Recticel and Covestro collaborate in the development of circular materials

Closing cycles for polyurethane mattresses

- Both companies join forces in the PUResmart research project
- First time use of CO2-based cardyon® product in mattresses

Recticel and Covestro are working closely together in developing breakthrough solutions to make mattresses more sustainable and ready them for a circular economy. This includes the research of raw material technologies – from mattress production to end-of-life and beyond. At imm cologne 2020 furniture fair, Schlaraffia® / Recticel Schlaffkomfort GmbH will show such innovative and sustainable solutions at booths nos. A010 and A011 in hall 5.2.

“Polyurethane mattresses are widely used for a long time and valued for their comfort,” says Boudewijn Dezutter, Commercial Director at Recticel. “Now it is time to further increase the sustainable value of the material at each stage of the lifecycle.” “The project is part of a long-term program with which Covestro is strongly oriented towards a circular economy,” states Dr. Berit Stange, Circular Economy Manager in the Polyurethanes segment at Covestro. “In particular, we focus on using raw materials from sustainable sources, such as waste, plants and CO2.”

Turn polyurethane into a truly sustainable material

The greatest potential for closing cycles in the plastics industry lies in the recycling of post-consumer waste. This in particular applies to the recycling of thermoset materials like polyurethanes. Mass products such as mattresses are a main focus here. Covestro wants to contribute to this by developing chemical recycling technologies.

The company is part of the Europe-wide research project “PUResmart”, which comprises nine companies and academic institutions from six countries and is
coordinated by Recticel. The goal is to develop a complete circular product life cycle and turn polyurethane foam into a truly sustainable material: recover the used material (e.g. mattresses) and turn them into building blocks for existing or new products.

Covestro is much committed to supporting the flexible foam industry with a solution to achieve a complete circular economy with polyurethane foams and especially post consumer mattresses. In this context, the company is already investigating the feasibility of a short-term scale-up from laboratory scale to semi-industrial level, with the aim of making chemical recycling an efficient industrial process. This solution should then also support the current PURESmart project.

**CO₂ as building block for flexible foams**

Besides the latest project to recycle post-consumer waste, Covestro has been putting emphasis on working with alternative feedstock for many years already. The use of CO₂ as building block for chemical synthesis has been the focus – resulting in a breakthrough development: a CO₂ polyol. A team of researchers from Covestro and RWTH Aachen University made it to the final round of the prestigious German President’s Award for Innovation in Science and Technology.

Recticel was the first company to support the development of Covestro’s CO₂ polyol, cardyon®, and to implement it for the production of its flexible foams. The reuse of carbon dioxide contributes to closing the carbon cycle for mattresses. In January 2018, Recticel introduced the new second generation of its GELTEX® foam based on the CO₂ polyol.

**About Covestro:**

With 2018 sales of EUR 14.6 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 16,800 people (calculated as full-time equivalents) at the end of 2018.
About Recticel:
Recticel is a Belgian group with a strong European orientation, but also active in the rest of the world. Recticel employs over 8,400 people at 97 branches in 29 countries.
Recticel contributes to daily comfort with foam fillings for seats, mattresses and slat bases from top brands, insulating materials, car interiors and a wide range of other industrial and home applications.
Recticel is the group behind renowned bed brands (Beka®, Literie Bultex®, Schlaraffia®, Sembella®, Swissflex®, Superba®, Ubica® etc.) and GELTEX®. In the insulation segment, high-quality thermal insulation products are sold under the renowned brands Eurowall®, Powerroof®, Powerdeck®, Powerwall® and Xentro®. Technological progress and innovation have led to groundbreaking developments at the biggest names in the automotive industry, thanks to Colo-Fast®, Colo-Sense® and Colo-Sense Lite®.
In 2018, Recticel achieved total sales of €1.45 billion. Recticel (Euronext: REC - Reuters: RECT.BR - Bloomberg: REC:BB) is a publicly traded company (Euronext, Brussels).

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