

# ELTEX<sup>®</sup> Superstress<sup>™</sup> TUB121N6000

## Product Technical Information

ELTEX<sup>®</sup> Superstress<sup>™</sup> 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<sup>®</sup> Superstress<sup>™</sup> 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<sup>®</sup> Superstress<sup>™</sup> 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.

## Applications

- Gas
- Water
- Industrial

| Properties  | Conditions           | Test Methods         | Values   | Units             |
|---|----------------------|----------------------|----------|-------------------|
| <b>Rheological</b>                                    |                      |                      |          |                   |
| Melt Flow Rate  | 190°C/5 kg           | ISO 1133-1           | 0.3      | g/10min           |
| <b>Physical</b>                                       |                      |                      |          |                   |
| Density   | 23°C                 | ISO 1183-1 & 17855-1 | 959      | kg/m <sup>3</sup> |
| <b>Thermal</b>  |                      |                      |          |                   |
| Vicat Softening Temperature                           | 10N                  | ISO 306/A50          | 128      | °C                |
| Oxidation Induction Time (OIT)                        | 210°C                | ISO 11357-6          | ≥ 20     | min               |
| <b>Pigmentation</b>                                   |                      |                      |          |                   |
| Carbon Black Dispersion                               |                      | ISO 18553            | ≤ 3      | Grade             |
| Carbon Black Content                                  |                      | ISO 6964             | 2 to 2.5 | %                 |
| <b>Mechanical</b>                                     |                      |                      |          |                   |
| 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               |
| <b>Data should not be used for specification work</b> |                      |                      |          |                   |

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|--|--|--------------------|-----------------------|--------|
| <b>Resistance to Slow Crack Growth</b> |  |                    |                       |        |
| 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 <sup>6</sup> | cycles |
| Point Loading Test                     | 80°C, 2% Arkopal N100, 4 N/mm <sup>2</sup> | Hessel test method | ≥ 1                   | year   |

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## 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.

## Regulatory Information

The product and uses described herein may be subject to specific requirements or limitations for use in certain applications like food contact, drinking water or medical devices. Further information may be obtained from the website [www.ineos.com](http://www.ineos.com) where a specific Regulatory Certificate is available for each grade under the heading "SDS & Regulatory Certificate".

Unless specifically indicated, the product mentioned herein is not suitable for applications in the medical or pharmaceutical sectors.

## Health and Safety Information

The product described herein may require precautions in handling. The available product health and safety information for this material is contained in the Safety Data Sheet (SDS) that may be obtained from the website [www.ineos.com](http://www.ineos.com). Before using any material, a customer is advised to consult the SDS for the product under consideration for use.

## Exclusion of Liability

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