

**NEWS RELEASE****Teijin Frontier Develops a Next-generation Comfort Material for Active and Functional Apparel**

Tokyo, Japan, November 28, 2024 --- [Teijin Frontier Co., Ltd.](#), announced today that it has developed a next-generation comfort material that uniquely combines contact cooling functionality with sweat stickiness prevention. The new material features a dual-layer, knit structure. The inner layer alternates Teijin Frontier's newly developed hydrophobic *WAVERON™* yarn and conventional hydrophilic *WAVERON™* yarn. The hydrophilic yarn absorbs perspiration, while the hydrophobic yarn prevents it from adhering to the skin to keep the skin dry. The outer layer disperses absorbed perspiration to the outside.

Teijin Frontier plans to promote and sell this next-generation comfort material as a desirable fabric for the 2026 spring/summer sports and outdoor apparel season, in both domestic and international markets. In advance of that season, the company aims to sell 100,000 meters of the material. Subsequently, it will expand into functional apparel such as fashion clothing. By fiscal 2028, Teijin Frontier expects to sell 1 million meters of this next-generation comfort material per year.

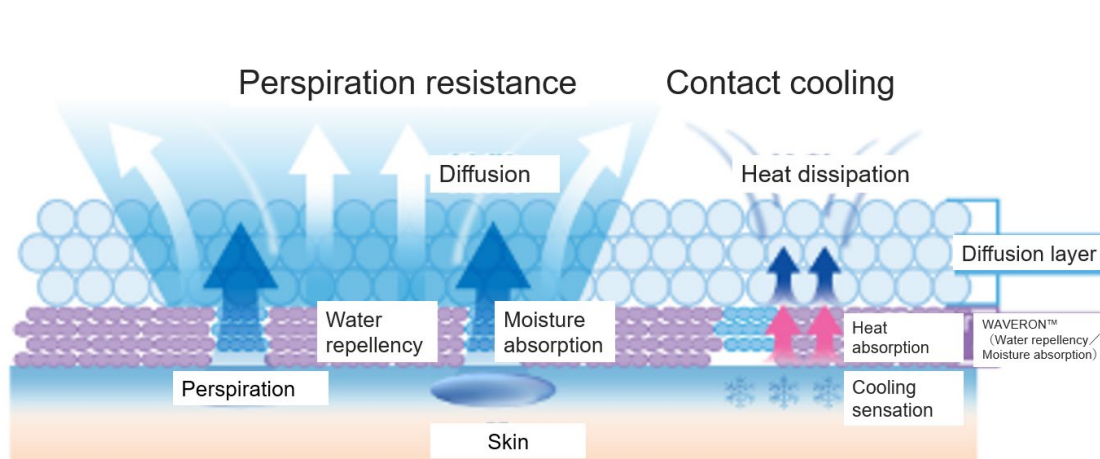
**Cooling Comfort for a Warming Planet**

In recent years, due to global warming, sports and outdoor apparel retailers are demanding clothing with multiple functions, such as contact cooling and perspiration management, to enhance consumers' comfort in elevated temperatures. However, until now it has been challenging to deliver textiles that provide both contact cooling and sweat stickiness prevention. This is because contact cooling requires enlarging the material's contact area with the skin to improve heat conduction from the skin, while sweat stickiness prevention requires reducing contact with the skin.

To resolve this dilemma, Teijin Frontier leveraged the structure and function of two products. One is a specially structured polyester fabric that combines perspiration absorption functionality and sweat adhesion prevention through optimal placement of hydrophobic and hydrophilic yarns. The other product is *WAVERON™*, a full dull, non-crimped yarn with contact cooling functionality. *WAVERON™* yarn contains titanium oxide, which promotes a cooling sensation as heat is transferred from the skin to the fiber, and has a flat, cross-sectional shape that increases the skin contact area. Additionally, this non-crimped yarn maximizes the air gaps between fibers, offering high breathability. By combining these two technologies, the company was able to deliver both contact cooling and sweat stickiness prevention functions in one material.

## Contributing to Sustainability

The new material uses 100 percent recycled polyester and features water-repellent technology made without per- and polyfluoroalkyl substances (PFAS).



## About the Teijin Group

Teijin (TSE: 3401) is a technology-driven global group with two core businesses: high-performance materials and healthcare solutions. Established in 1918 as Japan's first rayon manufacturer, Teijin today comprises some 170 companies employing 20,000 people in 20 countries. Teijin is committed to our Purpose, "Pioneering solutions together for a healthy planet." "We work together with employees and external partners to achieve our Long-Term Vision, "To be a company that supports the society of the future." Teijin posted consolidated sales of JPY 1,032.8 billion (USD 6.6 billion) and total assets of JPY 1,251.0 billion (USD 8.0 billion) in the fiscal year ending March 31, 2024.

## Press Contact

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