# Press Release

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Covestro AG
Communications
51365 Leverkusen
Germany

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

$CO_2$-based cardyon® products partly replace fossil raw materials

## Covestro develops sustainable cast elastomer solution for the offshore industry

Covestro has developed a sustainable cast elastomer solution that enables the offshore industry to reduce its environmental impact and carbon footprint. The polyurethane elastomers are based on so-called cardyon® brand polyols, which contain $CO_2$ and offer the same good performance as corresponding petrochemical-based elastomers. A new technology from Covestro makes it possible to produce these precursors from carbon dioxide in a proportion of up to 20 percent by weight, thereby replacing some of the fossil raw materials used up to now. The development contributes to recycling carbon and underlines Covestro's intention to focus all its activities on the Circular Economy.

In its search for a more sustainable solution for the offshore industry, molding company Polarttech opted for a Desmodur® elastomer system containing cardyon® polyols. This cast polyurethane elastomer offers the following advantages:

- The part produced with this system shows very good hydrolysis resistance, as expected from such an offshore application, and is more durable than other elastomers such as rubber.
- The polyurethane system enables the production of elastomers with high-performance or even better mechanical properties such as tensile strength and tear resistance than corresponding conventional cast polyurethane systems made from fossil raw materials.
- The solution offers the possibility to reduce the carbon footprint and dependence on fossil raw materials.

"The use of $CO_2$ in chemical raw materials is a groundbreaking innovation that is in perfect harmony with our vision of recycling," comments Thomas Braig, Head of Covestro Elastomers. "What is important to us, of course, is a successful

application in practical use. We are pleased when manufacturers choose this sustainable solution, and appreciate the trust they place in our innovations, especially in our Desmodur® elastomer system, which contains cardyon® polyols."

"Our goal is to provide our customers with the quality products they need," adds Arthur Brouwers, CTO of Polarttech. "The tests we conducted confirmed both the property profiles and the processing conditions of the system developed by Covestro." The newly developed solution surpasses Polarttech's previous system in terms of resilience and abrasion resistance. Moreover, its processing is easier thanks to a long pot life and excellent detaching when the part is demoulded. "The use of cardyon® polyol in our system rounds off this project and makes it a perfect solution for everyone involved," says Arthur Brouwers, "especially for the environment!"

**About Covestro:**
With 2019 sales of EUR 12.4 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 17,200 people (calculated as full-time equivalents) at the end of 2019.