

# BorPure™ MB5568 and MB5569 – A Lightweight, Sustainable, Cost Efficient HDPE Solution for Beverage Caps & Closures

### Bringing added value to support the growing trend of lightweighting in beverage closures

As the trend for lightweight, standard short neck closures (PCO 1881) gains momentum within the global beverage industry, a joint Borealis and Borouge development brings enhanced benefits and advantages to the whole caps and closures value chain. The collaborative innovation is a new, advanced grade of BorPure™, the Borealis family of multimodal organoleptic HDPE materials dedicated to caps and closures for carbonated soft drinks, bottled water, juices and teas. Designed to meet their specific needs, BorPure delivers high processability in combination with excellent organoleptic and outstanding production economy.



Beverage closures have been central to the industry's drive to reduce costs and increase competitiveness. This is reflected in the recent trend shift from two-piece PP closures to single piece HDPE closures, which allows material and cost saving with no compromise in seal and barrier quality or in functionality and convenience for the end consumer. Still guided by consumer convenience, the subsequent focus has been on closure lightweighting, which was a direct result of the trend in the beverage industry to reduce the weight of the PET bottles; leading to a lower material usage by designing to PCO 1881 closure standard for short neck bottles. With the introduction of new BorPure MB5568/9 with superior Environmental Stress Cracking Resistance (ESCR), Borealis and Borouge are enabling converters and brand owners to take the next performance and quality step in optimising costs and contributing further to output sustainability.

### Lowering material consumption raises cost efficiency

BorPure MB5568/9 builds on the unique Borealis Borstar® multimodal PE technology platform that offers high downgauging potential, without compromising performance properties. Using less material represents an important saving and provides a direct cost benefit for converters and brand owners. The balance of improved stiffness and superior ESCR exhibited by BorPure MB5568/9, compared with alternative material choices, enables further downgauging of caps and closures, providing converters and brand owners a competitive edge. Two solutions have been developed in order to meet different requirements of the market. BorPure MB5568 is organoleptic HDPE solution without slip agent suitable for bottled water, carbonated soft drinks, teas and juices. BorPure MB5569 is organoleptic HDPE solution with slip agent in order to optimize the torque performance. BorPure MB5569 is recommended for carbonated soft drinks, teas and juices. BorPure MB5569 is not recommended for water.

# PRODUCT NEWS

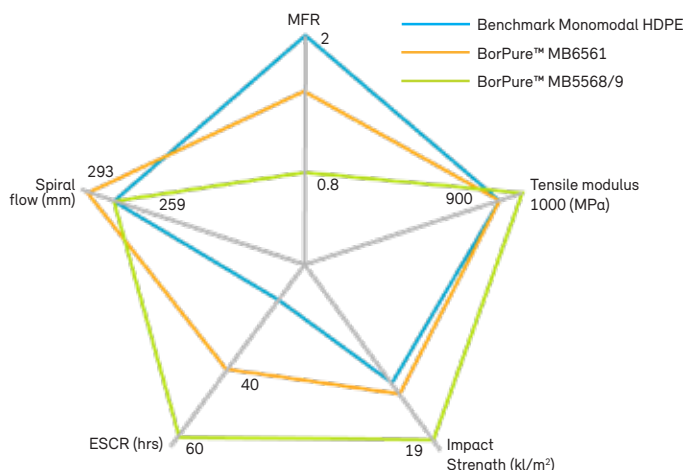
## Optimised balance between superior ESCR, material flowability and organoleptics

Due to the enhanced Borstar® polymer design, the new BorPure™ MB5568/9 delivers a 50% improvement on the already excellent Environmental Stress Crack Resistance (ESCR) of its predecessor, BorPure MB6561. Combined with flowability equal to benchmark monomodal MFR2 HDPE resin, it provides an excellent platform for further lightweighting by maintaining appearance and performance for the end consumer. Also, of overriding importance for the end consumer is that BorPure MB5568/9 has excellent organoleptic properties, which are regularly monitored to ensure quality consistency from batch-to-batch.

Caps and closures moulded in the material have no adverse influence on bottle contents, thus ensuring the preservation of the 'as bottled' taste of carbonated soft drinks, water, juices and teas, to satisfy consumers' and brand image demands.

## Underwritten by sustainability

Furthermore, with its material saving possibilities through downgauging and energy savings in production, BorPure MB5568/9 brings a higher level contribution to both resource conservation and lowering environmental impact through carbon footprint reduction, making it a cost effective and sustainable choice for the complete caps and closures value chain.



Physical Properties	Unit	Benchmark Monomodal HDPE	BorPure™ MB6561	BorPure™ MB5568/9
MFR (190°C/2.16 kg; ISO 1133)	g/10 min	2.0	1.5	0.8
Tensile modulus (ISO 527-2)	MPa	900	900	1000
Impact Strength (+23°C; ISO 273)	kJ/m²	13	14	19
ESCR on caps (5.3 bars; Borealis internal method)	failure time hr	13	40	60
Spiral flow (600 bars, 230°C)	mm	259	293	262

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**About Borealis** Borealis is a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers. With its head office in Vienna, Austria, the company currently has around 6,800 employees and operates in over 120 countries. Borealis generated EUR 8.3 billion in sales revenue and a net profit of EUR 906 million in 2018. Mubadala, through its holding company, owns 64% of the company, with the remaining 36% belonging to Austria-based OMV, an integrated, international oil and gas company. Borealis provides services and products to customers around the world in collaboration with Borouge, a joint venture with the Abu Dhabi National Oil Company (ADNOC).

Borealis and Borouge aim to proactively benefit society by taking on real societal challenges and offering real solutions. Both companies are committed to the principles of Responsible Care®, an initiative to improve safety performance within the chemical industry, and work to solve the world's water and sanitation challenges through product innovation and their Water for the World programme.

For more information visit: [www.borealisgroup.com](http://www.borealisgroup.com) · [www.borouge.com](http://www.borouge.com) · [www.waterfortheworld.net](http://www.waterfortheworld.net)

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### For more information:

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