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BSI Standards Publication

Wood-based panels — Characteristic values for structural design

Part 2: Plywood

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National foreword

This British Standard is the UK implementation of EN 12369-2:2025. It supersedes BS EN 12369-2:2011, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee B/541, Wood based panels.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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EUROPEAN STANDARD **EN 12369-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM September 2025

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English Version

Wood-based panels - Characteristic values for structural design - Part 2: Plywood

Panneaux à base de bois - Valeurs caractéristiques pour la conception des structures - Partie 2: Contreplaqué

Holzwerkstoffe - Charakteristische Werte für die Berechnung und Bemessung von Holzbauwerken - Teil 2: Sperrholz

This European Standard was approved by CEN on 6 July 2025.

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European foreword

This document (EN 12369-2:2025) 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of an identical text or by endorsement, at the latest by March 2026, and conflicting national standards shall be withdrawn at the latest by March 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12369-2:2011.

EN 12369-2:2025 includes the following significant technical changes with respect to EN 12369-2:2011:

— where values required by EN 1995-1-1 for plywood panels have been missing, this document provides additional properties in Clause 7 to be used in the structural design according to EN 1995-1-1;

— the symbols used in wood-based panels product standards, test standards and in EN 1995-1-1 do not match exactly to each other. This document gives advice how to use design properties when the structural design is performed according to EN 1995-1-1;

— normative reference to ISO 3131 replaced by reference to ISO 13061-2;

— values for classes F 35 and E 35 mentioned in EN 636 introduced by interpolation.

This document is intended to be used in conjunction with EN 1995-1-1.

The EN 12369 series *Wood-based panels — Characteristic values for structural design* is currently composed of the following parts:

— Part 1: OSB, particleboards and fibreboards;

— Part 2: Plywood;

— Part 3: Solid wood panels.

Annex A and Annex B are informative.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

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1 Scope

This document provides information on the characteristic values for use in designing structures incorporating wood-based panels. The characteristic values given are as defined in EN 1995-1-1.

When utilizing the classification system for derivation of plywood characteristic values, this document can only be applied with reference to EN 636.

This document includes the characteristic values of the mechanical properties for plywood complying with EN 636 in bending, tension, compression, panel shear and planar shear. EN 636 classifies bending properties into two sets of classes, one for stiffness and another for strength. Stiffness and strength in tension and compression are related to the same properties in bending.

For shear properties, fixed values determined by correlation to density are provided.

Where optimized values are needed, the characteristic values are determined directly by testing in accordance with EN 789 and EN 1058 or by combination of testing according to the latter two standards and calculation according to EN 14272.

This document applies to panels complying with the three following conditions:

— 5 layers or more and 6 mm overall thickness and more;

— the ratio of the cumulative thickness of veneers in alternate directions does not exceed 2.5;

— wood species with a mean density greater than 350 kg/m^3 and not exceeding 750 kg/m^3.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 323, *Wood-based panels — Determination of density*

EN 635-2, *Plywood — Classification by surface appearance — Part 2: Hardwood*

EN 635-3, *Plywood — Classification by surface appearance — Part 3: Softwood*

EN 789:2004, *Timber structures — Test methods — Determination of mechanical properties of wood based panels*

EN 1995-1-1:2004,[1] *Eurocode 5: Design of timber structures — Part 1-1: General — Common rules and rules for buildings*

EN 13986:2004+A1:2015, *Wood-based panels for use in construction — Characteristics, evaluation of conformity and marking*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

[1] As impacted by EN 1995-1-1:2004/A1:2008, EN 1995-1-1:2004/A2:2014 and EN 1995-1-1:2004/AC:2006.