

## Media Release

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# Borealis Borcycle™ C chemical recycling provides circular solutions for crosslinked polyethylene for the Wire & Cable and Infrastructure sectors

- **Pyrolysis process keeps difficult-to-recycle crosslinked polyethylene like XLPE and PE-X in the circular loop**
- **Chemically recycled grades in the Borcycle™ C portfolio are ISCC PLUS certified according to the mass balance methodology**
- **EverMinds™ approach provides innovative and viable solutions to recycling challenges in the Wire & Cable and Infrastructure industries**

Borealis announces the capability to use its proprietary Borcycle™ C chemical recycling process to recycle crosslinked polyethylene (PE) types such as XLPE and PE-X into recycled polyethylene. Thanks to its suitability for high performance applications, the recycled PE obtained in the pyrolysis process can replace virgin PE in the manufacture of XLPE and PE-X for use in the Wire & Cable and Infrastructure industries, respectively. Using ISCC PLUS (International Sustainability and Carbon Certification) certified grades in the Borcycle C portfolio enables customers to capitalise on circular solutions while at the same time maintaining high application quality and industry standards.

## A sustainable solution to overcome the challenges in recycling XLPE and PE-X

For cable networks, XLPE offers cost effectiveness and flexibility in installation. When used as insulation in low voltage electrical cables, XLPE boasts a better overall life-cycle impact than alternative materials: less of this lighter-weight material is required to provide top cable system performance. PE-X is deployed in a wide range of advanced polyolefin plumbing and heating pipes, and is particularly suited for coping with demanding environments. Compared to conventional materials, the inherent properties of crosslinked PE-X offer distinct benefits, including exceptional toughness, chemical resistance and durability at high temperatures. Up until recently, however, it was difficult to recycle XLPE or PE-X in such a way as to obtain the virgin-like PE required for these high-performance applications.

By drawing on its polymers expertise and recycling know-how, Borealis can now offer its customers a circular solution for crosslinked PE. In a series of tests conducted by Borealis, XLPE and PE-X plastic waste were pre-treated and fed into the Borcycle C chemical recycling process. This chemically-recycled material was analysed and determined to be suitable for use as cracker feedstock in the production of new ethylene in the manufacture of virgin-grade XLPE and PE-X.

The proprietary and evolving recycling technology [Borcycle C](#) transforms plastic waste streams into value-added products. These chemical recycling solutions complement mechanical recycling by turning difficult-to-recycle plastics – like crosslinked polyethylene – into virgin-level grade materials with the highest safety and performance characteristics.

Grades in the Borcycle C portfolio of circular polyolefins are ISCC PLUS certified according to the third-party mass balance methodology. This allows the customer to track and quantify the effective circular feedstock used at each step in the manufacturing process. When customers choose grades from the Borcycle C portfolio, they are replacing fossil fuel-based feedstock with an identical volume of circular feedstock without incurring extra switching costs, and – most importantly – while maintaining the same high application quality.

“True to our [EverMinds™](#) mindset, we’re proud to provide a long sought-after solution for XLPE recycling. Having pioneered the development of advanced insulation and jacketing systems, we are now making them more circular as well,” says Bart Verheule, Borealis Global Commercial Director Energy. “As Borealis Energy celebrates its 60<sup>th</sup> year as a reliable and trusted partner to our customers and value chain partners, we intend to keep re-inventing essentials for sustainable living in both the Wire & Cable and Infrastructure sectors.”



Photo: Borealis Borcycle™ C chemical recycling process breathes new life into crosslinked polyethylene (PE) types such as XLPE and PE-X.

Photo: © Borealis

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**About Borealis**

Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions and a European front-runner in polyolefins recycling. In Europe, we are a market leader in base chemicals and fertilizers. 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.

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.

With head offices in Vienna, Austria, we employ 6,900 employees and operate in over 120 countries. In 2021, we generated total sales of EUR 12.3 billion and a net profit of EUR 1,396 million. OMV, the Austria-based international oil and gas company, owns 75% of our shares, while the remaining 25% is owned by Abu Dhabi National Oil Company, or ADNOC, based in the United Arab Emirates (UAE). We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with ADNOC, headquartered in the UAE); and Baystar™ (with TotalEnergies, based in the US).

[www.borealisgroup.com](http://www.borealisgroup.com)

#### **Borealis solutions bring energy all around**

For over 50 years, Borealis has provided value-creating polyolefin compounds for the global energy industry.

Because understanding project execution is critical to the success of 'Power Projects', Borealis provides unparalleled reliability with Assurance Delivered for submarine and land cable projects. In power transmission and distribution, Borealis satisfies the highest demands on performance and across a comprehensive portfolio for medium and low voltage cable applications, as well as high-performance polypropylene (PP) capacitor film solutions for the entire energy sector.

Extra-high, high voltage AC and DC, and medium voltage applications are powered by Borlink™ technology. While the Visico™ technology helps extend the lifetime of cable systems for low and medium voltage applications.

To meet safety standards for industries and buildings sustainably, Borealis also offers a low smoke and zero halogen flame retardant system. Borealis compounds also help meet network provider's requirements for communication cables, namely fibre optic, data, copper multipair and coaxial cables.

[www.borealisbringsenergy.com](http://www.borealisbringsenergy.com)

#### **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.

[www.borealiseverminds.com](http://www.borealiseverminds.com)

#### **About Borouge**

Borouge, listed on the Abu Dhabi Securities Exchange (ADX symbol "BOROUGE" / ISIN "AEE01072B225"), is a leading petrochemical company that provides innovative and differentiated polyolefin solutions for the energy, infrastructure, mobility, advanced packaging, healthcare and agriculture industries. ADNOC owns a majority 54% stake and Borealis holds a 36% stake in Borouge.

To find out more, visit:

[borouge.com](http://borouge.com)

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