

Press Release



Leverkusen,
November 14, 2019

Covestro AG
Communications
51365 Leverkusen
Germany

Contact
Dr. Frank Rothbarth
Telephone
+49 214 6009-2536
Email
frank.rothbarth
@covestro.com

Fully recyclable shoes made from thermoplastic polyurethane

Effective shoe manufacturing with 3D printing

The manufacture of a shoe requires a multitude of work steps, some of which are carried out by hand. This makes production time-consuming and expensive. In the finished product, various materials are sewn together and glued together, so that it is virtually impossible to recycle them by type at the end of their useful life.

Using 3D printing, shoes could be made from only two parts – upper and sole. **Covestro** has developed a material that enables automated production at lower cost and complete recyclability of the finished shoe. At the **Formnext** trade fair from 19 to 22 November 2019 in Frankfurt am Main, Germany, the company will be presenting these and other developments of its additive manufacturing programme at Booth E11 in Hall 12.1.

A powder and a filament, both based on thermoplastic polyurethane (TPU), proved to be the material of choice for meeting all the above requirements. The plastic offers high rebound and abrasion resistance and is therefore ideally suited for the production of both shoe parts. In addition, the shoe can later be recycled in a single step, including the polyurethane adhesive used for production – an important milestone towards recycling. Old shoes are thus turned into filaments for new shoes.

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.

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 acknowledge the source of any pictures used.

Find more information at www.covestro.com.

Follow us on Twitter: <https://twitter.com/covestro>

ro (2019-186E)

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.