ELTEX® Superstress™ TUB121N6000

Product Technical Information

ELTEX® Superstress™ TUB121N6000 is a bimodal high-density polyethylene copolymer produced by INEOS Innovene-S process.
It is characterized as PE 100 Black compound in accordance with ISO 12162 based on ISO 9080 analysis.

ELTEX® Superstress™ TUB121N6000 is designed for the production of pipes by extrusion, as well as for the production of fittings in a broad range of shapes and dimensions by injection molding.

Benefits & Features

ELTEX® Superstress™ TUB121N6000 fulfils the PE 100-RC requirements according to the latest versions of the EN and ISO standards for the transport of water (EN 12201 and ISO 4427) and gas (EN 1555 and ISO 4437) under pressure, and for industrial applications (EN ISO 15494).

This PE 100-RC compound provides a step-out performance of increased stress cracking resistance and is designed to allow maximum safety under all installation conditions and reduction of installation costs using, for examples, no dig trenchless techniques, sandless laying or other non-conventional installation techniques that may increase the risk of scratches along the pipes.

ELTEX® Superstress™ TUB121N6000 conforms to the requirements of NSF/ANSI Standard 14 - Plastics Piping System Components and Related Materials for Potable Water Applications (PW).

Applications

- Gas
- Water
- Industrial

Properties	Conditions	Test Methods	Values	Units
Rheological				
Melt Flow Rate	190°C/5 kg	ISO 1133-1	0.3	g/10min
Physical				
Density	23°C	ISO 1183-1 & 17855-1	959	kg/m³
Thermal				
Vicat Softening Temperature	10N	ISO 306/A50	128	°C
Oxidation Induction Time (OIT)	210°C	ISO 11357-6	≥ 20	min
Pigmentation				
Carbon Black Dispersion		ISO 18553	≤ 3	Grade
Carbon Black Content		ISO 6964	2 to 2.5	%
Mechanical				
Tensile Strength at Yield	23°C	ISO 527-2	25	MPa
Tensile Strain at Break	23°C, 50 mm/min	ISO 527-2	≥ 350	%
Tensile Modulus	23°C, 1 mm/min	ISO 527-2	1100	MPa
Rapid Crack Propagation	0°C, 250 SDR11 pipes	ISO 13477	≥ 10	bar

Data should not be used for specification work

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Properties	Conditions	Test Methods	Values	Units
Resistance to Slow Crack Growth				
Notch Pipe Test	80°C, 9.2 bar	ISO 13479	≥ 1	year
Accelerated Notch Pipe Test	80°C, 9.2 bar, 2% Arkopal N100	ISO 13479	≥ 300	hours
FNCT	80°C, 2% Arkopal N100, 4 MPa	ISO 16770	≥ 1	year
Accelerated FNCT	90°C, 2% lauramine oxide, 4 MPa	ISO 16770	≥ 550	hours
Strain Hardening Test	80°C, 300 µm compression molded specimens	ISO 18488	≥ 70	MPa
Crack Round Bar Test	23°C, 12.5 MPa	ISO 18489	≥ 1.5 10^6	cycles
Point Loading Test	80°C, 2% Arkopal N100, 4 N/mm²	Hessel test method	≥1	year
Data should not be used for specification work				

Storage

The product should be stored in a dry and dust free environment at temperature below 50°C. Exposure to direct sunlight should be avoided as this may lead to product deterioration.
It is advised to process the product within maximum one year after delivery.

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