CiCLO®

SUSTAINABLE TEXTILE TECHNOLOGY

OEKO-TEX®
INSPIRING CONFIDENCE
ECO PASSPORT
17.0.14110 HOHENSTEIN HTTI
Tested and verified chemicals,
www.oeko-tex.com/ecopassport

SYNTHETIC TEXTILE MICROFIBERS ACCOUNT FOR 35% OF THE PRIMARY MICROPLASTICS IN OCEANS[1] AND ARE FOUND EVERYWHERE ON EARTH.

In the context of plastic pollution, microfibers are defined as short pieces of textile fibers that have broken from the main textile construction.

Synthetic microfibers are the most prevalent form of microplastic in aquatic, atmospheric, and terrestrial environments across the globe.[2]

Photo Credit: Sarah-Jeannie Royer, Oceanographer

A NATURE-BASED SOLUTION TO MITIGATE SYNTHETIC MICROFIBER POLLUTION

CiCLO® additive is thoroughly blended with recycled or conventional polyester or nylon while in molten form during melt extrusion to create countless biodegradable spots in the matrix of the plastic. These spots act as pathways that enable naturally occurring microorganisms to completely mineralize CiCLO® fibers, resulting in the production of basic natural elements.

CiCLO® is tested for efficacy in environments where synthetic microfibers are prolific pollutants—waste water sludge, anaerobic digester landfill conditions, natural soil and sea water.

The mechanism is only activated under conditions that allow for biodegradation. CiCLO® fabrics will not biodegrade or prematurely deteriorate on a warehouse shelf, while being used, or during customary care—just like inherently biodegradable fabrics made from natural fibers like cotton or wool will not.

CiCLO® FIBERS BIODEGRADE AT RATES SIMILAR TO NATURAL FIBERS LIKE WOOL

Long term studies conducted by 3rd party labs using internationally recognized ASTM & ISO Test Methods prove CiCLO® polyester and nylon biodegrade at greatly accelerated rates compared to untreated polyester and nylon.

Many factors influence how quickly biodegradation may occur, the speed of which can be described as the pace of nature. Rates will vary from environment to environment for any inherently biodegradable materials that end up as pollutants in uncontrolled natural conditions.

Visit ciclotextiles.com for test data and to learn more.

SUSTAINABLE PERFORMANCE TEXTILES

Fibers, yarns and fabrics built with CiCLO® technology have no loss of mechanical or durability characteristics, and can be dyed, finished and cared for using customary methods. The biomimetic mechanism in CiCLO® polyester and nylon is only activated under prolonged exposure to moisture and microbes in environments where synthetic microfibers are prolific pollutants—wastewater sludge, soil, anaerobic landfill conditions and sea water.

KEY BENEFITS

- Mitigates synthetic microfiber pollution caused by textiles
- Compatible with conventional and recycled polyester and nylon
- Rigorously tested for safety and efficacy
- Traceable
- Compatible with mechanical and chemical recycling
- ECO PASSPORT by OEKO-TEX certified
- All components are REACH compliant

SERVICES

- Fiber, yarn, fabric and supply chain development consultation
- Testing and reporting
- Responsible and compliant marketing support

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This brochure is intended for business to business communications. Any entity using the CiCLO® brand is required to execute a Trademark Licensing Agreement, and must responsibly promote CiCLO® technology to consumers using legally compliant messaging and claims following CiCLO® brand guidelines.

1 Boucher, J. and Friot D. (2017). Primary Microplastics in the Oceans: A Global Evaluation of Sources. Gland, Switzerland: IUCN. 43pp

2 Source: Roland Geyer, Jenna Gavigan, Alexis M. Jackson, Vienna R. Saccomanno, Sangwon Suh, Mary G. Gleason, Quantity and fate of synthetic microfiber emissions from apparel washing in California and strategies for their reduction, Environmental Pollution, Volume 298, 2022, 118835, ISSN 0269-7491, https://doi.org/10.1016/j.envpol.2022.118835.