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EUROPEAN STANDARD

EN 13553

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2015

ICS 97.150

Supersedes EN 13553:2002

English Version

Resilient floor coverings - Polyvinyl chloride floor coverings for use in special wet areas - Specification

Revêtements de sol résilients - Revêtements de sol à base de polychlorure de vinyle pour zones humides spéciales - Spécification

Elastische Bodenbeläge - Polyvinylchlorid-Bodenbeläge zur Anwendung in besonderen Nassräumen - Spezifikation

This European Standard was approved by CEN on 1 February 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

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Foreword

This document (EN 13553:2015) has been prepared by Technical Committee CEN/TC 134 “Resilient, textile and laminate floor coverings”, the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by October 2015 and conflicting national standards shall be withdrawn at the latest by October 2015.

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 13553:2002.

Significant changes compared to the previous edition are:

- Superseded EN standards were replaced by corresponding EN ISO standards.

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, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 13553:2015 (E)**1 Scope**

This European standard specifies the minimum additional characteristics which are necessary for:

- polyvinyl chloride floor coverings in roll form according to EN ISO 10581 or EN ISO 10582 and
- polyvinyl chloride floor coverings with foam backing in roll form to EN 651

to be installed satisfactorily in special wet areas to form a watertight installation with a long life. It specifies two categories (A and B) for use on different substrates.

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 661, *Resilient floor coverings - Determination of the spreading of water*

EN 684, *Resilient floor coverings - Determination of seam strength*

EN 12466, *Resilient floor coverings - Vocabulary*

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)*

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EN ISO 24340, *Resilient floor coverings - Determination of thickness of layers (ISO 24340)*

EN ISO 24344, *Resilient floor coverings - Determination of flexibility and deflection (ISO 24344)*

EN ISO 24346, *Resilient floor coverings - Determination of overall thickness (ISO 24346)*

3 Terms and definitions

For the purposes of this document the terms and definitions of EN 12466 and the following term and definition apply:

3.1**special wet area**

area where floors are designed to be frequently or permanently wet and equipped with a floor-based drain

EXAMPLE Bathrooms with free-standing tubs and shower rooms without partitions.

4 Requirements**4.1 General requirements**

Products covered by this standard shall conform to the requirements of EN ISO 10581, EN ISO 10582 or EN 651.

4.2 Additional performance requirements

Floor coverings conforming to the requirements of EN ISO 10581, EN ISO 10582 or EN 651 are suitable for special wet areas when they meet the additional requirements specified in Table 1.

Table 1 — Products suitable for special wet areas

Characteristic	Identity code W1	Identity code W2	Identity code W3	Test method
Floor covering type ^{a)}	Floor coverings conforming to EN ISO 10581 or EN ISO 10582	Floor coverings conforming to EN ISO 10581 or EN ISO 10582	Floor coverings conforming to EN 651	
Substrate type ^{b)}	Category A	Category B	Category A	
Nominal overall thickness (in mm)	≥ 1,5	≥ 2,0		EN ISO 24346
Total thickness of compact layers (in mm)	as for overall thickness	as for overall thickness	≥ 1,0	EN ISO 24340
Spreading of water (in days)	-	-	≥ 7	EN 661
Seam strength, when welded in accordance with the manufacturer's instructions (in N/50 mm)	≥ 240	≥ 400	≥ 240	EN 684
Flexibility	When bent around a mandrel of 10 mm diameter, no cracking or other surface deterioration shall be visible with the naked eye For heterogeneous materials the test shall be made with the surface side as well as with the reverse side outwards.			EN ISO 24344
Water tightness	The welded product shall be classified watertight.			Annex A
^{a)} For installation see Annex C				
^{b)} For choice of category see Annex B				

4.3 Installation

See Annex C.

5 Marking

Floor coverings covered by this standard and/or their packaging shall bear the following marking in addition to the marking according to EN ISO 10581, EN ISO 10582 or EN 651;

- number and year of publication of this European Standard (EN 13553:2015);
- identity code W1, W2 or W3;
- category A or B.

Annex A (normative) Water tightness test

A.1 Scope

This annex describes a method for testing the water tightness of floor coverings.

A.2 Apparatus

A.2.1 A base of non-porous material such as metal or glass, on which the sample rests during testing.

NOTE If the base is transparent and suitably supported, it will enable any leakage to be observed from below.

A.2.2 A watertight, bottomless box-frame, to be placed on top of the test specimen. The box-frame shall have vertical sides at least 300 mm and shall cover a surface area of at least 300 mm x 500 mm. The box-frame will be supporting water pressure and should therefore be held in place by clamps or weights. The box-frame shall be sealed to achieve water tightness between the floor covering and the box-frame.

A.2.3 Indicator paper, sensitive to moisture.

A.3 Test specimen

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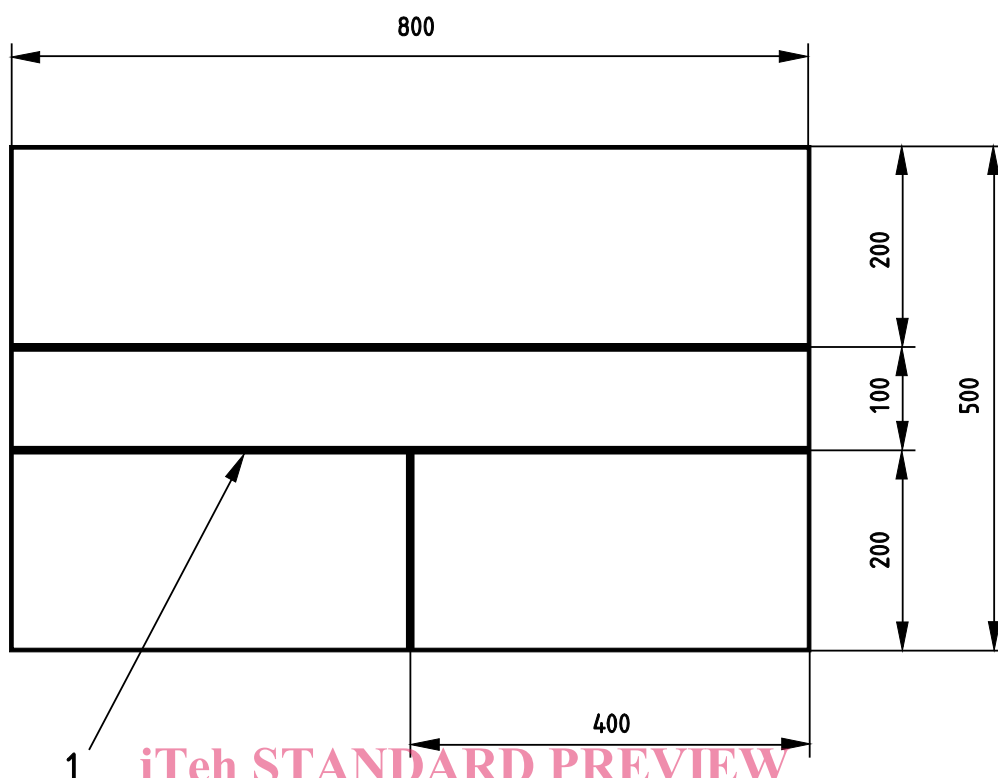
The test specimen shall be flat or capable of being flattened so that it lies flat on the base. The base may be covered by polyethylene foil or similar material. When preparing test specimens the manufacturer's instructions shall be observed.

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The size of the specimen shall be at least 500 mm x 800 mm and it shall be provided with seams welded in accordance with manufacturer's recommendations (see Figure A.1).

Dimensions in mm

**Key**

- 1 welded seam

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Figure A.1 — Specimen with welded seams

A.4 Conditioning

Special conditioning is not required. The test specimen shall be dry on visual inspection and be at a temperature of 15 °C to 25 °C.

A.5 Testing

The temperature of the water during testing shall be 15 °C to 25 °C.

Cover the supporting base with the indicator paper. Place the test specimen on the indicator paper with the use surface upwards. Place the box-frame over the test specimen and press the support towards the box-frame to ensure water tightness (see A.2 and Figure A.2).

Fill the box-frame with water to a level of 200 mm ± 10 mm above the upper surface of the test specimen. This water level is maintained for 24 h ± 1 h after which the water is drained off.

The moisture indicator and the test specimen are examined for any signs of water penetrating the specimen.

The test specimen is considered watertight if there is no sign of penetrating water.