

# POLYETHYLENE BorSafe™ ME3441

## YELLOW MEDIUM DENSITY POLYETHYLENE FOR PRESSURE PIPES

### DESCRIPTION

**BorSafe ME3441** is a yellow, bimodal medium density polyethylene classified as a MRS 8.0 material (PE80), with an optimum balance between flexibility and strength, produced with the advanced Borstar® Technology. Long term stability is ensured by an optimised stabilisation system.

### APPLICATIONS

**BorSafe ME3441** is recommended for gas pressure pipe systems where flexibility and coilability is of importance. It also shows excellent resistance to rapid crack propagation and slow crack growth. Attributed to the molecular structure, it gives outstanding extrudability, compared to conventional PE80 products.

### PHYSICAL PROPERTIES

Property		Test Method	Unit	Typical Value*
Density	(Compound)	ISO 1183-1 Method A	kg/m <sup>3</sup>	944
Melt Flow Rate	(190°C/5.0 kg)	ISO 1133	g/10 min	0.80
Tensile Modulus	(1mm/min)	ISO 527-2	MPa	800
Tensile Strain at Break	(50mm/min)	ISO 527-2	%	>600
Tensile Stress at Yield	(50mm/min)	ISO 527-2	MPa	19
Pigment Dispersion		ISO 18553	-	≤3
Oxidation Induction Time	(210°C)	ISO 11357-6	minutes	≥20
Resistance to Rapid Crack Propagation, S4 test	(Pc at 0°C, test pipe 250mm SDR11)	ISO 13477	bar	>3
Resistance to Slow Crack Growth	(8.0bar, 80°C)	ISO 13479	hours	>2000

\* Data should not be used for specification work.

## PROCESSING GUIDELINES

### 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. The following conditions may be used as a guide when starting up the extruder:

Cylinder	180 – 210°C
Head	200 – 210°C
Die	200 – 210°C
Melt temperature	200 – 220°C

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

## STORAGE AND HANDLING

**BorSafe 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 can have negative effects on the physical properties of the product.

## SAFETY

**BorSafe 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.

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

## 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.

## RELATED DOCUMENTS

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

Safety Information Sheet, SIS

Liability statements on:

- Statement on chemical, regulations and standards

## 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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