

Press Release



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Covestro and Plama-pur cooperate to produce foam for sports shoes

Running with CO₂ technology

Innovative process conserves fossil resources

[Covestro](#) has developed an innovative technology that converts the exhaust gas CO₂ into a valuable precursor for plastics, replacing up to 20 percent of fossil raw materials which are normally used. The precursor is marketed under the name [cardyon®](#) and is suitable for many different applications. A current example is flexible foams from the Slovenian footwear supplier [Plama-pur](#), which provide greater comfort in the inner padding of running, trekking and ski boots, especially in the ankle zone.

The more sustainable raw material can already be used in many products and industries and enables similar or better properties than with fossil-based raw materials. New applications are consistently being developed. Covestro's CO₂ technology has thus developed into a platform technology that contributes to resource conservation and circular economy and to reducing the ecological footprint.

Comfortable padding

The foams are characterized by durability and a high compression hardness – an important quality for athletic activities. Compared with products made of pure fossil raw materials, they have more favorable physical properties and, above all, better elasticity and a finer cell structure.

Plama-pur offers these products under the name ECO Foams. Its customers laminate the cut foam pieces onto self-adhesive materials and punch them out into various shapes according to the specifications.

Other sports applications



The CO₂-based precursor is also found in concept sneakers designed by Chinese shoe designer Axis Liu. More specifically, in a thin, translucent film made of the thermoplastic polyurethane Desmopan® 37385A, which matches the color and structure of the upper material. It is applied to the upper shoe by hot stamping and features good scratch and abrasion resistance. Covestro presented the sneakers at the K 2019 plastics trade fair in Düsseldorf.

At the end of 2018, cardyon® experienced another premiere in the sports sector: The material was used in the subfloor of the [field hockey facility](#) of a renowned sports club in Krefeld, in the German state of North Rhine-Westphalia. In this application, too, CO₂ is used in a recycling process to save fossil raw materials.

About Covestro:

With 2020 sales of EUR 10.7 billion, Covestro is among the world's leading 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 daily life. In doing so, Covestro is fully committed to the circular economy. The main industries served are the automotive and transportation industries, construction, furniture and wood processing, as well as electrical, electronics, and household appliances industries. Other sectors include sports and leisure, cosmetics, health and the chemical industry itself. At the end of 2020, Covestro has 33 production sites worldwide and employs approximately 16,500 people (calculated as full-time equivalents).

Forward-looking statements

This press 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. 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.