

## PRODUCT DATA SHEET

# POLYETHYLENE

## BorPure™ MB7581

HIGH DENSITY POLYETHYLENE FOR INJECTION AND COMPRESSION MOULDING

### DESCRIPTION

**BorPure™ MB7581** is a multimodal, high-density polyethylene intended for both injection and compression moulding. This grade offers excellent organoleptic properties, superior ESCR and stiffness integrated with excellent flowability to allow for easy processing and potential energy saving.

CAS-No. 25087-34-7

### APPLICATIONS

Caps and closures for taste-sensitive beverages like water.  
Closures for juice and tea  
Industrial jerry can and bottles lids.

### KEY FEATURES

Excellent organoleptic properties.  
Outstanding Environmental stress crack resistance and Stiffness balance  
High flowability which is equivalent to a unimodal HDPE – MFR2 12.0g/10min

### PHYSICAL PROPERTIES

Property	Typical Value*	Test Method
Density	958 kg/m <sup>3</sup>	ISO 1183
Melt Flow Rate (190°C/2.16kg)	4.0 g/10min	ISO 1133
Tensile Modulus (1mm/min)	1100 MPa	ISO 527-2
Tensile Stress at Yield (50mm/min)	26.0 MPa	ISO 527-2
Tensile Strain at Yield (50mm/min)	9.0 %	ISO 527-2
Flexural modulus (2mm/min)	1150 MPa	ISO 178
Charpy Notched Strength (23°C, Type1, A, Edge)	6.5 KJ/m <sup>2</sup>	ISO 179
Shore Hardness (Shore D, 15 sec.)	62	ISO 868
Shore Hardness (Shore D, 1 sec.)	67	ASTM D2240
VICAT Softening Temperature (A50)	124°C	ISO306
	125°C	ASTM D1525
VICAT Softening Temperature (B50)	70°C	ISO306
ESCR (10% Igepal – F 50%)	40 Hours	ASTM D1693-B

\* Typical properties and data should not be used for specification work

### PROCESSING CONDITIONS

This product is easy to process with standard injection moulding machines, as well as on compression moulding equipment

### Injection Moulding

Following injection moulding parameters should be used as guidelines:

Melt temperature:	190 - 230 °C
Mould temperature:	10 - 40 °C
Injection speed:	As high as possible.

Shrinkage 1 - 2 %, depending on wall thickness and moulding parameters

### Compression Moulding

Following compression moulding parameters should be used as guidelines:

Extruder temperature profile	160 - 200 °C
Melt temperature:	180 - 200 °C
Mould temperature:	10 - 40 °C

Shrinkage 1 - 2 %, depending on wall thickness and moulding parameters

Please contact your local Borouge representative for specific recommendations for processing conditions

### FOOD CONTACT REGULATIONS

**BorPure™MB7581** fulfils the food contact regulations in most countries. If required, contact your Borouge / Borealis representative for a certificate.

### STORAGE

**BorPure™MB7581** should be stored in dry conditions at temperature 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 physical properties of this product.

More information on storage can be found in Safety Information Sheet (SIS) for this product.

### SAFETY

The product is not classified as a hazardous mixture.

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.

Please see our Safety Information Sheet (SIS) for details on various aspects of safety, recovery and disposal of the product, for more information contact your Borouge representative.

### 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  
Statement on chemicals, regulations and standards  
Statement on compliance to regulations for drinking water pipes

## STANDARDS

Borouge is certified to various ISO standards, please refer to [Borouge.com](http://Borouge.com) for more information.

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