SLOVENSKI STANDARD
SIST EN 317:1996

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Iverne in vlaknene plošče - Ugotavljanje debelinskega nabreka po potapljanju v vodi

Particleboards and fibreboards - Determination of swelling in thickness after immersion in water

Spanplatten und Faserplatten - Bestimmung der Dickenquellung nach Wasserlagerung

Panneaux de particules et panneaux de fibres - Détermination du gonflement en épaisseur apres immersion dans l'eau

Ta slovenski standard je istoveten z: **EN 317:1993**

ICS:

79.060.20	Vlaknene in iverne plošče	Fibre and particle boards

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English version

Particleboards and fibreboards - Determination of swelling in thickness after immersion in water

Panneaux de particules et panneaux de fibres - Détermination du gonflement en épaisseur après immersion dans l'eau

Spanplatten und Faserplatten - Bestimmung der Dickenquellung nach Wasserlagerung

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Contents list

Foreword

This European Standard was prepared by Working Group 1 "Particleboards" (Secretariat: Germany) and Working Group 3 "Fibreboards" (Secretariat: Italy) of Technical Committee CEN/TC 112, Wood-based panels (Secretariat: Germany).

This standard is one of a series specifying methods of test for determining the properties of particleboards and fibreboards.

No existing European Standard is superseded.

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of an identical text or by endorsement, at the latest by August 1993, and conflicting national standards shall be withdrawn at the latest by December 1994.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom.

1 Scope

This European Standard specifies a method of determining the swelling in thickness of flat-pressed or drum-pressed particleboards, fibreboards, and cement-bonded particleboards.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the last edition of the publication referred to applies.

EN 325 Wood-based panels
Determination of dimensions of test pieces

EN 326-1 Wood-based panels
Sampling, cutting and inspection
Part 1: Sampling and cutting of test pieces and expression of test results [1])

3 Principle

Swelling in thickness is determined by measuring the increase in thickness of the test piece after complete immersion in water.

4 Apparatus

4.1 Micrometer

Mircometer, according to EN 325.

4.2 Water bath

A thermostatically controlled water bath, capable of maintaining a temperatur of (20 ± 1) °C and in which the test pieces can be maintained in the conditions specified in 6.2.

5 Test pieces

5.1 Sampling

Sampling and cutting of the test pieces shall be carried out according to EN 326-1.

5.2 Dimensions

The test pieces shall be square with a side length of (50 ± 1) mm.

5.3 Conditioning

Test test pieces shall be conditioned to constant mass in an atmoshere with a mean relative humidity of (65 ± 5) % and a temperature of (20 ± 2) °C. Constant mass is considered to be reached when the results of two successive weighing operations, carried out at an interval of 24 h, do not differ by more than 0,1 % of the mass of the test piece.

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[1]) At present in the draft stage

6 Procedure

6.1 Thickness measurement

The thickness of each test piece shall be measured to an accuracy of 0,01 mm at the intersection of the diagonals, according to EN 325 (Fig. 1).

Dimensions in millimetres

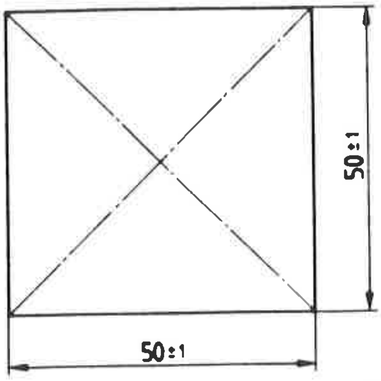

Figure 1: Test piece for the measurement of swelling in thickness

6.2 Immersion

Immerse the test pieces with their faces vertical in clean, still water, having a pH of 7 ± 1 and a temperature of (20 ± 1) °C. This temperature shall be maintained throughout the test period. During the test, the test pieces shall be seperated from each other and from the bottom and the sides of the water bath. The upper edges of the test pieces shall be covered by (25 ± 5) mm of water throughout the test. The water shall be changed after each test.

The immersion times shall be as specified by the individual standards for the different board types.

6.3 Further procedure

After the immersion time has elapsed, take the test pieces our of the water, remove excess water and measure the thickness of each test piece (6.1).

7 Expression of results

7.1 For each test piece

The swelling in thickness of each test piece, G_t, expressed as a percentage of original thickness shall be calculated according to the following formula:

$$G_t = \frac{t_2 - t_1}{t_1} \times 100$$

where:

t_1 is the thickness of the test piece before immersion, in millimetres

t_2 is the thickness of the test piece after immersion, in millimetres

Swelling in thickness shall be expressed to one decimal.

7.2 For a board

The swelling in thickness of a board is the arithmetic mean of the results of all test pieces taken from that board and shall be expressed in percent, to one decimal.

8 Test report

According to EN 326-1.

Additionally: The results of this test, including the time of immersion.

Annex A (informative)

Bibliography

EN 300 Particleboards: Oriented Strand Boards (OSB) [1]

EN 309 Wood particleboards
Definition and classification

EN 312-2 Particleboards
Specifications, Part 2: Requirements for general purpose boards [1]

EN 312-3 Particleboards
Specifications, Part 3: Requirements for boards for use in interior fitments (including furniture) in dry conditions [1]

EN 312-4 Particleboards
Specifications, Part 4: Requirements for load-bearing boards for use in dry conditions [1]

EN 312-5 Particleboards
Specifications, Part 5: Requirements for load-bearing boards for use in humid conditions [1]

EN 312-6 Particleboards
Specifications, Part 6: Requirements for heavy-duty load-bearing boards for use in dry conditions [1]

EN 312-7 Particleboards
Specifications, Part 7: Requirements for heavy-duty load-bearing boards for use in humid conditions [1]

EN 316 Wood fibreboards
Definition, classification and symbols

EN 622-2 Fibreboards
Specifications, Part 2: Requirements for hardboards [1]

EN 622-3 Fibreboards
Specifications, Part 3: Requirements for medium boards [1]

EN 622-4 Fibreboards
Specifications, Part 4: Requirements for softboards [1]

EN 622-5 Fibreboards
Specifications, Part 5: Requirements for dry process fibreboards [1]

EN 633 Cement-bonded particleboards
Definition and classification [1]

EN 634-1 Cement-bonded particleboards
Specifications, Part 1: General requirements [1]

[1]) At present in the draft stage