NBR BOP 75S

NBR-BOP75S-01 · NBR · 75 Shore A · Sulfur cure · −10 °C to +90 °C

NO POLE MARK

An annular packing compound for oil-based mud.

READ THE CODE NBR-BOP75S-01 = NBR, BOP duty (blowout preventers), 75 Shore A, S for sulfur 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

A 75 Shore A NBR for annular BOP packing units and other large elements in oil-based mud: high elongation, tear strength and fatigue life for repeated closures on pipe of different sizes.

Applications

- Annular BOP packing units for oil-based and synthetic mud
- Stripping elements and diverter packers
- Large moulded pressure-control elements

POLYMER	NBR (nitrile)
DUTY	BOP: Pressure control
CHEMISTRY	Sulfur-cured nitrile, high tear and fatigue grade
CURE	Sulfur
HARDNESS	75 Shore A nominal
DESIGN RANGE	−10 °C to +90 °C
COLOUR	Black
PORTFOLIO	Wave 2, probable
POLE MARKS	None

Properties: targets and release limits

PROPERTY	TARGET	RELEASE LIMIT	UNIT	TEST METHOD
Hardness	**75**	**70 to 80**	Shore A	ASTM D2240 / ISO 48-4, 1 s
Tensile strength	**20**	**min 17**	MPa	ASTM D412 die C / ISO 37 type 2
Elongation at break	**500**	**min 400**	%	ASTM D412 die C / ISO 37 type 2
Tear strength	**55**	**min 45**	kN/m	ASTM D624 die C
Compression set, 22 h at 100 °C	**20**	**max 30**	%	ASTM D395 method B, button
TR10	**−18**	**max −15**	°C	ASTM D1329 / ISO 2921
IRM 903, 70 h at 100 °C, volume change	**+6**	**max +12**	%	ASTM D471 / ISO 1817
Flex crack growth (DeMattia)	**To be measured**	**Reported, no limit yet**	cycles	ISO 133

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	Oil-based and synthetic mud at 90 °C	Planned
Fatigue	ISO 133 (DeMattia)	Crack growth	Planned
Closure testing	API 16A, with an OEM or rebuilder	On the packing unit design	Planned

Processing

Press cure guide: 8 to 10 min at 165 °C (thicker sections longer). Large elements: cure time set by section thickness and thermocouple data.

Storage and lot record

Target 3 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.

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.