

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

Tel: 0044 (0) 114 243 2777 . Fax: 0044 (0) 114 242 2300 . Mail: sales.esd@m-seals.co.uk . Web: www.m-seals.com

M Seals believes that the information above is an accurate description of the typical characteristics and/or uses of the product or products, however M Seals makes no warranty, expressed or implied, that parts manufactured from this / and or any other material will perform satisfactorily in the customers application. It is the customers responsibility to thoroughly test products in their specific application to determine performance, efficiency and safety for each end-use product, device or application. The information and data contained herein are based on standard test pieces according to the corresponding ISO, DIN & ASTM standards and cannot be directly related to finished seals, gaskets or other sealing products and should be used only as a general guide.