



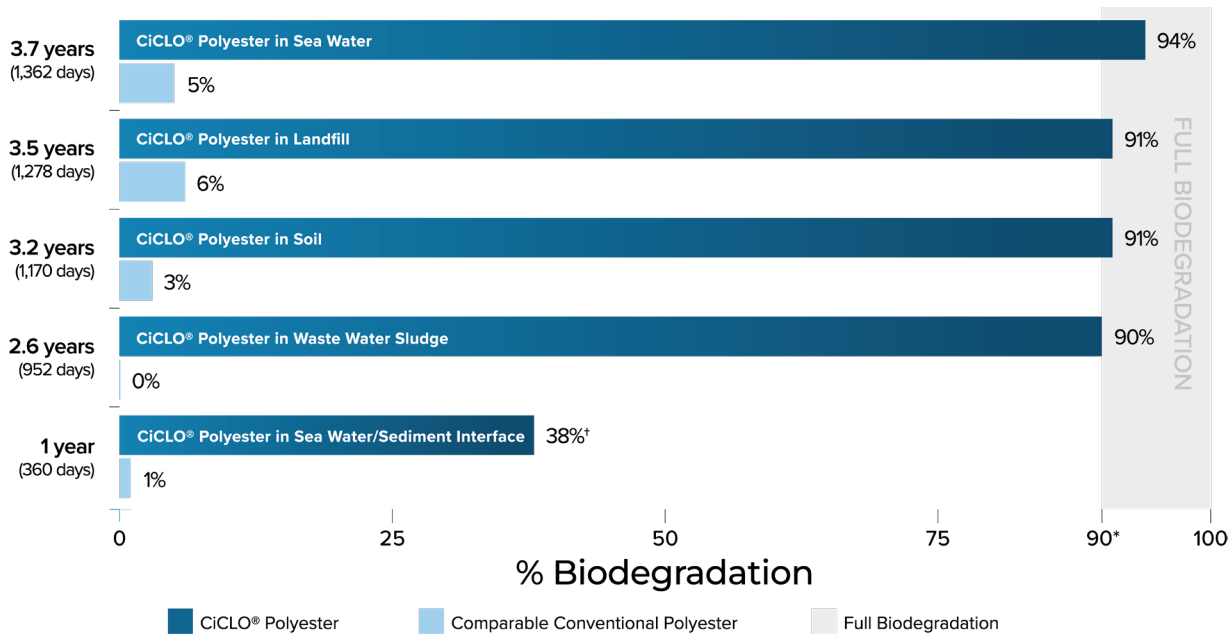
Scientific testing of CiCLO[®] textiles

Biodegradation Rate comparison CiCLO[®] Polyester v. Comparable Conventional Polyester

CiCLO[®] fibers, yarns and textiles have been proven effective over the course of several years through reliable scientific data from long term studies:

- gathered from independent third party laboratory studies with the American Society for Testing and Materials (ASTM)
- results gained from internationally recognized scientific and technological tests in simulated environments, e. g. seawater and soil
- results show rate and extent of biodegradation in these environments

CiCLO[®] textiles and fugitive microfibers are metabolized by microbes while untreated textiles remain persistent and refractory in those same environments



* 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.

[†] 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 ciclotextiles.com for more information and detailed test data.

APPROVAL PENDING |
All Data are provided by
Intrinsic Advanced Materials, LLC

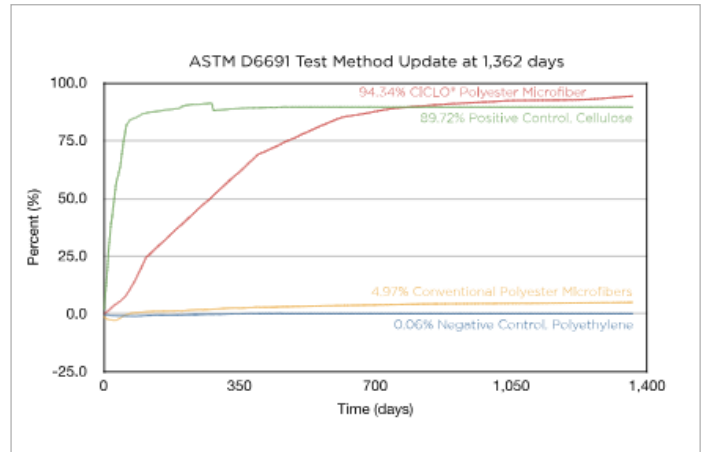


Natural Seawater Environment - ASTM D6691-17 certified

ASTM D6691-17 Standard Test Method for Determining Aerobic Biodegradation of Plastic Materials in the Marine Environment by a Defined Microbial Consortium or Natural Sea Water Inoculum

This test method 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[®] fibers (red line) biodegraded 94 %, whereas comparable untreated fibers (yellow line) biodegraded 5 %.

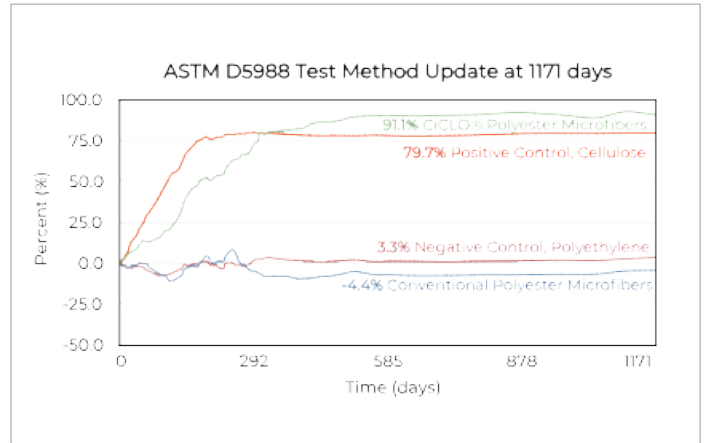


Soil - ASTM D5988 certified

ASTM D5988 Standard Test Method for Determining Aerobic Biodegradation of Plastic Materials in Soil

This test method 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. Research shows that agricultural lands receive large amounts of microfibers via biosolids application.

After 1,171 days in soil conditions, CiCLO[®] microfibers (green line) are biodegraded 91 %, whereas comparable untreated microfibers (blue line) have not biodegraded at all.



More information



[CiCLO[®] technology \(video\)](#)



[IAM and CiCLO[®] technology](#)



[Effectiveness of CiCLO[®] technology](#)



[Importance of biodegradation \(video\)](#)



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