

Press Release



Leverkusen,
October 11, 2019

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Closing the carbon loop with recycled raw materials

New electronic components made of used polycarbonate

Covestro develops post-consumer recycling concept together with partners

A circular economy offers great opportunities for achieving sustainability goals and improving resource efficiency in the plastics industry. But it also holds great economic potential in the long term. Aiming to become a pioneer on the road to a future with alternative raw materials, [Covestro](#) is building material cycles along the entire value chain – from suppliers, through its own production and logistics, to the use of its products and their recycling.

Closing the carbon loop with recycled raw materials is a core element in the development of a circular economy. During the [K 2019](#) plastics trade fair, the company will be presenting a new concept for post-consumer recycled (PCR) polycarbonate waste and its use in the electronics industries at Booth A 75 in Hall 6.

Focus on reuse

“Polycarbonate is used in many high-quality applications and is also very durable,” says Kayla Wu, marketing manager for electronics applications of polycarbonates in the Asia-Pacific region. “The material is far too valuable to be disposed of after just one use.”

The market drivers for material recycling are the UN Sustainability Development Targets (UN SDGs), in particular target Number 11 for sustainable cities and settlements and Number 12 for sustainable consumption and production. But industry-specific standards in the electronics industry, such as eco-labels like the Blue Angel and the EPEAT electronics eco-label, CSR initiatives by companies



and, last but not least, growing consumer interest in more sustainable products are also driving the development of recycling solutions.

Closed material cycle

The closed material cycle presented at K 2019 begins with the production of new, transparent polycarbonate at Covestro and its supply to a manufacturer of 5-gallon water bottles. This customer delivers the bottles to a water producer, which then provides the filled containers to consumers. They can be reused for up to approximately 50 times. At the end-of-life, they are being returned to the bottle manufacturer via the water producer through the same value chain. Then the bottles are shredded, cleaned and sorted.

After that, the quality of the post-consumer recyclate is checked and polycarbonate granulates produced. This recycled granulate is processed by Covestro – to form a polycarbonate blend which is used by OEMs to produce new laptops, copiers, printers, mobile chargers for smartphones and other electronic devices.

Creating value for all partners

The concept offers significant advantages over previous recycling approaches for thermoplastics. The collection and material sorting of post-consumer products has often been a challenge in the past. Fluctuations in quality have also often stood in the way of effective and economical recycling. However, all partners can benefit from the new concept and the business model behind it.

Not only is the electrical and electronics industry very interested in recycled raw materials; the automotive value chain, for example battery manufacturers, is also becoming increasingly committed to using more sustainable materials.

Reuse of PET bottles

In another project, Covestro is working with partners on the recycling of polyethylene terephthalate (PET) bottles together with polycarbonate. Both plastics are processed into a PC-PET blend from which new, high-quality products can be manufactured.

About Covestro:

With 2018 sales of EUR 14.6 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. The main segments served are the automotive, construction, wood processing and furniture, and electrical and electronics industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. Covestro has 30 production sites worldwide and



employs approximately 16,800 people (calculated as full-time equivalents) at the end of 2018.

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ro (2019-165E)

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