Material Data Sheet HN901-RGD-LT (peroxide cross linked)

General

HN901-B85-RGD-LT is a black hydrogenated NBR commonly referred to as H-NBR, with excellent physical characteristics and chemical resistance to the most common hydraulic fluids, sour oils/gases (H2S) and crude oils.
HN901-B85-RGD-LT has been optimized to withstand the risk of rapid gas decompression (RGD) or explosive decompression (ED) at low temperature applications in the oil and gas industry.

Typical Physical properties

Density:	DIN ISO 1183-1	g/cm³	1,39 ±0,03
Hardness at 23°C:	DIN ISO 7619-1	Shore A	83 ±5
100% Modulus:	DIN 53504	N/mm²	3,4 *
Tensile strength:	DIN 53504	N/mm²	7,8 *
Elongation at break:	DIN 53504	%	273,2*
Tear resistance:	DIN ISO 34-1 B/b	N/mm	10,4 *
Rebound resiliance:	DIN 53512	%	39,0 *
Compression set, 24h, 70°C, 25%:	DIN ISO 815-1	%	10,6 *
Compression set, 24h, 100°C, 25%:	DIN ISO 815-1	%	11,9*
Compression set, 24h, 150°C, 25%:	DIN ISO 815-1	%	15,6 *

* mentioned values are subject to a tolerance of +/- 25%

Temperature range: -40°C to 150°C

Chemical resistance

Resistant to: Water up to 90°C, HFA, HFB, HFC Fluids, Vegetable Oils, Silicone Oils, Biodegradable Oils, Diesel Fuel, Gasoline Fuel, Mineral Oils, Air up to 80°C.
Not Resistant to: Steam from 140°C, Acetone

Main application

Static and dynamic seals, O-Rings, flange seals, rubber energizers (preload elements) in the oil and gas industry, especially in applications with high gas pressure.

Available certificates

The compound has passed the RGD test at MERL UK with the highest possible rating of 0000.
Test conditions, according Norsok M-710, were 10 decompressions cycles with 90% Methane + 10% Carbon dioxide gas at 100° C and 150 bar test pressure.

Analysis and Evaluation

Values mentioned above are based on several tests performed during development and production of the material. Tests have been performed on standard test pieces specified within the relevant standard within the laboratory. Tests performed on any other pieces which are not related to the corresponding standard or made out of any (semi)finished part or any other part deviating in production process, dimension or age of the material from above may result in different values. The data represents our present empirical values and does not disengage the end user from their obligation to examine the usage of the material for each specific application.

We reserve the right to update this data sheet from time to time if new empirical values are available. Errors and omissions excepted.

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