Sourcing Journal

Unifi CEO: Tech Investments, Textile Upcycling Advance Carbon Reduction

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MARCH 3, 2023 1:52PM

IN ITS THIRD SUSTAINABILITY REPORT, UNIFI REITERATED ITS COMMITMENT TO DIVERTING 50 BILLION PLASTIC BOTTLES FROM LANDFILLS BY 2025. **COURTESY**

Outlining environmental progress and ambitions, Unifi's third sustainability report details the relaunch of an upcycling program that aims to create new fibers from apparel waste—as well as strong investments in carbon-saving technology.

The Repreve producer reiterated its commitment to diverting 50 billion plastic bottles from landfills by 2025. Unifi surpassed its 2022 target by 5 billion bottles, converting 35 billion into new materials to date. In doing so,

the recycled and synthetic yarnmaker cut carbon emissions by 19 percent and reduced total pounds of wastage by 14 percent per revenue dollar.

“Apparel represents a vital application sector for our global business and we are energized to continue on the growth trajectory that is underway,” Unifi CEO Eddie Ingle told Sourcing Journal. Now, the company sees growth opportunities outside of fashion or even traditional textile applications, from automotive to building materials and composites, medical, packaging and non-wovens. These “are all areas of purposeful expansion efforts” that will help Unifi reach its 2025 goal, he said.

While the upcycled polyester yarn has represented a significant part of the company’s strategy for carbon emissions reduction, Ingle sees strong potential for Unifi’s latest investment. “We are constantly looking for the next great technologies, or those technologies that might require a bit more research and development to get across the finish line,” he said. The company put $100 million into new eAFK EvoCooler polyester texturing machinery, which provides a 20 percent reduction in carbon emissions for every pound of material produced.

This represents “the first real step change in texturing technology in more than two decades,” Ingle said. The eAFK EvoCooler equipment “has many features that offer a benefit versus other platforms,” including a threadline or yarn path that is “far more forgiving than previous texturing technology designs, putting less stress on the yarn itself in the process,” he added.

“We have been able to create products that weren’t possible on previous technologies, which broadens what we can bring to our customers and the market,” he added. Unifi worked closely with technology provider Oerlikon to build the appropriate machinery for Unifi’s needs and capabilities, with installations across Unifi’s Americas facilities in the U.S., El Salvador and Brazil last year.

Unifi’s work provide upskilling and training for the advanced technology has yielded a “sizable” benefit for workers, Ingle said. Infrastructural upsides have also been facilitated by the new machinery, from wider aisles to better lighting, and there is “no longer a need for frequent ladder climbing to check for fallacies on the upper level, as happens with alternative texturizing machines,” he said.

Unifi launched one of its most effective emissions-reducing products last year. The company’s SmartDye technology allows a substrate to be dyed at a lower

temperature, reducing energy usage and emissions associated with heating the dye bath—and the shorter heating cycle saves time for the dyer.

“This technology, when coupled with Repreve, affords a 30-percent reduction in energy consumption for the conventional dyeing of textiles,” Ingle said. “In order to develop, qualify and launch this key performance product, we had to run countless trials through our own dye house to ensure that colorways and performance properties were achievable.” Unifi also worked with customer development partners to ensure that SmartDye worked for both piece- and package-dyeing.

The firm is also rebooting and expansding its Textile Takeback program this year. The initiative, which collects and recycles polyester-based textile waste into Repreve, aims to address the millions of tons of clothing and fabric scraps discarded each year.

Unifi’s proposed platform expansion will take place across Asia. Since 2019, the project has generated almost 600,000 pounds of recycled fiber.

“Today, in China specifically, we are focused on the transformation of waste textile materials into Repreve polyester staple fiber products,” Ingle said. “We are working closely with our mill, as well as brand partners globally to bring this new product into key collections.”

“Textile Takeback aims to transform the industry’s take-make-waste model by providing a sustainable way to recycle landfill-bound textiles and create new products,” Ingle said, specializing in dyed and undyed polyester-based textile discards, which are generated into recycled resin through a material conversion process. “By focusing on sustainable solutions that create a closed-loop circular system,” the program “serves as an actionable and certified step towards addressing the industry’s waste footprint.”