

NEWS RELEASE

Teijin Frontier Develops World's First Tire Cord Made from Eco-friendly Adhesive and Recycled Polyester

Tokyo, Japan, September 12, 2022 --- [Teijin Frontier Co., Ltd.](#), the [Teijin Group](#)'s fibers and products converting company, announced today that it has developed an eco-friendly tire cord made from an adhesive that does not contain resorcinol formaldehyde (RF), which is harmful to the human body and the environment, and also incorporates a low-environmental impact chemically recycled polyester fiber for rubber reinforcement. According to the company, this is the world's first commercialization of a tire cord that combines an RF-free adhesive and a chemically recycled polyester fiber.



Teijin Frontier's new tire cord

Teijin Frontier will now begin to develop reinforcing-fiber applications for various rubber products, including tire cords, belts, hoses and other diverse uses. The company will start test production of its new tire cord in 2023, targeting annual production of 200,000 tons by 2030.

Teijin Frontier, guided by its *THINK ECO*[®] environmental initiative, is striving to improve its environmental value by developing greener materials and products for applications ranging from clothing to industrial materials. The new tire cord is a result of the company's increasing emphasis on low-environmental impact solutions.

Thanks to its use of an adhesive polymer compound instead of RF, the new tire cord reduces the environmental impact of adhesive processing. In addition, due to its strong affinity with fibers and rubber, its adhesion performance is equivalent to that of conventional resorcinol-formaldehyde-latex (RFL) adhesives. Also, its chemically

recycled fibers, which are made from polymers produced with chemical recycling method, maintain their strength, fatigue resistance, dimensional stability and heat resistance. Compared to conventional tire cords made from petroleum-derived polyester fiber, the new tire cord achieves the same levels of quality and performance in addition to reducing CO2 emissions during production.

The demand for more eco-friendly tires is growing due to rising environmental awareness. In response, Teijin Frontier has been actively developing eco-friendly materials and products for tires as well as other rubber products. In 2008, it launched the world's first tire cord incorporating chemically recycled polyester fiber, and in March 2020 the company introduced an eco-friendly rubber-reinforced fiber cord that does not contain RF.

The newly developed tire cord will be exhibited at the International Tire Exhibition and Conference, one of North America's largest tire-related exhibitions and conferences, in Akron, Ohio from September 13 to 15.

About the Teijin Group

Teijin (TSE: 3401) is a technology-driven global group offering advanced solutions in the fields of environmental value; safety, security and disaster mitigation; and demographic change and increased health consciousness. Originally established as Japan's first rayon manufacturer in 1918, Teijin has evolved into a unique enterprise encompassing three core business domains: high-performance materials including aramid, carbon fibers and composites, and also resin and plastic processing, films, polyester fibers and products converting; healthcare including pharmaceuticals and home healthcare equipment for bone/joint, respiratory and cardiovascular/metabolic diseases, nursing care and pre-symptomatic healthcare; and IT including B2B solutions for medical, corporate and public systems as well as packaged software and B2C online services for digital entertainment. Deeply committed to its stakeholders, as expressed in the brand statement "Human Chemistry, Human Solutions," Teijin aims to be a company that supports the society of the future. The group comprises some 170 companies and employs some 20,000 people across 20 countries worldwide. Teijin posted consolidated sales of JPY 926.1 billion (USD 7.2 billion) and total assets of JPY 1,207.6 billion (USD 9.4 billion) in the fiscal year that ended on March 31, 2022.

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