

Press Release



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Premiere: Covestro at the Greener Manufacturing Show in Cologne, Germany

Innovations in the spirit of the circular economy

Novel recycling technologies and alternative raw materials are at the center of attention

The circular economy is a pivotal factor in achieving climate neutrality, conserving natural resources and protecting the environment. [Covestro](#), a leading global supplier of polymers, is firmly committed to fully embracing the circular economy and helping to make it the global guiding principle. At its first appearance at the sustainability expo [Greener Manufacturing Show](#) on November 10-11, 2021, in Cologne, Germany, Covestro will be showcasing breakthrough recycling technologies and alternative raw materials.

"Our goal is to increasingly dispense with fossil resources in our production and replace them with renewable raw materials from recycled plastics, biomass and CO₂," says Dr. Christian Haessler, head of the Global Circular Economy Program at Covestro. "In doing so, we are applying our core competencies in chemistry and bioeconomy and developing innovative processes for the production of bio-based raw materials, the use of CO₂ as a raw material in production and the chemical recycling of plastics."

Just like in nature: putting carbon into a cycle

Similar to plants, which take up carbon in the form of CO₂ from the air and use it with the help of water and solar energy to grow and as a source of energy, Covestro also harnesses this principle of nature to extract carbon from CO₂ in the air, from biomass and plastic waste and use it to manufacture its products. Some specific examples are partially bio-based types and, to an increasing extent, certified mass-balanced ranges. They are therefore contributing to the development of the circular economy.



Plastics with CO₂

Covestro has already been making use of the climate gas CO₂ to produce an important plastic component, so-called polyols, since 2016. In these cardyon[®] brand products, it replaces up to 20 percent of the fossil raw materials that would otherwise be used. Thanks to our dedicated research, we have since been able to significantly expand our portfolio for these polyols, from their first applications in [mattress foam](#) to [automotive interiors](#) and [textile fibers](#) to [sports flooring](#).

At the heart of all these developments is the [Triturn[®] technology](#). It enables the manufacture of cardyon[®] products and the reuse of CO₂ – from waste to added value. In doing so, it reduces dependence on fossil raw materials and contributes to the fulfillment of consumer demands for more sustainable products.

Chemical recycling of mattress foam

Plastic waste is a valuable resource for new products. This also applies to the polyurethane foam recovered from used mattresses. Covestro has developed an innovative technology enabling the chemical recycling of such foams. Unlike other chemical recycling processes, this process makes it possible for both of the core raw materials originally used to be recovered and reused. Covestro is currently putting its efforts into developing innovative business models in cooperation with the entire value chain, with the ultimate aim of closing the loop for mattress foams.

Product passport for recycling

In many cases, it is not possible to recycle valuable materials effectively because the waste they contain is not collected or their composition and origin are not known. Covestro is taking a novel approach here. The Niaga[®] tag is a unique product passport that identifies its origin and composition and explains how the product can best be reused. Carpeting, mattresses and furniture parts – all important components of bulky waste – are already identified in this way and can be fully recycled.

Digital tracking of plastics

Yet another project for tracking plastics for the purpose of recycling employs a digital process: [blockchain technology](#). To this end, Covestro is working with [Circularise](#), a specialist in blockchain transparency, as well as with other partners. The digital information about the origin, composition, and ecological footprint of plastics along the value chain is used to generate a digital twin path that ultimately facilitates precise recycling. This has already made it possible to demonstrate the use of more sustainable materials in Porsche vehicles.



About Covestro:

With sales of EUR 10.7 billion in 2020, 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, sustainable solutions for products used in many areas of everyday life. In doing so, Covestro is becoming fully circular. Its main customers are the automotive and transport industries, the construction industry, the furniture and wood processing industries, and the electrical, electronics, and household appliance industries. Other sectors include sports and leisure, cosmetics, healthcare and the chemical industry itself. As of the end of 2020, Covestro produces at 33 sites worldwide and employs around 16,500 people (converted to full-time positions).

Forward-looking statements

This press release may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG management. Various known and unknown risks, uncertainties, and other factors could lead to material differences between the actual future results, financial situation, development, or performance of the company and the estimates provided here. These factors include those discussed in Covestro's public reports. These reports are available at www.covestro.com. The company assumes no liability whatsoever to update these forward-looking statements or to make them conform to future events or developments.