Media Release
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On presents the first ever shoe made from carbon emissions in partnership with LanzaTech, Borealis and Technip Energies

Swiss sports brand creates supply chain coalition to reshape carbon waste into running shoes. Today, the next critical step in this project has been reached – the reveal of Cloudprime.

Main Facts:

- **On is revealing the first ever shoe made from carbon emissions, called Cloudprime.**
- **Cloudprime is made from CleanCloud™ EVA foam that uses carbon emissions as a raw material.**
- **On is the first company in the footwear industry to explore using carbon emissions as a primary raw material for a shoe's midsole.**
- **On is moving away from using fossil feedstock and exploring alternative materials for producing high-performance sports products.**
- **On is partnering with LanzaTech, Borealis and Technip Energies, three of the most innovative companies in biochemicals, process, and material innovation.**

Swiss sports brand On presents the first shoe made from carbon emissions, called Cloudprime. This is a significant moment in On's journey to move away from petroleum-based resources by creating a new foam material called CleanCloud™, made using carbon emissions as a raw material. On is the first company in the footwear industry to explore carbon emissions as a primary raw material for a shoe's midsole, specifically EVA (ethylene vinyl acetate) foam, that could also be used in other shoe parts and products in the future.

On's ambitions are high: The sports brand born in the Swiss Alps envisions a future where every On product is fossil free and fully circular. CleanCloud™ is the result of five years of dedicated work, which began with finding the best possible partners. This collaborative approach is key to overcoming the challenges of developing this complex technology at a commercial scale.

"Holding the first-ever shoe made of carbon emissions in my hands is a huge milestone – not only for On, but for the whole sports industry", explains Caspar Coppetti, Co-Founder and Executive Co-Chairman of On. "Five years ago, this was barely a dream. Imagine what can happen in the future as we unlock the potential of alternative carbon sources with further research and in collaboration with the best partners."

CleanCloud™ is the result of a pioneering supply chain partnership with some of the most innovative companies in biochemicals, process and material innovation, including LanzaTech, Borealis and Technip Energies. LanzaTech is using a combination of cutting-edge genetic engineering, state-of-the-art biotechnology, artificial intelligence, and innovations in mechanical and chemical engineering to manufacture chemicals using a process that soaks up waste carbon rather than emitting it.

“Today we continue our journey to show the world that recycled carbon is a resource rather than a liability,” says Jennifer Holmgren, CEO of LanzaTech. “As we increasingly convert pollution into the products we use in our daily lives, we will reduce the need to extract more carbon from the ground! The partnership between On, Borealis,Technip and LanzaTech will change how the world thinks about sourcing carbon, enabling us to bend the carbon curve, keep our skies blue, and create a sustainable future for all.”

Technip Energies is a leading engineering and technology company for the energy transition and in this consortium in charge of the process of dehydrating ethanol to the gas ethylene, which is a monomer and the most important building block of widely used plastics.

Bhaskar Patel, SVP Sustainable Fuels, Chemicals & Circularity at Technip Energies: “Technip Energies is proud to be supporting On in this exciting project to make CleanCloud™ a reality. The application of our Hummingbird@ technology to produce bio-ethylene is one step to a more sustainable future. We look forward to working with the On team to scale up and help bring CleanCloud™ to the world.”

Borealis is a leading provider of advanced, circular and renewable plastic solutions and essential in creating high-performance, easy-to-process EVA foam for CleanCloud™. This collaboration clearly underlines Borealis’ commitment to a net zero future and fully aligns with its EverMinds™ ambition of accelerating circularity through partnerships.

Lucrèce Foufopoulos, Borealis Executive Vice President Polyolefins, Circularity and Innovation & Technology: “Borealis is thrilled to be part of this unique value chain collaboration. With our creative partners On, LanzaTech, and Technip Energies we are proud to co-create circularity in carbon and decouple plastic from its reliance on fossil-based resources. Through innovation and collaboration, we continue re-inventing essentials for sustainable living.”

This is how it works: Technology from LanzaTech captures carbon monoxide emitted from industrial sources like steel mills before being released into the atmosphere. Once captured, these emissions enter a patented fermentation process. Thanks to specially selected and naturally occurring bacteria, the carbon rich gas ferments naturally and is converted to ethanol. This natural fermentation process is similar to that of conventional alcohol production – e.g., beer brewing. The ethanol is then dehydrated to create ethylene by Technip Energies, which is then polymerized by Borealis to become EVA (ethylene vinyl acetate) in a form of solid small plastic pellets – the versatile and lightweight material that On starts working with to create a performance foam for shoes.

On’s ambition is to bring the CleanCloud™ technology to as many consumers as possible in the near future. “We believe that On can be an agent for positive change through enabling and accelerating the scale up of sustainable technologies such as CleanCloud™”, says Caspar Coppetti.

Driven by the same spirit of sustainable innovation, On is collaborating with circular start-up Novoloop on the CleanCloud™ outsole, by utilizing the world’s first chemically upcycled TPU from post-consumer plastic waste. The outsole was put under rigorous lab and athlete testing, meeting specifications comparable to fossil derived TPUs with a significant carbon footprint reduction. For the upper, On is collaborating with the young French start-up Fairbrics to create a polyester-based textile made from carbon emissions.

High-res images are available via this link as well as further images from Borealis here.

Learn more about On’s sustainability journey in the On Impact Progress Report.

Photo | On presents the first ever shoe made from carbon emissions in partnership with Borealis, LanzaTech and Technip Energies.
Photo: © ON

K 2022 will take place from 19 to 26 October 2022 in Düsseldorf, Germany.

We invite you to "Innovate Collaborate Accelerate" together with us by visiting Borealis and Borouge in Hall 6 at Stand A43, where the shoes produced in collaboration with ON will be on display.

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About Borealis
Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions and a European front-runner in polyolefins recycling. In Europe, we are a market leader in base chemicals and fertilizers. We leverage our polymer expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries such as consumer products, energy, healthcare, infrastructure and mobility. In re-inventing essentials for sustainable living, we build on our commitment to safety, our people, innovation and technology, and performance excellence. We are accelerating the transformation to a circular economy of polyolefins and expanding our geographical footprint to better serve our customers around the globe.
With head offices in Vienna, Austria, we employ 6,900 employees and operate in over 120 countries. In 2021, we generated total sales of EUR 12.342 EUR billion and a net profit of EUR 1,396 million. OMV, the Austria-based international oil and gas company, owns 75% of our shares, while the remaining 25% is owned by a holding company of the Abu-Dhabi based Mubadala. We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with the Abu Dhabi National Oil Company, or ADNOC, based in UAE); and Baystar™ (with TotalEnergies, based in the US)**.** **www.borealisgroup.com** **|** **www.borealiseverminds.com**

About On
On was born in the Swiss Alps with one goal: to revolutionize the sensation of running by empowering all to run on clouds. Twelve years after market launch, On delivers industry-disrupting innovation in premium footwear, apparel, and accessories for high-performance running, outdoor, and all-day activities. Fueled by customer recommendation, On's award-winning **CloudTec®** innovation, purposeful design, and groundbreaking strides in sportswear's **circular economy** have attracted a fast-growing global fan base — inspiring humans to explore, discover and dream on.
On is present in more than 60 countries globally and engages with a digital community on **www.on-running.com**.

About LanzaTech
LanzaTech harnesses the power of biology and big data to create climate-safe materials and fuels. With expertise in synthetic biology, bioinformatics, artificial intelligence, and machine learning coupled with engineering, LanzaTech has created a platform that converts waste carbon into new everyday products that would otherwise come from virgin fossil resources. LanzaTech's first two commercial scale gas fermentation plants have produced over 50 million gallons of ethanol, which is the equivalent of offsetting the release of 190,000 metric tons of CO2 from the atmosphere. Additional plants are under construction globally. LanzaTech is based in Illinois, USA. For more LanzaTech company news, visit www.lanzatech.com.

About Technip Energies
Technip Energies is a leading Engineering & Technology company for the energy transition, with leadership positions in sustainable chemistry, circularity, ethylene, Liquefied Natural Gas (LNG) and hydrogen, as well as growing market positions in blue and green hydrogen and CO2 management. The company benefits from its robust project delivery model supported by extensive technology, products and services offering. Operating in 34 countries, our 15,000 people are fully committed to bringing our client's innovative projects to life, breaking boundaries to accelerate the energy transition for a better tomorrow.
Technip Energies is listed on Euronext Paris with American depositary receipts ("ADRs"). For further information: http://www.technipenergies.com/

About Novoloop
Novoloop is a next-generation chemical start-up innovating post-consumer plastic waste into performance materials. Where others see trash, the company sees opportunity. With a vision to end the plastic epidemic, the venture-backed company is building and scaling new technologies to transform hard-to-recycle plastic waste into applications for footwear, sporting goods, and the automotive industries.

About Fairbrics
Fairbrics is a startup with the mission to fight climate change by developing circular manufacturing processes, which use renewable resources instead of petroleum-based ones.

Our first product, Airwear, is a state-of-the-art technology with 5 patents pending which makes it possible to produce polyester yarn with a very low carbon footprint. After being captured from industrial sources or from the air, harmful greenhouse gas CO2 is converted to a raw material of polyester by using special catalysts, then polymerized to create polyester pellets which are then spun into yarn and finally into fabrics. In the near future our technology aims to produce carbon negative 100% sustainable polyester.

We are building our first industrial facility with the ambition to solve the main challenges of the fashion industry, namely carbon neutrality, circularity and profitability.