

Press Release



Leverkusen,
August 30, 2018

Covestro AG
Communications
51365 Leverkusen

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

Fakuma 2018: Covestro presents demonstrator for 3D printing technology

3D-printed shock absorber with high degree of functionality

Complex demonstrator is made of three materials by three processes

For years, Covestro has been developing customized polymer materials for all common manufacturing processes in 3D printing. Thanks to their diverse properties, the filaments, powders and liquid raw materials are suitable for many industries and applications.

At the Fakuma 2018 trade fair from 16 to 20 October in Friedrichshafen, the company will be presenting a demonstrator for a shock absorber at Stand 4206 in Hall B4. The complex part marks another milestone on the way from the creation of individual prototypes to the integration of various functions and mass production.

Production using various processes

In addition to its high degree of functionality, the unique feature of the shock absorber is the production of the individual parts from three different products and with the aid of three different manufacturing processes. The outer spring of the 40 x 7 cm part is made of powdered thermoplastic polyurethane (TPU). It was shaped layer by layer using selective laser sintering and is notable for its elasticity and high abrasion resistance.

The adjusting screw inside the shock absorber has to be very strong and hard. For this reason, it is made of filaments of Covestro's robust polycarbonate material, using the fused filament fabrication (FFF) process. The air chamber in the interior is created from a liquid polyurethane resin. The digital light processing method has proven itself for such components with filigree structures – as in this case as well.



Combination of tailor-made materials

The individual components are subsequently connected to each other. "This complex structure would not have been possible with conventional production processes," explains Lukas Breuers, a marketing manager for 2D and 3D printing at Covestro. "Another new development is the combination of different materials with various, tailor-made properties. This has enabled us to significantly expand the possibilities of additive production and its areas of application." Other products from the company for additive manufacturing are characterized by good heat resistance, abrasion resistance or flexibility, for example.

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. Photos are available there for download as well. Please acknowledge the source of any pictures used.

For more information please see www.covestro.com.

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

ro (2018-105E)

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.