

Unzipping Polyester for a Cleaner Future

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Plastics play an important role in the cosmetics industry. For decades cosmetics brands have turned to materials like Eastman's copolyesters for their durability, safety, and ability to meet almost any design challenge. Qualiform, one of the world's top producers of luxury cosmetic packaging relies on Eastman copolyesters to meet the industry's exacting standards. Those standards increasingly include packaging with high levels of recycled content. Qualiform immediately recognized the unique advantages offered by Eastman's new line of copolyesters produced with their Advanced Circular Recycling technologies. They moved quickly and are now proud to say they are also ISCC PLUS certified. Qualiform has just launched their first line of bottles for the luxury cosmetics market made with Eastman Cristal™ Renew copolyester.

Part of the polyester family, copolyesters are important for many consumer end markets due to their durability, clarity and chemical resistance. We all purchase clothes, carpets and containers made from polyester, but most end up in landfill when we have finished with them. More than 3 billion pounds (1.36 billion kg) of carpet were sent for disposal in the US in 2018. Eastman, a global speciality materials company, has developed technologies to recycle waste polyester at

the molecular level, preventing it from ending up in landfill. They have chosen ISCC to certify the sustainability of their processes.



Qualiform creates luxury cosmetic bottles from Eastman Cristal™ Renew copolyester. This enables Qualiform to deliver packaging with high levels of recycled content, allocated via mass balance accounting. According to Stéphane Perrolier of Qualiform, "In the luxury industry, it is impossible to compromise on the aesthetic or

performance of a product. With this certification, we are able to produce bottles with recycled content without any compromise on the aesthetic, nor on the compatibility with the product inside." This makes Eastman's technologies and ISCC PLUS certification a great fit for their business and customers.

Eastman's Polyester Renewal Technology 'unzips' polyesters to convert them back to their basic monomers which are then used to create new materials. The monomers produced are indistinguishable from materials made with virgin or nonrecycled content. Jason Pierce from Eastman explains, "This process, also known as depolymerisation, allows us to recycle polyester waste over and over again without degradation over time and reduces greenhouse gas emissions by 20%-30% compared to processes using fossil fuels."

Eastman is enabling Qualiform and others to make an impact in the industry immediately. The first-generation process is already operating commercially. A full-scale second generation plant is set to be online by the end of 2022. Sourcing enough waste material for a commercial scale plant is a difficult task in itself. The company arranges much of its own waste collection from a variety of sources. Three of Eastman's sites are certified as both ISCC PLUS collecting points and processing units, which ensures appropriate sourcing and chain of custody for their Renew products.

Both companies are working to scale up the circular economy as a top priority. Their collaboration means that Qualiform can offer high-quality bottles with certified recycled content to the market. These new Cristal Renew resins complete Qualiform's "Green Line" which is already composed of mechanically recycled material, bio-sourced and Ocean Plastic. Justine Tardy from Qualiform understands the needs of customers. "Thanks to ISCC and molecular recycling, we can now offer certified recycled resins with a high level of transparency. This is a real innovation for the cosmetic packaging market!"

ISCC PLUS certification provides traceability so the final consumer knows they are buying a product that supports the scale up of the circular economy and improves waste management on a global basis. Stéphane Perrollier explains why the concept is familiar to them. "Due to the high level of requirements of our industry in term of quality and traceability, our operations were already set up to precisely trace our material and product all along the manufacturing process and decoration."



Eastman polymers go into a wide range of products in sectors ranging from personal care, food packaging, eyewear and medical to transportation, construction and agriculture. Many of these products are now also available containing the recycled content. We all know that we must recycle plastic in a sustainable way. 'Certified recycled content' will become a familiar term to help us distinguish the best materials from the rest. Thanks to this collaboration, a whole new family of ISCC PLUS certified polymers can pass the test.

For more information on ISCC PLUS certification please contact ISCC at info@iscc-system.org.