

Continental Enables Use of Recycled PET Bottles in Tire Production as of 2022

- **Technology for recycling PET bottles for tire construction developed jointly with fiber specialist OTIZ, Oriental Industries (Suzhou) Ltd.**
- **Reprocessing for high mechanical requirements in tire construction takes place without intermediate chemical steps. Secondary raw material has the equally high quality of virgin PET**
- **Circular economy is an integral part of Continental's sustainability strategy**

Hanover, Germany, August 3, 2021. Continental enables the use of reprocessed polyester obtained from recycled plastic bottles in its tire production as of 2022. The new sustainable polyester yarn will be obtained from polyethylene terephthalate (PET) bottles by a mechanical process and will be used in the construction of the tire carcass. This can completely replace conventional polyester. Together with its cooperation partner and supplier OTIZ, a fiber specialist and textile manufacturer, the premium tire manufacturer has developed a special technology to recycle PET bottles without previously necessary intermediate chemical steps and to make the polyester yarn functional for the high mechanical requirements of the tire. In the course of so-called upcycling, a PET bottle becomes a high-performance PET material.

"As early as 2022, we will be able to use material obtained from recycled PET bottles in tire production. In our innovative recycling process, the fibers are spun from recycled PET without having to break the material down into its components beforehand," says Dr. Andreas Topp, responsible for materials, process development and industrialization in Continental's Tires business area. He adds: "Already at this year's IAA MOBILITY in Munich, we will present a highly innovative concept tire with polyester yarn made from recycled PET bottles. With the use of recycled polyester yarn, we are taking another important step in the direction of cross-product circular economy."

As part of the recycling process, the bottles are first sorted, caps removed and finally mechanically cleaned. After mechanical shredding, they are melted down and granulated; this is followed by solid state polymerization and a modified spinning process. "Our modified manufacturing process enables us to obtain polyester yarn for tire construction from PET bottles without any polymerization process from monomers," explains Dr. Derren Huang, Chief of Research and Development at OTIZ.

Laboratory and tire tests conducted by Continental have shown that secondary raw material fibers perform equally well as the fibers used up to now. They have the same quality as virgin PET, are just as stable, and are particularly suitable for tires due to their breaking strength, toughness and thermal stability.

Conventional PET has long been used as a material in car tire construction because it retains its shape even under high loads and temperatures and thus ensures safety at all driving speeds. The use of recycled PET conserves valuable resources in tire construction: today, a conventional passenger car tire consists of around 400 grams of polyester yarn. This means that more than 60 recycled PET bottles can be used for a complete set of vehicle tires in the future.

Circular economy is an integral part of Continental's sustainability strategy

Recycling is becoming increasingly important in the design, development and production of premium tires. By 2050 at the latest, Continental aims to successively use 100 percent sustainably produced materials in its tire products. With the use of recycled PET, the tire manufacturer succeeds in taking a further step toward circular economy.

"For us, waste is tomorrow's production material as we see the model of the future in circular economy. Continental's commitment to actively shaping and driving this transformation offers us a head start for our future business and thus for our future viability," says Claus Petschick, Head of Sustainability at the Tires business area of Continental. "Our ambition is clear: By 2050 at the latest, we want to completely close our product and resource cycles together with partners and suppliers."

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. In 2020, Continental generated sales of €37.7 billion and currently employs around 235,000 people in 58 countries and markets. In 2021, the company celebrates its 150th anniversary.

The **Tires business area** has 24 production and development locations worldwide. Continental is one of the leading tire manufacturers with more than 56,000 employees and posted sales of €11.7 billion in 2019 in this business area. Continental ranks among the technology leaders in tire production and offers a broad product range for passenger cars, commercial and special-purpose vehicles as well as two-wheelers. Through continuous investment in research and development, Continental makes a major contribution to safe, cost-effective and ecologically efficient mobility. The portfolio of the Tires business area includes services for the tire trade and fleet applications, as well as digital management systems for tires.

OTIZ, Oriental industries (Suzhou) Ltd. is a wholly-owned subsidiary of FEG, Far East Group (www.feg.com.tw), with the capability of innovation, OTIZ produces the functional textile reinforcement for multiple applications, including automobile goods (tire cord fabric, yarn for airbag and safety belt), industrial yarn, geotextile, conveyor belting fabric. The parent company, FEG, provides customers the full range of PET sustainable and recycling solutions, FEG reused 8.1 billion PET bottles in 2020, intercepted 6,000 metric tons of marine waste plastics, and achieved 900,000 tons of carbon emissions reduction. In order to reach the commitment of social responsibility and environment sustainability, OTIZ develops sustainable products based on the technical foundation of FENC®TOPGREEN®, including bio-based Polyester, recycled Polyester and bio-based Nylon, these sustainable products can be used alternatively to the industrial fibers, and it can make great contributions to circular economy and GHG, Greenhouse Gas.

Press contact

Henry Schniewind
Head of External Communications
Continental Tires business area
Phone: +49 511 938-21810
Email: henry.schniewind@conti.de

Press portal: www.continental-press.com
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Continental_PP_Dr_Andreas_Topp

Dr. Andreas Topp, Head of Materials, Process Development and Industrialization of the Tires business area at Continental.



Continental_PP_Claus Petschick

Claus Petschick, Head of Sustainability Tires.



Continental_PP_Dr_Derren_Huang

Dr. Derren Huang, Chief of Research and Development at OTIZ.