



SLOVENSKI STANDARD SIST EN 1470:2009

01-januar-2009

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Textile floor coverings - Classification of needed floor coverings except for needed pile floor coverings

Textile Bodenbeläge - Einstufung von Nadelvlies-Bodenbelägen, ausgenommen Polvlies-Bodenbeläge

Revêtements de sol textiles - Classement des revêtements de sol aiguilletés à l'exception des moquettes aiguilletées

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Ta slovenski standard je istoveten z: EN 1470:2008

ICS:

59.080.60 Tekstilne talne obloge Textile floor coverings

SIST EN 1470:2009 en,fr,de

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English Version

Textile floor coverings - Classification of needled floor coverings
except for needled pile floor coveringsRevêtements de sol textiles - Classement des revêtements
de sol aiguilletés à l'exception des moquettes aiguilletéesTextile Bodenbeläge - Einstufung von Nadelvlies-
Bodenbelägen, ausgenommen Polvlies-Bodenbeläge

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This document (EN 1470:2008) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate floor coverings”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2008, and conflicting national standards shall be withdrawn at the latest by December 2008.

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

This document supersedes EN 1470:1997

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

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EN 1470:2008 (E)**1 Scope**

This European Standard describes and specifies the requirements for classification of needled floor coverings in sheet form into use classes in respect of wear and appearance retention and a class for luxury rating.

This European Standard is also applicable to tiles, the additional requirements for which are given in Annex A.

This European Standard is not applicable to needled pile floor coverings.

This European Standard refers to the classification as defined in EN 685.

2 Normative references

The following referenced documents are indispensable for the application 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 984, *Textile floor coverings — Determination of the mass per unit area of the use surface of needled floor coverings*

EN 985:2001, *Textile floor coverings — Castor chair test*

EN 986, *Textile floor coverings — Tiles — Determination of dimensional changes due to the effects of varied water and heat conditions and distortion out of plane*

EN 994, *Textiles floor coverings — Determination of the side length, squareness and straightness of tiles*

EN 1269, *Textile floorcoverings — Assessment of impregnations in needled floorcoverings by means of a soiling test*

EN 1471, *Textile floor coverings — Assessment of changes in appearance*

EN 1963, *Textile floor coverings — Tests using the Lisson Tretrad Machine*

CEN/TS 14159, *Textile floor coverings — Requirements for tolerances on (linear) dimensions of rugs, runners, carpet tiles and wall-to-wall carpet and for tolerances on pattern repeat*

EN 15115, *Textile floor coverings — Determination of sensitivity to spilled water*

CEN/TS 15398, *Resilient, textile and laminate floor coverings — Floor covering standard symbols*

EN ISO 105-A01, *Textiles — Tests for colour fastness — Part A01: General principles of testing (ISO 105-A01:1994)*

EN ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test (ISO 105-B02:1994, including amendment 1:1998)*

EN ISO 105-E01, *Textiles — Tests for colour fastness — Part E01: Colour fastness to water (ISO 105-E01:1994)*

EN ISO 105-X12, *Textiles — Tests for colour fastness — Part X12: Colour fastness to rubbing (ISO 105-X12:2001)*

EN ISO 140-8, *Acoustics — Measurement of sound insulation in buildings and of building elements — Part 8: Laboratory measurements of the reduction of transmitted impact noise by floor coverings on a heavyweight standard floor (ISO 140-8:1997)*

EN ISO 354, *Acoustics — Measurement of sound absorption in a reverberation room (ISO 354:2003)*

EN ISO 717-2, *Acoustics — Rating of sound insulation in buildings and of building elements — Part 2: Impact sound insulation (ISO 717-2:1996)*

EN ISO 11378-2, *Textile floor coverings — Laboratory soiling tests — Part 2: Drum test (ISO 11378-2:2001)*

ISO 1765, *Machine-made textile floor coverings — Determination of thickness*

ISO 2424:2007, *Textile floor coverings — Vocabulary*

ISO 2551, *Machine-made textile floor coverings — Determination of dimensional changes due to the effects of varied water and heat conditions*

ISO 3415, *Textile floor coverings — Determination of thickness loss after brief, moderate static loading*

ISO 6356, *Textile 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 8543, *Textile floor coverings — Methods for determination of mass*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 2424:2007 and the following apply.

3.1

non adhered tile (loose laid)

tile installed without any use of a bonding system (see Annex A)

[EN 1307:2008]

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3.2

adhered removable tile

tile installed with a bonding system allowing easy removal and reinstallation (see Annex A)

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[EN 1307:2008]

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3.3

permanent adhered tile

tile installed with a permanent bonding system (see Annex A)

[EN 1307:2008]

3.4

nominal value

value stated by the manufacturer

4 Description of categories and levels of use

4.1 Needed floor coverings categories

Flat needed floor coverings shall be distributed in three categories:

- a) Type 1: one visible layer (homogeneous product);
- b) Type 2: more than one visible layer, the bonding compound of which does not reach the top of the use surface;
- c) Type 3: more than one visible layer, the bonding compound of which is present throughout its thickness.

NOTE layers such as e.g. secondary backing should also be taken into consideration for the determination of the number of layers

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4.2 Levels of use

Textile floor coverings are classified as suitable for different levels of use in accordance with the performance requirements specified in Clause 7.

The different levels of use are described in Table 1.

Table 1 — Levels of use

Class	Use intensity
Domestic	
21	Moderate/light
22	General/medium
22+	General
23	Heavy
Commercial^a	
31	Moderate
32	General
33	Heavy
^a Class 33 should be used as the basis to which additional requirements are added to provide an individual full specification.	

If symbols are to be used for the use classes, luxury rating classes and additional characteristics, the symbols listed in CEN/TS 15398 shall be used which can also be found on www.floorsymbols.com

For very specific use such as airports, theatres or industrial use, the technical requirements should be discussed and agreed between all parties involved.

5 Identification requirements

This clause specifies the characteristics for identification of the product and requirements for tolerances for the identifying properties.

The producer shall provide the following information in accordance with the definitions given in ISO 2424:

- commercial references;
- type of bonding (full impregnation or back coated);
- type of backing.

The producer shall also declare the values of the characteristics listed in Table 2.

Table 2 — Identification requirements

Characteristics	Test methods	Tolerances
Fibre composition of use surface	^a	
Dimensions	CEN/TS 14159	CEN/TS 14159
Total thickness mm	ISO 1765	Nominal $\pm 15\%$ ^b
Total mass per unit area g/m ²	ISO 8543	Nominal $\pm 15\%$
Mass per unit area of the use-surface (for Type 2 and Type 3 product) g/m ²	EN 984	Nominal $\pm 15\%$
<p>^a Attention is drawn to the European Directives 96/73 and 96/74 which cover the fibre composition and are reflected in the national regulations</p> <p>^b For products with total thickness $\leq 3,5$ mm: tolerance maximum $\pm 0,5$ mm</p>		

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6 Basic requirements

Needed floor coverings shall conform to the basic requirements specified in Table 3.

Table 3 — Basic requirements

Characteristics	Requirements	Test methods
Dimensional stability	Shrinkage ≤ 1,2 % in either direction Extension ≤ 0,5 % in either direction	ISO 2551
Assessment of impregnations	≥ 2-3 ^a	EN 1269
Colour fastness to ^b Light – general – pastel shade ^c Rubbing – wet – dry	≥ 5 ≥ 4 ≥ 3 ≥ 3-4	EN ISO 105-B02 EN ISO 105-X12
Water (change in colour) – plain floor coverings – other floor coverings Water (staining) – all floor coverings	SIST EN 1470:2009 ≥ 4 ≥ 2-3 ^d	EN ISO 105-E01
Hairiness (pilling)	≥ 2,5 ^e	EN 1963 – Test D
Static loading (for classes 23, 32 and 33)	≤ 0,8 mm	ISO 3415
Colour change ^f – due to spilled water – due to soiling subsequent to spilled water	≥ 4 ≥ 3	EN 15115 Annex C
<p>^a For class 21 products, the specification ≥ 2 is acceptable.</p> <p>^b Conformity to be declared by the manufacturer for each colour.</p> <p>^c Pastel shade: colour corresponding to a standard depth ≤ 1/12 in accordance with EN ISO 105-A01.</p> <p>^d On multi-fibre: worst result.</p> <p>^e Tested production-wise and cross-wise, worst result decisive.</p> <p>^f Conformity to be declared by the manufacturer.</p>		

7 Level of use classification

7.1 General

Needed floor coverings are classified as to their suitability for use in different circumstances.

The three classification properties, wear resistance, general structural integrity and change in colour are intended to indicate suitability according to use intensity (level of use classes 21 to 33 as in Table 1, in increasing order of use intensity).

The level of use class allocated to a needed floor covering is the lowest of the classes obtained for the wear, general structural integrity and change in colour (see 7.2 to 7.4).

7.2 Classification for wear

7.2.1 Primary requirements for use-surface

The primary requirements for each class are specified in Table 4.

Table 4 — Primary wear requirements

Number of visually different layers	One	More than one	
	Type 1	Type 2	Type 3
Class	Measured total mass per unit area g/m ²	Measured use surface mass per unit area g/m ²	Measured use surface mass per unit area g/m ²
Domestic			
21	—	—	—
22	≥ 500	≥ 130	≥ 150
22+			
23	≥ 700	≥ 180	≥ 200
Commercial			
31	≥ 500	≥ 130	≥ 150
32	≥ 700	≥ 180	≥ 200
33	≥ 850	≥ 225	≥ 250
Test methods	ISO 8543	EN 984	EN 984

7.2.2 Abrasion resistance – Lisson test - Mass loss per unit area (m_V)

The requirements for each class are specified in Table 5; m_V is calculated as indicated in EN 1963 test A.