

## Polyethylene

# BorPure™ MB5562

## High Density Polyethylene for Injection and Compression Moulding

### Description

BorPure MB5562 is a multimodal High Density Polyethylene intended for injection and compression moulding with strong focus on easy process ability and organoleptic performance in combination with excellent stiffness and environmental stress cracking resistance (ESCR) allowing further down weighting and consequently plastic waste reduction. This grade is especially designed for beverage caps and closures for still & carbonated water and soft drinks, teas and juices.

This grade offers optimum torque performance of the caps with improved organoleptics and without alteration of taste after exposure to UV light.

### Typical characteristics

BorPure™ MB5562 can be described with following typical characteristics:

|                                   |  |
|-----------------------------------|--|
| Improved process ability          | Outstanding stress crack resistance  |
| Excellent organoleptic properties | Good impact strength   |
| Optimum torque                    | Suitable for still & sparkling bottled water and carbonated soft drinks caps |

### Applications

BorPure™ MB5562 is intended for following applications:

- Caps and closures for beverage and food
- Caps and closures for still & sparkling water
- Caps and closures for carbonated soft drinks

### Physical properties

| Property  | Typical value * | Unit              | Test method   |
|---|-----------------|-------------------|---------------|
| Density   | 956             | kg/m <sup>3</sup> | ISO 1183-1    |
| Melt flow rate (190 °C/2.16 kg)                         | 0.80            | g/10min           | ISO 1133-1    |
| Tensile modulus (1 mm/min) <sup>1</sup>                 | 950             | MPa               | ISO 527-2     |
| Tensile stress at yield <sup>1</sup>                    | 24              | MPa               | ISO 527-2     |
| Tensile strain at yield (50 mm/min) <sup>1</sup>        | 9               | %                 | ISO 527-2     |
| Charpy impact strength, notched (23 °C)                 | 15              | kJ/m <sup>2</sup> | ISO 179-1/1eA |
| Izod impact strength, notched (23 °C)                   | 16              | kJ/m <sup>2</sup> | ISO 180       |
| Environmental stress crack resistance (Igepal 10%, F50) | 750             | h                 | ASTM D 1693-B |

\* Data should not be used for specification work

<sup>1</sup> Measured on injection moulded specimen

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### Processing techniques

COMPRESSION MOULDING recommended processing conditions

|                   |  |
|-------------------|--|
| Melt temperature  | 180 - 200°C  |
| Mould temperature | 10 – 40°C  |
| Shrinkage         | 1 – 2% depending on wall thickness and moulding parameters |

Note that actual conditions will depend on the type of equipment used.

INJECTION MOULDING recommended processing conditions

BorPure MB5562 can easily be processed with standard injection moulding machines.

|                   |  |
|-------------------|--|
| Melt temperature  | 190 - 250°C  |
| Mould temperature | 10 – 40°C  |
| Injection speed   | As high as possible  |
| Shrinkage         | 1 – 2% depending on wall thickness and moulding parameters |

### Packaging and storage

BorPure™ MB5562 should be stored in dry conditions at temperatures below 50°C and protected from UV-light. Improper storage can initiate degradation, which can result in odour generation and colour changes and can have negative effects on the physical properties of this product.

### Product compliance documents

Latest versions of product safety information sheets (PSIS), product safety data sheets (SDS) and other product liability documents are available in our website [www.borealisgroup.com](http://www.borealisgroup.com).

### Sustainability aspects

Borealis is ever mindful of the impact of our products on the planet. We promote Design for Circularity (DfC) and Design for Recycling (DfR) to conserve natural resources and to reduce the environmental impact of products over their entire lifetime (including production, use phase and after phase). DfR helps ensure that material can be effectively recycled while maximizing the material performance efficiency.

Further information on sustainability and Design for Recycling (DfR) can be found from our websites [www.borealisgroup.com](http://www.borealisgroup.com) and [www.borealiseverminds.com](http://www.borealiseverminds.com).

### 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.

Borealis 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.

No liability can be accepted in respect of the use of any Borealis product in conjunction with any other products and/or materials. The information contained herein relates exclusively to our products when not used in conjunction with any other material unless as specifically provided for in the test methods stated above.