SLOVENSKI STANDARD
SIST EN 14354:2005

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Lesne plošče – Leseni furnir za talne obloge

Wood-based panels - Wood veneer floor covering

Holzwerkstoffe - Furnierte Fußbodenbeläge

Panneaux a base de bois - Revetement de sol a placage bois

Ta slovenski standard je istoveten z: **EN 14354:2004**

ICS:

79.080	Polizdelki iz lesa	Semi-manufactures of timber
97.150	Netekstilne talne obloge	Non-textile floor coverings

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Wood-based panels - Wood veneer floor covering

Panneaux à base de bois - Revêtement de sol à placage bois

Holzwerkstoffe - Furnierte Fußbodenbeläge

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Foreword

This document (EN 14354:2004) has been prepared by Technical Committee CEN/TC 112 “Wood-based panels”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

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

1 Scope

This document specifies definitions, requirements and test methods for wood veneer floor coverings for internal use. It gives guidance for the evaluation of conformity of the products to the requirements of this standard.

Wood-veneer floor coverings without finishing are excluded.

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 319, *Particleboards and fibreboards — Determination of tensile strength perpendicular to the plane of the board.*

EN 322, *Wood based panels — Determination of moisture content.*

EN 438-2:1991, *Decorative high-pressure laminates (HPL) — Sheets based on thermosetting resins — Part 2: Determination of properties (ISO 4586-2:1988 modified).*

EN 685, *Resilient floor coverings — Classification.*

EN 1534, *Wood and parquet flooring — Determination of resistance to indentation (Brinell) — Test method.*

EN 1910, *Wood and parquet flooring and wood panelling and cladding — Determination of dimensional stability.*

EN 13329:2000, *Laminate floor coverings — Specifications, requirements and test methods.*

EN 60454–2:1995, *Specification for pressure-sensitive adhesive tapes for electrical purposes — Part 2: Methods of test (IEC 60454-2:1994).*

EN ISO 2409, *Paints and varnishes — Cross cut test (ISO 2409:1992).*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

3.1
wood veneer floor covering
rigid floor covering consisting of a substrate made from a wood-based panel, with a top layer of wood veneer and possibly a backing

3.2
top layer
finished upper wood layer, intended to be the visible side when the floor is installed

3.3
substrate
core material of the wood veneer floor covering

3.4
backing
layer opposite to the top layer

3.5
wood veneer floor covering element
smallest single item identified as the complete product, shaped and machined on its sides to the appropriate dimensions. The element is provided with a suitable system allowing the elements to be assembled together at installation

3.6
cup
curvature, concave or convex, of the element across the width of the face

3.7
lipping
difference in height, at the edge, between the upper faces of two adjacent and assembled elements when laid on a flat surface

3.8
deviation from edge straightness
concavity or convexity of the edge of the element along the length between the two ends of the element

3.9
wear layer
layer on which wearing occur

4 Requirements

4.1 Introduction

All wood veneer floor coverings shall comply with the general requirements given in Table 1 and 2 and with the classification requirements given in Table 3. The values given in this Table take account of uncertainties due to variations in the application of finishes and of those described in the test method in Annex D.

4.2 General requirements

The nominal dimensions shall be declared by the manufacturer at a given humidity. For appearance for evaluation of conformity, to be used when requested about product quality, the procedure in Annex F may be used.

The wood veneers used for the top layer are hardwood or softwood species and shall be free from decay and insect attack. Variations of colour can occur under the influence of light.

Table 1 — General requirements

Characteristics	Requirements	Test methods
Moisture content h (dispatch from manufacturer)	$5\ \% \leq h_{average} \leq 9\ \%$ and $h_{max} - h_{min} \leq 3\ \%$	EN 322
Thickness t of an element	$t_{max} - t_{min} \leq 0{,}50$ mm $t_{average} - t_{nominal} \leq \pm 0{,}50$ mm	Annex A
Length l of the top layer in the same package	$l \leq 1\,500$ mm: $l_{max} - l_{min} \leq 0{,}50$ mm $l > 1\,500$ mm: $l_{max} - l_{min} \leq 0{,}30$ mm/m $l_{mean} \leq 1$ mm	
Width w of the top layer and square element	$w_{max} - w_{min} \leq 0{,}20$ mm $w_{average} - w_{nominal} \leq 0{,}1$mm $w_{mean} \leq 0{,}5$ mm	
Length l and width w of squared elements $l = w$	$l_{average} - l_{nominal} \leq 0{,}10$ mm $w_{average} - w_{nominal} \leq 0{,}10$ mm $l_{max} - l_{min} \leq 0{,}20$ mm $w_{max} - w_{min} \leq 0{,}20$ mm	
Deviation of squareness	$q_{max} \leq 0{,}20$ mm	
Deviation from edge straightness of the top layer s	$s_{max} \leq 0{,}30$ mm/m	
Cup f_w in width direction	$\lvert f_{w\,max} \rvert \leq 0{,}20\ \%$ $\lvert f_{w\,average} \rvert \leq 0{,}15\ \%$	
Lipping p	$p_{max} \leq 0{,}15$ mm	Annex B
Opening between elements	$\leq 0{,}20$ mm	
Adhesion of the lacquer	≤ class 2	Annex E
Tensile strength of the substrate[a]	$\geq 1{,}40$ N/mm^2	EN 319
Surface soundness	$\geq 1{,}00$ N/mm^2	Annex D of EN 13329:2000

a For the mechanical assembly systems only (assembly system without glue).

4.3 Requirements on humidity variations

To determine the capacity of a wood veneer floor covering to withstand ambient humidity variations, a test in a climate controlled chamber (according to EN 1910 and using the parameters defined in Table 2) shall be made.

After testing, the wood veneer floor covering elements shall comply with the requirements in Table 2.

Table 2 — General requirements for humidity variations

Characteristics	Requirement	Testing and measuring methods
Delamination of the top layer	No delamination	Visual
Cup	Mean value: max. 0,35 % of the width w at all stages	EN 1910 – climate B, – condition n°2, – humid climate H2 – Annex A

5 Classification requirements

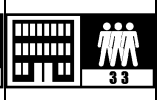
5.1 General

Veneer floor coverings shall be classified as suitable for different levels of use, according to the performance requirements specified in Table 3, when tested with the methods given therein. Classification shall conform to the scheme specified in EN 685 (levels 21, 22, 23, 31, 32, 33). The use classification defined in the Table 3 had been fixed on the basis of the material (wood veneer) and the linked test methods.

5.2 Classification requirements for elements with lacquer finishing

The classification requirements for elements with lacquer finishing are given in Table 3

Table 3 — Classification requirements for elements with finishing ex- factory

Class	**21**	**22**	**23**	**31**	**32**	**33**	**Test method**
Symbol							
Level of use	**Domestic**			**Commercial**			
	Moderate	**General**	**Heavy**	**Moderate**	**General**	**Heavy**	
Resistance to indentation	**≥ 10 N/mm²**	**≥ 20 N/mm²**		**≥ 30 N/mm²**	**≥ 40 N/mm²**		EN 1534
Thickness swelling	**≤ 15 %**				**≤ 10 %**		EN 13329:2000 Annex G
Impact resistance (Elasticity)	EC0	EC1		EC2	EC3		Annex C
Wear resistance	WR0	WR1		WR2	WR3		Annex D

6 Marking and packaging

6.1 Marking

Wood veneer floor coverings which comply with the requirements of this standard shall have the following information marked by the manufacturer, either on their packaging, or on a label or information sheet included in the packaging.

a) Product name and number of this document, EN 14354

b) Level of use

c) Wood species of the top layer

d) Nominal dimensions of one element: thickness × width × length in millimetres

e) The number of elements contained in a package

f) The area in square metres contained in a package

g) Manufacturer's or supplier's identification

6.2 Packaging

The product shall be delivered in packages designed to protect the corners, edges and surfaces of the product, under normal conditions of transport and handling. Installation, cleaning and maintenance instructions shall be delivered together with the product.

7 Test report

If a test report is requested, it shall contain at least the following information:

— the name and address of the test laboratory;

— date of test report;

— a reference to this standard;

— the product tested;

— sampling information;

— test result;

— all deviations from this standard.

Annex A
(normative)

Test methods for the determination of thickness, length, width, squareness, deviation from edge straightness and cup

A.1 Scope

This Annex specifies methods for measuring the thickness, length, width, squareness, deviation from edge straightness and cup of wood veneer floor covering elements.

A.2 Sampling

Take 5 elements at random.

A.3 Conditioning

Elements are measured without conditioning. If requested, the test pieces shall be stabilized to a constant mass in an atmosphere of (23 ± 2)°C and (50 ± 5) % relative humidity. Constant mass is considered to be reached when the results of two successive weighing operations, carried out at an interval of 24h, do not differ by more than 0,1 % of the mass of the test pieces.

A.4 Test equipment

A.4.1 Micrometer, sliding caliper or any other equivalent tool giving an accuracy of 0,05 mm.

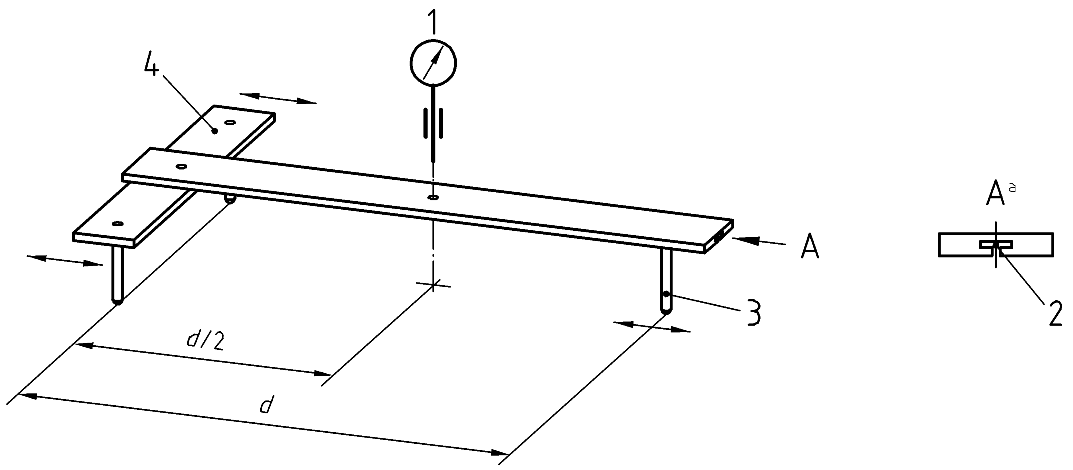
A.4.2 Sliding caliper or any other equivalent tool giving an accuracy of 0,01 mm.

A.4.3 Square arms with lengths of 300 mm and having a maximum angular distortion of 0,02 mm at 300 mm.

A.4.4 Steel ruler of length at least equal to the length of test specimen and having a maximum straightness deviation of 0,05 mm over 1 000 mm.

A.4.5 Apparatus (T–assembly) for measuring width flatness consisting of a dial gauge accurate to ± 0,01 mm with a rounded tip with a radius of ≤ 5,5 mm, installed centrally in relation to three rounded supports with a radius of ≥ 5 mm. The supports shall be adjustable along a T-shaped assembly of bars to provide the required gauge length. The measurement *d* shall not be less than the width *w* of the test specimen minus 10 mm. The tip of the gauge in contact with the face of the test specimen shall apply a force of (1,0 ± 0,5) N. The mass of the apparatus shall not affect the flatness of the test specimen beyond the limit of the accuracy of the gauge. See Figure A.1 for illustration. The instrument shall be set to zero against a suitable reference plate.

Dimensions in millimetres



Key

a View A enlarged

1 Dial gauge
2 T-groove
3 Adjustable pin
4 Adjustable bridge

Figure A.1 — Instrument for measuring the width flatness (Principle)

A.4.6 Steel tape or ruler with an accuracy of ± 0,1 mm up to a length of 1,50 m, and ± 0,5 mm for longer lengths.

A.4.7 Thickness gauges ranging from 0,5 mm to 0,10 mm in steps of 0,01, and from 0,10 mm to 0,50 mm in steps of 0,05 mm.

A.5 Procedure

A.5.1 Determination of thickness *t*

Measure the thickness t with a micrometer, or any other device of the equipment described in A.4.1, at a distance of 20 mm from the edges of the top layer, at points located in each corner and in the middle of each long side (only four corner points if the length is ≤ 600 mm), see Figure A.2.