Teaming up with APT to construct a sustainable hockey field

Covestro contributes to sustainability at major sporting event with innovative CO₂ technology

- Another important application of CO₂-based material cardyon®
- Sustaining efforts to advance circularity by replacing petroleum

Covestro is using its cutting-edge carbon dioxide technology to contribute to a circular economy. For example, Covestro partnered with Australia-based Advanced Polymer Technology (APT) – a leading global manufacturer of polyurethane-based materials, acrylic coatings and artificial turf products – to develop the exclusive Poligras Tokyo GT field hockey surface in conjunction with sports flooring manufacturer Polytan. This product was developed for this summer's major sporting event in Tokyo, using Covestro's CO₂ technology specifically to produce the binder that sits beneath the surface.

The particularly sustainable new material, called cardyon®, is a polyol produced with up to 20 percent CO₂. Covestro brought this groundbreaking technology to market a few years ago. It helps reduce the use of petroleum-based fossil raw material in polyol by up to one-fifth. This is an enormous advance and an innovative contribution to resource conservation and the circular economy for the plastics-producing industry and beyond. cardyon® is manufactured at Covestro's Dormagen site near Cologne, Germany.

More sustainability with good playing properties
"Thanks to Covestro's CO₂ technology and other sustainable components such as renewable raw materials and recycled rubber, this field hockey pitch is one of the most sustainable and technologically advanced surfaces we have developed in the world," says Jim Tritt, COO of Sport Group Asia, which includes APT. "At the same time, it offers premium playability and performance for field hockey
By increasingly using CO₂ and other alternative raw materials to replace petroleum, we as an industry are making an important contribution to conserving fossil resources," said Dr. Persefoni Hilken, venture manager cardyon® at Covestro. "We are very pleased to work with partners like APT to advance the path toward sustainability and a circular economy with our innovative CO₂ technology, which is being used in more and more applications."

**Bringing carbon dioxide full circle**

With this technology, carbon dioxide can be reused as a valuable raw material for sustainable plastics. Chemical catalysts are used to drive reactions between CO₂ and a conventional feedstock to produce polyols in a more economical and sustainable way, with the CO₂ firmly chemically incorporated.

Cardyon® is now also used to produce padding for shoes and car interiors, flexible foam for mattresses and adhesives for sports floors. The first prototypes of insulating materials made of rigid foam and surfactants, which are used as detergents, for example, were also recently realized using CO₂ technology.

Last year, Covestro completed the installation of a catwalk with cardyon® polyols in cooperation with Shandong INOV New Materials Co., Ltd. at the Covestro Asia-Pacific Innovation Center in Shanghai. This was the first time the innovative product has been used in a binder for plastic walkways in the Asia-Pacific region.

**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 fully aligning itself to the Circular Economy. 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**

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