



SLOVENSKI STANDARD

oSIST prEN 13442:2022

01-februar-2022

Lesene in parketne talne obloge ter leseni stenski in stropni opaži - Ugotavljanje odpornosti proti kemijskim snovem

Wood and parquet flooring and wood panelling and cladding - Determination of the resistance to chemical agents

Holz und Parkettfußböden und Wand- und Deckenbekleidungen aus Holz - Bestimmung der chemischen Widerstandsfähigkeit

Planchers et parquets en bois et lambris et bardages en bois - Détermination de la résistance aux agents chimiques

Ta slovenski standard je istoveten z: ~~oSIST prEN 13442:2022~~ prEN 13442

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ICS:

79.080

Polizdelki iz lesa

Semi-manufactures of timber

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en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 13442

December 2021

ICS 79.080

Will supersede EN 13442:2013

English Version

Wood and parquet flooring and wood panelling and cladding - Determination of the resistance to chemical agents

Planchers et parquets en bois et lambris et bardages en bois - Détermination de la résistance aux agents chimiques

Holz und Parkettfußböden und Wand und Deckenbekleidungen aus Holz - Bestimmung der chemischen Widerstandsfähigkeit

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 175.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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European foreword

This document (prEN 13442:2021) has been prepared by Technical Committee CEN/TC 175 “Round and sawn timber”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document supersedes EN 13442:2013.

The following modifications have been made:

- 3.6 and 3.7, new definitions;
- 6.1.2, light sources has been modified;
- 6.2, Test equipment has been modified;
- Table 1, test agent has been modified;
- Table 2, has been added;
- 8.2, Procedure has been clarified;
- 9.3, has been deleted;
- Figure 2, has been deleted.

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prEN 13442:2021 (E)

Introduction

This document is one of a series of standards about wood in flooring (including parquet) and wood panelling and cladding.

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1 Scope

This document specifies a test method to determine the resistance of the surface of an element of wood flooring, panelling and cladding, to a predetermined list of chemical agents they may be exposed to during their service life.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 13756:2018, *Wood flooring and parquet — Terminology*

EN ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints (ISO 3668)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13756:2018 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

test piece

part, of a size suitable for testing, taken from an element

3.2

test specimen

either a full element or an assembly of elements to be tested

3.3

test surface

part of the test piece, where the test area is located

Note 1 to entry: For products made from small elements the test piece can be the same as the test specimen.

3.4

test area

area under the Petri dish

3.5

reference area

any unexposed surface of the test specimen close to the test area but outside the Petri dish

3.6

film-forming coating

coating that forms a continuous, perceivable and measurable film on a wood surface

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Note 1 to entry: A continuous coating film can be produced in planed surfaces of coniferous wood species (e.g. spruce, pine and larch) and ring porous hardwood species (e.g. oak, ash and elm) above a dry film thickness of approximately 20 µm. On diffuse-porous hardwood species (e.g. maple, beech and birch) lower dry film thicknesses can result in continuous coating films.

Note 2 to entry: On structured surfaces the dry film thickness can be up to 30 µm.

[SOURCE: ISO 5323:2019, 3.47, modified adding note 2 to entry]

3.7

non-film-forming coatings

coating which does not form a continuous physical film

Note 1 to entry: Oiled and waxed surfaces or combinations of both with a thickness of the dry coating film < 20 µm are examples for non-film-forming coatings.

4 Principle

Application of a liquid test agent to a surface by means of saturated paper, covered by a glass Petri dish. After a specified period of time, removal of the paper, washing and drying of the surface and examination for visible change. Assessment of the test results in terms of a numerical rating code.

5 Test pieces and test specimens

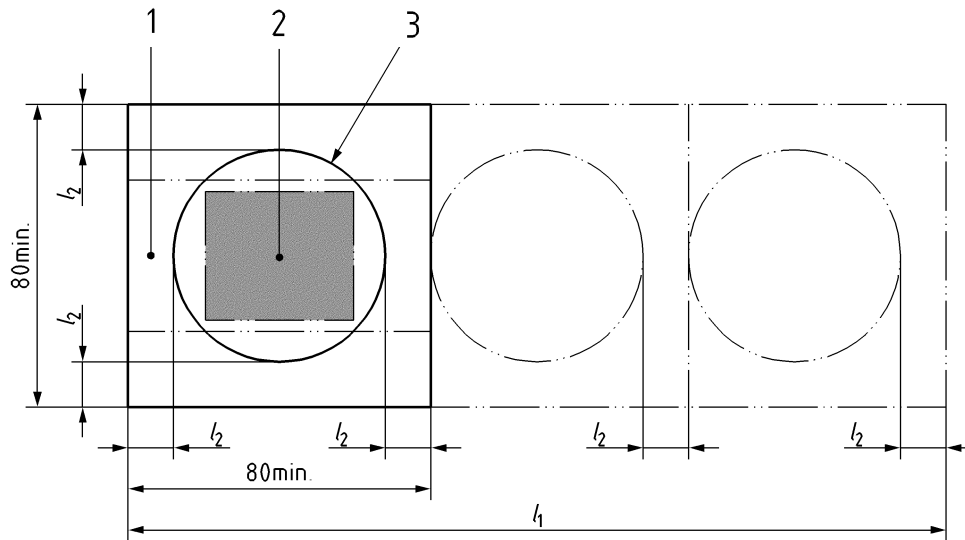
5.1 Dimensions

A test piece shall have a minimum size of 80 mm by 80 mm by the thickness of the element, see Figure 1.

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Dimensions in millimetres

**Key**

- | | |
|-------|---|
| 1 | test surface |
| 2 | test area |
| 3 | Petri dish |
| l_1 | $\geq 80 + 60(n - 1)$, minimum distance between the edge and the next test area(s) according to the number of test areas |
| l_2 | 20 mm, minimum distance between any test area and the edge or another test area |
| n | number of test areas |

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Figure 1 — Dimensions of a test piece

If the size of the element delivered by the manufacturer does not allow the cutting of a test piece, a test specimen shall be assembled in accordance with the manufacturer's specification, which allows to cut the necessary test pieces.

5.2 Sampling

Three test pieces or test specimens shall be tested for each agent to be applied.

6 Equipment and materials

6.1 Apparatus

6.1.1 Conditioning

If a conditioning system is available, the following climate shall be used:

- temperature $(23 \pm 2) ^\circ\text{C}$;
- relative humidity $(50 \pm 5) \%$.

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6.1.2 Diffused light sources

This source provides evenly diffused light, giving an illumination on the test area of between $(1\ 200 \pm 400)$ lx.

The light source should have a correlated colour temperature of $(6\ 500 \pm 50)$ K and an R_a (the indication of depiction of colours) greater than 92, by using a colour matching booth in accordance with EN ISO 3668.

6.2 Test equipment

6.2.1 Pieces of cellulose filter paper with a diameter of (25 ± 2) mm to apply each of the test agents, free of dyes and of chemicals, with a grammage of 400 g/m^2 to 500 g/m^2 .

6.2.2 Glass Petri dish

Glass Petri dish with ground edges and without lips, external diameter between 40 and 60 mm.

6.2.3 Pair of tweezers.

6.2.4 Absorbent paper or tissue, with good absorbent properties, free of dyes and of chemicals.

6.2.5 White, soft, absorbent cotton cloths.

6.2.6 Vessels for containing test agents during soaking of filter paper.

6.3 Chemical agents

6.3.1 Test agents

The test agents for film-forming coatings are listed in Table 1. The test agents for non-film-forming coating are listed in Table 2.

Table 1 — Test agents for film-forming coatings for different levels of chemical resistance (A, B)

Agent	Initial temperature of the agent $\pm 5\text{ }^\circ\text{C}$	Procedure A	Procedure B
Acetic acid 4,4 %,	20	(24 ± 1) h	(60 ± 1) min
Acetone, purity grade min. mass fraction of 99,5 %	20	(120 ± 10) s	(10 ± 1) s
Ammonia solution ^b at 10 % in water	20	(8 ± 1) h	-
Black tea, 10 g of tea leaves is infused with 1 l of boiling water. Tea is allowed to draw for 5 min.	80	(24 ± 1) h	-
Blue/black ink	20	(24 ± 1) h	-
Cleaning Solution (see 6.3.2.2)	20	(24 ± 1) h	(24 ± 1) h
Coffee ^a , 40 g instant, freeze-dried coffee per l of boiling water	80	(24 ± 1) h	(24 ± 1) h
Cow's milk ^a , mass fraction of 3 % to 5 % fat	-	(24 ± 1) h	-
Distilled water (see 6.3.2.1)	20	(24 ± 1) h	(8 ± 1) h