



A FEBELSAFE POSITION PAPER ON:

Circular Textiles That Work

ESPR, Digital Product Passports and Recycled Content

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Febelsafe – Belgian Federation for PPE, Workwear and Professional Textiles

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Executive Summary

Europe's transition to a circular textile sector is essential — but must be anchored in industrial reality, regulatory coherence, and material integrity.

The European Union's *Ecodesign for Sustainable Products Regulation* (ESPR) (Regulation (EU) 2024/1781) provides a new framework for sustainable product design and lifecycle transparency, including the introduction of *Digital Product Passports* (DPPs) for textiles and other product groups. ([European Commission](#))

Febelsafe supports ambitious circular economy policy but warns that **blanket recycled-content mandates across all textile product groups risk undermining safety, compliance and legal certainty** unless they are tailored, traceable, and compatible with existing EU frameworks.

This position paper outlines:

- where recycled feedstock already works today
- where virgin material remains the regulatory default
- why DPPs are essential

- and how to design *workable, scalable* circular textile policy

1. Why This Matters

Textiles are among the largest consumer product flows in Europe, with significant environmental footprint and waste generation. The ESPR and its delegated acts (including textile ecodesign requirements) will shape textile policy and industrial practice for decades. ([European Commission](#))

The regulatory landscape is evolving in parallel across:

- *Product safety regulation* (GPSR—General Product Safety Regulation, Regulation (EU) 2023/988) ([GPSR](#))
- *Sector-specific safety regulation* (e.g., PPE Regulation (EU) 2016/425) ([EU-OSHA-PPE](#))
- *Chemical regulation* (REACH and substance restrictions)
- Circular economy law (ESPR & DPP)

This creates both **opportunity and risk** — especially for regulated and safety-critical textiles such as PPE, medical devices, food-contact materials and filtration systems.

2. Definitions and Regulatory Anchors

Ecodesign for Sustainable Products Regulation (ESPR) – EU Regulation (EU) 2024/1781 establishes a horizontal framework requiring that products meet sustainability and lifecycle information requirements, including material composition, durability, reparability, recyclability, and the introduction of DPPs. ([EUR-Lex](#))

Digital Product Passport (DPP) – A structured *digital record* of product information (material composition, supply chain data, compliance documentation, reuse/recycle guidance). Under the ESPR, DPPs will be required for priority product groups including textiles. The organisation SBS made a relevant position paper on DPP as the EU industry are mostly SME's ([SBS PP](#)).

Professional and Safety-Critical Textiles – Textile products governed by sectoral safety regulation (e.g., PPE — Regulation (EU) 2016/425; medical devices — Regulation (EU) 2017/745; food contact — Regulation (EC) 1935/2004). These regimes mandate conformity and risk-based performance, and they often require traceable and validated material performance.

Recycled Content – Fibre or polymer used in new products that has been recovered and processed from end-of-life or pre-consumer waste. Its inclusion must be demonstrably compliant with product performance, chemical safety, and regulatory requirements.

3. Circularity Is About Systems, Not Just Fibres

Sustainability is often reduced to a quantitative metric (“X% recycled content”). But **circularity is built on information — not ambiguity.**

A recycled fibre without traceability has:

- unknown composition
- unknown legacy chemicals
- unknown contamination
- unknown process history

This creates compliance challenges under EU product safety and chemical law. A DPP — with unique product identifiers and traceable information — is essential to give recycled materials *meaningful regulatory utility*.

4. The Reality of Recycling Technologies

Mechanical recycling — currently the predominant method — processes large aggregated flows but does *not* remove legacy chemicals or binders, pigments, coatings, finishes or other additives. The output’s chemical profile will reflect the input stream.

Chemical recycling can recover polymers for reuse, but today:

- it mainly works for clean, mono-material streams

- it is limited in scale across post-consumer heterogeneous waste
- it does not universally ensure removal of all chemical contaminants

This is not a failing of the technology — it reflects the diverse material complexity of textiles.

5. Compliance and Liability Across EU Law

A growing number of EU regulations emphasize **traceability** and **documented compliance**:

- GPSR requires safety documentation and technical files demonstrating conformity.
- ESPR mandates DPPs that will support sustainability compliance and lifecycle data.
- Sectoral laws like PPE, medical devices, food contact and others require certified performance based on known material properties.

Recycled materials without firm traceability could create gaps in required documentation, leaving brands exposed to liability or market withdrawal.

6. Where Blanket Recycled-Content Rules Fail

Certain textile applications cannot have ambiguous material profiles due to:

PPE and Protective Clothing

EU Regulation (EU) 2016/425 sets essential health and safety requirements for PPE design and manufacture, mandating predictable performance.

Medical Devices

Regulation (EU) 2017/745 (MDR) requires documented biocompatibility, extractables/leachables control and validated material behaviour.

Food-Contact Textiles

Under Regulation (EC) 1935/2004, materials must not transfer harmful substances to food.

High-Safety Systems

Airbags, seatbelts, aerospace restraint and fire-protected systems require certified performance under sectoral standards.

In these segments, **recycled feedstock is acceptable only if it is functionally equivalent to virgin material**, fully traceable, validated, and compliant with applicable safety and performance standards.

7. Where Circularity Already Works Today

There are real cases of circular practice that illustrate what *governed* circularity looks like:

Cleanroom Clothing Closed-Loop

Manufacturers use recycled polymer feedstock (e.g., rPET from sorted high tenacity PET food-grade bottles) because:

- feedstock is uniform and traceable
- use conditions are contractually defined
- take-back schemes ensure controlled reuse and data continuity

This works because governance and traceability structures are in place.

Automotive Interiors

Recycled fibres are already used in non-safety interior textiles where performance requirements are clearly met and documented.

Medical Support Textiles

Some hospital textiles (e.g., privacy curtains) use recycled polymer, but **not** sterile or contact-critical applications — where virgin material remains the traceable default.

The role of professional laundries in circular textiles

In large parts of the professional textile market, circularity is already embedded in service-based business models based on leasing, laundering, repair and take-back.

For PPE, workwear, cleanroom clothing and many professional textile applications, the environmental footprint is determined far more by lifetime in use than by fibre origin alone. A garment that lasts twice as long through professional maintenance is more circular than a garment made of recycled fibres that is discarded after a few months.

Professional laundries operate as the custodians of the product lifecycle. They manage:

- controlled washing and finishing
- inspection and performance monitoring
- repair and refurbishment
- replacement and withdrawal criteria
- sorting at end-of-life
- qualified material streams for reuse or recycling

Through these activities, laundries:

- extend product lifetime
- preserve certified performance
- prevent premature disposal
- reduce waste volumes
- and enable controlled circular flows

From a circular economy perspective, laundries are not just service providers. They are system operators.

They also provide the operational backbone for Digital Product Passports. Professional laundries already manage unique garment identification (RFID, barcodes), usage history, wash cycles, repair records and end-of-life data. This makes them the only actors capable of turning DPP from a policy concept into a functioning industrial system.

Any circular textile policy that ignores professional laundry and service models risks overlooking one of the most effective circular systems already operating in Europe today.

8. Economic and Data Reality

High-quality circularity requires:

- data systems and integration across the supply chain
- robust material testing and verification
- contractual frameworks for take-back and reuse
- investment in compliance systems

Governments must recognize that traceability infrastructure and qualification processes impose costs but deliver regulatory certainty.

9. Role of Digital Product Passports

The DPP is the cornerstone for circular textiles under the ESPR. It enables:

- unique product identifiers
- documented lifecycle and material composition
- compliance evidence for safety and chemical law
- traceability across reuse and recycling pathways

Under the ESPR, DPP requirements will be fleshed out in delegated acts for specific product groups, including textiles.

Implementation is expected to begin in phases between 2025–2030, with textiles among the priority groups.

10. Febelsafe Policy Recommendations

To make circular textiles work in practice:

A. Tailor Recycled-Content Requirements

Recycled content should be applied where:

- product risk profile allows it
 - traceability can be ensured
 - material performance is documented
- Not as a uniform obligation across all applications.

B. Embed DPPs at the Core

DPPs must be the infrastructure for traceability, compliance and data sharing.

C. Define Stream and Technology Qualification

Only defined feedstock streams and validated recycling technologies should qualify for recycled-content targets.

D. Align with Sectoral Safety Law

Ecodesign policy must explicitly recognise sectoral safety frameworks (PPE, MDR, food contact and others) and avoid legal conflict.

E. Enable Professional Closed Loops

Support governance and take-back schemes where traceability and closed-loop integrity already exist.

11. Conclusion

The textile circular transition succeeds only if it is:

- ambitious
- safe
- traceable

- economically viable
- and compatible with EU legal frameworks

Febelsafe stands ready to partner with policymakers, recyclers and industry to build a circular economy that **works — for companies, for workers, and for the planet.**

Find the position paper also on our website www.febelsafe.be

About Febelsafe

Febelsafe is the Belgian federation representing manufacturers, distributors, service providers and professional end users active in personal protective equipment (PPE), workwear & professional textiles.

Its members cover the full professional value chain, including product development, certification, distribution, leasing, laundering, maintenance and end-of-life management.

Febelsafe promotes product safety, regulatory compliance, quality and sustainable innovation in PPE and workwear applications. The federation actively contributes to European and national policy development in the areas of product safety, chemical regulation, market surveillance, ecodesign and circular economy.

Through expert working groups, standards engagement and dialogue with public authorities, Febelsafe supports the development of technically sound, legally robust and practically workable regulation for the sector.

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