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Resilient, textile, laminate and modular mechanical locked floor coverings - Circular economy and sustainability - Recommendations/guidelines for design

Elastische, textile, Laminat- und modulare mechanisch verriegelnde Bodenbeläge - Kreislaufwirtschaft und Nachhaltigkeit - Empfehlungen/Richtlinien für die Gestaltung

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (CEN/TS 18075:2024) 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a standardization request addressed to CEN by the European Commission (M/584). The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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Introduction

The European Commission adopted a European strategy for plastics in January 2018 [1]. It is part of the European Circular Economy Action Plan [2] and builds on existing measures to reduce plastic waste.

The plastics strategy is a key element of Europe's transition towards a carbon neutral and circular economy. It will contribute to reaching the 2030 Sustainable Development Goals, the Paris Climate Agreement objectives and the EU's industrial policy objectives.

In 2022 the *Commission Implementing Decision on a standardization request to the European Committee for Standardization and the European Committee for Electrotechnical Standardization as regards plastics recycling and recycled plastics in support of the European Strategy for Plastics in a Circular Economy* (*M/584)* [3] was approved, which forms the basis for this document.

In addition to providing an answer to M/584 this document addresses recommendations and guidelines for design for circular economy and sustainability for resilient, textile, laminate and modular mechanical locked floor coverings. It highlights the key elements of the life cycle that need to be considered when designing a product for circularity.

This document is intended for (non-exhaustive list in alphabetical order):

— contractors/installers;

— customers, including end users;

— designers;

— developers;

— facility managers;

— manufacturers;

— retailors (distributors).

This document addresses the possibilities for returning (raw) materials used to the economic cycle based on circular design principles. The focus is on open systems that allow for economically interesting alternatives and not limited to the principle of closed cycles (product to product). Recycling of plastics is one of the methodologies addressed in this document.

This document also highlights the possibilities for cleaning and renewing processes of floor coverings during their whole lifetime, with the aim to prolong the lifetime of the floor coverings. This allows for maintaining a longer sustainable perspective and for lowering the impact on the economic cycle of floor coverings.

1 Scope

The aim of this document is to provide general recommendations and guidelines on how to design a product to optimize its reuse and recyclability at the end of its lifetime as well as to take into account sustainable sourcing of materials for all floor covering product groups covered by CEN/TC 134. The overall target is to avoid waste and pollution and to achieve a product fit for the circular economy.

In a linear economy, the focus of product design is on developing new products without considering the recycling or reuse of the raw materials used.

This document provides guidance for processes allowing for (raw) materials used to be returned to the economic cycle based on circular design principles. The focus is on open systems that allow for economically interesting alternatives and are not limited to the principle of closed cycles (product to product).

Specific attention is given to renewable materials, where applicable.

The document is structured along the life cycle of the products, starting with the production phase.

Excluded is packaging, which is not considered part of the product end-of-life stage.

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 17861:2023, *Resilient, textile, laminate and modular mechanical locked floor coverings — Circular Economy — Terms and definitions*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 17861 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/

4 Design throughout the different steps in a product's lifetime

4.1 Overview

The document follows the following steps in a product's lifetime (see Figure 1):

1. Production phase

   Step 1: Define the business model for the flooring (4.2)

   Step 2: Define the product specifications (4.3)

   Step 3: Define the manufacturing process (4.4)

2. Use phase

   Step 4: Define the installation method (4.5)