EPDM Steam 75P

EPDM-STM75P-01 · EPDM · 75 Shore A · Peroxide cure · −45 °C to +160 °C ○ NO POLE MARK

The power plant's steam and water seal.

READ THE CODE EPDM-STM75P-01 = EPDM, STM duty (steam and hot water), 75 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 75 Shore A peroxide-cured EPDM for steam, hot water, condensate and cooling water in thermal power plants: boiler feed and condensate pumps, valves, heat exchanger gaskets and expansion joints. Not for mineral oils.

POLYMER	EPDM (ethylene propylene diene)
DUTY	STM: steam and hot water
CHEMISTRY	Peroxide-cured EPDM
CURE	Peroxide
HARDNESS	75 Shore A nominal
DESIGN RANGE	−45 °C to +160 °C
COLOUR	Black
PORTFOLIO	Wave 1, must-have
POLE MARKS	None

Applications

- Boiler feed and condensate pump O-rings and mechanical seal secondaries
- Steam and hot water valves
- Plate heat exchanger gaskets (to about 150 °C)
- Cooling water systems and expansion joints
- District heating and process steam

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
Specific gravity	**1.12**	**±0.02 of approved value**	—	ASTM D297 / ISO 2781
Tensile strength	**14**	**min 11**	MPa	ASTM D412 die C / ISO 37 type 2
Elongation at break	**250**	**min 180**	%	ASTM D412 die C / ISO 37 type 2
Compression set, 22 h at 150 °C	**12**	**max 20**	%	ASTM D395 method B, button
TR10	**−45**	**max −40**	°C	ASTM D1329 / ISO 2921
Saturated steam, 168 h at 180 °C, hardness change	**−2**	**−5 to +5**	points	In-house autoclave method
Saturated steam, 168 h at 180 °C, volume change	**+3**	**max +8**	%	In-house autoclave method
Hot water, 1,000 h at 150 °C	**To be measured**	**Reported, no limit yet**	—	Long-term ageing (planned)
Mineral oil (IRM 903)	**Not suitable**	**–**	—	EPDM swells in mineral oils

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 STM duty: Steam or hot-water ageing at the rated temperature.

TEST	STANDARD OR METHOD	CONDITIONS	STATUS
Steam ageing	In-house autoclave method, published with results	168 h and 500 h at 160 °C and 180 °C	Planned
Hot water ageing	Long-term immersion	1,000 h at 150 °C	Planned
Pump OEM approval	Customer qualification	On boiler feed and condensate pump seals	Planned

Processing

Press cure guide: 10 min at 175 °C. Post-cure guide: 2 h at 150 °C (optional).

Storage and lot record

Target 6 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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