

Material

HNBR HN703901

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Physical properties	nominal range	typical values		
Density ASTM D 2240	1.23 ±0.02	1.23	g/cm ³	
Hardness DIN ISO 7619-1, Shore A	70 ±5	74	Shore	
Tensile strength ISO 37	---	21	MPa	
Elongation at break ISO 37	---	280	%	
Rebound resilience ISO 4662	---	45	%	
Low temperature test ISO 2921, TR10	---	-22	°C	
Low-temperature resistance ISO 812, Brittleness	---	-42		
Compression set DIN ISO 815, 22 h, 150 °C	---	17	%	
Compression set DIN ISO 815, 70 h, 150 °C	---	32	%	
Compression set DIN ISO 815, 24 h, 125 °C	---	13	%	
Compression set DIN ISO 815, 22 h, 175 °C	---	20	%	
Compression set DIN ISO 815, 70 h, 175 °C	---	40	%	
Compression set DIN ISO 815, 168 h, 100 °C	---	20	%	
Compression set DIN ISO 815, 70 h, 23 °C	---	10	%	
Ozone Resistance ASTM D 1149, 40 °C, 72 h, 50 pphm, 20% all., pass	---	0	Rating	

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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
		EU 2000/53 (ELV) including EU 2011/65 and EU2015/863 (ROHS III)	see DoC

Change after aging in Air: 168h/100°C

		Typ. values		
		Base value	After aging	difference
Hardness (ASTM D2240, Shore A)	Shore	74	76	2
Tensile strength (ISO 37)	MPa	21	21.6	3 %
Elongation at break (ISO 37)	%	280	252	-10 %
volume change (ISO 188)	%	100	99	-1 %

Change after aging in Air: 70h/125°C

		Typ. values		
		Base value	After aging	difference
Hardness (ASTM D2240, Shore A)	Shore	74	77	3
Tensile strength (ISO 37)	MPa	21	21.4	2 %
Elongation at break (ISO 37)	%	280	294	5 %
volume change (ISO 188)	%	100	99	-1 %

Change after aging in Air: 70h/150°C

		Typ. values		
		Base value	After aging	difference
Hardness (ASTM D2240, Shore A)	Shore	74	79	5
Tensile strength (ISO 37)	MPa	21	20	-5 %
Elongation at break (ISO 37)	%	280	252	-10 %
volume change (ISO 188)	%	100	98	-2 %

Change after aging in Air: 168h/150°C

		Typ. values		
		Base value	After aging	difference
Hardness (ASTM D2240, Shore A)	Shore	74	82	8
Tensile strength (ISO 37)	MPa	21	22.7	8 %
Elongation at break (ISO 37)	%	280	210	-25 %
volume change (ISO 188)	%	100	96	-4 %

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Change after aging in Air: 70h/175°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)

Shore
MPa
%

Typ. values			
Base value	After aging	difference	
74	82	8	
21	18	-14 %	
280	160	-43 %	

Change after aging in Air: 24h/200°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 188)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	84	10	
21	12.6	-40 %	
280	106	-62 %	
100	94	-6 %	

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

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	72	-2	
21	19.9	-5 %	
280	260	-7 %	
	2.3		

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

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	51	-23	
21	11.1	-47 %	
280	145	-48 %	
	38		

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

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	46	-28	
21	9	-57 %	
280	120	-57 %	
	60		

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Change after aging in IRM 901: 70h/125°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

	Shore			
	74	77		3
	MPa	21	21.4	2 %
	%	280	272	-3 %
	%		-2.5	

Typ. values

Base value After aging difference

Change after aging in IRM 901: 70h/150°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

	Shore			
	74	74		0
	MPa	21	19.1	-9 %
	%	280	215	-23 %
	%		-2.5	

Typ. values

Base value After aging difference

Change after aging in IRM 901: 168h/150°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

	Shore			
	74	79		5
	MPa	21	17.2	-18 %
	%	280	212	-24 %
	%		-4	

Typ. values

Base value After aging difference

Change after aging in IRM 902: 168h/150°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

	Shore			
	74	67		-7
	MPa	21	23.1	10 %
	%	280	238	-15 %
	%		8	

Typ. values

Base value After aging difference

Change after aging in IRM 903: 70h/125°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

	Shore			
	74	69		-5
	MPa	21	20.8	-1 %
	%	280	266	-5 %
	%		8	

Typ. values

Base value After aging difference

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Change after aging in IRM 903: 70h/150°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	65	-9	
21	18.9	-10 %	
280	252	-10 %	
	15		

Change after aging in IRM 903: 168h/150°C

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	65	-9	
21	16.8	-20 %	
280	210	-25 %	
	16		

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

Hardness (ASTM D2240, Shore A)
Tensile strength (ISO 37)
Elongation at break (ISO 37)
volume change (ISO 1817)

Shore
MPa
%
%

Typ. values			
Base value	After aging	difference	
74	71	-3	
21	18.9	-10 %	
280	252	-10 %	
	3		

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No ASTM D2000 properties available

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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