

Puitlaastplaadid. Spetsifikaadid

Particleboards - Specifications

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 312:2003 sisaldab Euroopa standardi EN 312:2003 ingliskeelset teksti.

Standard on kinnitatud Eesti Standardikeskuse 23.12.2003 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.

Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 20.08.2003.

Standard on kättesaadav Eesti standardiorganisatsioonist.

This Estonian standard EVS-EN 312:2003 consists of the English text of the European standard EN 312:2003.

This standard is ratified with the order of Estonian Centre for Standardisation dated 23.12.2003 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.

Date of Availability of the European standard text 20.08.2003.

The standard is available from Estonian standardisation organisation.

ICS 79.060.20

Standardite reprodutseerimis- ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without permission in writing from Estonian Centre for Standardisation.

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

ICS 79.060.20

Supersedes EN 312-1:1996, EN 312-2:1996,
EN 312-3:1996, EN 312-4:1996, EN 312-5:1997,
EN 312-6:1996 and EN 312-7:1997

English version

Particleboards - Specifications

Panneaux de particules - Exigences

Spanplatten - Anforderungen

This European Standard was approved by CEN on 16 May 2003.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

page

Foreword	3
1 Scope	4
2 Normative references	4
3 Classification of boards	5
4 General requirements for all board types.....	5
5 Requirement values	6
6 Requirements for general purpose boards for use in dry conditions (Type P1).....	7
7 Requirements for boards for interior fitments (including furniture) for use in dry conditions (Type P2)	7
8 Requirements for non load-bearing boards for use in humid conditions (Type P3)	8
8.1 General	8
8.2 Mechanical and swelling properties.....	8
8.3 Moisture resistance	8
9 Requirements for load-bearing boards for use in dry conditions (Type P4)	9
10 Requirements for load-bearing boards for use in humid conditions (Type P5).....	10
10.1 General	10
10.2 Mechanical and swelling properties.....	10
10.3 Moisture resistance	11
11 Requirements for heavy duty load-bearing boards for use in dry conditions (Type P6)	12
12 Requirements for heavy duty load-bearing boards for use in humid conditions (Type P7).....	13
12.1 General	13
12.2 Mechanical and swelling properties.....	13
12.3 Moisture resistance	14
13 Supplementary properties.....	14
14 Verification of compliance	15
14.1 General	15
14.2 External control	15
14.3 Factory production control	15
15 Marking.....	16
Annex A (normative) Voluntary colour coding system for particleboards.....	17

Foreword

This document (EN 312:2003) 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 February 2004, and conflicting national standards shall be withdrawn at the latest by February 2004.

This document supersedes EN 312-1:1996, EN 312-2:1996, EN 312-3:1996, EN 312-4:1996, EN 312-5:1997, EN 312-6:1996 and EN 312-7:1997. The following modifications have been made:

- a) The seven parts of the standard have been combined.
- b) The annexes in EN 312-1:1996 with A-deviations for formaldehyde emission have been deleted. The formaldehyde classes according to EN 13986 have been taken into account in Table 1 and Table 13.
- c) A new grade of board type P3 has been introduced and the existing types P2 and P3 have been renamed to P1 and P2.
- d) The requirements for bending strength and modulus of elasticity in bending of class P4 have been modified in part.
- e) The requirements for swelling in thickness after cyclic test for some thickness classes have been modified for boards of type P5 and P7.
- f) The restrictions for adhesives for moisture resistant boards according to option 2 have been deleted.

Annex A is normative.

This document includes as bibliography.

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, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies the requirements for resin-bonded unfaced particleboards.

NOTE 1 This standard will be called up in EN 13986 for construction applications.

The values listed in this standard relate to product properties but they are not characteristic values to be used in design calculations.

NOTE 2 Such characteristic values (e. g. for use in design calculation in ENV 1995-1-1) are given either in EN 12369-1 or derived by testing according to EN 789, EN 1058 and ENV 1156.

Additional information on supplementary properties for certain applications is also given.

NOTE 3 Particleboards in accordance with this standard may be referred to as P1 to P7-boards.

NOTE 4 A new grade of board type P3 has been included and is intended for use as a non load-bearing board for use in humid conditions.

Boards of type P4 to P7 are intended for use in design and construction of load-bearing or stiffening building elements, e. g. walls, flooring, roofing and I-beams (see EN V 1995-1-1 and/or performance standards).

This standard does not give requirements for Oriented Strand Boards (OSB); these are set out in EN 300.

This standard does not apply to extruded 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 latest edition of the publication referred to applies (including amendments).

EN 120, *Wood-based panels — Determination of formaldehyde content — Extraction method called the perforator method.*

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

EN 311, *Wood-based panels — Surface soundness — Test method.*

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

EN 318, *Wood-based panels — Determination of dimensional changes associated with changes in relative humidity.*

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

EN 321, *Wood-based panels — Determination of moisture resistance under cyclic test conditions.*

EN 322, *Wood-based panels — Determination of moisture content.*

EN 323, *Wood-based panels — Determination of density.*

EN 324-1, *Wood-based panels — Determination of dimensions of boards — Part 1: Determination of thickness, width and length.*

EN 324-2, *Wood-based panels — Determination of dimensions of boards — Part 2: Determination of squareness and edge straightness.*

EN 326-1, *Wood-based panels — Sampling, cutting and inspection — Part 1: Sampling and cutting of test pieces and expressions of test results.*

EN 326-2, *Wood-based panels — Sampling, cutting and inspection — Part 2: Quality control in the factory.*

EN 326-3, *Wood-based panels — Sampling, cutting and inspection — Part 3: Inspection of a consignment of panels.*

ENV 717-1, *Wood-based panels — Determination of formaldehyde release — Part 1: Formaldehyde emission by the chamber method.*

EN 1087-1, *Particleboards — Determination of moisture resistance — Part 1: Boil test.*

EN 12871, *Wood-based panels — Performance specifications and requirements for load-bearing boards for use in floors, walls and roofs.*

EN 13986, *Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking.*

ISO 3340, *Fibre building boards — Determination of sand content.*

3 Classification of boards

Seven types of boards are classified and are distinguished as follows:

- P1 General purpose boards for use in dry conditions
- P2 Boards for interior fitments (including furniture) for use in dry conditions
- P3 Non load-bearing boards for use in humid conditions¹⁾
- P4 Load-bearing boards for use in dry conditions
- P5 Load-bearing boards for use in humid conditions¹⁾
- P6 Heavy duty load-bearing boards for use in dry conditions
- P7 Heavy duty load-bearing boards for use in humid conditions¹⁾

4 General requirements for all board types

Particleboards shall comply with the general requirements as listed in table 1 when dispatched from the production factory. For certain uses of particleboards (see performance standard EN 12871), special tolerances are required for the dimensional properties listed under No. 1. In the case of dispatch in cut sizes, or of further machined boards (tongued and grooved, and similar), special tolerances for properties No. 1, 2 and 3 may be agreed upon.

1) Humid conditions are defined in terms of service class 2 of ENV 1995-1-1 which is characterized by a moisture content in the material corresponding to a temperature of 20 °C and the relative humidity of the surrounding air only exceeding 85 % for a few weeks per year. Boards of this type are suitable for use in biological hazard classes 1 and 2 of EN 335-3.