



Borcycle™ M

advancing circularity
in rigid packaging



EverMinds™

Accelerating Action
on Circularity



BOREALIS

Giving packaging a second life



Due to their high versatility, plastics have become the leading material of our modern economy. However, only 14% of all plastic packaging is collected for recycling after use.

As a result, leading brand owners and retailers have pledged to increase the amount of recycled plastics in packaging to give waste a second life. Even so, a very limited amount of recyclate becomes packaging due to demanding application requirements. This is in part due to the fact that incorporating recyclates requires a fundamentally new set of expertise, but also because the value chain hasn't been able to rely on a consistent supply of high quality recyclates - until now.

Introducing Borcycle™ M

Borcycle™ M is an evolving recycling technology that transforms polyolefin-based waste streams into value-adding solutions for demanding applications. Borcycle™ M:

- safeguards the environment by driving the shift from linear to circular product offering.
- combines our innovation heritage in polymer technology with scalable and transformative recycling technology.
- enriches the existing polyolefin portfolio with pioneering circular solutions.
- ensure consistent and reliable production of high quality rPO compounds and advanced mechanical recyclates.

These solutions provide performance while helping our business partners address global environmental and regulatory challenges.

Borcycle™ M in rigid packaging

1. Addresses the value chain's sustainability targets in demanding applications, including bottles, caps and closures, thin wall packaging containers and lids.
2. Leverages our recycling and special compounding expertise with proprietary Borstar multimodal and Borstar® Nucleation Technology (BNT).
3. Offers rPP compounds with 55% recycling content and 100% recyclates in light, white and natural colors, characterized by high purity and low odours.

"Transform your business
with value-adding
recycling solutions."



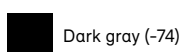
Meeting sustainability targets, whilst providing quality consistency

Advanced mechanical recyclates

rPP recyclates						
Resin name	MFR (230°C/2.16kg)	Tensile Modulus (Mpa)	Charpy NIS 23°C (kJ/m²)	Recycled content	Available colors	Type of application
AG1020MO-74	23	1.350	4.8	99%	Dark gray	Caps with glossy, dark color surface
AG1020MO-90	23	1.350	4.8	97%	White	Simple screw caps and cap designs
AG1020MO-99	23	1.250	4.5	99%	Natural	
Borcycle™ AH1040MO-90	40	1.350	4.8	97%	White, Natural	Thin wall packaging, pails
Borcycle™ AH1040MO-99	40	1.250	3.5	99%	Natural	Thin wall packaging, pails

rPP compounds

Resin name	MFR	Tensile modulus (MPa)	Charpy NIS 23°C (kJ/m²)	Recycled content	Available colors	Type of application
rPP compounds solutions with mechanical properties similar to homo PP						
Borcycle™ UF551MO	18	1.600	3.5	55%	light gray	Hinge caps with robust design requiring high stiffness
rPP compounds solutions with mechanical properties similar to block PP						
Borcycle™ UG521MO	27	1.350	6	55%	dark gray	Glossy, complex cap design requiring high impact and purity
Borcycle™ UG522MO	25	1.500	6	55%	dark gray, light color	Complex cap designs, spray pumps requiring high impact performance
Borcycle™ UJ599MO	70	1.400	4.5	55%	light color	Laundry tubs, lids, thin wall packaging containers, pails



Dark gray (-74)



Light gray (-72)



Light color (-70)















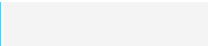
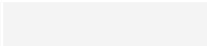







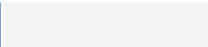




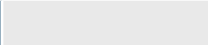




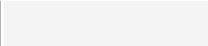




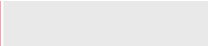




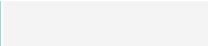




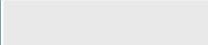




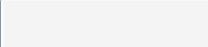




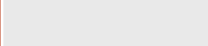
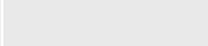



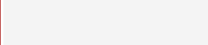
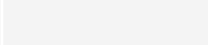



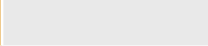
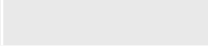
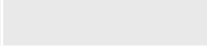


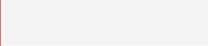
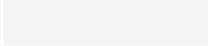
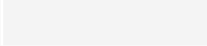


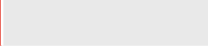
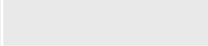
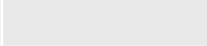
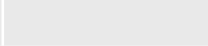

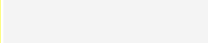
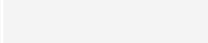
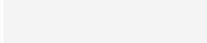
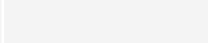
White (-90)


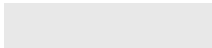


Natural (-99)

A wide range of color options with Borcycle™ M recyclates

While PCR may not offer the same colorability of virgin materials, Borcycle M products allow to consistently achieve a broad range of color options.

RAL Color	Color	XPF1011SY-74 (Dark Gray)	UG522MO-70 (Light Color)	XPF1011SY-90 (White)	XPF1011SY-99 (Natural)
RAL 3005 – Wine Red					
RAL 6005 – Moss Green					
RAL 5003 – Sapphire Blue					
RAL 6024 – Traffic Green					
RAL 5012 – Light Blue					
RAL 5024 – Pastel Blue					
RAL 7001 – Silver Gray					
RAL 3015 – Light Pink					
RAL 6027 – Bright Green					
RAL 6029 – Mint Green					
RAL 5015 – Sky Blue					
RAL 2012 – Salmon Orange					
RAL 3020 – Traffic Red					
RAL 1017 – Saffron Yellow					
RAL 3020 – Flame Red					
RAL 3026 – Bright Red					
RAL 1016 – Sulfur Yellow					

	possible to match with 3% Avient MB
	not possible to reach with max. 3% MB



*some of the above color tones may still be reached when adding MB amounts higher than 3%; please consult your Avient sales representative for further insights.

Dark gray (-74) offers good color absorption and can match a wide range of dark tones

Light color (-70) can be used as it is, or match bright colors, although requiring higher MB content than white (-90)

White (-90) can be used as it is, or match bright colors with minimum MB amounts

Natural color (-99) provides the most flexibility for reaching very bright colors

Due to its virgin content, due to the higher translucency, **Borcycle M rPP compounds** can further enhance colorability

Borcycle™ rPP compounds delivers peace of mind for the value chain

Potential for reduced cycle time

Enhanced mechanical properties vs. 100% recyclates

Ready-made solution with single point of responsibility for quality control

Higher flexibility with color matching

Borcycle PP compounds deliver Peace of Mind, offering a single point of responsibility for quality control and product liability, reducing the complexity and creating less risk when incorporating PCR, also thanks to its consistent batch to batch performance.

Compared to 100% recyclates, Borcycle M ready-made compounds offer enhanced mechanical properties, as well as potential for cycle time reduction and higher flexibility with color matching.



Launched in 2018, EverMinds™ is an umbrella brand uniting the wide range of Borealis activities and initiatives aimed at making plastics more circular. As a dedicated platform, EverMinds promotes a circular mind-set among all Borealis stakeholders.

The platform encompasses proprietary Borealis technologies as well as established brands such as Purpolen™ and Dipolen.™ It facilitates deeper collaboration between Borealis and its partners in order to develop innovative and sustainable polyolefins solutions based on the circular model of recycling, re-use and design for circularity. EverMinds also extends to pioneering corporate programmes such as Project STOP, and engagement in industry initiatives like the Polyolefins Circular Economy Platform (PCEP), and Project CEFLEX.

Be a part of the circular revolution for plastic. Be a part of EverMinds.™



EverMinds™ – Accelerating Action on Circularity

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Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions. In Europe, Borealis is also an innovative leader in polyolefins recycling and a major producer of base chemicals. We leverage our polymer expertise and decades of experience to offer value-adding, innovative and circular material solutions for key industries such as consumer products, energy, healthcare, infrastructure and mobility.

With customers in over 120 countries and head office in Vienna, Austria, Borealis employs around 6,200 people. In 2024, we generated a net profit of EUR 566 million. OMY, the sustainable chemicals, fuels and energy company with a focus on circular economy solutions, headquartered in Vienna, Austria, owns 75% of our shares. The Abu Dhabi National Oil Company (ADNOC), based in the United Arab Emirates (UAE), owns the remaining 25%.

In re-inventing essentials for sustainable living, we build on our commitment to safety, our people, innovation and technology, and performance excellence. We are accelerating the transformation to a circular economy of polyolefins and expanding our geographical footprint to better serve our customers around the globe. Our operations are augmented by two important joint ventures: Borouge (with ADNOC, headquartered in the UAE), and Baystar™ (with TotalEnergies, based in the US).

www.borealisgroup.com | www.borealiseverminds.com

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