



SLOVENSKI STANDARD

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Opredelitev in deklariranje reciklirane vsebine (organske in anorganske) v tekstilnih talnih oblogah

Definition and declaration of recycled content (organic and inorganic) in textile floor coverings.

Definition und Deklaration des Recyclinganteils (organisch und anorganisch) in textilen Bodenbelägen

Définition et déclaration de la teneur en matières recyclées (organiques et inorganiques) dans les revêtements de sol textiles

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97.150 Talne obloge Floor coverings

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Definition and declaration of recycled content (organic and inorganic) in textile floor coverings.

Definition und Deklaration des Recyclinganteils
(organisch und anorganisch) in textilen Bodenbelägen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 134.

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European foreword

This document (prEN 17903:2023) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile, laminate and modular mechanical locked floor coverings”, the secretariat of which is held by NBN.

This document is currently submitted to the CEN Enquiry.

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Introduction

Answering a need to develop a circular economy for floor covering products, this document is intended to allow producers and consumers to exchange information on the use and content of recycled, bio-based and renewable materials in textile floor coverings. Where necessary, a distinction is made between organic and inorganic materials. The standard provides a clear systematic definition and reporting format to allow a transparent information exchange between producers, consumers and the recycling industry.

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1 Scope

This document establishes definitions related to the use of organic and inorganic recyclates, bio-based and natural (animal- or plant-based) materials in textile floor coverings and defines calculation and reporting methods for the transparent and consistent declaration thereof.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 1307, *Textile floor coverings — Classification*

ISO 472, *Plastics — Vocabulary*

ISO 2424, *Textile floor coverings — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 1307, ISO 472, ISO 2424 and the following apply.

3.1

textile floor covering with pile / pile textile floor covering

floor covering having a textile use-surface formed from a layer of yarns or fibres projecting from a substrate

3.2

textile floor covering without pile

floor covering composed of a non-pile textile use-surface, with or without a substrate

3.3

unit area

default surface area of a textile floor covering, defined as 1 m²

3.4

total carpet weight

TCW

total mass of a textile floor covering per unit area in g/m²

3.5

use-layer

part of a textile floor covering directly exposed to traffic

Note 1 to entry: The use-layer is often also called “use-surface”.

prEN 17903:2023 (E)**3.6****total use-layer weight****TUW**

total mass of the defined use-layer per unit area in g/m²

Note 1 to entry: In the case of pile carpets the TUW is identical with the total pile weight (TPW).

Note 2 to entry: For non pile carpets this is the weight of all yarns that form the use-layer, including those yarn parts that penetrate the integral ground-weave or the backing layer (see figures 2, 3 and 4).

3.7**substrate**

construction element, integral with the use-surface and composed of one or more layers, which serves as a support for the use-surface.

Note 1 to entry: For the purpose of this standard the substrate (primary backing) is considered to be part of the backing.

Note 2 to entry: The substrate is often also called “primary-backing”.

3.8**Backing****CB**

one or more layers separately attached to the use-surface

Note 1 to entry: These layers can be of textile nature or non-textile nature. All materials in a pile floor covering other than the pile yarn.

Note 2 to entry: The backing is often also called “carpet backing” or “secondary backing”.

3.9**total backing weight****TBW**

total mass of all materials used in the backing per unit area in g/m²

3.10**ground weave****GW**

part of a woven carpet that forms the integral backing based on the weaving pattern

Note 1 to entry: A ground weave can be found in woven pile carpets or in flat woven carpets.

Note 2 to entry: In some cases an additional backing (CB) might be applied to carpets having a ground weave.

3.11**total pile**

all portions of yarns or fibres used to form the tufts or loops above, below and within the substrate

3.12**total pile weight****TPW**

mass of the pile yarn including that forming the base of the tufts or held in the substrate, but excluding any backing compound adhering to the pile yarn

Note 1 to entry: The TPW is reported as mass of total pile per unit area above, within and below the substrate, in g/m².

Note 2 to entry: $TPW = TCW - TBW$

3.13**surface pile**

part of a textile floor covering consisting of textile yarns or fibres, projecting from the substrate and acting as use-layer

Note 1 to entry: The surface pile is often also called “pile” or “effective pile”.

3.14**surface pile weight****SPW**

difference in the mass of a textile floor covering before and after the pile above the substrate (effective pile or surface pile) has been shorn away

Note 1 to entry: The SPW is reported as mass of pile per unit area above substrate in g/m².

3.15**dead pile**

part of the pile yarn not being part of the use-layer

3.16**dead pile weight****DPW**

mass of pile not being part of the use-layer, in g/m²

Note 1 to entry: $DPW = TPW - SPW$

3.17**filler**

relatively inert solid material added to a plastic or to an adhesive to modify its strength, permanence, working properties or other qualities, or to lower costs

Note 1 to entry: Two classes of filler have to be considered:

- chemically inert fillers, e.g., china clay or wood flour or chalk (limestone);
- reinforcing fillers like silicates, carbon black, fibrous materials or aluminium powder that markedly enhance the performance of a polymer.

Note 2 to entry: A filler only used to reduce cost is termed an “extender”.

3.18**polymer**

molecule containing a chain of at least three monomer units which have entered into a covalent bond with at least one other monomer unit or other reactant.

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Note 1 to entry: See REACH Article 3(5)

3.18.1**monomer**

substance that is converted via the polymerisation reaction into a polymer chain with repeating units

3.18.2**oligomer**

substance that is converted via a polymerisation reaction into a short chain with at least 2 repeating units but significantly less than a polymer

Note 1 to entry: Different to Polymers having the same repeating units, a small increase in the number of repeating units will change the physical properties.

3.18.3**bio-based polymers**

polymers where the monomers used for the polymerisation are partially or in whole made from renewable biological resources

Note 1 to entry: Also man-made organic fibres based on the transformation of natural polymers, like viscose, lyocell and acetate count as bio-based polymers.

Note 2 to entry: Bio-based polymers can be chemically identical with polymers made from crude oil. Which makes a clear distinction at the end-of-life stage of a textile floor covering difficult or impossible.

3.18.4**bio-degradable polymers/plastics**

polymers or plastics where the polymer-chain can be fully degraded into CO₂, H₂O, NO_x and biomass by biological processes.

Note 1 to entry: The degradation process should not lead to non-degradable residues or micro-plastics.

Note 2 to entry: Bio-degradable polymers can be made from fossil-based or bio-based sources.

3.19**plastic**

material which contains as an essential ingredient a polymer besides additives and fillers and which, at some stage in its processing into finished products, can be shaped by flow

Note 1 to entry: Elastomeric materials, which are also shaped by flow, are not considered to be plastics.

3.20**compound**

intimate mixture of a polymer or polymers with other ingredients such as additives, e.g., fillers, plasticizers, catalysts and colorants

3.21**natural fibres**

fibres made from natural resources like animals or plants

3.22**renewable fibres**

materials or fibres that are made from natural non-fossil-based resources that can be continually replenished

3.23**recycled materials**

all kind of materials prepared in a production process from waste materials for any purpose, but excluding energy recovery

3.24**recovered material**

material that has been separated, diverted or removed from the solid-waste stream in order to be recycled or used to substitute virgin raw materials

3.25**virgin material**

unused raw materials that have never been subjected to any processing other than for its production

Note 1 to entry: this includes also cascading production process which can be traced back to virgin raw materials e.g., polymers which are made of monomers, which themselves have been synthesized in a series of production steps that have started with a virgin raw material like crude oil

Note 2 to entry: this includes in principle also bio-based, natural and renewable materials, but to avoid any double counting e.g., as virgin and bio-based, bio-based natural and renewable materials are not counted as “virgin materials” see 5. Definition of system boundaries.

3.26**non-virgin material**

all other materials not defined as virgin

3.27**recycled content: RC**

proportion, by mass, of recycled material in a textile floor covering, the use-layer or the backing expressed in % per unit area ($\%/m^2$) only considering pre-consumer and post-consumer waste materials

Note 1 to entry: For the relevant definition of the term “recycled content” see prEN CEN TC 134/WG 10 N272.

3.28**recycled mass: RM**

absolute mass of recycled content (RC) of the relevant carpet components, use-layer or backing and the textile floor covering itself per unit area expressed in g/m^2

3.29**bio-based content****BC**

proportion, by mass, of bio-based material in a textile floor covering, the use-layer or the backing per unit area expressed in % per m^2 ($\%/m^2$)

Note 1 to entry: For the definition of the term “bio-based” see prEN CEN TC 134/WG 10 N272.

3.30**bio-based mass****BM**

absolute mass of bio-based content (BC) of the relevant carpet components, use-layer or backing and the textile floor covering itself per unit area expressed in g/m^2

prEN 17903:2023 (E)**3.31****renewable and natural material content****NC**

proportion, by mass, of renewable and natural materials in a textile floor covering, the use-layer or the backing per unit area expressed in % per m² (%/m²)

3.32**renewable and natural mass****NM**

absolute mass of renewable and natural material content (NC) of the relevant carpet components, use-layer or backing and the textile floor covering itself per unit area expressed in g/m²

3.33**virgin content****VC**

proportion, by mass, of virgin material in a textile floor covering, the use-layer or the backing expressed in % per unit area (%/m²)

3.34**virgin mass****VM**

absolute mass of virgin material content (VC) of the relevant carpet components, use-layer or backing and the textile floor covering itself per unit area expressed in g/m²

3.35**non-virgin content: n-VC**

proportion, by mass, of non-virgin material in a textile floor covering, the use-layer or the backing expressed in % per unit area (%/m²)

3.36**non-virgin mass**

absolute mass of non-virgin material content (VC) of the relevant carpet components, use-layer or backing and the textile floor covering itself per unit area expressed in g/m²

4 Definition of different groups of textile floor coverings**4.1 General**

For the purpose of this standard, textile floor coverings are divided into 2 groups based on general construction characteristics (for details see ISO 2424).

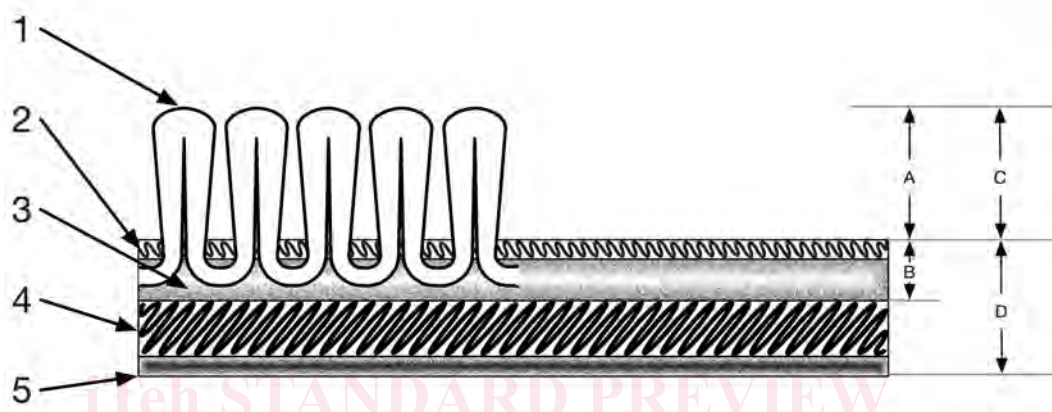
4.2 Group 1

4.2.1 General

All types of textile floor covering with or without pile, including textile floor covering tiles, where a clear distinction between materials used in use-layer and backing can be made.

The relevant construction elements for this group are shown and described in the following indicative pictures.

Note 1 to entry: The backing can either be an integral part of the textile floor covering like a ground-weave (see figure 2) or an additional backing layer that has been attached via lamination or coating.



Key

- | | | | |
|---|------------------------------------|---|------------------------------|
| 1 | pile fibres, forming the use-layer | A | surface pile, effective pile |
| 2 | substrate, primary backing | B | area with dead pile |
| 3 | pre-coat, coating | C | use-layer |
| 4 | backing layer | D | backing layer |
| 5 | support fabric, secondary backing | | |

Figure 1 — Relevant construction elements for tufted, fusion bonded and flocked textile floor coverings with pile (see ISO 2424:2007- 4.1.2, 4.1.4, 4.1.5)