

INTERVIEW: Costs, industry data gaps, and legislation challenge polyester circularity: PETCORE EUROPE

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- **Europe generates 5.75 million mt of textile waste annually**
- **Data collection challenges hinder recycling efforts in textiles**
- **EPR regulations for textiles may require significant adjustments**

Christian Crépet, head of the Textiles SIG Working Group, part of PETCORE EUROPE, discussed in a recent interview with S&P Global Commodity Insights the critical challenges facing the sector, particularly in data collection and recycling processes.

Crépet, who was speaking ahead of PETCORE's upcoming webinar on advancing polyester textile circularity on Dec. 11, highlighted the group's commitment to innovating recycling technologies, influencing policy standards, and promoting sustainable practices to reduce textile waste and increase the use of recycled polyester fiber.

Challenges in data collection and recycling

According to Crépet, Europe generates approximately 5.75 million metric tons of textile waste annually, with polyester fibers accounting for around 3.8 million mt. However, he noted a significant lack of reliable data sources on collection rates across the EU, which complicates the management of textile waste.

"The packaging sector is much more established, making it easier to track how many bottles are produced and how many are collected," Crépet said. In contrast, he added that the textile industry faces complexities, especially with imported materials, where the exact quantities entering Europe remain unclear.

While platforms like ReFashion in France provide some insights into collection rates and trade flows for textile waste, the lack of uniform implementation of similar projects across EU countries hampers accurate assessments of the current market conditions. For example, ReFashion reports that 188,000 mt of textile waste is generated in France each year with 60% being reused and 32% recycled. Of the recycled textile waste, only 19% consists of polyester fibers, yielding an estimated 11,000 mt of PES available for recycling.

This limited availability of feedstock poses challenges for large-scale recycling projects, with recent announcements across Europe indicating project delays or cancellations due to unclear feedstock sources.

Crépet emphasized that the absence of organized data and documentation prevents the industry from investing in new recycling capacities. He pointed out that establishing a sustainable textile supply chain requires higher investment than the packaging sector, primarily due to the preprocessing of textile waste.

Extended producer responsibility for textiles

As of Jan. 1, 2025, EU member states will be required to collect textile waste separately under the Extended Producer Responsibility policy. However, Crépet expressed skepticism about the EPR model, which was designed for packaging, suggesting it may not be suitable for textiles without significant adjustments.

He noted that the implementation of EPR regulations in the packaging sector took nearly 20 years, and similar timelines may not yield immediate results for textiles.

"We must acknowledge that, in general, it takes 1 to 5 years for garments to be discarded from wardrobes. Therefore, the EPR initiative will not have an immediate impact; we will need to wait a few years until textile waste is collected and properly separated. Additionally, legislative initiatives must be deployed to the extent that textile waste from a separate waste stream will be sufficient to fuel the textile-to-textile value chain," added Tatiana Bondar, Associate Director of Fibers at S&P Global Commodity Insights.

Competition for feedstock between packaging and textile industries

With advancements in chemical recycling, Crépet indicated that depolymerization units are mostly controlled by PET producers, which may direct the majority of textile waste feedstock towards the packaging industry.

Currently, mechanical recycling appears to be a more feasible option for the textile-to-textile loop. However, for the T2T concept to succeed through chemical recycling, the EU must invest in revitalizing its domestic textile industry.

Despite progress, Crépet cautioned that the scale of depolymerization technology is not yet competitive with virgin material production, posing ongoing challenges for recycled fibers.

"There are already some players that have managed to close the T2T loop, but scaling this up will take time," he said.