



**SLOVENSKI STANDARD**  
**SIST EN 15102:2008**  
**01-april-2008**

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Decorative wallcoverings - Roll and panel form products

Dekorative Wandbekleidungen - Rollen- und Plattenform

Revêtements muraux décoratifs - Rouleaux et panneaux

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**Ta slovenski standard je istoveten z: EN 15102:2007**

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91.180

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ICS 91.180

English Version

## Decorative wallcoverings - Roll and panel form products

Revêtements muraux décoratifs - Rouleaux et panneaux

Dekorative Wandbekleidungen - Rollen- und Plattenform

This European Standard was approved by CEN on 23 September 2007.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

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## Foreword

This document (EN 15102:2007) has been prepared by Technical Committee CEN/TC 99 "Wallcoverings", 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of an identical text or by endorsement, at the latest by May 2008, and conflicting national standards shall be withdrawn at the latest by August 2009.

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

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

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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## 1 Scope

This European Standard applies to all forms of wallcovering products in roll and panel form as defined in EN 235 supplied for hanging onto internal walls, partitions or ceilings, by means of an adhesive, whose primary purpose is decorative. However, certain wallcovering products may confer minor sound absorption and thermal resistance properties.

It also provides for the evaluation of conformity of products to the requirements of this standard.

It does not apply to wall coverings whose primary purpose is structural or protective (e.g. vapour or moisture barriers).

## 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 71-3:1994, *Safety of toys — Part 3: Migration of certain elements*

EN 12149:1997, *Wallcoverings in roll form — Determination of migration of heavy metals and certain other elements, of vinyl chloride monomer and of formaldehyde release*

EN 12524, *Building materials and products — Hygrothermal properties — Tabulated design values*

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 12781:2001, *Wallcoverings — Specification for cork panels*

EN 13085:2001, *Wallcoverings — Specification for cork rolls*

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

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

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

EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

EN ISO 11654, *Acoustics — Sound absorbers for use in buildings — Rating of sound absorption (ISO 11654:1997)*

### 3 Terms and definitions

For the purposes of this document the following terms and definitions apply.

#### 3.1

##### **product**

refers to a construction product, as defined by the CPD, from an individual producer (i.e. the item to which the CE marking applies)

#### 3.2

##### **product family**

range of products (i.e. wallcovering products in roll and panel form) within defined limits of variability (defined by the manufacturer or a technical specification) of the product parameters and, if relevant, end-use parameters, for which the performance remains unchanged (does not get worse)

NOTE This means that the results from one or more characteristics from one product within the family are representative for all other products within that family.

### 4 Characteristics

#### 4.1 Reaction to fire

If the wallcovering product is intended to be used (i.e. in end use condition) on internal walls or ceilings when such use is subject of reaction to fire regulations, its reaction to fire class and the associated mounting and fixing conditions shall be declared. (standards.iteh.ai)

If the wallcovering product is intended to be used (i.e. in end use condition) on internal walls or ceilings when such use is not subject to reaction to fire regulations, it shall be declared without testing as class F product, unless higher classification, based on tests, would be sought by the manufacturer.

The wallcovering product shall be tested in its end use conditions and classified according to EN 13501-1. For the purposes of the reaction to fire test, the wallcovering product shall be attached, following the manufacturer's instructions, to a substrate chosen according to the provisions of EN 13238 by the use of the manufacturer's recommended generic adhesive.

#### 4.2 Release of formaldehyde

The release of formaldehyde from the wallcovering product shall be declared when subject to regulatory requirement and may be declared otherwise. The formaldehyde release, when tested in accordance with Test C of EN 12149:1997 (as modified in Annex A of EN 12781:2001 or EN 13085:2001 for cork wallcovering products in panel form and roll form respectively) shall not exceed 120 mg/kg of wallcovering.

If no formaldehyde or products containing formaldehyde are added during the manufacturing process of the wallcovering product, and the raw materials are declared by the supplier to contain less than 120 mg/kg of formaldehyde, then testing is not necessary.

#### 4.3 Release of dangerous substances

##### 4.3.1 Heavy metals and specific elements

###### 4.3.1.1 Requirements

The migration of heavy metals and specific elements from the wallcovering product, expressed as mg/kg of wallcovering, shall not exceed the values given in Table 1 (after correction according to 4.3.1.2) when

measured in accordance with Test A of EN 12149:1997. If none of these substances are added during the wallcovering manufacturing process, and all the raw materials are declared by the supplier to meet the requirements of Table 1, then testing is not necessary.

**4.3.1.2 Interpretation of results**

The analytical results on migration of heavy metals and specific elements from the wallcovering product, obtained from the tests specified in EN 12149:1997 shall be corrected by subtracting the value of the analytical correction factors given in Table 2 in order to obtain a corrected analytical result.

The wallcovering product shall be considered to meet the requirements of this European Standard if the corrected analytical result does not exceed the limits indicated in Table 1.

Given the precision of the methods specified in this European Standard, the corrected analytical result to take into account the results of inter-laboratory tests (see Annex D of EN 71-3:1994) shall be used.

EXAMPLE: Analytical result for lead: 120 mg/kg.

Corresponding analytical correction in Table 3: 30 %.

Corrected analytical result =  $120 - (120 \times 30)/100 = 120 - 36 = 84$  mg/kg. This is regarded as satisfying the requirements of the standard (i.e. lead  $\leq 90$  mg/kg).

NOTE The measuring methods used in EN 12149:1997 are derived directly from EN 71-3:1994 on the safety of toys. Annex D of EN 71-3:1994, in particular D.4 'Statistical uncertainty of the test procedure and interpretation of results' justifies the introduction of a correction factor.

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**Table 1 — Maximum migration of heavy metals and specific elements of wallcovering products**

Heavy metal or element	Symbol	Maximum migration in mg/kg
Antimony	Sb	No upper limit
Arsenic	As	25
Barium	Ba	500
Cadmium	Cd	25
Chromium	Cr	60
Lead	Pb	90
Mercury	Hg	20
Selenium	Se	165

**Table 2 — Analytical correction factor**

Element	Sb	As	Ba	Cd	Cr	Pb	Hg	Se
Analytical correction factor (in percentage)	60	60	30	30	30	30	50	60



#### 4.3.2 Release of vinyl chloride monomer

The release of vinyl chloride monomer (VCM) from the wallcovering product shall be declared when subject to regulatory requirement and may be declared otherwise. The maximum VCM release when tested to Test B of EN 12149:1997 shall not exceed 0,2 mg/kg of wallcovering.

If no polyvinyl chloride or products containing vinyl chloride are used during the manufacturing process of the wallcovering product or if the raw materials used are declared by the supplier to contain less than 1 mg/kg of vinyl chloride monomer, then testing on VCM release is not necessary.

#### 4.4 Sound absorption

The sound absorption of the wallcovering product shall be declared when its intended end use is subject to regulatory requirement and may be declared otherwise. It shall be measured in accordance with EN ISO 354 and expressed as a single number rating according to EN ISO 11654.

#### 4.5 Thermal resistance

The thermal resistance of the wallcovering product shall be declared when its intended end use is subject to regulatory requirement and may be declared otherwise. The value shall either be taken from EN 12524 or the products shall be tested in accordance with EN 12667 and a value declared in  $m^2K/W$  or  $W/(mK)$ .

### 5 Evaluation of conformity

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#### 5.1 General

The conformity of the wallcovering product with the requirements of this standard and with the stated values (including classes) shall be demonstrated by [EN 15102:2008](https://standards.iteh.ai/catalog/standards/sist/c33cf6a4-397c-4d1e-8065-c598e3827805/sist-en-15102-2008)

- initial type testing, <https://standards.iteh.ai/catalog/standards/sist/c33cf6a4-397c-4d1e-8065-c598e3827805/sist-en-15102-2008>
- factory production control by the manufacturer, including product assessment (see Annex A).

For the purposes of testing, wallcovering products may be grouped into families (see 3.2).

#### 5.2 Initial type testing

##### 5.2.1 General

Initial type testing shall be performed to show conformity of the wallcovering product with this standard. Tests previously performed in accordance with the provisions of this standard (same product, same characteristic(s), test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account. In addition, initial type testing shall be performed at the beginning of the production of a new product type (unless a member of the same family) or at the beginning of a new method of production (where this may affect the stated properties).

All characteristics in Clause 4 shall be subject to initial type testing.

Whenever a change occurs in the product raw materials, raw material suppliers, or the production process (subject to the definition of a family), which may change significantly one or more of the characteristics given in Clause 4, then the initial type testing shall be repeated for the appropriate characteristic(s).

## 5.2.2 Sampling, testing and compliance criteria

### 5.2.2.1 Sampling procedure

The sample of the wallcovering product taken for initial type testing shall be representative of normal production or, in the case of new products, samples representative of intended future production.

Whenever practicable, the random sampling method shall be used, in which every product in a batch has an equal chance of being selected for the sample. The required numbers of product shall be selected from a batch at random, without any consideration given to the condition or quality of the selected products.

When random sampling is impracticable, e.g. when the products form a large stack or stacks with ready access to only a limited number of products, a representative sampling procedure shall be used.

### 5.2.2.2 Testing and compliance criteria

The testing and compliance criteria are given in Table 3.

The results of all initial type testing shall be recorded and held by the manufacturer for at least 5 years after the last date of production of the wallcovering product to which they relate.

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Table 3 — Testing and compliance criteria for initial type testing of the wallcovering product

Characteristic	Requirement clause	Assessment method	Number of specimens	Conformity criteria
Reaction to fire	4.1	Tests referred to from EN 13501-1 (testing)	As required by the appropriate test standard	See classification in EN 13501-1
Release of formaldehyde	4.2	EN 12149:1997 (EN 12781:2001 or EN 13085:2001 for cork products)	As required by the appropriate test standard	See 4.2
Release of heavy metals and specific elements	4.3.1	EN 12149:1997	As required by the test standard	See 4.3.1.2
Release of vinyl chloride monomer (VCM)	4.3.2	EN 12149:1997	As required by the test standard	See 4.3.2
Sound absorption	4.4	EN ISO 354 (testing) EN ISO 11654 (classification)	See Note	See 4.4
Thermal resistance	4.5	EN 12667 EN 12524	See Note	See 4.5
NOTE Three specimens, each sample from a separate unit, with units selected according to the procedure of 5.2.2.1.				

### 5.3 Factory production control (FPC)

The manufacturer shall establish, document and maintain an FPC system to ensure that the subsequent wallcovering products placed on the market conform to the declared performance characteristics obtained on the basis of initial type testing. The FPC system shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product. The FPC system shall comply with at least the requirements of Annex A.