SLOVENSKI STANDARD
oSIST prEN ISO 5157:2022

01-oktober-2022

Tekstilije - Okoljski vidiki - Slovar (ISO/DIS 5157:2022)

Textiles - Environmental aspects - Vocabulary (ISO/DIS 5157:2022)

Textilien - Umweltaspekte - Vokabular (ISO/DIS 5157:2022)

Textiles - Aspects environnementaux - Vocabulaire (ISO/DIS 5157:2022)

Ta slovenski standard je istoveten z: **prEN ISO 5157**

ICS:

01.040.13	Okolje. Varovanje zdravja. Varnost (Slovarji)	Environment. Health protection. Safety (Vocabularies)
01.040.59	Tekstilna in usnjarska tehnologija (Slovarji)	Textile and leather technology (Vocabularies)
13.020.01	Okolje in varstvo okolja na splošno	Environment and environmental protection in general
59.020	Postopki v tekstilni industriji	Processes of the textile industry

oSIST prEN ISO 5157:2022 **en,fr,de**

DRAFT INTERNATIONAL STANDARD

ISO/DIS 5157

ISO/TC **38**

Secretariat: **SAC**

Voting begins on:
2022-08-18

Voting terminates on:
2022-11-10

Textiles — Environmental aspects — Vocabulary

Textiles - Aspects environnementaux - Vocabulaire

ICS: 59.020; 13.020.01; 01.040.59; 01.040.13

This document is circulated as received from the committee secretariat.

ISO/CEN PARALLEL PROCESSING

Reference number
ISO/DIS 5157:2022(E)

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 38, *Textiles*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

To date, the terminology regarding environmental aspects used in the textile industry has not been standardized, causing confusion, ineffectiveness and worst case hindering sustainable practices in the textile sector. The global nature of the textile industry highlights the need for global as well as national standards, enabling a common understanding and facilitate trade. A common vocabulary may serve to reduce the risk of greenwashing, bringing value for actors aiming to be transparent as well as facilitating the development of trust among consumers.

This document contains definitions of terms widely used in the textile value chain in reference to environmental aspects. ISO Guide 82 *Guidelines for addressing sustainability in standards* has been taken into consideration when addressing sustainability in this document.

Some definitions related to circular economy are included in this document, referencing ISO 59004 *Circular Economy – Terminology, principles and framework for implementation* currently being developed in ISO/TC 323 *Circular economy*. In the case ISO 59004 has not yet reached the DIS stage when this document reaches the publication stage, it cannot be used as reference, meaning all terms referencing ISO 59004 need to be removed. In that case, the ambition is to propose a minor revision of ISO 5157 as soon as ISO 59004 has been published, to include the accepted terms and definitions.

The list of terms is wide but not exhaustive.

Textiles — Environmental aspects — Vocabulary

1 Scope

This document provides general terms and definitions used in the textile value chain related to environmental aspects including design, production, retail, use and reuse, recycling processes and disposal.

This document is applicable to all stakeholders in the textile value chain regardless of size and location. Stakeholders will benefit from a common terminology for addressing issues related to environmental aspects of textile products and processes.

The aim of this document is to enable future standardization work related to environmental sustainability in the textile value chain, taking into account the aspects and definitions provided in ISO Guide 82. Definitions are as far as possible adapted from existing standards but when the intention or definition is unclear additional context or definitions are updated or added.

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 terminological 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 — General

3.1.1
biodegradable material
material capable of undergoing biological aerobic or anaerobic *degradation* (3.11.5) during a fixed period leading to a release of carbon dioxide and/or biogas and *biomass* (3.2.4), depending on the environmental conditions of the process

3.1.2
blended fibres fabric
fabric composed of more than one fibre type

3.1.3
fibre composition
description of fibre contents expressed by mass percentage

3.1.4
mono material textiles
textiles made of of *textile fibres* (3.1.10) from solely one chemical composition

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.

EXAMPLE A woven fabric made of 100 % cotton yarn.

3.1.5
mono material textiles product
textile product (3.1.11) made of *textile fibres* (3.1.10) and other components from solely one chemical composition

EXAMPLE A polyester sport t-shirt that is made from disperse dyed 100 % polyester knitted fabric, with dispersed dyed 100 % polyester sewing thread and labels containing 100 % polyester that are sublimation printed with disperse dyes not containing transfer prints out of other than polyester material.

3.1.6
multi material textiles
textiles made of textile fibres or materials made from more than one chemical composition

Note 1 to entry: Example: bi-component fibres are a multi material textile.

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

3.1.7
multi material textiles product
textile product (3.1.11) made of *textile fibres* (3.1.10) and other components consisting of materials made from more than one chemical composition

EXAMPLE A jacket containing a pure cotton fabric, with a polyester sewing yarn, a zipper with a polyester fabric and a polyoxymethylene hard parts (teeth, stoppers, and puller), a polyester woven label and metal press buttons.

3.1.9
recycled fibre
non-virgin fibre

Note 1 to entry: Claims of recycled fibre should only be made if the amount of *recycled content* (3.8.28) is stated and verified by a third-party *chain of custody* (3.10.4) certification.

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: ISO/TR 23383:2020, 3.1]

3.1.11
textile product
product made mainly of of *textile fibres* (3.1.10), yarns and/ or fabrics 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: ISO/TR 23383:2020(en), 3.2 - modified: "mainly" added and Note 1 to entry added]

3.1.12
virgin raw material
material that has not been subjected to use or processing other than that required for its initial manufacture

3.2 Terms related to textiles — Natural fibre

3.2.1
bio-based
derived from *biomass* (3.2.4)

Note 1 to entry: *Biomass* (3.2.4) can have undergone physical, chemical or biological treatment(s).

Note 2 to entry: The correct spelling of "bio-based" is with a hyphen (-). It is however in common usage sometimes spelt without a hyphen.

Note 3 to entry: The methods to determine and communicate "bio-based" as a characteristic are detailed in specific standards of CEN/TC 411.

[SOURCE: EN 16575:2014, 2.1]

3.2.2
bio-based content
fraction of a product that is derived from *biomass* (3.2.4)

Note 1 to entry: Normally expressed as a percentage of the total mass of the product.

Note 2 to entry: Considering the difficulties to determine the bio-based content in *textile products* (3.1.11), traceability from the producer has been found suitable.

[SOURCE: EN 16575:2014, 2.4, Note 2 to entry changed]

3.2.3
bio-based product
product wholly or partly derived from *biomass* (3.2.4)

Note 1 to entry: The bio-based product is normally characterised by the bio-based carbon content or the *bio-based content* (3.2.2). For the determination and declaration of the bio-based content and the bio-based carbon content, see the relevant standards of CEN/TC 411.

[SOURCE: EN 16575:2014, 2.5]

3.2.4
biomass
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* (3.11.17) of biological origin, e.g. manure.

[SOURCE: EN ISO 14021:2017, 3.1.1]

3.2.5
natural fibre
fibre which occurs in nature; they can be categorized according to their origin into animal, vegetable and mineral fibre

[SOURCE: EN ISO 6938:2014, 2.1]

3.2.6
natural polymer
biopolymer
polymer obtained from *biomass* (3.2.4), in which the polymer retains the original chemical structure and composition present in biomass (i.e. starch, cellulose, lignin or lignocellulose)

[SOURCE: ISO 16620-1:2015, 3.1.7, modified – biopolymer added as synonym]

3.2.7
organic fibres
natural fibres (3.2.5) grown without the use of synthetic pesticides, insecticides, or herbicides and *GMOs* (3.6.2) according to the principles of *organic agriculture* (3.6.4)

Note 1 to entry: The farm needs certification to comply with USDA National Organic Program (NOP), Regulation (EC) 834/2007 & EU 2018/848, or any other organic standard that is approved in the IFOAM Family of Standards.

3.3 Terms related to textiles — Man-made fibre

3.3.1
artificial fibre
manufactured fibre made by transformation of *natural polymers* (3.2.6) (macromolecular material existing in nature)

[SOURCE: ISO/TR 11827:2012, 4.2.1]

3.3.2
dissolving pulp
cellulose based pulp used in production of *regenerated cellulosic fibre* (3.3.5) such as lyocell and viscose cellulose acetate

3.3.3
man-made fibre
fibre obtained by a manufacturing process

Note 1 to entry: The term “chemically manufactured” fibre can be named “manufactured” fibre or “chemical” fibre.

[SOURCE: ISO 2076:2021, 3.1]

3.3.4
microfibre
fibre with linear density less than 1 dtex or a diameter less than 10µm

3.3.5
regenerated cellulosic fibre
fibres produced from naturally occurring polymers of cellulose, where processing by dissolution is needed to convert them into fibre form

3.3.6
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: ISO 2076]

3.3.7
regenerated protein fibre
fibres produced from naturally occurring polymers of protein, where processing by dissolution is needed to convert them into fibre form

3.3.8
synthetic fibre
manufactured fibre made from synthetic polymers (macromolecular material which has been chemically synthesised)

[SOURCE: ISO/TR 11827:2012, 4.2.2]