

Media Release
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Borealis' EverMinds™ ambition moves industry one step closer to plastics circularity thanks to new recycling technology and improved recyclate

- **Borealis launches recycling technology Borcycle™ and new rPO compound at K 2019**
- **Borealis also announces significant material improvements to existing Purpolen® recyclate materials**

Borealis, a leading provider of innovative solutions in the fields of polyolefins, base chemicals and fertilizers, announces the introduction of a new plastics recycling technology, Borcycle™. This evolving technology will be used to produce high-quality compounds made of recycled polyolefins (rPO) such as the newly-launched Borcycle™ MF1981SY, an rPO with over 80% recycled content intended for use in visible appliance parts. Borealis also announces a series of significant material improvements to existing recyclates in the established Purpolen™ brand portfolio. These market launches and product improvements are important technology advancements and thus accelerate the transformation to a circular economy of plastics. Borealis and its wholly-owned subsidiary, mtm plastics, will showcase the new Borcycle technology and recyclate innovations at the K 2019 in October.

Borealis is leading the industry by applying its Visioneering Philosophy™ to the development and implementation of novel polyolefins-based solutions that enable plastics reuse, recycling, and recovery, and by designing for circularity. These wide-ranging activities are gathered under the symbolic roof of EverMinds™, the Borealis platform dedicated to promoting a more circular mind-set in the industry. By capitalising on its profound expertise in virgin polyolefins and collaborating with value chain partners, Borealis keeps discovering new opportunities for business growth within the circular economy.

Advancing technology to bring about polyolefin circularity

The new technology, **Borcycle**, transforms polyolefin-based waste streams into recyclate material such as pellets. As a transformative technology, it complements the existing Borealis virgin polyolefins portfolio with a range of pioneering, circular solutions. It unites state-of-the-art technology with the profound Borealis polymer expertise gained over decades.

As a scalable and modular technology, Borcycle has been developed to meet growing market demand for high-quality recyclate. Leading appliance brand owners, for one, have pledged to increase the

amount of recycled plastics in their goods. Yet until recently, producers have not been able to rely on a consistent supply of high-quality recyclate. The Borcycle technology will help address this challenge. Compounds made using the Borcycle technology deliver high performance, add value and offer versatility. Producers and brand owners in a range of industries will profit from the availability of high-quality recyclate that helps them meet environmental and regulatory challenges.

“Advancing technology is crucial if our aim is to implement value-creating solutions in the circular sphere,” claims Maurits van Tol, Borealis Senior Vice President, Innovation, Technology & Circular Economy Solutions. “Building tomorrow together’ means innovating, collaborating, focussing on the customer, and above all – taking action. The launch of our new recycling technology Borcycle is tangible proof of our commitment to achieving plastics circularity.”



photo : Recyclates from mtm save approximately 30% of CO2 emissions compared to virgin materials.
photo : © mtm plastics



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New and improved recyclate for high-end applications

Borcycle™ MF1981SY is the first of several upcoming launches of rPO solutions made under the umbrella of the Borcycle technology. Borcycle™ MF1981SY will be available to Borealis customers in Europe. The compound is an exciting addition to the rPO portfolio because it is a 10% talc-filled compound that contains over 80% recycled material. It offers an ideal balance between stiffness and impact. The compound is especially suited for use in visible black parts, for example in small appliances.

Like its relatives in the mtm plastics family of recyclate materials, Borcycle™ MF1981SY is a truly sustainable offering. Recyclates from mtm save approximately 30% of CO₂ emissions compared to virgin materials.

A number of significant improvements have been made to existing recyclate grades in the Purpolen portfolio.

Purpolen® PP Y40

- A recycled polypropylene (PP) with higher and improved flowability
- Melt flow index now improved to 40g/10min for the injection moulding of thin-walled parts, and long flow paths
- Target applications: pails, thin-wall packaging, appliance parts and more

Purpolen® PE FF

- A fine-filtered (FF) polyethylene (PE) regranulate
- Improved gel level via extrusion setup:
 - Modified screw by means of integrated mixing element
 - Finer melt filtration
 - Higher quality is now more comparable to competing conventional grades; is suitable for general purpose applications

Purpolen® PE Y01

- A 100%-PCR grade with low melt flow rate (MFR); for extrusion processes for pipes or larger bottles.
- In extrusion processes, lower MFR and lower gel content are prerequisites for the production of bottles and pipes (among other products), offering improved aesthetics, better surface finish and processing stability.

“Mechanical recycling is presently a most eco-efficient method to implement the principles of the circular economy,” explains Guenter Stephan, Head of Mechanical Recycling, Borealis Circular Economy Solutions. “Borealis and mtm plastics are leveraging their respective areas of expertise to make significant progress in achieving polyolefin circularity by upscaling recycling output and ensuring the reliable supply of high-quality plastics recycle for European producers, in particular.”

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About Borealis EverMinds™

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 the Polyolefins Circular Economy Platform (PCEP), and Project CEFLEX.

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 more than 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 globally, in collaboration with Borouge, a joint venture with the Abu Dhabi National Oil Company (ADNOC) and with Baystar™, a joint venture with Total and NOVA Chemicals in Texas, USA. www.borealisgroup.com

For more information, visit:

www.borealiseverminds.com
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