

**Ehituses kasutatavad puitplaadid. Näitajad,
vastavushindamine ja märgistamine**

Wood-based panels for use in construction -
Characteristics, evaluation of conformity and marking

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13986:2004 sisaldab Euroopa standardi EN 13986:2004 ingliskeelset teksti.

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Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

English version

Wood-based panels for use in construction - Characteristics, evaluation of conformity and marking

Panneaux à base de bois destinés à la construction -
Caractéristiques, évaluation de conformité et marquage

Holzwerkstoffe zur Verwendung im Bauwesen -
Eigenschaften, Bewertung der Konformität und
Kennzeichnung

This European Standard was approved by CEN on 8 July 2004.

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

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

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Foreword

This document (EN 13986:2004) 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of an identical text or by endorsement, at the latest by April 2005, and conflicting national standards shall be withdrawn at the latest by April 2005.

This document has been prepared under Mandate M/113 given to CEN by the European Commission and the European Free Trade Association, as revised by the Standing Committee on Construction on 14 May 2003 and supports essential requirements of EU Directives.

For relationship with Council Directive 89/106/EEC, see the informative Annex ZA, which is an integral part of this document.

This document supersedes EN 13986:2002.

Compared to EN 13986:2002 the following modifications have been made:

- a) Addendum to Mandate M 113 concerning release of formaldehyde for external use has been taken into account in Tables 3 and 6.
- b) Revisions of specifications for particleboard in EN 312, for plywood in EN 636 and for MDF in prEN 622-5 have been taken into account.
- c) Laminated Veneer Lumber (LVL) has been included in Tables 1 to 7.
- d) Additional clarification has been added in 6.2 for factory production control and in 6.3 for initial type testing.
- e) Provisions for marking in Clause 7 are described more clearly.
- f) Annex ZA has been revised in accordance with the new format of presentation.

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

1 Scope

This document defines wood-based panels for use in construction and specifies the relevant characteristics and the appropriate test methods to determine these characteristics for wood-based panels, unfaced, overlaid, veneered or coated:

- for internal use as structural components in dry conditions¹⁾ ;
- for internal (or protected external) use as structural components in humid conditions²⁾ ;
- for external use as structural components³⁾ ;
- for internal use as non-structural components in dry conditions¹⁾;
- for internal (or protected external) uses as non structural components in humid conditions²⁾;
- for external use as non-structural components³⁾;
- for use as structural floor decking on joists in dry¹⁾ or humid²⁾ or external³⁾ conditions;
- for use as structural roof decking on joists in dry¹⁾ or humid²⁾ or external³⁾ conditions;
- for use as structural wall sheathing on studs in dry¹⁾ or humid²⁾ or external³⁾ conditions.

It provides for the evaluation of conformity and the requirements for marking these products.

This document covers wood-based panels in the form of solid wood panels, LVL⁴⁾ , plywood, OSB, particleboards (chipboards) either resin- or cement-bonded, wet process fibreboards (hardboards, medium boards, softboards) and dry process fibreboards (MDF) for use in construction. They may contain chemical agents to improve their reaction to fire and their resistance to biological attack, e.g. by fungi and insects.

This document is not intended to be applicable to wood-based panels for use in non-constructional applications.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

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

EN 300, *Oriented Strand Boards (OSB) — Definitions, classification and specifications*

EN 309, *Wood particleboards — Definitions and classification*

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

EN 312, *Particleboards — Specifications*

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- 1) Dry conditions are defined in 3.8.2. Boards of this type are suitable for use in biological hazard class 1 of EN 335-3.
 - 2) Humid conditions are defined in 3.8.3. Boards of this type are suitable for use in biological hazard classes 1 and 2 of EN 335-3.
 - 3) Exterior conditions are defined in 3.8.4. Boards of this type are suitable for use in biological hazard classes 1, 2, 3 and 4 of EN 335-3.
 - 4) The specification standard for LVL as a panel product, prEN 14279, is in course of preparation. PrEN 14374 — Timber structures: Laminated Veneer Lumber (LVL), for use as a structural product — is being prepared by CEN/TC 124.

- EN 313-2, *Plywood — Classification and terminology — Part 2: Terminology*
- EN 314-1, *Plywood — Bonding quality — Part 1: Test methods*
- EN 314-2, *Plywood — Bonding quality — Part 2: Requirements*
- EN 316, *Wood fibreboards — Definition, classification and symbols*
- 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 321, *Wood-based panels — Determination of moisture resistance under cyclic test conditions*
- EN 323, *Wood-based panels — Determination of density*
- 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*
- EN 326-2, *Wood-based panels — Sampling, cutting and inspection — Part 2: Quality control in the factory*
- EN 335-1, *Durability of wood and derived products — Definition of hazard classes of biological attack — Part 1: General*
- EN 335-2, *Durability of wood and wood-based products — Definition of hazard classes of biological attack — Part 2: Application to solid wood*
- EN 335-3, *Durability of wood and wood-based products — Definition of hazard classes of biological attack — Part 3: Application to wood-based panels*
- EN 596, *Timber structures — Test methods — Soft body impact test of timber framed walls*
- EN 622-1, *Fibreboards — Specifications — Part 1: General requirements*
- EN 622-2, *Fibreboards — Specifications — Part 2: Requirements for hardboards*
- EN 622-3, *Fibreboards — Specifications — Part 3: Requirements for medium boards*
- EN 622-4, *Fibreboards — Specifications — Part 4: Requirements for softboards*
- prEN 622-5, *Fibreboards — Specifications — Part 5: Requirements for dry process boards (MDF)*
- EN 633, *Cement-bonded particleboards — Definition and classification*
- EN 634-2, *Cement-bonded particleboards - Specifications - Part 2: Requirements for OPC bonded particleboards for use in dry, humid and exterior*
- EN 636, *Plywood — Specifications*
- ENV 717-1, *Wood-based panels — Determination of formaldehyde release — Part 1: Formaldehyde emission by the chamber method*
- EN 717-2, *Wood-based panels — Determination of formaldehyde release — Part 2: Formaldehyde release by the gas analysis method*

- prEN 789, *Timber structures — Test methods — Determination of mechanical properties of wood-based panels*
- EN 1058, *Wood-based panels — Determination of characteristic values of mechanical properties and density*
- EN 1087-1, *Particleboards — Determination of moisture resistance — Part 1: Boil test*
- ENV 1156, *Wood-based panels — Determination of duration of load and creep factors*
- EN 1195, *Timber structure — Test methods — Performance of structural floor decking*
- prEN 1995-1-1, *Eurocode 5 — Design of timber structures — Part 1-1: General rules and rules for buildings*
- EN 12369-1, *Wood-based panels — Characteristic values for structural design — Part 1: OSB, particleboards and fibreboards*
- EN 12369-2, *Wood-based panels — Characteristic values for structural design — Part 2: Plywood*
- EN 12524, *Building materials and products — Hygrothermal properties — Tabulated design values*
- EN 12664, *Thermal performance of building materials and products — Determination of thermal resistance by means of guarded hot plate and heat flow meter methods — Dry and moist products of medium and low thermal resistance*
- EN 12775, *Solid wood panels — Classification and terminology*
- EN 12871, *Wood-based panels — Performance, specification and requirements for load-bearing boards for use in floors, walls, and roofs*
- ENV 12872, *Wood-based panels — Guidance on the use of load-bearing boards in floors, walls and roofs*
- EN 13353, *Solid wood panels (SWP) — Requirements*
- CEN/TS 13354, *Solid wood panels — Bonding quality — Test method*
- EN 13501-1, *Fire classification of construction products and building elements — Part 1: Classification using test data from reaction to fire tests*
- prEN 14279, *Laminated Veneer Lumber (LVL) — Specifications, definitions, classification and requirements*
- prEN 14755, *Extruded particleboards — Specifications*
- EN ISO 354, *Acoustics — Measurement of sound absorption in a reverberation room (ISO 354:2003)*
- EN ISO 12572:2001, *Hygrothermal performance of building materials and products — Determination of water vapour transmission properties (ISO 12572:2001)*