Brighter use of resources – New CO_2-based materials

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People are becoming more and more aware that carbon dioxide is much too valuable to just be released into the atmosphere, and thus worsen the greenhouse effect. This is because the gas contains carbon, an important element needed for the production of plastics. This means petroleum, a traditional source of carbon, can be replaced at least in part. Covestro wants to exploit this possibility and has become a pioneer of using CO_2.

Covestro currently focuses on using carbon dioxide to produce polyols, a crucial component of polyurethane foam. The new material was launched in 2016. The first target product: Mattresses based on CO_2. A dedicated demonstration plant was built for this purpose.

Since then, further CO_2 based polyether polyols were developed that found a platform for a broader range of applications. These polyols can also incorporate building blocks which derive from intermediates made from CO_2 (indirect use of CO_2). We have investigated a series of applications and will report on current developments.

About Covestro:

Covestro creates materials the world relies on every day. Our high-tech polymers are used in nearly every area of modern life and in a wide range of industries: automotive, construction, healthcare, cosmetics, energy, electronics, sports and leisure.

But we don't just produce materials. Together with our partners and customers, we're taking big steps to tackle a fundamental challenge: Shifting towards a Circular Economy. To achieve this bold goal, we're innovating efficient ways to close energy and material cycles, pushing the boundaries of what is possible with polymers.

With sales of EUR 12.4 billion in 2019, Covestro is among the world's largest polymer companies. Covestro has 30 production sites worldwide and employs approximately 17,200 people (calculated as full-time equivalents) as of the end of 2019.