

M SEALS HNBR-LT-RGDB85

Hydrogenated-Acrylonitrile-Butadiene-Rubber

Low Temperature RGD Resistant Peroxide Cured HNBR



MATERIAL DATA SHEET (Version 6.0 – 05.2022)



High Temperature



Low Temperature



Norsok M710

Description

HNBR-LT-RGDB85 is a Peroxide cured Hydrogenated-Acrylonitrile-Butadiene-Rubber (HNBR / HSN) which has been optimised for resistance to the risk of Rapid Gas Decompression (RGD) and to allow its use in low temperature applications. This material has a low Acrylonitrile content (ACN content) which provides it with low temperature flexibility, the reduction of the ACN content however forces a reduction in chemical resistance.

HNBR-LT-RGDB85 also exhibits good abrasion and compression set resistance, while offering a wide operating 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 incompatible with the media to be sealed.

HNBR-B85 provides good chemical resistance in the most commonly used hydraulic fluids, animal and vegetable oils, crude oils and applications where low-level sour oils/gases (H₂S), are found.

Physical Properties

Property	Test method	Unit	Typical Value
Colour			Dark Grey/Black
Density	ISO 1183-1	g/cm ³	1.39
Hardness	ISO 7619-1	Shore A	83(+/-5)
Tensile Strength	DIN 53504	N/mm ²	7.8
Tensile Modulus 100%	DIN 53504	N/mm ²	3.4
Elongation at break	DIN 53504	%	273.2
Tear Strength	ISO 34-1 B	N/mm	10.4
Rebound resilience	DIN 53512	%	39
Compression set (25% Strain 24 Hours @ 70°C)	ISO 815-1	%	10.6
Compression set (25% Strain 24 Hours @ 100°C)	ISO 815-1	%	11.9
Compression set (25% Strain 24 Hours @ 150°C)	ISO 815-1	%	15.6
Minimum service temperature		°C	-40
Maximum service temperature		°C	+150

Norsok M-710 RGD resistance in 10% CO ₂ + 90% CH ₄ @ 15MPa - 100°C		
Material - Seal	Summary Rating	Conclusion
HNBR-LT-RGDB85	0 0 0 0	PASS

Main Characteristics

- Good chemical resistance
- Good low temperature flexibility
- Good abrasion resistance
- Good physical properties

Typical products

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

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