HNBR Transformer 70P

HNBR-TRF70P-01 · HNBR · 70 Shore A · Peroxide cure · −40 °C to +130 °C ○ NO POLE MARK

A gasket that respects the insulating oil.

READ THE CODE HNBR-TRF70P-01 = HNBR, TRF duty (transformers and electrical equipment), 70 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

A 70 Shore A HNBR for transformer, switchgear and electrical equipment gaskets in mineral oil and in natural and synthetic esters: low compression set at temperature, low-temperature flexibility and a fluorine-free formulation.

Applications

- Power and distribution transformer tank and cover gaskets
- Switchgear and electrical equipment seals
- Bushing and tap-changer seals
- Radiator and conservator gaskets

POLYMER	HNBR (hydrogenated nitrile)
DUTY	TRF: electrical equipment
CHEMISTRY	Peroxide-cured hydrogenated nitrile, low acrylonitrile, transformer grade
CURE	Peroxide
HARDNESS	70 Shore A nominal
DESIGN RANGE	−40 °C to +130 °C
COLOUR	Black
PORTFOLIO	Wave 2, probable
POLE MARKS	None

Properties: targets and release limits

PROPERTY	TARGET	RELEASE LIMIT	UNIT	TEST METHOD
Hardness	**70**	**65 to 75**	Shore A	ASTM D2240 / ISO 48-4, 1 s
Tensile strength	**20**	**min 16**	MPa	ASTM D412 die C / ISO 37 type 2
Elongation at break	**350**	**min 250**	%	ASTM D412 die C / ISO 37 type 2
Compression set, 70 h at 125 °C	**18**	**max 25**	%	ASTM D395 method B, button
TR10	**−35**	**max −30**	°C	ASTM D1329 / ISO 2921
Mineral insulating oil (IEC 60296), 168 h at 125 °C, volume change	**+5**	**max +10**	%	ASTM D471 / ISO 1817
Natural ester (IEC 62770), 168 h at 125 °C, volume change	**+8**	**max +15**	%	ASTM D471 / ISO 1817
Compatibility with insulating oil	**Pass**	**pass**	—	ASTM D3455

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 TRF duty: Ageing in mineral and natural-ester insulating oils.

TEST	STANDARD OR METHOD	CONDITIONS	STATUS
Material compatibility with insulating oil	ASTM D3455	Mineral oil, natural and synthetic ester	Planned
Fluid immersion	ASTM D471	Mineral oil, natural ester, synthetic ester at 125 °C	Planned
Transformer OEM approval	Customer qualification	Per OEM	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.

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.