

Press Release



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Cooperation between VAUDE and Covestro

GMO-free, partially bio-based midsole for hiking boots

First outdoor sports shoe made predominantly from bio-based and recycled materials

Materials supplier [Covestro](#) and [VAUDE](#), a family-owned manufacturer of outdoor equipment and footwear, have collaborated to develop a partially [bio-based foam midsole](#) for VAUDE's new Lavik Eco outdoor hiking boot. It is based on thermoplastic polyurethane (TPU) foams from Covestro's Desmopan® EC 33000 series, which use non-GMO raw materials. The durable foams meet the outdoor brand's Green Shape criteria without sacrificing performance.

"With the new Lavik Eco, we want to introduce our first bio-based outdoor shoe in the 2022 summer collection and the first outdoor sports shoe ever in which all components are made from more than 50 percent bio-based and recycled materials," explains Clément Affholder, Innovation Manager at VAUDE. "When selecting materials, we paid particular attention to environmental compatibility and optimal performance under outdoor conditions." The Lavik Eco shoe is scheduled to be available in stores as a men's and women's model from spring 2022.

Hard and soft – both are important

The midsole is a crucial element in a hiking boot: it must be pleasantly soft and comfortable, but also provide a firm grip and have excellent cushioning properties. "TPU has already proven itself as a durable and supportive material in midsoles for active footwear such as mountain boots. However, in this soft and hard material combination, it has not been produced with non-GMO raw materials before," says Sayma Hou, Key Account Manager Footwear at Covestro.



Together with VAUDE, Covestro has identified and tested start-up raw material supplier Metabolic Explorer, which can supply bio-based 1,3-propanediol, a building block in the production of polymers from palm oil. The fact that the chemical raw material is not genetically modified also played a role in the evaluation.

CO₂ footprint reduced by more than 20 percent

The Desmopan® EC series for the midsole and beyond is characterized by high abrasion resistance and flexibility over a wide temperature range, as well as high elasticity in various degrees of hardness. The series offers waterproof qualities as well as excellent oil, grease, and solvent resistance and stands up well to weathering and high-energy radiation. Compared to fossil-based TPUs, the EC series can reduce the carbon footprint by more than 20 percent without compromising on quality or performance.

The outdoor manufacturer has already been using partially bio-based TPUs from the Desmopan® EC series for its TRK Skarvan hiking boots since 2018. In these more sustainable shoes, the bioplastic provides protection in the toe cap against injury from stones in the front of the foot and added stability from the heel cap in the back.

Green Shape is the VAUDE label for functional and environmentally friendly products made from more sustainable materials. The manufacturer is focusing on more environmentally friendly alternatives to petroleum-based raw materials, the increased use of recycled materials and materials derived from natural fibers such as hemp and organic cotton, and the use of bio-based plastics from non-GMO sources.

About VAUDE:

VAUDE Newsroom: [Media | VAUDE](#)

VAUDE offers functional and innovative products for mountain and bike athletes. As a sustainable and innovative outdoor outfitter, VAUDE contributes to a world worth living in, so that the people of tomorrow can enjoy nature with a clear conscience. In doing so, the family-owned company sets ecological and social standards worldwide. VAUDE (pronounced [fau'de]) stands for environmentally friendly products from fair production. At its headquarters in Tett nang in southern Germany, the company employs around 500 people.

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 becoming fully circular. 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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