

NEWS RELEASE

Teijin Frontier announces development of Microft[™] MX, a new material for sports and outdoor wear that evenly combines the texture and functionality of polyester and nylon

Tokyo, Japan, December 7, 2023 --- <u>Teijin Frontier Co., Ltd.</u>, the <u>Teijin Group</u>'s fibers and products converting company, today announced the development of Microft™ MX, a next-generation, high-quality, high-performance material. This product is made from highly-deformed cross-section multifilament yarn*, which is a uniform mixture of single filaments of polyester and nylon, using a unique spinning technology, as the optimal woven or knitted structure. The evenly mixed polyester and nylon filaments produce deep colors. And Microft™ MX has the appearance of a finely woven chambray due to difference in dyeing effect of both materials.

The raw yarn has a gently V-shaped highly-deformed cross-section, which provides bulkiness and a spun-like, soft texture. Uniformly mixing polyester and nylon on the surface and in the structure of the woven fabric produces a combination of desirable features from both materials, such as the abrasion resistance and color development capabilities of nylon, and the water absorption, quick-drying properties and shape stability of polyester.

Technology overview

process	Technology content	Image of material
Raw Yarn	Different polymer co-spinning technology Special deformed cross-section spinning technology	Cross section of yarn Polyester Nylon
Yarn processing		 — ※Single yarns of polyester and nylon are evenly mixed together.
	High crimping, pre-twisting technology	Side of yarn
		non-twisted yarn Textured yarn
Weaving/ knitting	Woven structure design technology	Developed non-twisted yarn and textured yarn Surface of fabric
		Zoom up Nylon
Dyeing/ processing	Dyeing technology that produces strong colors for a good appearance Functionality imparting processing technology	 Polyester Polyester and nylon single yarns are evenly mixed to achieve a fusion of the textures and functions of both materials.

Product characteristics of "Microft™ MX"

Item		Features
High quality	Appearance	Deep color Finely woven chambray style
	Texture	· Special bulky · Span style texture
Functionality	Derived from polyester	Water absorption, quick drying, water repellency Shape stability, stretchability
	Derived from nylon	Abrasion resistance Excellent color development

In recent years, fashions that combine the practicality of sports and outdoor apparel with lifestyle have been expanding in popularity. There is a growing need for fabrics with superior functionality, plus new looks and textures, that differ from conventional products.

Polyester and nylon are often used in sports and outdoor clothing. Advances in product development are being made to take advantage of polyester's stretch properties, dimensional stability, water absorption and quick-drying properties, and nylon's abrasion resistance and vivid colors. However, no progress has been made in developing materials that combine the texture and functionality of polyester and nylon.

Teijin Frontier will begin promoting Microft™ MX fabric for the 2025 spring and summer outdoor clothing and sportswear collections. Applications will then be expanded to include functional clothing of innerwear and fashion clothing, with the aim of selling 500,000m per year by 2026.

*Multifilament yarn: A filament yarn made by pulling together dozens of single yarns (single fibers) into a single yarn.

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. Through "Human Chemistry, Human Solutions," Teijin relentlessly strives to aims to be a company that supports the society of the future by protecting the global environment and addressing the needs of people and communities. Teijin posted

consolidated sales of JPY 1,018.8 billion (USD 7.6 billion) and total assets of JPY 1,242.4 billion (USD 9.2 billion) in the fiscal year ending March 31, 2023.

Press Contact

Investor and Public Relations Department Teijin Limited pr@teijin.co.jp