

SLOVENSKI STANDARD SIST EN 14915:2013

01-december-2013

Nadomešča:

SIST EN 14915:2007

SIST EN 14915:2007/AC:2007

Notranje in zunanje obloge iz masivnega lesa - Lastnosti, vrednotenje skladnosti in označevanje

Solid wood panelling and cladding - Characteristics, evaluation of conformity and marking

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Wand- und Deckenbekleidungen aus Massivholz- Eigenschaften, Bewertung der Konformität und Kennzeichnung

SIST EN 14915:2013

Lambris et bardages bois - Caractéristiques, évaluation de conformité et marquage

Ta slovenski standard je istoveten z: EN 14915:2013

ICS:

79.080 Polizdelki iz lesa Semi-manufactures of timber

SIST EN 14915:2013 en,fr,de

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EUROPEAN STANDARD

EN 14915

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2013

ICS 79.080

Supersedes EN 14915:2006

English Version

Solid wood panelling and cladding - Characteristics, evaluation of conformity and marking

Lambris et bardages bois - Caractéristiques, évaluation de conformité et marquage

Wand- und Deckenbekleidungen aus Massivholz -Eigenschaften, Bewertung der Konformität und Kennzeichnung

This European Standard was approved by CEN on 8 August 2013.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

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Foreword

This document (EN 14915:2013) has been prepared by Technical Committee CEN/TC 175 "Round and sawn timber", the secretariat of which is held by AFNOR.

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of an identical text or by endorsement, at the latest by March 2014, and conflicting national standards shall be withdrawn at the latest by March 2014.

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 14915:2006.

In comparison with the previous edition, the entire document has been revised.

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.

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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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1 Scope

This European Standard defines and specifies the relevant characteristics and the appropriate test methods to determine these characteristics for solid wood products to be used as panelling and cladding (including siding) for:

- wall and ceiling panelling for internal use,
- wall and ceiling cladding for external uses.

It provides for the evaluation of conformity and the requirements for marking these products.

This European Standard does not cover panels intended for use as stiffening elements.

This European Standard does not cover suspended ceiling in wood panelling and cladding.

This European Standard does not cover the processes for treatment, surface coating or modification.

This European standard does not cover products which are produced from laminated layer section.

This European Standard covers treated, untreated and surface coated products, including those made of thermally or chemically modified wood, as well as finger jointed and edge glued products.

NOTE Prescriptions for surface coating and treatment can be found in documents valid in the place of use.

This European Standard covers products in compliance with EN 14519, EN 15146 and EN 14951, and other solid timber products manufactured for use as panelling and cladding.

2 Normative references

SIST EN 14915:2013

The following documents, and 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 335:2013, Durability of wood and wood-based products — Use classes: definitions, application to solid wood and wood-based products

EN 350-1, Durability of wood and wood-based products — Natural durability of solid wood — Part 1: Guide to the principles of testing and classification of the natural durability of wood

EN 350-2, Durability of wood and wood-based products — Natural durability of solid wood — Part 2: Guide to natural durability and treatability of selected wood species of importance in Europe

EN 351-1, Durability of wood and wood based-products — Preservative-treated solid wood — Part 1: Classification of preservative penetration and retention

EN 599-2, Durability of wood and wood-based products — Performance of preventive wood preservatives as determined by biological tests — Part 2: Classification and labelling

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

EN 717-2, Wood based panels — Determination of formaldehyde release — Part 2: Formaldehyde release by the gas analysis method

EN 844-9:1997, Round and sawn timber — Terminology — Part 9: Terms relating to features of sawn timber

EN 1309-1:1997, Round and sawn timber — Method of measurement of dimensions — Part 1: Sawn timber

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

EN 13556, Round and sawn timber — Nomenclature of timbers used in Europe

EN 13756:2002, Wood flooring — Terminology

EN 13986, Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking

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

EN ISO 10456:2007, Building materials and products — Hygrothermal properties — Tabulated design values and procedures for determining declared and design thermal values (ISO 10456:2007)

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

EN ISO 12572, Hygrothermal performance of building materials and products - Determination of water vapour transmission properties (ISO 12572)

3 Terms and definitions Teh STANDARD PREVIEW

For the purposes of this document, the terms and definitions given in EN 13756:2002, EN 844-9:1997 and EN 1309-1:1997 and the following apply. (Standards.iten.al)

3.1 SIST EN 14915:2013

siding

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North American term, synonymous with exterior cladding; material attached to exterior of the building wall where length predominates over the other two dimensions, having reduced thickness

3.2

assembled panelling/cladding

products put together, according to their method of assembly as given by the manufacturer (e.g. joined tongue to groove), to form a panelling or cladding assembly

4 Requirements

4.1 General

Characteristics shall be assessed and declared when subject to regulatory requirements and may be assessed and declared when not subject to such requirements.

4.2 Characteristics for solid wood panelling for use on internal walls and ceilings

The following characteristics shall be determined:

- reaction to fire: see 5.1,
- release of formaldehyde: see 5.2.1,
- content of pentachlorophenol: see 5.2.2,
- water vapour permeability: see 5.4,

- sound absorption: see 5.5,
- thermal conductivity: see 5.6,
- resistance to fixings: see 5.7,
- release of other dangerous substance: see 5.3.

4.3 Characteristics for solid wood sidings for use on internal walls

The following characteristics shall be determined:

- reaction to fire: see 5.1,
- release of formaldehyde: see 5.2.1,
- content of pentachlorophenol: see 5.2.2,
- release of other dangerous substance: see 5.3,
- thermal conductivity: see 5.6,
- resistance to fixings: see 5.7.

4.4 Characteristics for solid wood sidings for use on external walls

The following characteristics shall be determined ds.iteh.ai)

- reaction to fire: see 5.1, SIST EN 14915:2013
- content of pentachlorophenol: see 5.2.2 302d/sist-en-14915-2013
- release of other dangerous substance: see 5.3,
- ŭ
- water vapour permeability: see 5.4,
- thermal conductivity: see 5.6,
- resistance to fixings: see 5.7.

4.5 Characteristics for solid wood cladding for use on external walls and ceilings

The following characteristics shall be determined:

- reaction to fire: see 5.1,
- content of pentachlorophenol: see 5.2.2,
- release of other dangerous substance: see 5.3,
- water vapour permeability: see 5.4,
- thermal conductivity: see 5.6,
- resistance to fixings: see 5.7.

4.6 Durability against biological attack

4.6.1 Biological durability

If the species is listed in EN 350-2, the biological durability shall be as given therein; otherwise it shall be assessed in accordance with EN 350-1.

4.6.2 Timber treated against biological attack

4.6.2.1 General

Timber treated against biological attack shall meet regulatory requirements valid in the place of use of the products.

Preservative treated products shall be defined by:

- use class in accordance with EN 335,
- wood preservative in accordance with EN 599-2,
- penetration class in accordance with EN 351-1,
- retention of preservative in accordance with EN 351-1.

4.6.2.2 Timber iTeh STANDARD PREVIEW

Any machining, boring, planing, etc. shall be completed before preservative treatment. In case of wane, the bark shall be removed.

4.6.2.3 Preservatives

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Wood preservatives used shall conform to the performance requirements given in EN 599-2 appropriate for the use class.

4.6.2.4 Penetration

The minimum penetration shall be declared in terms of penetration classes listed in EN 351-1.

4.6.2.5 Retention

The mean retention in the analytical zone (see EN 351-1) shall be equal to or greater than the retention requirement for the preservative used in the declared use class.

5 Testing, assessment and sampling methods

5.1 Reaction to fire

The reaction to fire performance of a solid wood panelling and cladding product, whether treated or not, shall be classified in accordance with EN 13501-1, after being tested in accordance with the test standards given therein and the relevant reaction to fire class declared.

When tested, the product shall be mounted and fixed in accordance with the same mounting and fixing conditions used for obtaining the classification of products without the need of testing (i.e. those in relevant footnotes a to j of Table 1).

In case the product meets the requirements given in Table 1¹⁾ it may be classified without the need for further testing (CWFT) in one of the appropriate classes shown therein. In this case, the relevant reaction to fire class shall be declared (together with the corresponding mean density of the product, the overall thickness of the product as well as the end-use conditions).

Table 1 - Classes of reaction to fire performance

Material	Product detail ^e	Minimum mean density ^f (kg/m³)	Minimum thickness total/ minimum ^g (mm)	End-use condition ^d	Class ^c
Panelling and cladding ^a	Wood pieces with or without tongue and groove and with or without profiled surface	390	9/6	Without air gap or with closed air gap behind	D - s2,d 2
			12/8		D - s2,d 0
Panelling and cladding ^b	Wood pieces with or without tongue and groove and with or without profiled surface	390	9/6	With open air gap ≤ 20 mm behind	D - s2,d 0
			18/12	Without air gap or with open air gap behind	
Wood ribbon elements ^h	Wood pieces mounted on a support frame i	390	18	Surrounded by open air on all sides ^j	D - s2,d 0

^a Mounted mechanically on a wood batten support frame, with the gap closed or filled with a substrate of at least class A2 - s1, d0 with minimum density of 10 kg/m³ or filled with a substrate of cellulose insulation material of at least class E and with or without a vapour barrier behind. The wood product shall be designed to be mounted without open joints.

b Mounted mechanically on a wood batten support frame, with or without an open air gap behind. The wood product shall be designed to be mounted without open joints.

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Class as provided for in Table 1 of the annex to Commission Decision 2000/147/EC.

An open air gap may include possibility for ventilation behind the product, while a closed air gap will exclude such ventilation. The substrate behind the air gap shall be of at least class A2 - s1, d0 with a minimum density of 10 kg/m³. Behind a closed air gap of maximum 20 mm and with vertical wood pieces, the substrate may be of at least class D - s2, d0.

e Joints include all types of joints, e.g. butt joints and tongue and groove joints.

f Conditioned according to EN 13238.

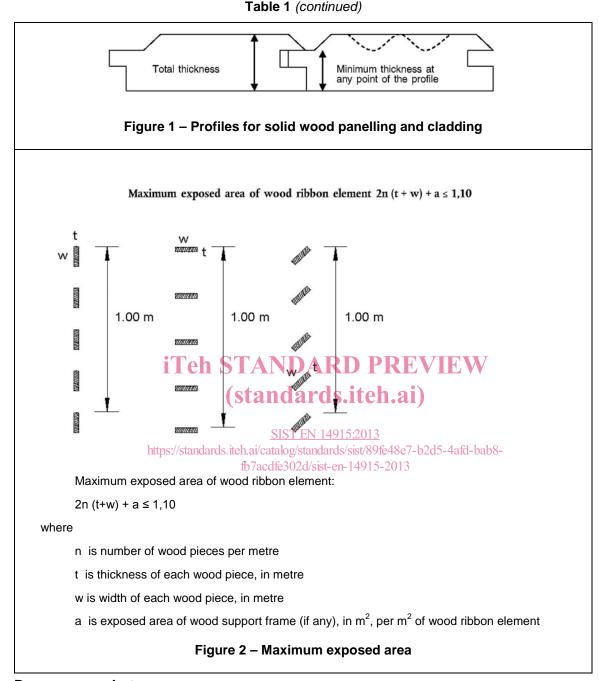
⁹ As illustrated in Figure 1 below. Profiled area of the exposed side of the panel not more than 20 % of the plane area, or 25 % if measured at both exposed and unexposed side of the panel. For butt joints, the larger thickness applies at the joint interface.

h Rectangular wood pieces, with or without rounded corners, mounted horizontally or vertically on a support frame and surrounded by air on all sides, mainly used close to other building elements, both in interior and exterior applications.

Maximum exposed area (all sides of rectangular wood pieces and wood support frame) not more than 110 % of the total plane area, see Figure 2.

^j Other building elements closer than 100 mm from the wood ribbon element (excluding its support frame) shall be of at least class A2 - s1, d0, at distances 100 mm - 300 mm of at least class B - s1, d0 and at distances more than 300 mm of at least class D - s2, d0.

¹⁾ This table and Figures 1 and 2 correspond to Table 2 and Figures a and b respectively of the Commission Decision 2006/213/EC (OJEU L79/27 of 16.3.2006).



5.2 Dangerous substances

5.2.1 Formaldehyde release²⁾

The formaldehyde release of solid wood panelling and cladding products shall be determined according to Annex C. The declared values are expressed in term of classes.

²⁾ Products CE marked according to this European Standard emitting formaldehyde above class E1 might be prohibited in some Member States.