

Press release



Leverkusen,
May 28, 2018

Covestro AG
Communications
51365 Leverkusen

Contact
Dr. Frank Rothbarth
Telephone
+49 175 30 25363
E-mail
frank.rothbarth
@covestro.com

Conserving fossil resources, closing the carbon cycle

Covestro – a pioneer in alternative raw materials

Presentation at the UTECH Europe 2018 conference

Around 4 to 6 percent of the oil produced worldwide is used in the production of plastics. As oil reserves are limited, alternative carbon sources are very high in demand. For years, Covestro has been increasingly using alternative raw materials to manufacture its products, by that also striving to reduce its dependence on fossil resources. The material manufacturer is thus meeting the growing interest in products on this basis and is presenting itself as a pioneer in terms of sustainability.

Covestro has been using carbon dioxide as a building block for high-quality plastics since 2016, which saves part of the oil used to date. At the UTECH Europe 2018 trade fair, the company will be presenting examples for such entirely sustainable developments that contribute to the preservation of the planet and at the same time offer added value for customers and society.

CO₂ platform technology: broad raw material basis for the future

At the Dormagen site, Covestro operates a production plant for polyol, a precursor for flexible polyurethane (PU) foam, which is used in upholstered furniture and mattresses. Thanks to the new technology, up to 20 percent CO₂ can be chemically bound in the polyol, which saves a correspondingly large amount of crude oil. The products are offered under the name cardyon®.

But this is only the beginning: Covestro is working closely with other companies and universities to open up additional possibilities for using the CO₂ platform technology; many of the projects are publicly funded. One focus is CO₂-based rigid PU foam for the thermal insulation of buildings, but applications in automobiles and sports are also moving into the spotlight.



Closing the carbon cycle

“Alternative raw materials such as carbon dioxide are an important part of our holistic approach, which covers the entire value chain of our products,” says Hermann-Josef Dörholt, Head of Sales for the Polyurethanes segment in the Europe, Middle East, Africa region at Covestro. “By using CO₂ we bring the important chemical element carbon back into the value chain and begin to close the carbon cycle.”

The process is also more advantageous in terms of the ecological footprint than conventional technology and contributes to the fulfillment of several UN sustainability goals – SDGs for short. It is also a successful example of Covestro's goal to invest at least 80 percent of its research expenditure on achieving SDGs by 2025. In other words, the technology has high carbon productivity when one considers the ratio of the amount of CO₂ used to the benefit achieved in the form of high-quality plastics.

On 30 May from 3.45 p.m. Dr. Christoph Gürtler and Dr. Jochen Norwig will give a presentation on this topic at the UTECH Europe 2018 conference, entitled “Broadening the raw material base of polyurethanes: new developments with CO₂ and pFA”.

Made entirely from vegetable raw materials: bio-based aniline

In addition, Covestro and its partners have developed a unique method for obtaining the key chemical product aniline from plant raw materials. The entire carbon content comes from biomass – the small quantity means there is no shortage of vegetable foodstuffs. According to external studies, if all plastics produced worldwide were made from renewable raw materials, the arable land needed for this would only account for 0.9 percent of the world's agricultural land.

The new two-stage production of bio-based aniline has already been successfully tested in the laboratory. Further developments are currently underway to use it on a larger technical scale. Aniline is an important feedstock for the chemical industry. It is used, among other things, as a component in the production of MDI, an important starting material for PU rigid foam for thermal insulation.

Covestro has also developed new bio-based hardeners for PU coatings and adhesives and for polyurethane dispersions. For example, 70 percent of the carbon content of the hardener Desmodur[®] eco N 7300 comes from vegetable raw materials.



About Covestro:

With 2017 sales of EUR 14.1 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 16,200 people (calculated as full-time equivalents) at the end of 2017.

This press release is available for download from the Covestro press server at www.covestro.com. A photo is available there for download as well. Please note the source.

For more information please see www.covestro.com.
Follow us on Twitter: <https://twitter.com/covestro>

ro (2018-047E)

Forward-looking statements

This news release may contain forward-looking statements based on current assumptions and forecasts made by Covestro AG. 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 given here. These factors include those discussed in Covestro's public reports which are available at www.covestro.com. The company assumes no liability whatsoever to update these forward-looking statements or to conform them to future events or developments.