



RENUVA™ Mattress Recycling Program: Closing the Loop in the Flexible Polyurethane Foam Industry

PROJECT DESCRIPTION

Dow's award-winning Mattress Recycling Program - RENUVA™ - has been validated by CEFIC at the 2022 European Responsible Care® Awards for the second year running.

It is an initiative aimed at reducing waste and promoting sustainability in the polyurethane foam industry by recycling end-of-life mattresses. The project uses polyurethane foam from end-of-life mattresses and turns it into RENUVA™ polyols for use in new mattresses and other sustainable applications.

Closing the loop in the flexible polyurethane foam industry requires innovative solutions and a collaborative approach. That is why Dow partnered with stakeholders from the whole PU value chain.

Main partners are Ecomaison - an Extended Producer Responsibility (EPR) scheme in France, which collects and dismantles end-of-life mattresses, and Orrion Chemicals - a chemical manufacturing company which operates the world's first industrial-scale reactor where chemical recycling takes place. Other notable partners include H&S Anlagentechnik - provider of recycling infrastructure, and The Vita Group - flexible PU foam producer using RENUVA™ polyol to produce new foam under the brand name Orbis™.



PROJECT IMPACT

The RENUVA™ Mattress Recycling Program has several tangible impacts on sustainability of the flexible polyurethane foam industry.

- **Waste Reduction:** The program helps to divert used mattresses from landfills, reducing waste and the associated environmental impacts.
- **Environmental Footprint Reduction:** External Lifecycle Analysis (LCA) show that the RENUVA™ process leads to a 54% equivalent CO2 reduction compared to standard polyol production. It also results in a 14% reduction in water use impact on the eco-system, and a 29% reduction in resource use (energy carriers including fossil fuels).
- **Resource Conservation:** The program recycles PU foam from used mattresses into new raw materials, conserving natural resources and reducing the need for virgin materials.
- **Innovation:** The RENUVA™ program uses innovative technologies to recycle flexible polyurethane foam from end-of-life mattresses, driving innovation in the industry and promoting the development of more sustainable products and processes.

The RENUVA™ Program and products drive a circular and resource efficient future for the flexible PU foam industry.

ABOUT DOW

Dow (NYSE: DOW) combines global breadth; asset integration and scale; focused innovation and materials science expertise; leading business positions; and environmental, social and governance leadership to achieve profitable growth and help deliver a sustainable future. The Company's ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company in the world. Dow's portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated, science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer applications. Dow operates manufacturing sites in 31 countries and employs approximately 37,800 people. Dow delivered sales of approximately \$57 billion in 2022. References to Dow or the Company mean Dow Inc. and its subsidiaries. For more information, please visit www.dow.com or follow @DowNewsroom on Twitter.

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