



# Polyethylene Borstar<sup>®</sup> ME3441

Yellow Medium Density Polyethylene Compound for Natural Gas Pipes

## Description

**Borstar ME3441** is a yellow, bimodal, cadmium free, medium density polyethylene compound classified as a MRS 8.0 material (PE80) produced with the advanced Borstar technology. It includes a combination of pigments and stabilisers to ensure excellent long-term thermal stability and UV-resistance and resistance to gas condensate. It also shows excellent resistance to rapid crack propagation and slow crack growth.

## Applications

**Borstar ME3441** is recommended for pressure pipe systems in the application fields of natural gas, particularly where flexibility and coilability is of importance. It also shows excellent resistance to rapid crack propagation and slow crack growth. Thanks to the structure, it gives outstanding extrudability, compared to conventional PE80 products.

## Physical Properties

		Typical Value*	Unit	Test Method
Density		944	kg/m <sup>3</sup>	ISO 1183
Melt Flow Rate	(190°C/5.0 kg)	0.80	g/10 min	ISO 1133
Tensile Stress at Yield	(50 mm/min)	19	MPa	ISO 527-2
Tensile Modulus	(1 mm/min)	800	MPa	ISO 527-2
Elongation at Break		> 600	%	ISO 527-2
Thermal Stability	(200°C)	> 20	min	EN 728
Resistance to Slow Crack Growth	(8 bar, 80°C)	> 2000	h	ISO 13479
Resistance to Rapid Crack Propagation		> 7	bar	ISO 13477

(Pc at 0°C, S4 test / pipe size 250 mm SDR11)

\* Data should not be used for specification work.

## Processing guidelines

The actual extrusion conditions will depend on the type of equipment used and the size and wall thickness of the pipe required. The following conditions should be used as a guideline when starting up the extruder.

Cylinder	180 - 210°C
Head	200 - 210°C
Die	200 - 210°C
Melt Temperature	200 - 220°C

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### Borealis A/S

Parallevej 16  
DK-2800 Kongens Lyngby (Denmark)  
Telephone: +45 45 96 60 00  
Fax : +45 45 96 61 23  
www.borealisgroup.com



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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 and handling**

**ME3441** 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 the product.

### **Safety**

**Borstar ME3441** is not classified as dangerous preparation.

Dust and fines from the product carry a risk of dust explosion. All equipment should be properly earthed.

Inhalation of dust should be avoided as it may cause irritation of the respiratory system.

Small amounts of fumes are generated during processing of the product. Proper ventilation is therefore required.

### **Recycling**

The product is suitable for recycling using modern methods of shredding and cleaning but for pipe applications only if approved in the relevant standard or specification. In-house production waste should be kept clean to facilitate direct recycling.

A Safety Data Sheet is available on request. Please contact your Borealis representative for more details on various aspects of safety, recovery and disposal of the product.

### **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, SDS  
Environmental Fact Sheet



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**Disclaimer**

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