CiCLO®

Biodegradable Technology

Made to last, not here forever

CiCLO® TECHNOLOGY TRANSFORMS SYNTHETIC FIBERS TO BEHAVE LIKE NATURAL ONES WITHOUT COMPROMISING DURABILITY, ENSURING THEY ARE MADE TO LAST - JUST NOT FOREVER.

What is CiCLO® Technology?

CiCLO® technology is a patented textile ingredient that allows polyester and nylon to biodegrade naturally, significantly reducing the time synthetic fibers (microplastics) pollute the environment.

How Does CiCLO® Technology Work?

When blended with recycled or virgin polyester or nylon during melt extrusion, the CiCLO® active ingredients create pathways that attract naturally occurring microorganisms. This enables complete biodegradation of the CiCLO® fibers, leaving only natural elements behind. Biodegradation is activated only after prolonged exposure to moisture and microorganisms, assuring fibers and fabrics maintain their durability and performance during use.

Seamless Integration

Drops in, requiring no changes to manafacturing processes.

Upholds Performance

Maintains durability, dyeability, and recyclability without compromising performance.

Functional Compatibility

Integrates seamlessly with other functional technologies and sustainable fibers.

Why Use CiCLO® Technology?

CiCLO® Technology enables synthetic fibers naturally biodegrade, preventing them from lasting forever in the environment.

Synthetic fibers make up 65%[1] of the global textile market and are a major source of microplastic pollution, with up to 18 million microfibers[2] released per wash cycle. Almost all textiles unavoidably shed during manufacturing, use, and care. Once these plastic microfibers become environmental pollutants, they're too small to recapture. Like most plastics, they persist indefinitely unless made with CiCLO® technology.

Regulation-Ready

Aligns with regulations demanding durability and the reduction of microplastic pollution.

Versatile Application

Suitable for home and hospitality textiles, apparel, trims, and more.

Effortless Scalability

Meets production needs easily, from small batches to mass-scale operations.

1. Ocean Conservancy, 5 Gyres; 2. Textile Exchange

Does CiCLO® Technology Support Circular Economy Initiatives?

CiCLO® technology supports circular economy systems by reducing the environmental impact of microplastic pollution from synthetic textiles. It is compatible with rPET, textile waste, and bio-based polymers and does not interfere with the chemical or mechanical recyclability of fibers or fabrics.

Are CiCLO® Fibers Available Globally?

CiCLO® polyester and nylon are available through our worldwide network of certified filament and staple fiber manufacturing partners. Scalable, affordable, and market-proven, the CiCLO® brand is trusted and adopted by leading global brands and retailers.

Americas:

- USA
- Brazil
- Colombia
- El Salvador
- Honduras

Europe:

- Germany
- Ireland
- Turkey

Asia/Middle East:

- China
- India
- Indonesia
- Israel
- Pakistan
- South Korea
- Taiwan
- Thailand
- Vietnam

How is CiCLO® Technology Proven and Tested?

CiCLO® chemistry is certified safe for use in sustainable textiles by OEKO-TEX® ECO PASSPORT. It is also REACH compliant, meeting EU standards to protect human health and the environment from harmful chemicals, and is non-toxic to marine and plant life. CiCLO® fibers and fabrics are rigorously tested for biodegradability by third-party labs using ASTM and ISO test methods.

SAFE CHEMISTRY

ALL COMPONENTS REACH compliant CiCLO

OEKO TEX® ECO PASSPORT 17.0.14110 Hohenstein HTTI

www.oeko-tex.com

CiCLO® Fibers Fully Biodegrade

Biodegradation Rate Comparison

In Seawater

3.7 years

ASTM D6691 data shows CiCLO® polyester biodegraded* 94% compared to 5% for conventional polyester in 1,362 days.

In Waste Water Sludge

2.6 years

ASTM D5210 data shows CiCLO® polyester biodegraded* 90% compared to 0% for conventional polyester in 952 days.

In Soil

3.2 years

ASTM D5988 data shows CiCLO® polyester biodegraded* 91% compared to 3% for conventional polyester in 1,170 days.

In Biologically Active Landfill

3.5 years

ASTM D5511 data shows CiCLO® polyester biodegraded* 91% compared to 6% for conventional polyester in 1,278 days.

*Respirometry test methods recognize ≥90% as full biodegradation. Rate of biodegradation for any inherently biodegradable materials in uncontrolled open environments depends on many factors.inherently biodegradable materials in uncontrolled open environments depends on many factors. trademark of Intrinsic Advanced Materials, LLC.

BY CHOOSING CiCLO®, YOU JOIN A NETWORK DEDICATED TO COMBATING MICROPLASTIC POLLUTION THROUGH RESPONSIBLE INNOVATION. CONTACT US TO LEARN MORE.

CICLOTEXTILES.COM

THIRD PARTY TESTED

intertek Total Quality. Assured. · ASTM · BUREAU VERITAS · ISO