

EverMinds™ in action: Borealis *Closes The Loop* pilot project in Belgium eliminates single-use cups with innovative double-closed loop system

- **Borealis eliminates single-use plastic cups at its four sites in Belgium as part of a close-the-loop pilot project**
- **Founded on the principles of Reduce – Reuse – Recycle, the project reduces plastic material use by a factor of 20**
- **1.5 million single-use cups replaced with 30,000 reusable lightweight cups, collected and washed for reuse before ultimately being recycled**
- **The reusable cups can be mechanically recycled into high-quality recyclate, once again suitable for use as cups in the scheme, thereby closing the recycling loop**

Borealis is spearheading an innovative new pilot to test the advantages of a double-closed loop reuse and recycling system, leading the transition towards a more circular economy of plastics, fully in line with its [EverMinds™](#) ambition. Borealis *Closes The Loop* sees Borealis and its value-chain partners replace the 1.5 million single-use cups used annually at four of its Belgium sites with 30,000 reusable EcoCore® cups. Part of Borealis' mission to Reduce – Reuse – Recycle, the pilot first reduces the weight of plastics through these extremely lightweight cups, then reuses them to maximise their lifetime before seeking to recycle back into cups. This double-closed loop system is Borealis' latest innovation in driving the circular economy of plastics, expanding their scope up the waste hierarchy towards reduce and reuse, and using their own sites to demonstrate the benefits.

Double-closed loop recycling has the power to transform sustainability practices

Many reuse initiatives today focus on the consumer, for example reusable cup schemes run by high-street coffee shops. Schemes like this can have a relatively low uptake as the burden is on the consumer to decide whether or not they reuse a cup. In the business environment, reuse schemes are less prevalent and there is widespread consumption of single-use plastic cups. By using a double-closed

loop, the pilot aims to make reuse schemes more sustainable and economically viable. Replacing 1.5 million single-use cups with 30,000 reusable cups, weighing 15 grammes per cup, results in a material saving of 4.2 tons of single-use plastic per year.

Borealis Closes The Loop pilot project works as follows:

- Lightweight and durable EcoCore® foamed cups from Bockatech – engineered to require less material, with faster cycle times to lower material costs, energy use and environmental impact – reduce the amount of plastic from the outset.
- Produced locally by Miko Pac, the CO₂ breakeven of these cups versus single use is only at two refills per day.
- Using Miko Coffee Services machines, employees reuse the same cup throughout the day, eliminating on average four single-use consumptions. Cups are collected and washed by facilities company Goodless.
- Cups are individually tagged with unique Radio Frequency Identification (RFID) chips so the reuse cycle of each cup can be traced. This digitalisation means the system can be further optimised, for example analysing how many cups have been used and potentially reducing the number in circulation.
- When cups are removed from the reuse loop (for example due to wear and tear or damage), they move on to the material recycling loop.
- The cups can then be mechanically recycled into food-approved recycled material, which can be used to create more reusable cups, thereby fully closing the loop. This is as opposed to open-loop recycling, where material is often downcycled into a lesser quality product.

Findings and learnings from the pilot will be captured, recorded and published to demonstrate how to design and set up robust reuse systems superior to single-use plastics. Borealis will support its customers and value-chain partners with the implementation of further closed-loop systems.

“As a leading polyolefins producer, Borealis takes a 360° approach in driving the transition to a circular economy in alignment with our EverMinds™ ambition. With design for circularity at its core, Borealis Closes The Loop pilot project adopts our principles of Reduce – Reuse – Recycle,” says Lucrece Foufopoulos, Borealis Executive Vice President Polyolefins, Circular Economy Solutions and Innovation & Technology. “Life demands progress. It’s only by walking the talk that we can inspire the entire value-chain to close loops with us. As an industry, it’s critical we take ownership of where plastics end up. The double closed-loop system is another development in reducing the amount of plastics waste. This is how we re-invent for more sustainable living.”

For more information: www.borealisclsestheLoop.com

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About Borealis:

Borealis is one of the world's leading providers of advanced and circular polyolefin solutions and a European market leader in base chemicals, fertilizers and the mechanical recycling of plastics. We leverage our polymers expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries. In re-inventing for more sustainable living, we build on our commitment to safety, our people and excellence as we accelerate the transformation to a circular economy and expand our geographical footprint.

With head offices in Vienna, Austria, Borealis employs 6,900 employees and operates in over 120 countries. In 2019, Borealis generated EUR 8.1 billion in sales revenue and a net profit of EUR 872 million. OMV, the Austria-based international oil and gas company, owns 75% of Borealis, while the remaining 25% is owned by a holding company of the Abu-Dhabi based Mubadala. We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with the Abu Dhabi National Oil Company, or ADNOC, based in UAE); and Baystar™ (with Total, based in the US).

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.

Borealis in Belgium:

Borealis operates three production sites in Belgium, Kallo, Zwijndrecht and Beringen as well as a shared service centre in Mechelen with a total of about 1200 employees.

In Beringen, Borealis has two polypropylene (PP) plants and a compounding plant. The main application areas served from Borealis in Beringen are advanced packaging, hygiene and electronic applications and automotive industry.

At Kallo, Borealis produces polypropylene and also operates a dehydrogenation unit to convert propane to propylene. In 2019 the construction works for a new, world-scale propane dehydrogenation (PDH) plant in Kallo started. It will be one of the largest and most efficient facilities in the world.

In Zwijndrecht, Borealis produces ethylene copolymers and polyethylene divided over two high pressure reactor lines used for polyethylene (PE) compounds, for low density polyethylene, and material handling facilities. Main application area is wire & cable industry.

The Borealis Digital Studio was set up near Brussels in 2018 as an autonomous unit within the Borealis Digitalization Programme and consists of a team of around 30 digital professionals. It is the company's agile enabler for developing smart and proven added-value business solutions based on design thinking principles.

For more information:

www.borealisgroup.com

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