

# Let's talk about: **Textile recycling.**

Closing the Loop with Sympatex.



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## WHY TEXTILE RECYCLING?

- Demand for recycled polyester is increasing
- PES is the most widely available textile material in the world
- Raw material for recycled polyester is largely based on PET bottles
- The production of fibers and textiles is also increasing, which also leads to more textile waste if the textile itself is not recycled.
- The exclusive use of virgin, petroleum-based PES inevitably leads to ever-increasing environmental damage

### Textile-Chain without recycling:



## THE CHALLENGE

### POLICY CHALLENGES

At the time of writing, policy requirements to incentivize the recycling of textiles into textiles are being discussed, particularly in the EU, but have not yet been finalized.

### CERTIFICATES / TRANSPARENCY (RCS / GRS)

Currently only RCS is an available certification for F2F. The exact source of the textile waste and the mixture of pre- and post-consumer waste per batch cannot be precisely traced due to variations in the feedstock.

### HIGH-QUALITY SOURCES OF TEXTILE WASTE

- Expansion of the infrastructure for collection and sorting necessary
- Complexity of the materials leads to additional effort and greater challenge in sorting
- Lucrative recycling requires large quantities of a single material at a high level of high purity, which is currently not always available to recyclers.
- Generating stable profit is still very challenging for recycling start-ups. More readily available subsidies and investors are key for success.

### TECHNICAL CHALLENGES

- Solutions from feasibility study to commercial scale, including cleaning of recycling streams and integration into further processing
- the consistency of the raw materials used in the process
- clarity of process flow for recycling streams and reliability of efficiency throughout these processes
- No process reliability yet for these new technologies
- Building the infrastructure requires a lot of investment

### LENGTH OF THE TEXTILE CHAIN (additional steps)

- Chemically recycled fibers from textile waste require additional steps during production compared to virgin polyester or mechanically recycled PET bottles.
- Sufficient data regarding the environmental impact comparing recycled and conventional polyester production is not yet fully available.

### CHALLENGES IN NYLON RECYCLING

- Nylon is a fiber with a lower market availability due to lower usage in textile products compared to PES; this makes it more challenging for recyclers to attain enough feedstock for recycling.
- Sympatex avoids the use of nylon as much as possible, focusing on mono-materiality with PES components only.

## GENERAL INFORMATION

This is not a complete picture of the current situation, but highlights the most important points on which more detailed information can be found in the Textile Exchange Report. We want to make an important point for ourselves as part of the textile industry and promote an honest, fact-based exchange.

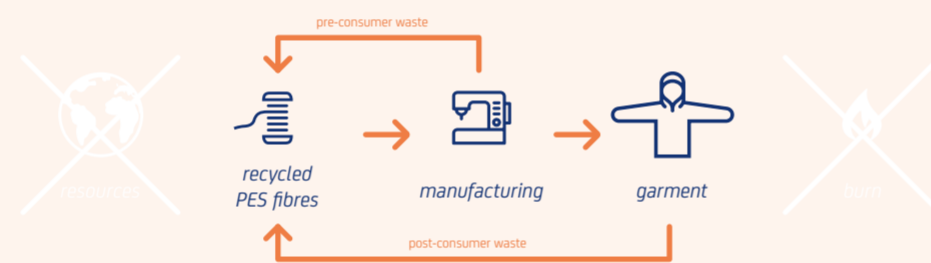
### TERMS

We differentiate when using the following **terms** and use them consciously:



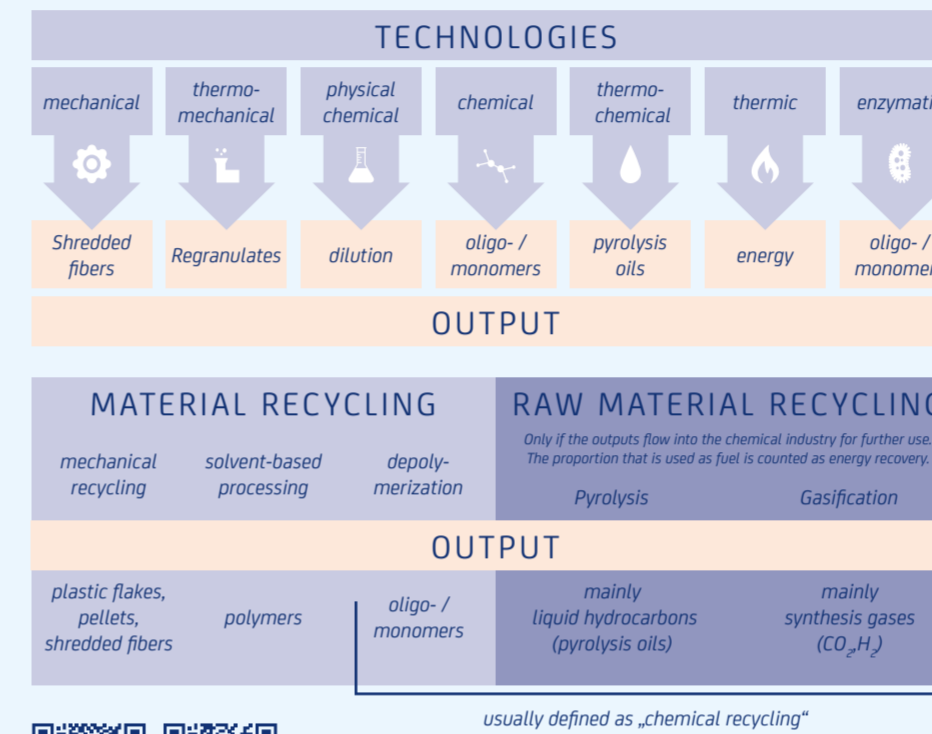
### F2F = Fiber to fiber

It refers to the recycling of textile resources and further processing as fibers go back into the textile cycle. Alternatively, the term textile to textile is also used.



**F2F eliminates the dead end of linear textile usage.** Instead of burning resources or relying on virgin PES fibers, the recycling of polyester materials helps to reduce the consumption of new/fossil resources.

## CLASSIFICATION OF RECYCLING TECHNOLOGIES



usually defined as „chemical recycling“  
← Sources on which this graphic is based

## OUTLOOK

**The Sympatex goal: to be able to offer a full circular portfolio by 2030 and replace PET polyester bottles with F2F.**

On top we support, disseminate information, share knowledge and point out urgency - topics that the industry must advance together.

### SYMPATEX OFFER FOR CUSTOMERS:

#### Responsible Design Guide

Tips for designers on how the circularity of the product can already be considered in the design to make it more easy to return it to the textile cycle.



## INITIATIVES

### HOW SYMPATEX IS TAKING PART AND SUPPORTS INITIATIVES

You can't change an entire industry alone. It is only through joint efforts that a truly circular economy can be achieved. That's why our key word is cooperation.

We support projects and diversity so that the projects will still exist in a few years' time (when they are needed).

As a member of diverse multi-stakeholder initiatives and organisations, we combine our strengths with other representatives from the textile industry and share experiences, solutions, research results and best practices. Here you will find some of our valued partners:



## THE SYMPATEX F2F BENEFITS

- ✓ **Future-Proof**  
Compliant with upcoming EU regulations on recycled content.
- ✓ **Traceability you can trust**  
We offer all information for your Digital Product Passports to ensure supply chain transparency and compliance.
- ✓ **Premium Quality**  
Qualitative PES-feedstock provides durability, performance and enables better recyclability for circular design.
- ✓ **Eco-Friendly**  
Less waste, less resources, lower environmental impact. Made from recycled yarns that are sourced from used textiles and production waste for a truly circular process.
- ✓ **Circular Design**  
Our PES monomaterial laminates are the base for a complete monomaterial garment and therefore the first step to close the lifecycle of textiles - Let's close the loop. Together.
- ✓ **Customer Support**  
We have answers - with our in-house experts, you can have your questions answered and be ready to get started.

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