Hyosung TNC commercializes world’s first bio-based spandex

Hyosung TNC (KRX:298020) has succeeded in extracting spandex from corn and commercializing the world’s first bio-based spandex.

Hyosung TNC announced on August 10, 2022 that it successfully developed bio-derived spandex, ‘creora® bio-based’, using a natural material extracted from corn instead of coal, and obtained a global eco-friendly certification.

Commercializing the world’s first bio-based spandex that reduces carbon emissions by 23% compared to conventional products

The ‘creora® bio-based’ spandex uses a corn-derived substance that obtained an eco-friendly certificate from the U.S. Department of Agriculture, replacing a part of coal-extracted raw materials.

The corn-derived substance has long been used for general fibers, wrapping papers, cosmetics, and liquid detergents, but not for high-functional textiles, such as spandex, as it is impossible to deliver unique elasticity and resilience due to technological limitations. Building on its technological prowess that leads the world’s spandex market, Hyosung TNC has made research and development efforts for more than a year, and successfully commercialized bio-based spandex for the first time in the world.

According to the Life Cycle Assessment, an assessment technique based on the international standards for environmental impact, when ‘creora® bio-based’ is applied to the products, it can reduce water use by 39% and carbon dioxide emissions by 23%, compared to conventional spandex products.

Obtaining an eco-friendly certification from SGS, the world’s leading international standard certification institute

In June 2022, the ‘creora® bio-based’ received the Eco Product Mark, a global eco-friendly certification, from the SGS (formerly Société Générale de Surveillance).

The Eco Product Mark is awarded to products that used eco-friendly raw materials, harmless to human body and produced in eco-friendly methods through ESG-oriented management.

As the European Union recently announced a full-scale adoption of the Carbon Border Adjustment Mechanism (CBAM) in 2025, global demand for eco-friendly biomaterials is on the rise.

Data Bridge, a global market survey institute, expects the global biological fiber market to grow at an annual average of 5.5% by 2029,

“We will drastically expand the eco-friendly product business,” says Hyosung Chairman Cho Hyun-joon, signaling the group’s intention to collaborate with global brands.



Hyosung Chairman Cho Hyun-joon says Hyosung will expand the eco-friendly product business and play a pivotal role as an industry leader by steadily developing the next-generation eco-friendly textiles including biodegradable fiber. (Photo: Business Wire)

Hyosung TNC will initially start production of the bio-based spandex at its production bases in Korea including facilities in Gumi, and then increase its production through global production bases, such as those in Vietnam.

In addition, it aims to continuously increase the use of natural raw materials for its products through collaboration with global fashion brands.

“We will play a pivotal role as an industry leader by steadily developing the next-generation eco-friendly textiles including biodegradable fiber,” said Hyosung Chairman Cho Hyun-joon.