HNBR BOP 85P

HNBR-BOP85P-01 · HNBR · 85 Shore A · Peroxide cure · −20 °C to +150 °C ○ NO POLE MARK

For the seals that close a well.

READ THE CODE HNBR-BOP85P-01 = HNBR, BOP duty (blowout preventers), 85 Shore A, P for peroxide cure, recipe 01.

DEVELOPMENT TARGETS: NOT MEASURED RESULTS. Every value on this sheet is a design target or a release limit for development. Replace targets with measured typical values (mean of production lots, with the number of lots) and the test report reference before external use.

Description

An 85 Shore A HNBR for blowout preventer ram packers, top seals, bonnet seals and bonded seals: high tear strength, strong rubber-to-metal bonding, and resistance to drilling fluids, sour gas and RGD.

POLYMER	HNBR (hydrogenated nitrile)
DUTY	BOP: Pressure control
CHEMISTRY	Peroxide-cured hydrogenated nitrile, bonding grade
CURE	Peroxide
HARDNESS	85 Shore A nominal
DESIGN RANGE	−20 °C to +150 °C
COLOUR	Black
PORTFOLIO	Wave 1, must-have
POLE MARKS	None

Applications

- Ram BOP packers and top seals
- Bonnet and door seals
- Bonded seals in BOPs and choke and kill equipment
- Wellhead and pressure-control bonded components

Properties: targets and release limits

PROPERTY	TARGET	RELEASE LIMIT	UNIT	TEST METHOD
Hardness	**85**	**80 to 90**	Shore A	ASTM D2240 / ISO 48-4, 1 s
Tensile strength	**22**	**min 18**	MPa	ASTM D412 die C / ISO 37 type 2
Elongation at break	**300**	**min 220**	%	ASTM D412 die C / ISO 37 type 2
Tear strength	**48**	**min 40**	kN/m	ASTM D624 die C
Compression set, 70 h at 150 °C	**25**	**max 35**	%	ASTM D395 method B, button
TR10	**−25**	**max −22**	°C	ASTM D1329 / ISO 2921
Bond to steel	**9**	**min 7, rubber failure**	kN/m	ASTM D429 method B (90° peel)
IRM 903, 168 h at 150 °C, volume change	**+8**	**max +15**	%	ASTM D471 / ISO 1817

Typical values are indicative and are not a warranty. Targets are design values, not measured results. The user is responsible for confirming suitability in the actual application. Pascalor · Compounds with a paper trail.

Qualification plan

The grade code says what this compound is designed for. This table says what it has passed: a duty is claimed only once its report is on file. Evidence for the BOP duty: Compound data in the named drilling fluids; element testing to API 16A is done on the preventer.

TEST	STANDARD OR METHOD	CONDITIONS	STATUS
Drilling fluid ageing	In-house method, published with results	Water-based and oil-based mud at rated temperature	Planned
BOP elastomer requirements	API 16A, design verification with an OEM	On the OEM's ram and packer designs	Planned
Rapid gas decompression	ISO 23936-2 Annex B / NORSOK M-710	90/10 CH4/CO2, 15 MPa, 100 °C, 8 cycles, about 2 MPa/min decompression; 5.33 mm and 6.99 mm sections; target rating 0000 to 1111 (0 to 3 passes)	Planned
Sour ageing and life prediction	ISO 23936-2 Annex A / NORSOK M-710	Sour multiphase fluid (hydrocarbon liquid, water, gas with H2S) at three temperatures; Arrhenius extrapolation to service temperature	Planned

Processing

Press cure guide: 10 min at 180 °C. Post-cure guide: 4 h at 150 °C (optional, for lowest compression set).

Storage and lot record

Target 4 months at or below 25 °C. Every lot ships with its Passport: results against these limits, the rheometer cure curve and the raw-material lots.

How to read this sheet

Target: the value the compound is designed to reach, used until measured data exists.

Typical: the mean of measured production lots, stated with the number of lots. Replaces the target.

Release limit: the window every lot is tested against. A lot outside it does not ship.

Method: the standard, specimen and conditions behind each number.

Supply

Supplied as uncured compound by the batch, with the lot Passport. Test slabs, buttons and trial quantities are available for qualification.

Tell us the fluid, the temperature range, the pressure and the seal design, and we will say whether this grade fits, and which one does if it does not.

Pole marks

This is a reference or general grade and carries no pole mark. The red HPHT mark is for high-pressure duty at 160 °C or above; the blue HPLT mark is for sealing under pressure at −30 °C or below.

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