

M SEALS HNBR-B95

Extreme Hard Grade Hydrogenated-Acrylonitrile-Butadiene-Rubber

M SEALS
- Part of Diploma PLC

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



High Temperature



Chemical Resistance



Wear Resistance

Description

HNBR-B95 is our extreme hard grade Hydrogenated-Acrylonitrile-Butadiene-Rubber material commonly referred to as HNBR, H-NBR, or Highly Saturated Nitrile (HSN). This material exhibits some very useful physical characteristics including excellent abrasion and extrusion resistance, which make it a good choice for high pressure applications.

HNBR is often a useful intermediate material for applications where standard Nitrile performance is not quite good enough, but Fluorocarbon rubbers (FKM/Viton™) are overkill or incompatible with the media to be sealed.

HNBR-B95 provides good chemical resistance in the most commonly used hydraulic fluids, and applications where crude oils, low level sour oils/gases (H₂S), animal and vegetable oils are found.

Caution should be taken when utilising this material as the increased hardness can inhibit installation in stretch fit applications, because of this, fully open or semi-open seal grooves are advisable.

Physical Properties

Property	Test method	Unit	Typical Value
Colour			Black
Density	ISO 1183-1	g/cm ³	1.24
Hardness	ISO 7619-1	Shore A	95 (+/-5)
Tensile Strength	DIN 53504	MPa	≥22.7
Tensile Modulus 100%	DIN 53504	MPa	≥19.2
Elongation at break	DIN 53504	%	≥137
Tear Strength	ISO 34-1 B	N/mm	≥5.1
Rebound resilience	DIN 53512	%	25
Abrasion	DIN 53516	mm ³	117
Compression set (25% Strain 24 Hours @ 100°C)	ISO 815-1	%	≤34.9
Compression set (25% Strain 24 Hours @ 150°C)	ISO 815-1	%	≤36.9
Minimum service temperature		°C	-20
Maximum service temperature		°C	+150
Maximum service temperature (Short term)		°C	+170
Maximum service temperature (In Steam)		°C	+120

Main Characteristics

- Excellent extrusion resistance
- Useful temperature range
- Good abrasion resistance

Typical Products

- O-Ring Energised U-Seals
- Static Seals & O-Rings
- Scraper/Wiper seals

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