

M SEALS HNBR-B90

Hard Grade Hydrogenated-Acrylonitrile-Butadiene-Rubber

MATERIAL DATA SHEET (Version 6.0 – 05.2022)



High Temperature



Chemical Resistance

Description

HNBR-B90 is our 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, while also offering a wide temperature range. 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-B90 provides good chemical resistance in the most commonly used hydraulic fluids, and applications where crude oils, sour oils/gases (H₂S), animal and vegetable oils are found.

Physical Properties

Property	Test method	Unit	Typical Value
Colour			Black
Density	ISO 1183-1	g/cm ³	1.45
Hardness	ISO 7619-1	Shore A	90 (+/-5)
Tensile Strength	DIN 53504	MPa	>9
Tensile Modulus 100%	DIN 53504	MPa	>6
Elongation at break	DIN 53504	%	>220
Tear Strength	ISO 34-1 B	kN/m	>20
Rebound resilience	DIN 53512	%	30
Compression set (25% Strain 24 Hours @ 70°C)	ISO 815-1	%	<26
Compression set (25% Strain 24 Hours @ 100°C)	ISO 815-1	%	<32
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

- Good chemical resistance
- Useful temperature range
- Good abrasion resistance
- Good physical properties

Typical Products

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

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