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Revision 1

Material test report HNBR 90

Temp. range **-55°C / +160°C**

Colour Black

Property	Unit	Test method	Test parameter	Value
Hardness	Shore A	ASTM D 2240		90±5
Tensile strength	MPa	ASTM D 412		18,5
Ultimate elongation	%	ASTM D 412		110
Specific gravity	g/cm^3	ASTM D 297		1,27
Compression set	%	ASTM D 395 B/1	24h / 150°C	15
Compression set	%	ASTM D 395 B/1	70h / 125°C	24
Compression set	%	ASTM D 395 B/1	70h / 150°C	35
Low temp. DSC glass transition	°C	DIN 53545	DSC glass transition	-40
Low temp. TR10	°C	ASTM D 1329	TR10	-38
Low temp. brittle point	°C	ASTM D 2137 A	brittle point	-48

Changes of properties after ageing

Medium	Test method	Time	Temperature	hardness	Tensile strength	Ultimate elongation	Volume
		H	°C	Points	%	%	%
Air	ASTM D 573	70	125	+1,7	-6,8	-13	
Pentan pentane	ASTM D 471	70	23	+2,3			+8,8
ASTM Öl 1 ASTM oil 1	ASTM D 471	70	150	-1,5	-7,6	-13,1	+2,5
ASTM IRM oil 903	ASTM D 471	70	150	-21	-16	-22,7	+39

Remarks:

HNBR 19% ACN (PEROXIDE CURED, REINFORCED WITH CARBON BLACK).
OIL/GAS APPLICATIONS - LOW TEMPERATURE CAPABILITY,
ANTI EXPLOSIVE DECOMPRESSION
NACE TM0187 TESTED - SOUR FLUID TEST
NORSOK M710 - Annex B Approved - Rapid Gas Decompression Resistance

The above indicated data were determined to the best knowledge according to modern laboratory standards on standardised test specimen. If these data are compared with data which were determined on finished parts it may come to variations.