
Tekstilije - Krožno gospodarstvo za tekstilne izdelke - 1. del: Splošna načela in smernice

Textiles - Circular economy for textile products - Part 1: General principles and guidance

Textilien - Circular Economy für Textilerzeugnisse - Teil1: Allgemeine Grundsätze und Leitlinien

Textiles - Économie circulaire pour les produits textiles - Partie 1: Principes généraux et recommandations

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**Textiles - Circular economy for textile products - Part 1:
General principles and guidance**

Textiles - Économie circulaire pour les produits textiles
- Partie 1: Principes généraux et recommandations

Textilien - Circular Economy für Textilerzeugnisse -
Teil 1: Allgemeine Grundsätze und Leitlinien

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CEN/TS 18272-1:2026 (E)**European foreword**

This document (CEN/TS 18272-1:2026) has been prepared by Technical Committee CEN/TC 248 “Textiles and textile products”, the secretariat of which is held by BSI.

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Introduction

The textile sector is woven into our daily lives. It generates high levels of employment, and significant revenues, providing products essential to human welfare. However, the industry's significant ecological footprint, as well as its health and societal risks have come under increasing scrutiny. A crisis exacerbated by both the volume and the patterns of our production and consumption. The textile sector faces significant sustainability challenges that need to be addressed to ensure more sustainable patterns of production and consumption. There is urgent need for transformation.

Circular economy for textile products requires a fundamental shift in how we value natural resources, business models, textile products, and production processes. The extraction and use of new natural resources needs to be minimized. New circular business models for textiles need to be introduced along the value chain. New processes, like reverse logistics, collection and sorting of textiles, need to work seamlessly together for a circular business ecosystem to function effectively. To contribute to solving the global textile waste problem, and to be able to replace some of the virgin materials with recycled textile materials, recycling technologies are at the centre of innovation.

The EU Green Deal is driving the expansion of circular economy practices across key economic sectors, providing a decisive legislative framework to help the EU reach climate neutrality by 2050. In doing so, it aims to decouple economic growth from natural resource use. On a global level, sustainable management and efficient use of natural resources is addressed in the UN Sustainable Development Goals (SDG) since 2015.

The EU Sustainable and Circular Textiles Strategy aims “to counter fast fashion and textile waste and to make textiles more durable, repairable, reusable and recyclable.” To support the textile strategy, the Ecodesign for Sustainable Products Regulation (ESPR) was introduced, which aims to reduce the environmental impacts of products throughout their life cycle and improve the circularity performance of products. The ESPR stipulates that circularity performance will be communicated to end consumers through a digital product passport (DPP). The DPP will store and enable exchange of relevant information supporting products' sustainability, circularity and regulatory compliance.

Another key EU legislative directive supporting the textile strategy is the Green Claims Directive (GCD). It aims to make green claims reliable, comparable and verifiable across the EU and protect consumers from greenwashing. An additional EU tool to support circularity, involving the financial sector is the Corporate Sustainability Reporting Directive (CSRD). It requires reporting on material flows and circularity through the European Sustainability Reporting Standard (ESRS) E5.

The Waste Framework Directive (WFD) established basic concepts and definitions for waste management, including definitions of waste recycling and recovery. In July 2023, the European Commission has proposed a targeted amendment to introduce mandatory Extended Producer Responsibility (EPR) for textiles, obliging producers to take financial and organisational responsibility for the end of life of the products they place on the EU market. These are among the most innovative points of the proposed rule change, which aims for a more circular and sustainable management of textile waste, in line with the EU Strategy for Sustainable and Circular Textiles.

This document is intended to help textile organizations and individuals working in the textile industry to consider and implement more circular and sustainable practices within their businesses, providing more circular products and/or rethinking the entire business model and value chain. It provides a common understanding and establishes the general principles of circular economy in textile products. See the work program of CEN/TC 248/WG 39 “Circular economy for textile products and the textile chain” for more standards development on circular textiles.

This document describes the general principles of circular economy across the textile value chain and value network and circularity for textile products.

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The standard is divided into four main areas. Clause 4 introduces the key principles of a circular economy, providing further key supporting areas and enablers to create a circular value network. Clause 5 offers a comprehensive analysis of the R-strategies. These strategies provide the core framework of the transition toward circular value creation and are based on the principles of narrowing, slowing, and closing material flows and the need to expand reverse logistics, collection and sorting of textiles. Clause 6 provides insights into the differences between the technical and biological cycles and explains the need to enhance fibre-to-fibre recycling. Clause 7 gives a brief introduction into materials in- and outflows and the importance of lifecycle perspective

This document also supports organizations in advancing the objectives of the UN Sustainability Development Goals (SDG):

- 8 Decent work and economic growth
- 9 Industry, innovation, and infrastructure
- 12 Responsible consumption and production
- 13 Climate action

Note to the reader on normative language: In this document, the following verbal forms are used in accordance with the CEN/CENELEC Internal Regulations Part 3:2022, Clause 7:

- “shall” indicates a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability;
- “must” indicates an external constraint.

1 Scope

This document lists circular economy principles and provides guidance for circular economy across the textile value chain and value network of textile products.

This document applies to textiles and textile products, including non-textile components and materials.

This document excludes leather, fur products and footwear.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1 Terms related to textiles

3.1.1

blended fabric

fabric produced with a combination of two or more types of different textile fibres (3.1.10)

[SOURCE: EN ISO 5157:2023, definition 3.1.1.2, modified — “or yarns” was deleted]

3.1.2

clothing

general provisions from design to distribution intended for covering the body with everything except the footwear

Note 1 to entry: The term “clothing” is intended for referring to the concept of clothing in opposition to the clothing product.

Note 2 to entry: In English, the terms “clothing” and “garment” have been used as synonyms in the standards. Depending on the context, the term “clothing” refers either to “clothing” (3.1.2) or to “garment” (3.1.5). Henceforth, definitions have been introduced in this document for clarification.

[SOURCE: EN ISO 11610:2023, definition 4.1.1]

3.1.3

component

part of a textile product (3.1.11) with a distinctive content, shape and structure

CEN/TS 18272-1:2026 (E)**3.1.4****fabric**

item showing a spread surface in regard to its thickness, formed by entanglement of any textile materials, having a cohesion given by any textile process

Note 1 to entry: Textile processes include weaving, knitting, braiding, lacing, tufting, and nonwoven bonding.

[SOURCE: EN ISO 11610:2023, definition 4.3.1, modified — “materials” was deleted; reference to 4.1.5 was deleted]

3.1.5**garment**

single article of clothing (3.1.2)

Note 1 to entry: The term “garment” is intended for referring to the product (3.1.8).

Note 2 to entry: Garments consist of either a single layer or multiple layers.

EXAMPLE Trousers, jacket, coats, socks, etc.

[SOURCE: EN ISO 11610:2023, definition 4.1.2, modified — “gloves” and “gaiters” were deleted in the Example]

3.1.6**mono material textile**

textiles made of textile fibres (3.1.10) which is only composed of single type of chemical composition

EXAMPLE A woven fabric made of 100 % cotton yarn.

Note 1 to entry: One fibre type can consist of different chemical compositions. For example, polyamide-6 is a different material than polyamide-6.6.

[SOURCE: EN ISO 5157:2023, definition 3.1.1.6]

3.1.7**multi material textile**

textiles made of textile fibres (3.1.10) or materials made from more than one chemical composition

EXAMPLE 1 Bi-component fibres are a multi material textile.

EXAMPLE 2 Multi material textiles are e.g. intimate blend of polyester and cotton fibre, different fibres in warp and weft or a polyurethane coated polyester fabric.

[SOURCE: EN ISO 5157:2023, definition 3.1.1.8]

3.1.8**product**

physical-based object designed for or utilized with a purpose

[SOURCE: ISO 59004:2024, definition 3.2.2, modified — Note 1 to entry was deleted]

3.1.9**textile**

any raw, semi-worked, worked, semi-manufactured, manufactured, semi-made-up or made-up product (3.1.8) which is exclusively composed of textile fibres (3.1.10), regardless of the mixing or assembly process employed

[SOURCE: EU Regulation 1007/2011, article 3, definition 1.a]

3.1.10**textile fibre**

unit of matter characterized by its flexibility, fineness and high ratio of length to maximum transverse dimension, which render it suitable for textile applications

[SOURCE: EN ISO 5157:2023, definition 3.1.1.12]

3.1.11**textile product**

product (3.1.8) made mainly of textile fibres (3.1.10), yarns (3.1.12) and/or fabrics (3.1.4) and intended to be used, as such or in conjunction with other textile or non-textile elements

Note 1 to entry: These articles can contain non-textile parts, such as plastics (e.g. buttons and membrane or coatings) or metals.

[SOURCE: EN ISO 5157:2023, definition 3.1.1.13, modified — references to 3.1.8, 3.1.12 and 3.1.4 were added]

3.1.12**yarn**

textile product (3.1.11) of substantial length and relatively small cross-section of fibres and/or filaments with or without twist

Note 1 to entry: The “yarn” is a general term covering all the specific types of yarns.

[SOURCE: ISO 8159:2025, definition 3.2.1, modified; reference to 3.1.3 was deleted; reference to 3.1.11 was added]

3.2 Terms related to environmental aspects**3.2.1****biobased materials**

derived from material of biological origin, excluding material embedded in geological formations or transformed to fossilized material and excluding peat

Note 1 to entry: This includes organic material (both living and dead) from above and below ground, e.g. trees, crops, grasses, tree litter, algae, animals and waste (3.6.6) of biological origin, e.g. manure.

Note 2 to entry: This definition is derived from the definition of “biomass” in EN ISO 5157:2023, definition 3.1.2.4.

CEN/TS 18272-1:2026 (E)**3.2.2****hazardous substance**

substance which can adversely affect human health or the environment with immediate or retarded effect

Note 1 to entry: Manufacturers can determine the hazardous substances according to national or regional regulations.

[SOURCE: ISO 23434-1:2021, definition 3.21]

3.2.3**microplastic**

material consisting of a solid polymer containing particles, to which additives or other substances can be added, and where a weight fraction of $\geq 1\%$ particles have:

- a) all sizes $100 \text{ nm} \leq x \leq 5 \text{ mm}$,
- b) for fibres, a length of $300 \text{ nm} \leq x \leq 15 \text{ mm}$ and a length/diameter ratio > 3

Note 1 to entry: Polymers that occur in nature that have not been chemically modified (other than by hydrolysis) are excluded, as are polymers that are (bio) degradable.

[SOURCE: ISO 4484-2:2023, definition 3.1, modified — admitted term “MP” was deleted]

3.2.4**pollution**

alteration of water, air or soil quality, mainly by discharge of organic, microbiologic and chemical substances coming from anthropic activities or from natural sources

[SOURCE: ISO 6107:2021, definition 3.414, modified — “(e.g. volcanic ash)” was deleted]

3.2.5**regenerate**

improve or restore a degraded ecosystem

[SOURCE: ISO 59004:2024, definition 3.5.27, modified — reference to 3.1.17 was deleted]

3.2.6**regenerated fibres**

fibres produced from naturally occurring polymers of cellulose or protein, where processing by dissolution is needed to convert them into fibre form

[SOURCE: EN ISO 5157:2023, definition 3.1.3.5]

3.2.7**renewable**

replenishable naturally at source at a rate at least the same as consumption

Note 1 to entry: This can apply to materials and energy.

[SOURCE: EN ISO 5157:2023, definition 3.2.2.13]