



SLOVENSKI STANDARD

SIST EN 73:2020

01-oktober-2020

Nadomešča:
SIST EN 73:2015

Trajnost lesa in lesnih proizvodov - Pospešeno staranje zaščitene lesa pred biološkim preskušanjem - Postopek izparevanja

Durability of wood and wood-based products - Accelerated ageing of treated wood prior to biological testing - Evaporative ageing procedure

Dauerhaftigkeit von Holz und Holzprodukten - Beschleunigte Alterung von behandeltem Holz vor biologischen Prüfungen - Verdunstungsbeanspruchung

Durabilité du bois et des produits dérivés - Épreuves de vieillissement accéléré des bois traités avant essais biologiques - Épreuve d'évaporation

Ta slovenski standard je istoveten z: **EN 73:2020**

ICS:

71.100.50 Kemikalije za zaščito lesa Wood-protecting chemicals

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en,fr,de

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 73

August 2020

ICS 71.100.50

Supersedes EN 73:2014

English Version

Durability of wood and wood-based products - Accelerated
ageing of treated wood prior to biological testing -
Evaporative ageing procedure

Durabilité du bois et des produits dérivés - Épreuves
de vieillissement accéléré des bois traités avant essais
biologiques - Épreuve d'évaporation

Dauerhaftigkeit von Holz und Holzprodukten -
Beschleunigte Alterung von behandeltem Holz vor
biologischen Prüfungen - Verdunstungsbeanspruchung

This European Standard was approved by CEN on 24 February 2020.

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.

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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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (EN 73:2020) has been prepared by Technical Committee CEN/TC 38 “Durability of wood and wood-based products”, 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 February 2021, and conflicting national standards shall be withdrawn at the latest by February 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 73:2014. Data using this version of EN 73 may still be used.

Compared to EN 73:2014 the following modifications have been made:

- change of title;
- inclusion of untreated wood, modified wood and wood-based panel products in the Scope;
- inclusion of a statement regarding the maximum period of time permitted between the completion of the ageing procedure and the start of the biological test procedure;
- inclusion of a requirement that this period of time be stated in the biological test report.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

EN 73:2020 (E)

Introduction

During its service life, preservative-treated wood can be exposed to conditions which may cause the volatilization and removal of the wood preservative thereby reducing its effectiveness.

This document provides a laboratory based method for ageing test specimens which are to be subject to biological testing.

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1 Scope

This document specifies an evaporative ageing procedure, applicable to test specimens of wood and wood-based products which are subsequently subjected to biological tests.

NOTE The method can also be used for pre-conditioning of untreated wood, modified wood and wood-based panel products, whether they received preservative treatment or not.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

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

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

4 Principle

Test specimens are prepared for biological testing against either fungi or insects using the appropriate standards methods. Test specimens are exposed, for a specified period, in a dust-free current of air of a defined velocity and temperature.

5 Equipment

5.1 A wind tunnel which is compartmented and fitted with devices for heating and distributing air.

The air shall be dust-free and shall not be polluted by chemical products which could have an effect on the results of biological testing.

The heating and distribution devices shall be such that the temperature and air velocity are maintained constant and uniform in each compartment.

The air leaving the tunnel shall be led away in such a manner that it cannot re-enter the tunnel.

5.2 A device which:

- a) controls the temperature within the defined limits stated in 7.2;
- b) measures and records the air temperature within the defined limits as stated in 7.2.

5.3 An anemometer capable to measuring air velocity of $(1 \pm 0,3)$ m/s.

EN 73:2020 (E)

6 Test specimens

6.1 Definition and origin

The test specimens and their preparation are defined in the standards concerning the biological tests to which they are intended to be subjected.

The evaporative ageing procedure shall be carried out no more than 3 months after the end of the preparation of test specimens for testing described in the relevant biological test standard. This includes any treatment and subsequent conditioning period where relevant. An alternative period can be used if specified by the product supplier. This shall be stated in the test report.

Prior to testing the specimens may be stored at (20 ± 2) °C and (65 ± 5) % relative humidity. Deviation from this must be stated in the biological report.

6.2 Number of test specimens

The number of test specimens shall allow the relevant biological tests to be carried out in accordance with the instructions in the appropriate standards, bearing in mind that in some tests the evaporative ageing procedure shall be applied to control specimens as well as to test specimens.

The control specimens may be of the following kinds where required by the relevant test standard:

- check test specimens that will not be subjected to attack by biological agents after the evaporative ageing procedure. These will serve as controls for changes in mass in those tests in which this factor is taken into consideration;
- untreated control or reference species specimens which, after evaporative ageing, are subjected to the test by biological agents to check any variation in the behaviour of the reference species.

7 Procedure

7.1 Arrangement of the test specimens

Arrange the test specimens in the compartments on grids made from metal or any other inert material which can be decontaminated, resting them with one of their faces on the base so that none of the other faces is less than 10 mm from the side partitions. The faces parallel to the grain of the wood shall be parallel to the general direction of air flow and they shall be at least 10 mm from the corresponding faces of the adjacent test specimens. Do not place in the same compartment test specimens of different species, specimens treated with different products or with different concentrations or loadings of the same product, specimens from wood modified using different processes or to different extents, or both test and control specimens:

- **test specimens**

The arrangement of the test specimens may vary from that described above in the following cases:

- **test specimens for which the faces perpendicular to the grain of wood are sealed before treatment**

Arrange the test specimens as above. The sealed faces may, however, be brought closer together.

For example, specimens intended for testing in accordance with EN 118 (termites).

- **test specimens with one treated face only**

Rest the test specimens on the opposite face to that which has been treated.

For example, test specimens intended for the test determining preventive action against termites (EN 118) and the larvae of *Hyloterpes bajulus* (EN 46-2).

7.2 Starting and adjustment of the apparatus

With the test specimens in position, establish an air current controlled at a temperature of $(40 \pm 2) ^\circ\text{C}$ which enters the compartments at a speed of $(1 \pm 0,3) \text{ m/s}$.

7.3 Ageing procedure

Maintain the test specimens in the arrangement specified in 7.1 and under the conditions specified in 7.2 for two weeks (14 days).

In order to obtain homogeneous evaporation from all the treated faces of a test specimen, rotate the test specimens through an angle of 180° on its small horizontal axis every two week (14 days) period (see Figure 2).

Test specimens with only one treated surface shall be rotated through an angle of 180° on their vertical axis every two weeks (14 days) period (see Figure 3).

If a compartment contains more than one test specimen, at the same time as rotating the test specimens, change the position of the specimens within this compartment, the method depending on the number of test specimens which it contains and on the duration of the procedure (see Figure 1).

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