



Level 3

Biodegradable polyester yarn
to reduce microplastic pollution from textiles powered by *CiCLO*® technology

Innovative CiCLO® technology -

reduces microplastic pollution, retaining the positive characteristics of polyester yarn

Polyester is weatherproof, UV resistant and shows hardly any signs of usage. Its longevity becomes a problem when polyester enters the environment in the form of microplastics.

Natural solution through CiCLO® technology

During production, CiCLO® technology is embedded in the yarn, enabling microbial biodegradation. This drop-in solution requires no changes to existing processes and preserves the yarn's performance, usability and durability.

Microplastic particles released into the environment in the course of a textile's life can be biodegraded by microorganisms - just like naturally occurring fibers.

Independent certification confirms that CiCLO® ingredients meet ecologically responsible manufacturing standards, being OEKO-TEX® ECO PASSPORT certified and REACH compliant, and are safe and non-toxic to marine and plant life.

ASTM D6691-17

ASTM D6691-17 STM¹ determines the rate and degree of aerobic biodegradation of plastic materials exposed to the indigenous population existing in natural seawater.

After 1,362 days in natural sea water, CiCLO® polyester biodegraded 94%.

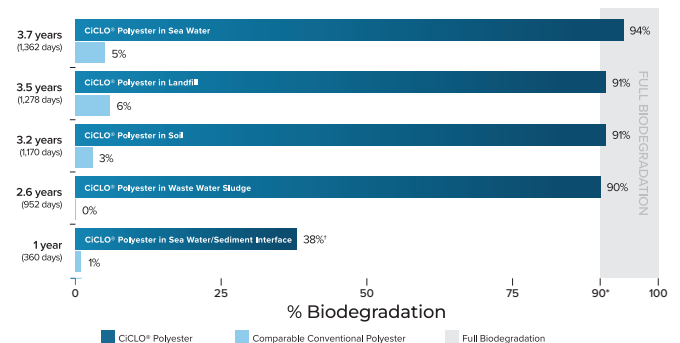
ASTM D5988

ASTM D5988 STM¹ determines the degree and rate of aerobic biodegradation of synthetic plastic materials on exposure to fertile soil to assure active microbiota that is mixed with compost to simulate agricultural applications.

After 1,170 days in soil conditions, CiCLO® polyester biodegraded 91%.

Biodegradation Rate Comparison

CiCLO® Polyester v. Comparable Conventional Polyester



* Achieving ≥ 90% in respirometry tests is considered full biodegradation. The remaining percentage can be attributed to biomass. Further analysis has been conducted to confirm no microplastics left behind.

¹ Study still in progress, data represents one point in time.

Data is summarized from studies conducted by 3rd party labs using ASTM/ISO Test Methods. Visit [cidotextiles.com](https://www.cidotextiles.com) for more information and detailed test data.

Our cooperation partner

The innovative CiCLO® technology is distributed by Intrinsic Advanced Materials (IAM). In 2018, IAM was founded as a joint venture between Intrinsic Textiles Group (USA) and Parkdale Advanced Materials, a subsidiary of Parkdale Inc.

The IAM team consists of scientists, engineers and experts from the textile industry. Together, they develop technologies that will lead to a more sustainable textile industry.

► We are a licensed CiCLO® certified manufacturer, producing flag fabrics made from 100 % polyester.

Available products

Flag fabrics with 100 % polyester *powered by CiCLO® technology*

- high-quality material characteristics
- usual processing
- weather tests have shown no restrictions regarding durability
- suitable for direct printing with sublimation inks, transfer printing, screen printing
- available from stock
- woven labels available

► **By adopting CiCLO® polyester, you contribute to reducing microplastic textile pollution. The biodegradation of the microplastic particles is carried out by naturally occurring microorganisms.**

More information



CiCLO® technology
(video)



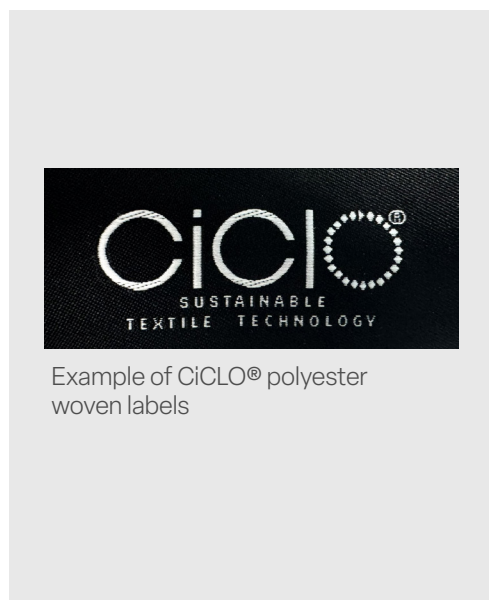
IAM and
CiCLO® technology



Effectiveness of
CiCLO® technology



Importance of
biodegradation (video)



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GERMANY