



## Material profile

New material combination of high-grade aramid fibres and fillers bonded with **NBR** rubber (**N**itrile **B**utadiene **R**ubber). The material compound consists of an oil-resistant, hard core and very soft covering layers on both sides having controlled swelling properties in oil.

A special material profile results from the different properties of the material layers:

- excellent adaptability
- controlled swelling in oil, fuels and greases in critical ranges
- very good stress relaxation
- low permeability to gas

## Applications

This special gasket material can be applied where the surface pressure between the bolts is insufficient, but partially excessive pressure is found directly under the bolts. This irregular distribution of pressure is balanced by the swelling capability of the gasket material in contact with oil and additionally the special material construction.

### Typical applications are as follows:

- Plant, apparatus and transformer construction
- General machine building industry
- Accessories for the automotive industry

## Surface coating

An additional surface coating would adversely affect the swelling function of the covering layers. The same applies to the use of sealing acids, such as graphite paste, silicone or copper grease which reduce the frictional resistance between gasket and flange.

## Material data

### General Data

Binders	Core: NBR; Cover: NR/NBR
Colour	one side brown, one side red
Anti-stick coating	non standard
Sheet sizes and thickness tolerance	according to DIN 28 091-1

### Physical properties

	Standard	Unity	Value *
Gasket thickness 2.0 mm			
Density	DIN 28 090-2	[g/cm <sup>3</sup> ]	1.45
Tensile strength	DIN 52 910	[N/mm <sup>2</sup> ]	32
		[N/mm <sup>2</sup> ]	9
Residual stress $\sigma_{dE/16}$	DIN 52 913	[N/mm <sup>2</sup> ]	32
		[N/mm <sup>2</sup> ]	24
		[N/mm <sup>2</sup> ]	24
Compressibility	ASTM F36 J	[%]	8
Recovery	ASTM F36 J	[%]	66
Cold compressibility $\epsilon_{KSW}$	DIN 28 090-2	[%]	9
Cold recovery $\epsilon_{KRW}$	DIN 28 090-2	[%]	5
Hot creep $\epsilon_{WSW/200}$	DIN 28 090-2	[%]	12
Hot recovery $\epsilon_{WRW/200}$	DIN 28 090-2	[%]	2
Recovery R	DIN 28 090-2		0.040
Specific leakage rate	DIN 3535-6	[mg/(m·s)]	0.100
Specific leakage rate $\lambda_{2,0}$	DIN 28 090-2	[mg/(m·s)]	0.150
Fluid resistance	ASTM F 146		
ASTM IRM 903	5h / 150 °C		
Weight change		[%]	23
Thickness increase		[%]	12
ASTM Fuel B	5h / 23 °C		
Weight change		[%]	18
Thickness increase		[%]	10

\* = Mode (typical value)

## Product data

- Dimensions in mm: 1000 x 1500, 1500 x 1500, 3000 x 1500
- Thicknesses in mm: 1.0/1.5/2.0/3.0
- Further dimensions and thicknesses are available on request

## Quality Management

ISO 9001  
ISO/TS 16949

## Environmental Management

ISO 14001

Do you have any questions about your application?  
The gasket information service will help you:

[gaskets@frenzelit.de](mailto:gaskets@frenzelit.de)

All previous versions of this prospectus cease to apply. Subject to technical amendment.

FZ17/08.10.001/FZ

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