Polyethylene

BorPEX™ ME2592

Medium Density Polyethylene for Crosslinked Pipes (PE-X)

Description

BorPEX ME2592 is a high molecular weight, medium density polyethylene specially designed for production of crosslinked pipes (PE-X)

Applications

BorPEX ME2592 is recommended for the production of crosslinked pipes used in

Plumbing
Heating
Industrial applications

The product is used for single as well as for multilayer pipes, where you then differentiate between plastic multilayer with integrated EVOH layer and aluminium multilayer pipes.

Specifications

BorPEX ME2592 is intended to fulfill following standards and regulations, in case of appropriate industrial manufacturing standard procedures applied and a continuous quality system is implemented.

DIN 16894
DIN 16895

Special features

BorPEX ME2592 is a ready made compound in pellet form for the production of crosslinkable pipes by the electron beam beta-irradiation process (PE-Xc) and included is a specially selected additive package to ensure:

Enhanced processability
Economical pipe production
Effective crosslinking behaviour
Excellent product consistency
High temperature resistance
High resistance to additive washout

Physical Properties

Property	Typical Value Data should not be used for specification work	Test Method
Density	936 kg/m3	ISO 1872-2/ISO 1183
Melt Flow Rate (190 °C/21,6 kg)	10 g/10min	ISO 1133
Flexural Modulus (2 mm/min)	680 MPa	ISO 178
Tensile Modulus (1 mm/min)	840 MPa	ISO 527-2
Tensile Strain at Break	> 600 %	ISO 527-2
Tensile Stress at Yield (50 mm/min)	16 MPa	ISO 527
Oxidation Induction Time (210 °C),	> 40 min	EN 728

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Processing Techniques

The actual conditions will depend on the type of equipment used.

Extrusion

The actual extrusion conditions will depend on the type of equipment used. They will also depend on size and wall thickness of the pipe produced.

Typically an HDPE extruder with modified screw design for HMW materials is used. The inner and outer surface of the pipe can be optimized with an additional heating unit at the tip of the die tool.

Melt temperature	210 - 230 °C
Tooling	220 °C

Crosslinking

Whereas normal PE requires higher irradiation dose, we recommend 8-12MRad for this product. This means less energy consumption and higher speed or thicker pipe walls possible when crosslinked.

Specific recommendations for processing conditions can be determined only when the application and type of equipment are known. Please contact your local Borealis representative for such particulars.

Storage

BorPEX ME2592 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odour generation and colour changes and can have negative effects on the physical properties of this product.

Safety

The product is not classified as a dangerous preparation.

Recycling

The product is suitable for recycling using modern methods of shredding and cleaning. In-house production waste should be kept clean to facilitate direct recycling.

Please see our Safety Data Sheet for details on various aspects of safety, recovery and disposal of the product, for more information contact your Borealis representative.

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Related Documents

The following related documents are available on request, and represent various aspects on the usability, safety, recovery and disposal of the products.

Recovery and disposal of polyolefins
Information on emissions from processing and fires
Safety Data Sheet
Statement on compliance to food contact regulations
Statement on compliance to regulations for drinking water pipes

Disclaimer

The product(s) mentioned herein are not intended to be used for medical, pharmaceutical or healthcare applications and we do not support their use for such applications.

To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability whatsoever for the accuracy and completeness of such information.

Borealis makes no warranties which extend beyond the description contained herein. Nothing herein shall constitute any warranty of merchantability or fitness for a particular purpose.

It is the customer's responsibility to inspect and test our products in order to satisfy itself as to the suitability of the products for the customer's particular purpose. The customer is responsible for the appropriate, safe and legal use, processing and handling of our products.

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