

**SLOVENSKI STANDARD**  
**oSIST prEN 14041:2016**  
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**Netekstilne, tekstilne in laminirane (plastene) talne obloge - Bistvene značilnosti**

Resilient, textile and laminate floor coverings - Essential characteristics

Elastische, textile und Laminat-Bodenbeläge - Wesentliche Merkmale

Revêtements de sols résilients, textiles et stratifiés - Caractéristiques essentielles

**Ta slovenski standard je istoveten z: prEN 14041**

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## Resilient, textile and laminate floor coverings - Essential characteristics

Revêtements de sols résilients, textiles et stratifiés -  
Caractéristiques essentielles

Elastische, textile und Laminat-Bodenbeläge -  
Wesentliche Merkmale

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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## Contents

Page

European foreword.....	5
1 Scope .....	6
2 Normative references .....	6
3 Terms and definitions .....	8
4 Essential characteristics.....	9
4.1 Reaction to fire.....	9
4.1.1 Specimen preparation and conditioning.....	9
4.1.2 Application rules .....	9
4.1.3 Durability aspects .....	9
4.1.4 Classification.....	9
4.2 Dangerous substances.....	11
4.2.1 General.....	11
4.2.2 Content of dangerous substances in floor coverings.....	12
4.2.3 Emissions of floorcoverings into indoor air .....	14
4.3 Water-tightness .....	15
4.4 Slip resistance .....	15
4.5 Electrical behaviour .....	15
4.6 Thermal conductivity .....	16
5 Sustainable use of natural resources.....	16
6 Assessment and verification of constancy of performance (AVCP) .....	16
6.1 General.....	16
6.2 Type Testing.....	17
6.2.1 General.....	17
6.2.2 Test samples, testing and compliance criteria .....	17
6.2.3 Test reports.....	17
6.2.4 Shared other party results.....	18
6.3 Factory production control (FPC) .....	18
6.3.1 General.....	18
6.3.2 Requirements .....	19
6.3.3 Product specific requirements.....	21
6.3.4 Initial inspection of factory and of FPC .....	22
6.3.5 Continuous surveillance of FPC for products covered by AVCP 1.....	22
6.3.6 Procedure for modifications .....	23
6.3.7 One-off products, pre-production products (e.g. prototypes) and products produced in very low quantity .....	23
7 Marking and labelling.....	24
Annex A (informative) Product standards for resilient, textile and laminate floor coverings .....	25
Annex B (normative) Determination of pentachlorophenol in resilient and textile floor coverings .....	27
B.1 Principle of test.....	27
B.2 Apparatus and materials .....	27

B.3	Sampling and specimen preparation .....	27
B.4	Sample extraction and analysis.....	27
B.5	Expression of results .....	27
Annex C (informative) Guidance on the reduction of slip hazards .....		28
C.1	Scope .....	28
C.2	General .....	28
C.3	Design .....	28
C.4	Service.....	29
C.5	User responsibility .....	29
Annex D (normative) Product parameters for defining product families .....		31
D.1	Product parameters related to reaction-to-fire performance .....	31
D.2	Product parameters related to indoor air emissions.....	32
D.2.1	Resilient floor coverings .....	32
D.2.2	Laminate floor coverings .....	33
D.2.3	Textile floor coverings .....	33
Annex E (normative) Determination of Polycyclic Aromatic Hydrocarbons (PAH) .....		34
E.1	Principle of test .....	34
E.2	Terms and definitions.....	34
E.3	Abbreviations.....	35
E.4	Equipment.....	35
E.5	Chemicals and solutions.....	35
E.5.1	Reagents.....	35
E.5.2	Internal standards.....	36
E.5.3	External standards .....	36
E.6	Procedure .....	36
E.6.1	Extraction .....	36
E.6.2	Calibration standards .....	36
E.6.3	Purification (optional).....	37
E.7	GC-MS Analysis.....	37
E.8	Calculations.....	38
E.9	Test Report.....	38
E.10	Example (Informative) — GC-MS parameters.....	39
Annex F (normative) Determination of phthalates .....		42
F.1	Principle of test .....	42
F.2	Definitions.....	42
F.3	Equipment and Supplies .....	43

## prEN 14041:2016 (E)

<b>F.4</b>	<b>Measurement of Phthalate Concentration .....</b>	<b>43</b>
<b>F.4.1</b>	<b>General.....</b>	<b>43</b>
<b>F.4.2</b>	<b>Sample Pre-Screening by Infrared (IR) Spectroscopy (optional).....</b>	<b>44</b>
<b>F.4.3</b>	<b>Sample Preparation.....</b>	<b>44</b>
<b>F.4.4</b>	<b>Phthalate Extraction Method .....</b>	<b>44</b>
<b>F.4.5</b>	<b>GC-MS Operating Procedures and Quality Control Measures .....</b>	<b>45</b>
<b>F.4.6</b>	<b>Analysis.....</b>	<b>46</b>
<b>F.4.7</b>	<b>Calculations and Results.....</b>	<b>47</b>
<b>Annex ZA (informative)</b>	<b>Relationship of this European Standard with Regulation (EU) No.305/2011 (Construction Products Regulation) (When applying this standard as a harmonized standard under Regulation (EU) No. 305/2011, manufacturers and Member States are obliged by this regulation to use this Annex) .....</b>	<b>49</b>
<b>Bibliography.....</b>		<b>54</b>

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## European foreword

This document (prEN 14041:2016) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate floor coverings”, the secretariat of which is held by NBN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 14041:2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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## 1 Scope

This European Standard specifies the essential characteristics for:

- resilient floor coverings, excluding loose-laid mats;
- textile floor coverings, excluding loose-laid (barrier) mats, runners and rugs;
- laminate floor coverings;
- modular multilayer floating floor covering panels with a mechanical locking system.

These products are intended for use as floor coverings within a building according to the manufacturer's specifications.

This standard describes the system(s) for Assessment and Verification of Constancy of Performance (AVCP) of product(s), to which the product shall be submitted.

This standard does not specify product requirements, which are not related to the essential characteristics as defined in Regulation (EU) No 305/2011.

This standard does not cover installation or maintenance of the floor covering.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 651, *Resilient floor coverings - Polyvinyl chloride floor coverings with foam layer - Specification*

EN 652, *Resilient floor coverings - Polyvinyl chloride floor coverings with cork-based backing - Specification*

EN 687, *Resilient floor coverings - Specification for plain and decorative linoleum on a corkment backing*

EN 717-1, *Wood-based panels - Determination of formaldehyde release - Part 1: Formaldehyde emission by the chamber method*

EN 1081, *Resilient floor coverings - Determination of the electrical resistance*

EN 1122, *Plastics - Determination of cadmium - Wet decomposition method*

EN 1307, *Textile floor coverings - Classification*

EN 1815, *Resilient and textile floor coverings - Assessment of static electrical propensity*

EN 1816, *Resilient floor coverings - Specification for homogeneous and heterogeneous smooth rubber floor coverings with foam backing*

EN 1817, *Resilient floor coverings - Specification for homogeneous and heterogeneous smooth rubber floor coverings*

EN 12199, *Resilient floor coverings - Specifications for homogeneous and heterogeneous relief rubber floor coverings*

EN 12466, *Resilient floor coverings - Vocabulary*



EN 12664, *Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Dry and moist products of medium and low thermal resistance*

EN 12667, *Thermal performance of building materials and products - Determination of thermal resistance by means of guarded hot plate and heat flow meter methods - Products of high and medium thermal resistance*

EN 12673, *Water quality - Gas chromatographic determination of some selected chlorophenols in water*

EN 13238, *Reaction to fire tests for building products - Conditioning procedures and general rules for selection of substrates*

EN 13329, *Laminate floor coverings - Elements with a surface layer based on aminoplastic thermosetting resins - Specifications, requirements and test methods*

EN 13501-1, *Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests*

EN 13553, *Resilient floor coverings - Polyvinyl chloride floor coverings for use in special wet areas - Specification*

EN 13893, *Resilient, laminate and textile floor coverings - Measurement of dynamic coefficient of friction on dry floor surfaces*

EN 14362-1, *Textiles - Methods for determination of certain aromatic amines derived from azo colorants - Part 1: Detection of the use of certain azo colorants accessible with and without extracting the fibres*

CEN/TR 14823, *Durability of wood and wood-based products - Quantitative determination of pentachlorophenol in wood - Gas chromatographic method*

CEN/TS 15447, *Mounting and fixing in reaction to fire tests under the Construction Products Directive*

CEN/TS 15968, *Determination of extractable perfluorooctanesulphonate (PFOS) in coated and impregnated solid articles, liquids and fire fighting foams - Method for sampling, extraction and analysis by LC-qMS or LC-tandem/MS*

CEN/TS 16516, *Construction products - Assessment of release of dangerous substances - Determination of emissions into indoor air*

EN 62321-1, *Determination of certain substances in electrotechnical products - Part 1: Introduction and overview (IEC 62321-1)*

EN ISO 9239-1, *Reaction to fire tests for floorings - Part 1: Determination of the burning behaviour using a radiant heat source (ISO 9239-1)*

EN ISO 10456, *Building materials and products - Hygrothermal properties - Tabulated design values and procedures for determining declared and design thermal values (ISO 10456)*

EN ISO 10581, *Resilient floor coverings - Homogeneous poly(vinyl chloride) floor covering - Specifications (ISO 10581)*

EN ISO 10582, *Resilient floor coverings - Heterogeneous poly(vinyl chloride) floor coverings - Specification (ISO 10582)*

**prEN 14041:2016 (E)**

EN ISO 10595, *Resilient floor coverings - Semi-flexible/vinyl composition (VCT) poly(vinyl chloride) floor tiles - Specification (ISO 10595)*

EN ISO 11925-2, *Reaction to fire tests - Ignitability of products subjected to direct impingement of flame - Part 2: Single-flame source test (ISO 11925-2)*

CEN ISO/TS 16179, *Footwear - Critical substances potentially present in footwear and footwear components - Determination of organotin compounds in footwear materials (ISO/TS 16179)*

CEN ISO/TS 16186, *Footwear - Critical substances potentially present in footwear and footwear components - Test method to quantitatively determine dimethyl fumarate (DMFU) in footwear materials (ISO/TS 16186)*

EN ISO 12460-3, *Wood-based panels - Determination of formaldehyde release - Part 3: Gas analysis method (ISO 12460-3)*

EN ISO 24011, *Resilient floor coverings - Specification for plain and decorative linoleum (ISO 24011)*

EN ISO 26986, *Resilient floor coverings - Expanded (cushioned) poly(vinyl chloride) floor covering - Specification (ISO 26986)*

ISO 1766, *Textile floor coverings — Determination of thickness of pile above the substrate*

ISO 1957, *Machine-made textile floor coverings — Selection and cutting of specimens for physical tests*

ISO 2424, *Textile floor coverings — Vocabulary*

ISO 6356, *Textile and laminate floor coverings — Assessment of static electrical propensity — Walking test*

ISO 8302, *Thermal insulation — Determination of steady-state thermal resistance and related properties — Guarded hot plate apparatus*

ISO 10965, *Textile floor coverings — Determination of electrical resistance*

ISO 11379, *Textile floor coverings — Laboratory cleaning procedure using spray extraction*

### **3 Terms and definitions**

For the purposes of this document, the terms and definitions given in EN 12466 and ISO 2424, and the following apply.

#### **3.1**

##### **family of products**

range of products within defined limits of variability defined by the manufacturer or by a technical specification of the product parameters and, if relevant, end-use parameters for which essential characteristics remain unchanged

## 4 Essential characteristics

### 4.1 Reaction to fire

#### 4.1.1 Specimen preparation and conditioning

Test specimens shall be prepared as specified in EN 13501-1 and CEN/TS 15447. In the case of textile floor coverings, a washing and cleaning procedure similar to commonly used in real life may be required to verify the durability of surface fire retardant treatments (see 4.1.3).

One of the two standard substrates specified for floorings in EN 13238 shall be selected according to the intended end use.

Prior to type testing the manufacturer shall declare the relevant composition of the product, including the presence of any fire retardant additive (if applicable) to the relevant notified testing laboratory.

#### 4.1.2 Application rules

If the specimens are mounted using an adhesive prior to testing, the test result is valid for the tested floor covering with that adhesive, or the generic adhesive type, in end use conditions (see EN 13501-1).

If the specimens are tested without using an adhesive, the test result is valid for the tested floor covering with and without using adhesives in end use conditions.

If the specimens are tested on a wooden substrate the test result for the tested floor covering is also valid for end-use conditions on a non-combustible substrate.

#### 4.1.3 Durability aspects

Reaction-to-fire properties of a floor covering are deemed to be durable for the expected life-time of the products without testing.

However, when a fire retardant has been directly applied to the exposed (used) surface of a floor covering by spray, foam or other technology, specimens shall be subjected to a laboratory cleaning procedure.

For textile floorcovering, the spray-extraction cleaning procedure according to ISO 11379 shall be used with the following modifications:

- a) the specimens shall be cleaned three times, with an interval of  $(120 \pm 15)$  min between cycles, each cleaning cycle consisting of two strokes:
  - for the first stroke: use the spray extraction machine with simultaneous spray and extraction;
  - for the second stroke: operate the machine only as an extraction machine.
- b) the first cleaning cycle shall be carried out using the reference cleaning solution at ambient temperature  $(25 \pm 10)$  °C and the second and third cleaning cycle with water at ambient temperature without any addition of chemicals.

#### 4.1.4 Classification

If no claim for reaction-to-fire performance is made, i.e. if a product or family of products is placed on the market as class  $F_{n1}$ , no reaction-to-fire testing shall be required for this product or family of products.

If a claim for reaction-to-fire performance is made, the floor covering shall be tested and classified according to the requirements of EN 13501-1. The resulting class and subclass (as appropriate to the class itself) shall be declared.

## prEN 14041:2016 (E)

The products listed in Tables 1, 2 and 3 can be classified E<sub>fl</sub> without testing (CWT).

Annex D (normative) (D.1) defines a family of products in relation to fire performance relevant to initial type testing, factory production control and assessment and verification of constancy of performance. The product parameters influencing the reaction-to-fire performance of floor coverings are given in this annex.

**Table 1 — Classes of reaction to fire for laminate floor coverings**

Floor covering type <sup>1</sup>	Product standard	Minimum density (kg/m <sup>3</sup> )	Minimum overall thickness (mm)	Class Floorings
Laminate floor coverings	EN 13329	800	6,5	E <sub>fl</sub>

<sup>1</sup> See commission decision 2005/610/EC, Table 2

**Table 2 — Classes of reaction to fire for textile floor coverings**

Floor covering type <sup>1</sup>	Product standard	Class Floorings
Textile floor coverings and carpet tiles <sup>2</sup>	EN 1307	E <sub>fl</sub>

<sup>1</sup> See commission decision 2005/610/EC Table 4

<sup>2</sup> Textile floor coverings having a total mass of max. 4,8 kg/m<sup>2</sup>, a minimum thickness of pile above the substrate of 1,8 mm (see ISO 1766) and a surface of:

- 100 % wool,
- 80 % wool or more - 20 % polyamide or less,
- 80 % wool or more - 20 % polyamide/polyester or less,
- 80 % wool or more - 20 % polypropylene/polyester or less,
- 100 % polyamide,
- 10 % polyamide (or wool) or more - 90 % polypropylene or less and if with SBR-foam backing, a total mass of > 0,780 kg/m<sup>2</sup>. All carpets of this product family with other foam backings are excluded
- 100 % polypropylene and if with SBR-foam backing, a total mass of > 0,780 kg/m<sup>2</sup>. All polypropylene carpets with other foam backings are excluded.

Table 3 — Classes of reaction to fire for resilient floor coverings

Floor covering type <sup>1</sup>	Product standard	Minimum mass (kg/m <sup>2</sup> )	Maximum mass (kg/m <sup>2</sup> )	Minimum overall thickness (mm)	Class Floorings
Plain and decorative Linoleum	EN ISO 24011	2,3	4,9	2	E <sub>fl</sub>
Homogeneous polyvinyl chloride floor coverings	EN ISO 10581	2,3	3,9	1,5	E <sub>fl</sub>
Heterogeneous polyvinyl chloride floor coverings	EN ISO 10582	2,3	3,9	1,5	E <sub>fl</sub>
Polyvinyl chloride floor coverings with foam layer	EN 651	1,7	5,4	2	E <sub>fl</sub>
Polyvinyl chloride floor covering with cork-based backing	EN 652	3,4	3,7	3,2	E <sub>fl</sub>
Expanded (cushioned) polyvinyl chloride floor coverings	EN ISO 26986	1,0	2,8	1,1	E <sub>fl</sub>
Semi-flexible polyvinyl chloride tiles	EN ISO 10595	4,2	5,0	2	E <sub>fl</sub>
Linoleum on corkment backing	EN 687	2,9	5,3	2,5	E <sub>fl</sub>
Homogeneous and heterogeneous smooth rubber floor coverings with foam backing	EN 1816	3,4	4,3	4	E <sub>fl</sub>
Homogeneous and heterogeneous smooth rubber floor coverings	EN 1817	3,0	6,0	1,8	E <sub>fl</sub>
Homogeneous and heterogeneous relief rubber floor coverings	EN 12199	4,6	6,7	2,5	E <sub>fl</sub>

<sup>1</sup> see commission decision 2005/610/EC, Table 3

## 4.2 Dangerous substances

### 4.2.1 General

National regulations on dangerous substances may require verification and declaration on release, and sometimes content, when construction products covered by this standard are placed in those markets.

In the absence of European harmonized test methods, verification and declaration on release/content should be done taking into account national provisions in the place of use.

NOTE 1 An informative database covering European and national provisions on dangerous substances is available at <http://ec.europa.eu/enterprise/construction/cpd-ds/>.

**prEN 14041:2016 (E)**

NOTE 2 For the classification of substances, please refer to REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

NOTE 3 Some substances may be subject to REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH).

**4.2.2 Content of dangerous substances in floor coverings**

Resilient, textile and laminate floor coverings shall be evaluated concerning their content of dangerous substances, in accordance with the test methods listed in Table 4.

Active use of carcinogens, mutagens or reprotoxic substances of class 1A and 1B (excluding formaldehyde) is not permitted.

If the substances listed in Table 4 are not actively added in the manufacturing process of the floor covering or actively added in any of its raw materials and are not known to occur in any stage of the production process then the floor covering shall not be tested.

In all other cases, the floor coverings shall be tested if required by national or EU legislation (4.2.1).

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Table 4 — Content of dangerous substances: Test methods and requirements

Substance	CAS number	Floor covering type R = resilient, T = textile, L = laminate	Test method	Threshold values
Pentachlorophenol (PCP)	87-86-5	R, T	See Annex B	5 mg PCP per kg dry weight.
		L	CEN/TR 14823	5 mg PCP per kg dry weight.
Phthalates: Benzyl butyl phthalate (BBP) Bis(2-ethylhexyl)phthalate (DEHP) Dibutylphthalate (DBP)	85-68-7 117-81-7 84-74-2	R, T, L	See Annex F	< 1000 mg/kg
Short chain chlorinated paraffins (C10-13, SCCP)	85535-84-8	R, T, L	At present no test method standard validated for floorcoverings is available.	-
Medium chain chlorinated paraffins (C14-17, MCCP)	85535-85-9	R, T, L	At present no test method standard is available.	-
Pentabromodiphenylether	32534-81-9	R, T, L	IEC 62321-1	< 1000 mg/kg
Octabromodiphenylether	32536-52-0	R, T, L	IEC 62321-1	< 1000 mg/kg
Decabromodiphenylether	1163-19-5	R, T, L	IEC 62321-1	< 1000 mg/kg
Cadmium	7440-43-9	R, T, L	EN 1122 Total digestion of sample by hydrofluoric acid, followed by atomic absorption spectroscopy (AAS) or inductively coupled plasma (ICP)	< 100 mg/kg
Lead	7439-92-1	R, T, L	EN 1122 Total digestion of sample by hydrofluoric acid, followed by atomic absorption spectroscopy (AAS) or inductively coupled plasma (ICP).	< 1000 mg/kg