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Träprodukter – Golv och paneler – Bestämning av dimensionsstabilitet

Wood flooring and wood panelling and cladding – Determination of dimensional stability

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Denna standard ersätter SS-EN 1910:2013, utgåva 2.

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This standard supersedes the Swedish Standard SS-EN 1910:2013, edition 2.

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EUROPEAN STANDARD

EN 1910

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2016

ICS 79.080

Supersedes EN 1910:2013

English Version

Wood flooring and wood panelling and cladding - Determination of dimensional stability

Planchers en bois et lambris et bardages en bois -
Détermination de la stabilité dimensionnelle

Holzfußböden und Wand- und Deckenbekleidungen
aus Holz - Bestimmung der Dimensionsstabilität

This European Standard was approved by CEN on 20 February 2016.

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| Contents | Page |
|---|-------------|
| European foreword..... | 4 |
| 1 Scope | 5 |
| 2 Normative references | 5 |
| 3 Terms and definitions | 5 |
| 4 Principle | 5 |
| 5 Test equipment | 5 |
| 5.1 Conditioning room or enclosure..... | 5 |
| 5.2 Stabilizing room or enclosure..... | 6 |
| 5.3 Trays..... | 6 |
| 5.4 Measuring equipment..... | 6 |
| 5.5 Scales..... | 6 |
| 5.6 Oven..... | 6 |
| 6 Test specimens | 6 |
| 6.1 Dimensions and shape..... | 6 |
| 6.2 Sampling..... | 7 |
| 6.3 Conditioning..... | 7 |
| 7 Measurements | 7 |
| 7.1 Mass..... | 7 |
| 7.2 Dimensions of the test specimen..... | 7 |
| 7.3 Warp..... | 7 |
| 7.3.1 General..... | 7 |
| 7.3.2 Twist..... | 7 |
| 7.3.3 Procedure..... | 7 |
| 7.3.4 Expression of results..... | 9 |
| 7.4 Moisture content..... | 9 |
| 8 Procedure | 9 |
| 8.1 Initial measurements..... | 9 |
| 8.2 Exposure to the humid climate..... | 9 |
| 8.3 Measurements after stabilization in the humid climate..... | 9 |
| 8.4 Exposure to the dry climate..... | 9 |
| 8.5 Measurements after stabilization in the dry climate..... | 10 |
| 8.6 Oven drying..... | 10 |
| 9 Calculation and expression of the results of a test specimen | 10 |
| 9.1 Moisture content..... | 10 |
| 9.2 Dimensional changes..... | 10 |
| 9.3 Warp..... | 10 |
| 9.3.1 Cup..... | 10 |
| 9.3.2 Spring..... | 11 |
| 9.3.3 Bow..... | 11 |
| 9.3.4 Twist..... | 11 |
| 10 Accuracy of the 10 test specimens | 11 |
| 10.1 Dimensional changes..... | 11 |
| 10.2 Warp..... | 11 |

| | | |
|---------------------------|--------------------------|-----------|
| 11 | Test report | 11 |
| Bibliography | | 13 |

European foreword

This document (EN 1910:2016) 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 October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016.

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1 Scope

This European Standard specifies a method of test to determine the dimensional changes and warp of the elements of wood flooring and wood panelling and cladding.

2 Normative references

The following documents, in 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 13183-1, *Moisture content of a piece of sawn timber — Part 1: Determination by oven dry method*

EN 13183-2, *Moisture content of a piece of sawn timber — Part 2: Estimation by electrical resistance method*

EN 13647, *Wood flooring and wood panelling and cladding — Determination of geometrical characteristics*

EN 13756:2002, *Wood flooring — Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13756:2002 and the following apply.

3.1

twist

deformation of the element lengthwise with a helical pattern

[SOURCE: EN 844-3:1995]

4 Principle

Measure the dimensional changes of the test specimen after initial conditioning in a standard atmosphere and again after conditioning in a specified climate. The test specimen shall be lying in horizontal position in the test chamber. Express the results as a percentage of variation of the relevant dimension measured in the initial standard climatic conditions.

Record the warp and relate to the basis of measurement.

5 Test equipment

5.1 Conditioning room or enclosure

The conditioning room or enclosure shall be equipped with monitoring thermometers and hygrometers. It shall be suitable to condition the test specimen either in:

— climate A, defined by a relative humidity of $(65 \pm 5) \%$ and a temperature of $(20 \pm 2) \text{ }^\circ\text{C}$;

or

— climate B, defined by a relative humidity of $(50 \pm 5) \%$ and a temperature of $(23 \pm 2) \text{ }^\circ\text{C}$.

5.2 Stabilizing room or enclosure

The stabilizing room or enclosure shall be equipped with monitoring thermometers and hygrometers. It shall be capable of maintaining the conditions specified in Table 1:

Table 1 — Conditions maintained by a stabilizing room or enclosure

| | Condition No. 1 | Condition No. 2 |
|---|-----------------|-----------------|
| Temperature ^a | 20 °C | 23 °C |
| Relative humidity ^b | | |
| Dry climate: | 30 % | 30 % |
| Humid climate: | | |
| H1: | 75 % | 75 % |
| or | | |
| H2: | 85 % | 85 % |
| ^a The permitted deviation for temperature is ± 2 °C. ^b The permitted deviation for relative humidity is ± 5 %. | | |

It shall be possible to change from one climate to the other within 24 h.

5.3 Trays

The trays shall provide non-continuous support to the test specimen in the conditioning and stabilizing rooms.

The clearance between supports shall be sufficient to allow the ventilation between the test specimens.

5.4 Measuring equipment

All the dimensions shall be measured as defined in EN 13647.

5.5 Scales

Scales shall be accurate to 0,1 % of the masses to be measured.

5.6 Oven

The oven shall be able to operate at $(103 \pm 2)^\circ\text{C}$ to bring the test specimens to the dry state.

6 Test specimens

6.1 Dimensions and shape

Tests specimens are elements at the time of the first delivery.

Measurements are made on the element.

Elements more than 2000 mm require no end sealing.

Elements between 2000 and 1000 mm shall have one end sealed.

Elements less than or equal to 1000 mm shall have both ends sealed.

The shortest length of a reduced element is 250 mm.

6.2 Sampling

The method of installation has impact on the dimensional stability.

Unless otherwise specified, 10 test specimens selected at random shall be taken.

6.3 Conditioning

Prior to exposure in the specified climate (5.2), the test specimen shall be conditioned to equilibrium either in climate A or in climate B as defined in 5.1.

7 Measurements

7.1 Mass

Record the mass of each test specimen after initial conditioning (6.3) and after conditioning in the specified climate (5.2).

7.2 Dimensions of the test specimen

Measure the dimensions as defined in EN 13647.

7.3 Warp

7.3.1 General

Measure the cup, the bow and the spring as defined in EN 13647.

The forces applied to the test specimen with the apparatus shall not modify the measurements beyond the permitted deviations defined in this standard.

7.3.2 Twist

Measure the twist as defined below.

7.3.2.1 Principle

Determine twist by measuring the gap between the reference surface and the deformed corners of the element.

7.3.2.2 Apparatus

a) Dial gauge.

It shall give readings accurate to the nearest 0,01mm and have a cylindrical flat end with a diameter of 5 ± 1 mm.

b) Reference plane support.

Horizontal rigid plane support (e.g. marble, granite or steel made) with smooth surface.

7.3.3 Procedure

Place the element with its upper surface in contact with the reference plane support.

Prior to testing, mark measuring points on the element at 10 mm from the edges of the deformed corners.

A mass of 1 kg shall be positioned as show in Figure 1 on to one deformed corner (if present).