

**Media Release**

Vienna, Austria | 19 October 2022

## Joint Study by Borealis and Avient Reveals Wide Range of Colour Options for Recycled Plastics

- **Insights obtained in joint application study help customers take full advantage of the broad range of colour matching options for post-consumer recyclates (PCR)**
- **Use of grades from the Borealis Borcycle™ M portfolio in tandem with Avient Colour formulations achieves desired colour effect with low levels of colour addition**
- **Value chain collaboration in the spirit of EverMinds™, the Borealis Circular economy collaboration platform, helps realize the promise of plastics circularity**

Borealis, one of the world's leading providers of advanced and sustainable polyolefin solutions and a European front-runner in polyolefins recycling, and Avient Corporation, a premier provider of specialised and sustainable material solutions and services, today announced results of a new joint study. The study addresses the challenges of colour matching in PCR for rigid packaging, offering options that can create global colour consistency, quality, and circularity.

In 2018, Borealis launched EverMinds™, an umbrella platform uniting its activities and initiatives aimed at advancing action on circularity. Bridging from the [EverMinds™](#) platform, Borealis and Avient recently completed a joint application study that investigated how to optimise colour matching when using post-consumer recycled material (PCR) in rigid packaging applications. Insights obtained from the joint study will help value chain partners and customers take advantage of the wide range of colour options enabled by the use of [Borcycle™ M](#) compounds (mechanically recycled polyolefins) and Avient colour solutions, for even the most sophisticated application requirements.

### Why Borealis and Avient undertook this study

In order to enhance the sustainability of rigid packaging, the industry is seeking to find ways to incorporate higher amounts of PCR into its products without compromising on functionality or shelf appeal. Keeping in mind that colour is a key element of a pleasing appearance, the intrinsic colour matching properties of recyclate are more limited versus virgin polymers. In addition, the market availability of PCR in light and natural tones is equally limited. Moreover, colouring processes for dark recycled material can be challenging due to the need for high amounts of colorant to overcome the PCR base colour.

### Key takeaways from the research

The joint study determined that using specific components together from both companies consistently produced a wide range of colour options for PCR without having to add more colour. Those components include 100% recycled polypropylene (rPP) from the Borcycle M portfolio in tandem with Avient's PCR Colour Prediction Service. Plus, the colour formulations which have been specifically designed for use with PCR without disturbing detectability in the sorting process.

Another key discovery from the study: If colour must be added to the base material to achieve the desired colour, the addition of colour concentrate is low (around 2%). The higher translucency of Borcycle M compounds is one facilitating factor in better colour matching thanks to the materials' good light transmission and colour absorption. The study also demonstrated that using Borcycle M grades along with Avient's OnColor™ near infrared (NIR) detectable colorants produces a recyclable, neutral black which enables better automatic sorting for recycling. This solution helps to prevent downcycling of darker and black PCRs based on their colour, and maintains their value in the recycling stream.

"We're pleased to be able to use the findings of this joint study to assist our value chain partners and customers in making informed decisions about the best colour matching options for their own rigid packaging applications," says Peter Voortmans, Global Commercial Director Consumer Products at Borealis. "The more aesthetically appealing the pack, the more likely it is that the consumer will choose the more circular option. At Borealis, this is what we mean by re-inventing essentials for sustainable living."

"A cornerstone of our sustainability strategy at Avient is to use material science and our design expertise to enable our customers' sustainability goals," explains Jan Sültemeyer, Global Innovation and Sustainability Manager at Avient. "This collaborative study with Borealis is one way in which we can transfer our know-how to our value chain partners to close the loop on plastics circularity."

**K 2022 will take place from 19 to 26 October 2022 in Düsseldorf, Germany.**

**We invite you to "Innovate Collaborate Accelerate" together with us by visiting Borealis and Borouge in Hall 6 at Stand A43.**

**Avient welcomes visitors to their booth G10 in Hall 8A and its Collaboration Café. Please also visit Avient's [press hub](#) for further information on their content for K 2022.**



Insights obtained in study performed jointly by Avient and Borealis help customers take full advantage of the broad range of colour matching options for post-consumer recyclates (PCR)  
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 12.342 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 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 TotalEnergies, based in the US). [www.borealisgroup.com](http://www.borealisgroup.com) | [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)

### About Avient

Avient Corporation (NYSE: AVNT) provides specialized and sustainable material solutions that transform customer challenges into opportunities, bringing new products to life for a better world. Examples include:

- Unique technologies that improve the recyclability of products and enable recycled content to be incorporated, thus advancing a more circular economy
- Light-weighting solutions that replace heavier traditional materials like metal, glass and wood, which can improve fuel efficiency in all modes of transportation and reduce carbon footprint
- Sustainable infrastructure solutions that increase energy efficiency, renewable energy, natural resource conservation and fiber optic / 5G network accessibility

Avient is certified ACC Responsible Care®, a founding member of the Alliance to End Plastic Waste and certified Great Place to Work®. For more information, visit [www.avient.com](http://www.avient.com).

To access Avient's news library online, please visit [www.avient.com/news](http://www.avient.com/news).

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