

TECHNOLOGY

CiCLO® technology reduces the persistence of fugitive synthetic microfiber pollution.

What is it

CiCLO® technology is a sustainable textile ingredient that is added to polyester and nylon during the melt extrusion process. It can be blended with recycled or virgin fibers.

How does it work

CiCLO® additive is thoroughly blended with the base polymer 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 break down and digest CiCLO® fibers, resulting in the production of basic natural elements.

The mechanism is only activated under conditions that allow for biodegradation to naturally – access to moisture and an abundance of microbes over an extended period of time. 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.

Key benefits

- ▶ Durability & recyclability maintained
- ▶ ECO PASSPORT Certified by OEKO-TEX®
- ▶ Non-toxic to marine life
- ▶ Traceable
- ▶ Fiber available from CiCLO® Certified Manufacturers globally

Why use it

Fiber fragments shed from synthetic fabrics made with CiCLO® technology won't persist in the environment forever the way other synthetics do.

While 100% prevention of plastic pollution and completely closed loops are ideal goals, the CiCLO® solution is grounded in current reality. Almost all textiles unavoidably shed. Options to recover the fragmented fibers are extremely limited. Once these tiny plastic microfibers end up as pollutants in the environment, they simply can't be recaptured. They are prolific and literally found everywhere, including the air, wastewater treatment plants, soil, aquatic environments, landfills, and even in the guts of humans and wildlife.

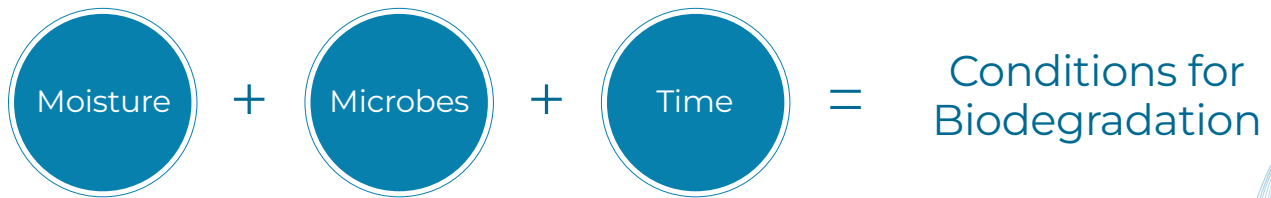
“Made to last” shouldn't mean “here forever.”

Learn more at ciclotextiles.com

SCIENCE

CiCLO® fibers are proven to biodegrade at greatly accelerated rates in environments where textiles are prolific pollutants.

Environment	Days	CiCLO® Fiber Biodegradation	Untreated Fiber Biodegradation
Waste Water Treatment Plant Sludge ASTM D5210	847	88%	0%
Soil ASTM D5988	1,171	91%	3%
Seawater ASTM D6691	844	92%	5%
Anaerobic Digester (Landfill) ASTM D5511	1,278	91%	6%



No activation during use or care

Some other stuff we're compelled to share...

*Biodegradation studies are conducted by independent 3rd party laboratories using internationally recognized ASTM Test Methods, including D5210, D5988, D6691 and D5511. Referenced Test Methods use respirometry, a process that measures biogas and uses stoichiometry to calculate rate and extent of biodegradation. Respirometry studies give true indication that microorganisms are breaking down and digesting materials. Biodegradation percentages never reach 100% on respirometry study data because when microorganisms digest carbon, most is used for energy and respired but some is utilized to build their cell walls. The FTC requires us to state that the rate and extent of biodegradation presented does not mean that the product will continue to biodegrade. In other words, do not extrapolate data. Laboratory studies represent controlled conditions. As with all biodegradable materials, the actual rate and extent of biodegradation is dependent upon individual conditions in actual environments.

IMPORTANT CALIFORNIA NOTICE: California law prohibits the sale of plastic packaging and plastic products that are labeled with the terms 'biodegradable,' 'degradable,' or 'decomposable,' or any form of those terms, or that imply in any way that the item will break down, biodegrade or decompose in a landfill or other environment. These restrictions apply to all sales in or into the State of California, including such sales over the internet. Intrinsic Advanced Materials, LLC, has developed extensive guidelines for how to use the CiCLO® trademark and brand assets in ways that are compliant with FTC and California requirements, and how to explain the benefits of CiCLO® technology to consumers in an easy to understand and truthful way.