

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.

APPLICATIONS

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

SPECIAL FEATURES

- Excellent organoleptic properties
- Outstanding ESCR and Stiffness balance
- High flowability equivalent to a uni-modal HDPE MFR 12.0.

PHYSICAL PROPERTIES

Typical properties*	Conditions	Method	Value	Unit
Physical				
Density		ISO 1183	958	kg/m ³
Melt Flow Rate (MFR ₂)	(190°C / 2.16kg)	ISO 1133	4.0	g/10min
Mechanical				
Tensile Modulus	(1mm/min)	ISO 527-2	1100	MPa
Tensile Stress at Yield	(50mm/min)	ISO 527-2	26.0	MPa
Tensile Strain at Yield	(50mm/min)	ISO 527-2	9.0	%
Flexural Modulus	(2mm/min)	ISO 178	1150	MPa
Charpy notched impact	(23° C, Type 1, Notch A, Edgewise)	ISO 179	6.5	KJ/m ²
Shore hardness	(Shore D, 15 Sec.)	ISO 868	62	
	(Shore D, 1 Sec.)	ASTM D2240	67	
Thermal				
VICAT softening temperature	A50 (10N, 50°C/h)	ISO 306	124	°C
		ASTM D1525	125	°C
	B50 (50 N, 50°C/h)	ISO 306	70	°C
Additional Properties				
ESCR	(10% Igepal, F50)	ASTM D1693-B	40	Hours

* Data should not be used for specification work.

PROCESSING TECHNIQUES

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

a. 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

b. Compression moulding

In compression moulding, the following parameters can 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

STORAGE

BorPure™ MB7581 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which results in odor generation and color changes and can have negative effects on the 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 dangerous preparation.

Please see our Product 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.

Product safety information sheet (SIS)
Statement on chemicals, regulations and standards
Statement on compliance to food contact regulations

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.

Borouge 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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