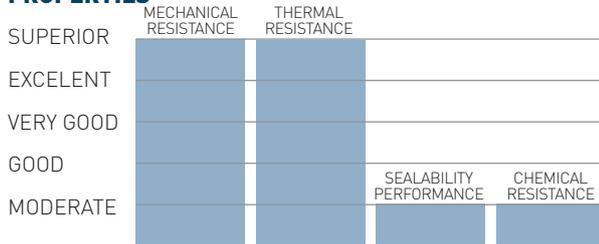




TESNIT® BA-R300 has outstanding dynamic and thermal resistance. TASNIT® BA-R300 is designed for use in high temperature applications, like those within ships' engines.

## PROPERTIES



## APPROPRIATE INDUSTRIES & APPLICATIONS

-  STEAM SUPPLY
-  POWER PLANT
-  AUTOMOTIVE AND ENGINE BUILDING INDUSTRY
-  HIGH TEMP. APPLICATIONS
-  SHIPBUILDING

|             |  |
|-------------|--|
| 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

|   |             |                   |          |
|---|-------------|-------------------|----------|
| <b>Density</b>  | DIN 28090-2 | g/cm <sup>3</sup> | 3.2      |
| <b>Compressibility</b>                                  | ASTM F36J   | %                 | 10       |
| <b>Recovery</b>   | ASTM F36J   | %                 | 40       |
| <b>Tensile strength</b>                                 | ASTM F152   | MPa               | /        |
| <b>Stress resistance</b>                                | DIN 52913   |                   |          |
| 16 h, 50 MPa, 175 °C                                    |             | MPa               | 46       |
| 16 h, 50 MPa, 300 °C                                    |             | MPa               | 40       |
| <b>Specific leak rate</b>                               | DIN 3535-6  | mg/(s·m)          | /        |
| <b>Thickness increase</b>                               | ASTM F146   |                   |          |
| Oil IRM 903, 5 h, 150 °C                                |             | %                 | 5        |
| ASTM Fuel B, 5 h, 23 °C                                 |             | %                 | /        |
| <b>Compression modulus</b>                              | DIN 28090-2 |                   |          |
| At room temperature: $\epsilon_{KSW}$                   |             | %                 | 11.1     |
| At elevated temperature: $\epsilon_{WSW/200\text{ °C}}$ |             | %                 | 6.9      |
| <b>Percentage creep relaxation</b>                      | DIN 28090-2 |                   |          |
| At room temperature: $\epsilon_{KRW}$                   |             | %                 | 3.4      |
| At elevated temperature: $\epsilon_{WRW/200\text{ °C}}$ |             | %                 | 0.4      |
| <b>Max. operating conditions</b>                        |             |                   |          |
| 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): 500 x 1400   1000 x 1400<br>Thickness (mm): 0.7   1.0   1.2   1.4   2.0   2.5   3.0<br>Other dimensions and thicknesses are available on request. |
| Tolerances                    | ± 5 % on length and width<br>On thickness up to 1.0 mm ± 0.1 mm<br>On thickness above 1.0 mm ± 10 %  |

|                             |   |                                       |   |                                |   |
|-----------------------------|---|---------------------------------------|---|--------------------------------|---|
| Acetamide                   | + | Dioxane                               | - | Oleic acid                     | - |
| Acetic acid, 10%            | - | Diphyt (Dowtherm A)                   | + | Oleum (Sulfuric acid, fuming)  | - |
| Acetic acid, 100% (Glacial) | - | Esters                                | ? | Oxalic acid                    | - |
| Acetone                     | ? | Ethane (gas)                          | + | Oxygen (gas)                   | - |
| Acetonitrile                | - | Ethers                                | ? | Palmitic acid                  | - |
| Acetylene (gas)             | + | Ethyl acetate                         | ? | Paraffin oil                   | + |
| Acid chlorides              | - | Ethyl alcohol (Ethanol)               | + | Pentane                        | + |
| Acrylic acid                | - | Ethyl cellulose                       | ? | Perchloroethylene              | - |
| Acrylonitrile               | - | Ethyl chloride (gas)                  | - | Petroleum (Crude oil)          | + |
| Adipic acid                 | - | Ethylene (gas)                        | + | Phenol (Carbolic acid)         | - |
| Air (gas)                   | + | Ethylene glycol                       | + | Phosphoric acid, 40%           | - |
| 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                  | + |
| Dibenzyl ether              | ? | Nitrous gases (NOx)                   | - | Xylenes                        | + |
| Di-butyl phthalate          | ? | Octane                                | + | Xylenol                        | - |
| Dimethylacetamide (DMA)     | ? | Oils (Essential)                      | + | Zinc sulfate                   | - |
| Dimethylformamide (DMF)     | ? | Oils (Vegetable)                      | + |                                |   |

## 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



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