

## **Wood-based panels - Determination of moisture resistance under cyclic test conditions**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 321:2002 sisaldab Euroopa standardi EN 321:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 16.05.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 321:2002 consists of the English text of the European standard EN 321:2001.</p> <p>This document is endorsed on 16.05.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This European Standard specifies a yest method for the determination of the moisture resistance of wood-based panels under cyclic test conditions.</p>	<p><b>Scope:</b> This European Standard specifies a yest method for the determination of the moisture resistance of wood-based panels under cyclic test conditions.</p>
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ICS 79.060.01

Võtmesõnad:

English version

**Wood-based panels - Determination of moisture resistance  
under cyclic test conditions**

Panneaux à base de bois - Détermination de la résistance  
à l'humidité selon essais cycliques

Holzwerkstoffe - Bestimmung der Feuchtebeständigkeit  
durch Zyklustest

This European Standard was approved by CEN on 30 September 2001.

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 Management Centre or to any CEN member.

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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
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## Foreword

This European Standard 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 May 2002, and conflicting national standards shall be withdrawn at the latest by May 2002.

This European Standard supersedes EN 321:1993.

This standard is one of a series specifying methods of test for determining the behaviour of wood-based panels under the influence of moisture.

This standard is a revised version of EN 321:1993 and AC:1994. Compared to the version EN 321:1993 and AC:1994 the following modifications have been made:

- a) The scope has been extended from fibreboards to wood-based panels.
- b) The method has been described in more detail in order to avoid misinterpretation and improve reproducibility.

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

## 1 Scope

This European Standard specifies a test method for the determination of the moisture resistance of wood-based panels under cyclic test conditions.

## 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 latest edition of the publication referred to applies (including amendments).

EN 310, *Wood based panels — Determination of modulus of elasticity in bending and of bending strength.*

EN 317, *Particleboards and fibreboards — Determination of swelling in thickness after immersion in water.*

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

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.*

## 3 Principle

Test pieces are exposed to three cycles, each comprising immersion in water, freezing, and drying at elevated temperature. After cyclic treatment, the test pieces are then reconditioned and their swelling in thickness and residual strength determined.

## 4 Apparatus

### 4.1 Water bath

A water bath which shall maintain water at a temperature of  $(20 \pm 1) ^\circ\text{C}$ .

### 4.2 Freezing cabinet

A freezing cabinet which shall be capable of maintaining a temperature of between  $-12 ^\circ\text{C}$  and  $-25 ^\circ\text{C}$ . It shall also be capable of regaining this temperature within 1 h after inserting the test pieces.

### 4.3 Drying cabinet

A laboratory drying cabinet with forced, evenly distributed air ventilation, which shall maintain a temperature of  $(70 \pm 2) ^\circ\text{C}$  and have  $(25 \pm 5)$  air exchanges per hour. It shall be capable of reaching a temperature of  $(70 \pm 2) ^\circ\text{C}$  within 2 h after inserting the test pieces.