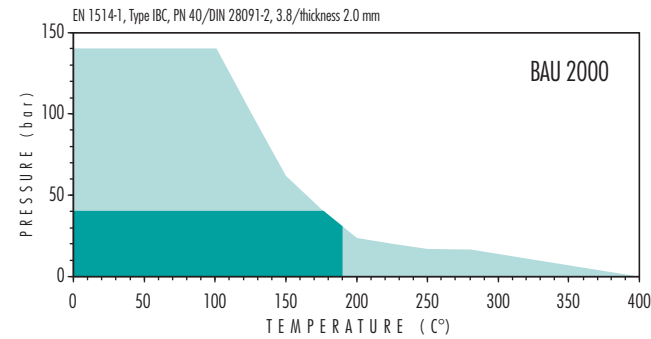
### APPLICATION

BAU 2000 serves as a high-quality universal gasket material which can be applied for general use at a higher pressure, temperature and surface stress.

BAU 2000 combines high-torque retention, chemical properties and sealability, enabling low maintenance costs and high joint safety. BAU 2000 is very suitable for the sealing of oils, fuels, gases, Freons, solvents, non-aggressive chemicals and many other media. Due to its carefully selected composition BAU 2000 can be also used in food industry and in contact with drinking water (also at high temperatures). Special surface treatment provides low adhesion of gasket on flange surfaces. BAU 2000 is suitable for demanding applications in machinery, pumps, pipelines, radiators, boilers and many different flanged joints.

### P-T DIAGRAM

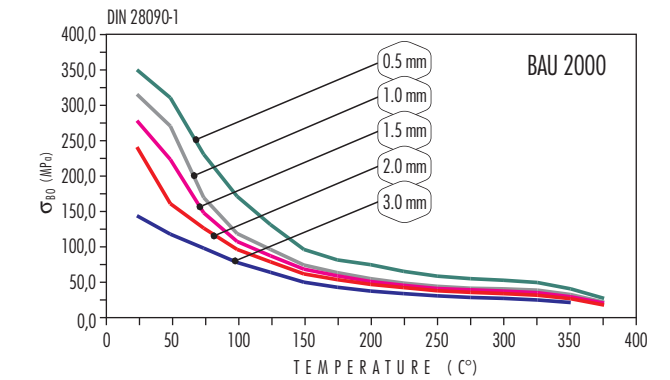
The Pressure - Temperature charts are the most current method of determining the suitability of a gasket material in a known application. Maximum figures for temperature and pressure can be misleading. Max. temperature and max. pressure represent maximum values and should not be used simultaneously. 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<sub>80</sub> 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<sub>80</sub> 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.

### BASIS

|             |                               |
|-------------|-------------------------------|
| Composition | Aramide fibres, NBR           |
| DIN 28091-2 | FA-A1-0                       |
| Colour      | Greenish blue / Greenish blue |

### DIMENSION OF STANDARD SHEET

|            |  |
|------------|--|
| Sheet size | 1000 mm x 1500 mm                              |
|            | 1500 mm x 1500 mm                              |
| Thickness* | 3000 mm x 1500 mm                              |
|            | 4500 mm x 1500 mm                              |
|            | 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 BAU 2000 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, BAM, HTB, UDT, TARRC/MRPRA, BS 7531 Grade Y

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                                       | 1.6 – 1.8 g/cm <sup>3</sup> |
| Compressibility                          | ASTM F 36/J                                       | 6 – 9 %                     |
| Recovery                                 | ASTM F 36/J                                       | > 55 %                      |
| Tensile strength                         | DIN 52910   | ≈ 12 MPa                    |
| Stress resistance                        | DIN 52913   |                             |
|  | 16h, 300°C, 50 MPa                                | ≈ 28 MPa                    |
|  | 16h, 175°C, 50 MPa                                | ≈ 33 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  | ≈ 0.03 mg/(s·m)             |
| Compression modulus:                     | DIN 28090-2                                       |                             |
|  | • At room temperature: ε <sub>KSW</sub>           | 6.5 – 9.4 %                 |
|  | • At elevated temperature: ε <sub>WSW/200°C</sub> | 9.0 – 13.0 %                |
| Percentage creep relaxation: DIN 28090-2 |   |                             |
|  | • At room temperature: ε <sub>KRW</sub>           | > 3.5 %                     |
|  | • At elevated temperature: ε <sub>VRW/200°C</sub> | ≈ 1.4 %                     |
| Recovery R                               | DIN 28090-2                                       | ≈ 0.026 mm                  |

#### \*Max. operating conditions

|              |                    |
|--------------|--------------------|
| Temperature: |                    |
| • Peak       | 400°C / 752°F      |
| • Continuous | 280°C / 536°F      |
| • With steam | 200°C / 392°F      |
| Pressure     | 140 bar / 2030 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.

|                      |   |                                      |   |                             |   |                        |   |
|----------------------|---|--------------------------------------|---|-----------------------------|---|------------------------|---|
| 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 carbonate       | ● |
| Ammonia              | ● | Ethyl alcohol                        | ● | Milk                        | ● | Sodium chloride        | ● |
| Ammonium bicarbonate | ● | Ethyl chloride                       | ● | Mineral oil type ASTM no. 1 | ● | Sodium cyanide         | ● |
| Ammonium chloride    | ● | Ethylene                             | ● | Naphtha                     | ● | Sodium hydroxide       | ● |
| Ammonium hydroxide   | ● | Ethylene glycol                      | ● | Nitric acid 20%             | ● | Sodium sulphate        | ● |
| Amyl acetate         | ● | Formic acid 10%                      | ● | Nitric acid 40%             | ● | Sodium sulphide        | ● |
| Aniline              | ▼ | Formic acid 85%                      | ● | Nitric acid 96%             | ▼ | Starch                 | ● |
| Asphalt              | ● | Formaldehyde                         | ● | Nitrobenzene                | ▼ | Steam                  | ● |
| Barium chloride      | ● | Freon 12                             | ● | Nitrogen                    | ● | Stearic acid           | ● |
| Benzene              | ● | Freon 22                             | ● | Octane                      | ● | Sugar                  | ● |
| Benzoic acid         | ● | Fuel oil                             | ● | Oleic acid                  | ● | Sulphuric acid 20%     | ● |
| Boric acid           | ● | Gasoline                             | ● | Oleum                       | ▼ | Sulphuric acid 96%     | ▼ |
| Borax                | ● | Glycerine                            | ● | Oxalic acid                 | ● | Tar                    | ● |
| Butane               | ● | Heptane                              | ● | Oxygen                      | ● | Tartaric acid          | ● |
| Butyl alcohol        | ● | Hydraulic oil (Mineral)              | ● | Palmitic acid               | ● | Toluene                | ● |
| Butyric acid         | ● | Hydraulic oil (Phosphate ester type) | ● | Pentane                     | ● | Transformer oil        | ● |
| Calcium chloride     | ● | Hydraulic oil (Glycol based)         | ● | Perchloroethylene           | ● | Trichloroethylene      | ● |
| Calcium hydroxide    | ● | Hydrazine                            | ● | Phenol                      | ▼ | Water                  | ● |
| Carbon disulphide    | ▼ | Hydrochloric acid 20%                | ● | Phosphoric acid             | ● | White Spirit           | ● |
| Carbon dioxide       | ● | Hydrochloric acid 36%                | ▼ | Potassium acetate           | ● | Xylene                 | ● |
| Chloroform           | ● | Hydrofluoric acid 10%                | ▼ | Potassium bicarbonate       | ● |                        |   |
| 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.