Work Package 2 | Meta-analysis and Data Collection

Post-Consumer Recycled Content in Products with Textile Fibres

Systematic review of research projects, literature and market products

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Work Package 2 populates the catalogue structure from WP 1 with documented product examples, provides a validated basis for the WP3 trial design, and establishes the state of science and technology. Two search lines were run in parallel and kept separate: research projects and peer-reviewed literature on one side, products on sale on the other.



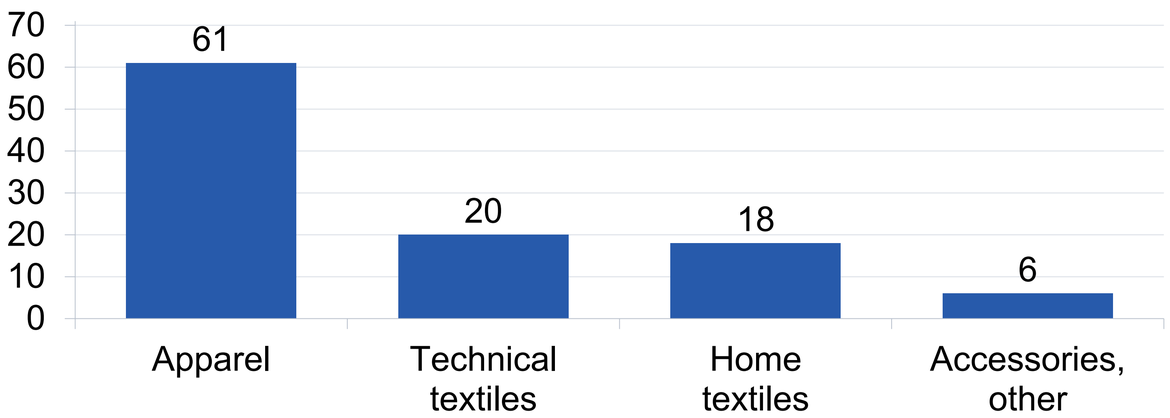
Objective and method

- Task 2.1: systematic collection of textile products with recycled or intended recycled content.
- Task 2.2: identification of innovation and research gaps through a gap analysis.
- Scoping-review logic following PRISMA-ScR, publication window 2015 to 09/2026.
- Inclusion: prototypes, demonstrators and product lines with textile fibres and an explicit post-consumer reference.
- Source types (Tier 1–3) and evidence grades (A–C) were assessed and designed to be carried into the catalogue's evaluation logic.

Evidence base

Documented sources and products	n
Research projects, pilots and initiatives	21
Peer-reviewed publications	9
Research prototypes and demonstrators	22
Scaled implementations	2
Market products with declared recycled content	102
Documented product entries in total	**126**

Coverage of the market survey



Key results

R1 Product-level PCR figures are the exception

Examples with quantified yarn/product shares include SCIRT, Eco Yarn, Levi's/Renewcell, STFI/DITF, DiTex and the Denim Deal. New Cotton and T-REX name the fibre as post-consumer but publish no product figure.

R2 Recycling origin is regularly mixed

Post-Consumer (PCR) and Post-Industrial (PIR) are routinely merged, and mixed with bottle-based rPET. Five independent manufacturers confirmed the same pattern: the figure states the recycled, not the PCR share.

R3 Industrial corridor: 20 to 30 % PCR in the yarn

Valid for short-staple cotton in ring spinning at apparel yarn counts but without data for process speeds. Higher shares have been demonstrated in optimized trials, but yarn quality and end-use requirements constrain transferability.

R4 High market shares, almost no origin data

Median of 79 % recycled content across 102 products, but 44 % for cotton/denim against 100 % for synthetics.
PCR contents barely documented. Only in 33 of 102 products.

R5 The regulatory window opens during the project

EPR for textiles is binding under Directive (EU) 2025/1892, the first ESPR delegated acts were adopted on 09.02.2026 and the textile-specific act is expected end 2026 / early 2027.

Preliminary Gap Analysis

G1	Process limits of mechanical recycling (quality, speed)
G2	Textile PCR versus bottle-based rPET
G3	Declaration gap of mixture at product level
G4	PCR origin mostly trust based, PCR proof lacking
G5	Recycling origin not declared, PCR vs PIR
G6	Short-fibre tolerant spinning (rotor) underrepresented
G7	Non-apparel products under-documented
G8	No European cost base for PCR products
G9	Regulatory fit of TexReKat, ESPR & DPP connection necessary

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