

Technical data sheet in accordance with ASTM

# Material

## NBR NB702822

black

cross linking: sulfur

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### Physical properties

	nominal range	typical values	
<b>Density</b> ASTM D 1817	1.24 ±0.02	1.23	g/cm <sup>3</sup>
<b>Hardness</b> ASTM D 2240, Shore A	70 ±5	70	Shore
<b>Modulus</b> 100 %, ASTM D412	---	4.6	MPa
<b>Tensile strength</b> ASTM D 412	> 14	18.3	MPa
<b>Elongation at break</b> ASTM D 412	> 250	412	%
<b>Compression set</b> ASTM D 395, Slab B, 22 h, 100 °C, solid button	< 25	8	%
<b>Compression set</b> ASTM D 395, Slab B, 70 h, 100 °C, plied sheet	< 25	15	%
<b>Temperature range</b>	-30°C to 100°C		

### Declarations of conformity

This overview is purely informative and does not constitute a declaration of conformity (DoC). Please refer to the actual declaration of conformity (DoC) including the conditions and its validity period.

	Country	Part	Remark	Expires
ADI Free			see certificate	see DoC
DVGW Baumusterprüfzertifikat Gas	D	not defined	DIN EN 549 H3 B1	06 / 2027
DVGW type examination certificate Gas	D	not defined	DIN EN 549 H3 B1	06 / 2027
Info ROHS and ELV			EU 2000/53 (ELV) including EU 2011/65 and EU2015/863 (ROHS III)	see DoC

### Freudenberg

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### Change after aging in Air: 70h/100°C

Hardness (ASTM D573)  
Tensile strength (ASTM D573)  
Elongation at break (ASTM D573)

IRHD  
MPa  
%

### Typ. values

Base value	After aging	difference
70	75	5
18.3	18.3	-0 %
412	351.8	-15 %

O-Ring 30\*2mm

### Change after aging in Fuel A: 70h/23°C

Hardness (ASTM D471, Shore A)  
Tensile strength (ASTM D471)  
Elongation at break (ASTM D471)  
volume change (ASTM D471)

Shore  
MPa  
%  
%

### Typ. values

Base value	After aging	difference
70	73	3
18.3	16.2	-11 %
412	324.6	-21 %
	2	

### Change after aging in Fuel B: 70h/23°C

Hardness (ASTM D471, Shore A)  
Tensile strength (ASTM D471)  
Elongation at break (ASTM D471)  
volume change (ASTM D471)

Shore  
MPa  
%  
%

### Typ. values

Base value	After aging	difference
70	60	-10
18.3	12.7	-31 %
412	246.4	-40 %
	25.5	

### Change after aging in IRM 901: 70h/100°C

Hardness (ASTM D471, Shore A)  
Tensile strength (ASTM D471)  
Elongation at break (ASTM D471)  
volume change (ASTM D471)

Shore  
MPa  
%  
%

### Typ. values

Base value	After aging	difference
70	78	8
18.3	18.8	3 %
412	280.6	-32 %
	-8.5	

### Change after aging in IRM 903: 70h/100°C

Hardness (ASTM D471, Shore A)  
Tensile strength (ASTM D471)  
Elongation at break (ASTM D471)  
volume change (ASTM D471)

Shore  
MPa  
%  
%

### Typ. values

Base value	After aging	difference
70	71	1
18.3	17.2	-6 %
412	293.3	-29 %
	7.6	

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### Change after aging in Water: 70h/100°C

#### Typ. values

Hardness (ASTM D471, Shore A)  
volume change (ASTM D471)

Shore  
%

Base value	After aging	difference
70	71	1
	7.7	

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Tested after ASTM D 2000: M 2 BG 714 B14 EA14 EF11 EF21 EO14 EO34 Z1

		nominal range	typical values
Hardness	Shore	70 ±5	69
Tensile strength	MPa	min. 14	15.4
Elongation at break	%	min. 250	328
<b>A14 Change after aging in Air 70h/100°C</b>			
Hardness	Shore A	---	4
Tensile strength	%	---	1.3
Elongation at break	%	---	-10.2
<b>B14 Compression set 22h/100°C</b>			
	%	25	6.3
<b>EA14 Change after aging in Distilled water 70h/100°C</b>			
Hardness	Shore A	±10	-4
Volume	%	±15	8.2
<b>EF11 Change after aging in Fuel A 70h/23°C</b>			
Hardness	Shore A	±10	-3
Tensile strength	%	-25	-8.5
Elongation at break	%	-25	-12.3
Volume	%	-5 to 10	3.5
<b>EF21 Change after aging in Fuel B 70h/23°C</b>			
Hardness	Shore A	0 to -30	-15
Tensile strength	%	-60	-28.4
Elongation at break	%	-60	-29.5
Volume	%	0 to 40	31.3
<b>EO14 Change after aging in IRM 901 70h/100°C</b>			
Hardness	Shore A	-5 to 10	8

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Tensile strength	%	-25	9.6	
Elongation at break	%	-45	-21.6	
Volume	%	-10 to 5	-8	
<b>EO34 Change after aging in IRM 903 70h/100°C</b>				
Hardness	Shore A	-10 to 5	-6	
Tensile strength	%	-45	-17.9	
Elongation at break	%	-45	-33.4	
Volume	%	0 to 25	11.9	
<b>Z1 Low temperature test ASTM D1329, TR10</b>	°C	---	-29.7	

The given values are based on a limited number of tests on standard test pieces (2mm sheets). The data from finished parts can deviate from above values depending on the manufacturing process and the component geometry.

The data represents our present empirical values. It is incumbent on the person placing the order to examine whether it is suitable for its intended purpose, before using the product. All questions regarding the guarantee of this product are in line with our terms and conditions, inasmuch as statutory provisions do not plan for something else.

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