

# Polyethylene BorPEX™ HE2598-C2

High Density Polyethylene for Crosslinked Pipes (PE-X)



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## Description

**BorPEX HE2598-C2** is a high molecular weight, high density polyethylene specially designed for production of crosslinked pipes (PE-X)

## Applications

**BorPEX HE2598-C2** is recommended for the production of crosslinked pipes used in

Domestic water  
Heating  
Relining  
Plumbing

Industrial applications  
Domestic gas  
District heating

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 HE2598-C2** is intended to fulfill following standards and regulations, in case of appropriate industrial manufacturing standard procedures applied and a continuous quality system is implemented.

ASTM F 876

ASTM F 2023

## Special features

**BorPEX HE2598-C2** 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  
Excellent product consistency  
Effective crosslinking behaviour

High temperature resistance  
High resistance to additive washout  
High oxidative stability in chlorinated water applications

## Physical Properties

| Property                                       | Typical Value         | Test Method |
|--|-----------------------|-------------|
| Data should not be used for specification work |                       |             |
| Density  | 951 kg/m <sup>3</sup> | ISO 1183    |
| Melt Flow Rate (190 °C/21,6 kg)                | 8,5 g/10min           | ISO 1133    |
| Tensile Strain at Break (50 mm/min) (23 °C)    | > 600 %               | ISO 527-2   |
| Tensile Stress at Yield (50 mm/min) (23 °C)    | 26 MPa                | ISO 527-2   |

## Processing Techniques

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

HongRong Engineering Plastics Co.,Ltd.  
Head Office Tel. +85-2-6957-5415  
Research Center Tel.+188 1699 6168

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The actual 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 HE2598-C2** 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 dangerous.

## 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" / "Product safety information sheet" for details on various aspects of safety, recovery and disposal of the product. For more information, contact your Borealis representative.

## Related Documents

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

- Recovery and disposal of polyolefins
- Information on emissions from processing and fires
- "Safety data sheet" / "Product safety information sheet"
- Statement on compliance to food contact regulations
- Statement on compliance to regulations for drinking water pipes

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## 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.

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**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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