



Time for Ecodesign

The Challenges of Recycled Polyester

11 NOVEMBER, 2022



AGENDA



UNIFI OVERVIEW



REPREVE® OVERVIEW



REPREVE® OUR OCEAN™



PRODUCT INNOVATIONS



UNIFI TEXTILE TAKEBACK™

UNIFI OVERVIEW



ABOUT UNIFI

Unifi has been a global leader in manufacturing synthetic and recycled yarn since 1971. With a focus on sustainability, Unifi is working today for the good for tomorrow.

GLOBAL REACH

Headquartered in Greensboro, North Carolina, Unifi's employees are located across the globe with manufacturing and distribution facilities in Asia, Europe, North and South America.

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FINANCIAL

Unifi is a publicly traded company on the NYSE with estimated FY2022 sales of \$800M

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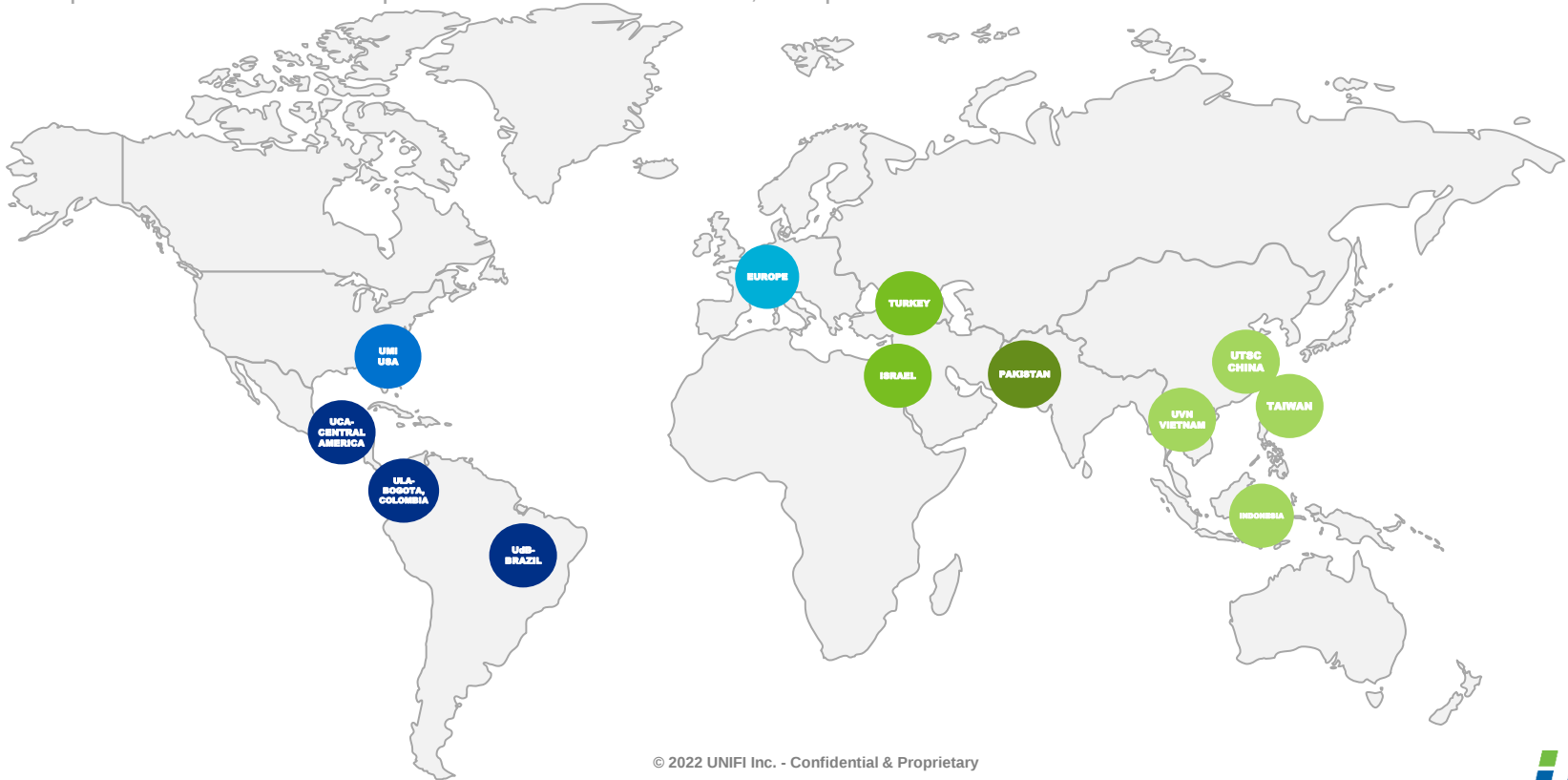
SUSTAINABLE

Through REPAREVE®, Unifi has recycled over 30 Billion bottles to date with plans to recycle 50 Billion Bottles by 2025

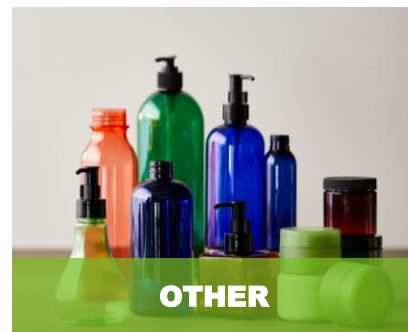
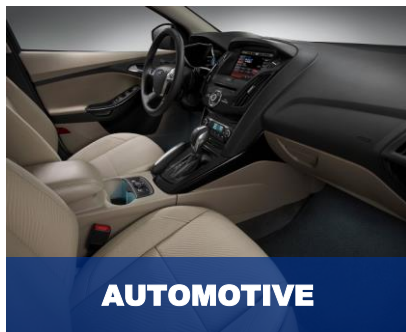
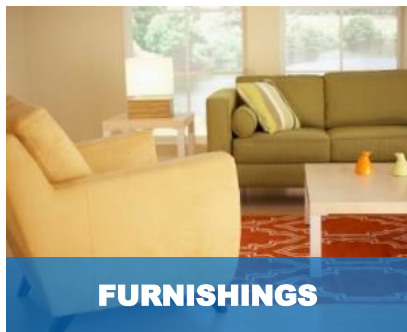
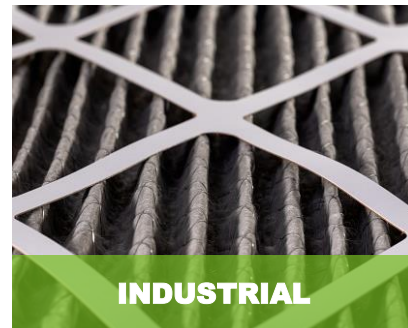


GLOBAL REACH

- Unifi produces and distributes products across the Americas, Europe and Asia.



SEGMENTS



SUSTAINABILITY AT UNIFI



Unifi's solar farm in Yadkinville, North Carolina



PLANET

- Strategic investments to reduce carbon footprint
- Pursue zero waste to-landfill in all owned operations
- Reduction of plastic pollution
- Reduce the use of water



PRODUCT

- Transform 50 billion bottles by Dec. 2025
- Expand the scale of Textile Takeback
- Reduce impact through product-focused innovation & life cycle analysis
- Transparency through industry certifications as well as U Trust® and FiberPrint™



PEOPLE

- Commitment to a culture of safety
Prioritize community engagement and philanthropy
- Empower employees through opportunity, education and leadership
- Strengthen a culture that is safe, fair, understanding and compassionate

REPREEVE®

REPREEVE is a high-quality, performance fiber made from recycled materials.
It's an essential ingredient that makes products more earth-friendly.
Many of the most recognizable brands in the world use REPREEVE.



UNIFI'S REPREVE® JOURNEY

Trademark application

REPREVE™

Technical Development



REPREVE recycling center opened



10 Billion plastic bottles recycled.

10 Billion

Target for 50 Billion bottled recycled.

50 Billion

2001

2003

2004



2006

2007

2011

2016

2017

2022

2025

REPREVE®

Trademark registered



First commercial customers



REPREVE bottle processing center opened

30 Billion

30 Billion plastic bottles recycled.

REPREVE® POLYESTER PROCESS

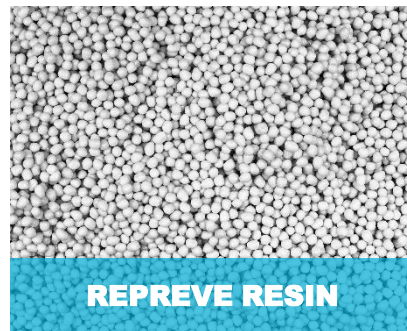
- Post-consumer waste is transformed into REPREVE through a four step process.



Post-consumer bottles are recycled



Bottles are washed and chopped into flake

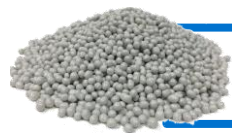


Flake is melted and formed into resin



Resin is melted and made into polyester yarn

REPREVE® APPLICATIONS



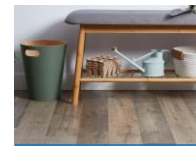
CHIP



PACKAGING



BOTTLES



FLOORING



FILAMENT



APPAREL



AUTOMOTIVE



**SOCKS/
HOSIERY**



FOOTWEAR



STAPLE



APPAREL



PADDING



INSULATION



BEDDING

TRANSPARENT. TRACEABLE. TRUSTED.

- REPREVE® offers the industry's only product level verification certification.



U Trust® Verification

The U Trust verification program is a comprehensive certification program designed to provide REPREVE® customers with a high level of transparency and confidence



FiberPrint™ Technology

FiberPrint technology helps customers avoid false environmental claims. This proprietary technology validates the authenticity of REPREVE® products and analyzes the fabric content and composition to support third-party certifications.

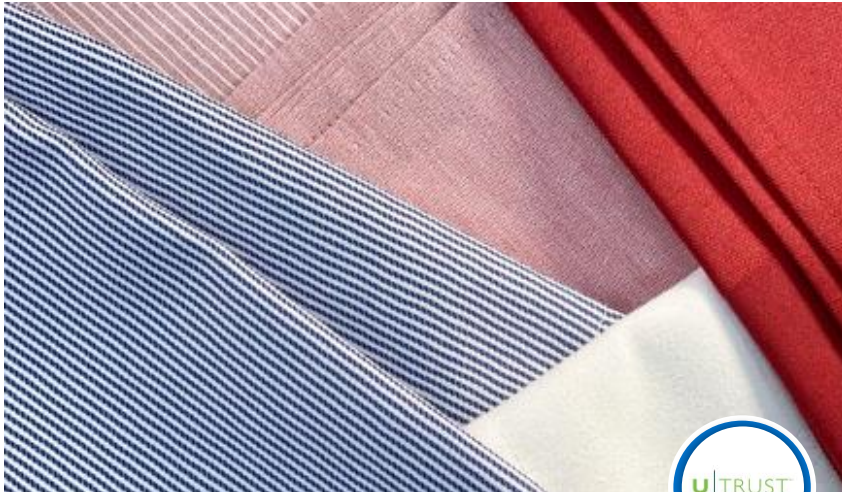


Certified Content

Products made with REPREVE recycled materials, including post-consumer plastic bottles and pre-consumer fiber waste, are certified by third parties.

REPREVE® CERTIFICATION

- Register for TexBase to easily certify product and gain assets to digital content.



FABRIC

The U Trust® verification program is a comprehensive certification program designed to provide REPREEVE customers with a higher level of transparency and validate the authenticity of REPREEVE products.



PRODUCT

Link finished product by using REPREEVE marketing to call out sustainability and eco friendly options to consumers.

INDUSTRY CERTIFICATIONS

- REPREVE® offers the peace of mind that comes with industry leading certifications.



ENVIRONMENTAL IMPACT

- REPREVE® has positively impacted the environment by:



905 MILLION

Improved **AIR QUALITY** by avoiding

904,790,877 KGs of CO2 emissions



331 THOUSAND

Generated enough energy to power over

331,194 HOMES for 1 year



787 MILLION

Saved more than **787,135,000 gallons** of

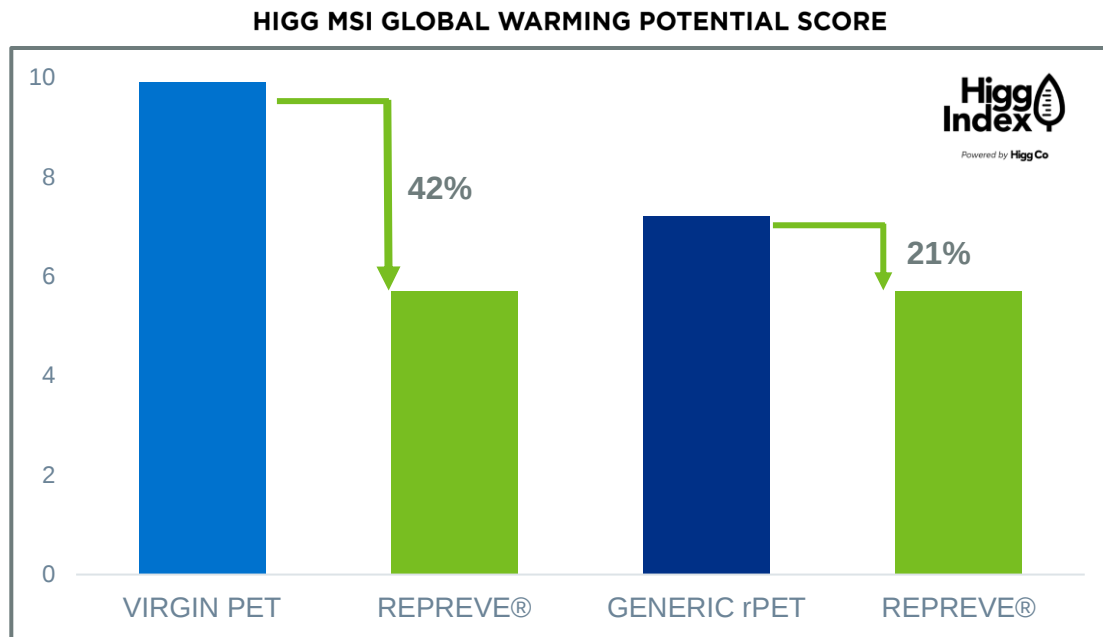
WATER



**35 BILLION BOTTLES
RECYCLED**

REPREVE® ENVIRONMENTAL IMPACT

- Higg Materials Sustainability Index (MSI) scores show that REPREVE is better for the environment than virgin PET and rPET.



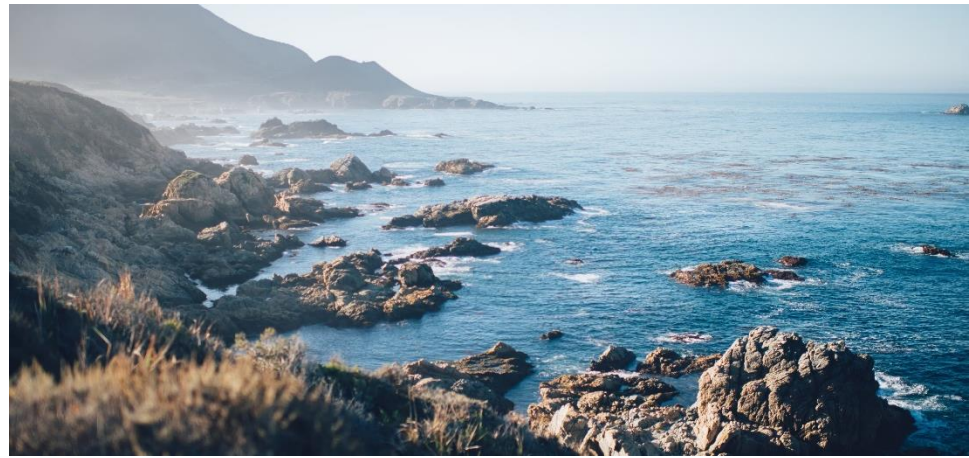


REPERVE®
OurOcean™

REPREVE® OUR OCEAN™

A premium collection made from ocean-bound plastic bottles

- REPREEVE Our Ocean is a recycled polyester option that tells an ocean-focused story.
- We specially source post-consumer plastic bottles at high risk of ending up in the ocean – so it deals with a root cause of ocean plastic.
- The bottles are collected from areas within 50km of coastlines and do not currently have a formal waste or recycling system.
- Once the bottles are collected they are certified by an independent third party organization and then follow the REPREEVE polyester process to create a recycled, ocean-bound fiber or yarn.



80%

of garbage falls into the ocean from the coast.

8 Million Tons

of plastic enter the ocean each year.

2050

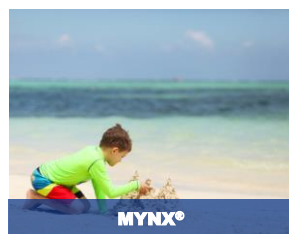
the year there will be more plastic in the ocean than fish if nothing changes.

PRODUCT INNOVATIONS

REPREVE®

PRODUCT INNOVATIONS PORTFOLIO

- Unifi offers a comprehensive selection of innovative technologies to enhance your products.



SMARTDYE™

SmartDye lower-temperature dyeable recycled polyester dye cycle efficiency and achieves up to 30%* energy savings without compromising your fabric's performance.

Potential Benefits:

- Reduction in dye cycle temperature and time saves energy, and improves efficiency.
- Dyeable at atmospheric temperature.***
- Can replace conventional polyester with minimal color lab work.***
- Comparable colorfastness.
- Reduction in carbon impact.
- Made with REPREEVE®, the only fiber with U TRUST® verification to certify recycled content claims for traceability, and made from 100% recycled materials, including post-consumer plastic bottles and pre-consumer waste.
- Available globally.
- Available in REPREEVE Polyester Filament and Staple Fiber.

UP TO 30% ENERGY SAVINGS*

REPREEVE LCI SAVINGS VS. VIRGIN POLYESTER**

44% Reduction in energy consumption

16% Reduction in water consumption

29% Reduction in greenhouse gas emissions



* Up to 30% reduction of energy consumption during the dyeing cycle (based on Unifi package dyeing equipment).

** Based on 2014 internal data specific to the REPREEVE brand for textured polyester yarn. Savings related to replacing virgin polyester base polymer with REPREEVE recycled polyester base polymer.

*** Reference code of best practices document for information regarding recommended dye procedures. 1 dpt yarn and certain colors have shown to be dyeable as low as 95° C vs 130° C + standard polyester disperse dyeing temperatures.

WATERWISE™

The greener way to dye fabrics by protecting water resources as it locks vibrant color into your clothes



Potential Benefits:

- Helps conserve water and energy, using fewer natural resources
- Can be inherently colorfast, durable, bleach resistant and UV lightfast, depending on the design of the product
- Superior brilliant color uniformity
- Precise custom mixing provides enhanced capability to match colors
- Made with REPREVE®, the only fiber with U TRUST® verification to certify recycled content claims for traceability, and made from 100% recycled materials, including post-consumer plastic bottles and pre-consumer waste.
- Available globally.
- Available in REPREVE Polyester Filament and Fiber, and Nylon Filament.



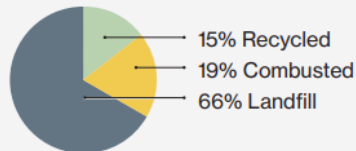
Textile
Takeback™



Textile Takeback™

The Problem

17 Million tons of textile waste was generated in 2018*



- + The main source of textile waste is discarded clothing followed by furniture, carpets, tires and footwear.
- + In 2018, 66% of that wound up in landfills.

The Solution

Unifi's Textile Takeback program is designed to reduce waste generated from fabric production or at the end of an article's lifecycle.

- + Unifi accepts polyester fabric and yarn waste from customers and processes the qualified waste into recycled polyester resin.
- + The resin will then be run directly into REPREVE® filament or fiber, or it maybe be blended with recycled bottled to achieve final specification.
- + The product then begins its lifecycle again without ever going to a landfill.

*Sources: American Apparel and Footwear Association, International Trade Commission, the U.S. Department of Commerce's Office of Textiles and Apparel, and the Council for Textile Recycling. www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/textiles-material-specific-data#TextilesTableandGraph





The Process*

STEP 1

Verify waste composition

Identify that your product meets all of the waste requirements

- + Product waste is 100% polyester (can contain small amounts of Spandex and Nylon, but pure PET is preferred)
- + Both undyed and dyed product waste can be used as feedstock for takeback
- + Other synthetic yarns/fibers and natural fibers cannot be processed
- + Printing (heavy ink), embroidery, coating, sizing, foil, or other fabric treatment processes, which can bring in other materials disqualify fabrics for Takeback
- + Product waste should be free of paper, wood, metal, and dust (less than **2%**)

STEP 2

Submit for approval

Submit your samples for testing and gain approval

- + Send hand sample (2kg minimum)
- + Must be clean

STEP 3

Collect and ship

Once approved collect your waste, package it and ship to Unifi

- + Reach out to your Unifi contact to obtain and complete documentation to become a Textile Takeback supplier



TEXTILE TAKEBACK INTO REPREVE® POLYESTER

- Fabric waste is transformed into REPREVE with our four step process through Unifi Textile Takeback program.



Fabric waste is collected



Waste is shredded and enters a unique material conversion process to create REPREVE resin (could be combined with bottle flake)



REPREVE resin is formed



Resin is melted and made into REPREVE staple fiber

THANK YOU

