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BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Interested committees:

Title: Draft BS EN 12369-2 BS Wood-based panels - Characteristic values for structural design. Part 2: Plywood.

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Responsible Committee Secretary: Ms Federica Vitali (BSI)

Direct tel: 0208 996 7944

E-mail: federica.vitali@bsigroup.com

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/ Figure/Table/Note	Type of comment	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

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 draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 112.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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 CEN-CENELEC Management Centre has the same status as the official versions.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

This document (prEN 12369-2:2024) has been prepared by Technical Committee CEN/TC 112 “Wood-based panels”, the secretariat of which is held by DIN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12369-2:2011.

prEN 12369-2:2024 includes the following significant technical changes with respect to EN 12369-2:2011:

- where values required by prEN 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 1991-1-1 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.

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/m³ and not exceeding 750 kg/m³.

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 1995-1-1:2004¹, *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*

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.

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/>

3.1

characteristic value

value of a material property relating to limit state design, for use in the design of timber structures, elements, assemblies and component

Note 1 to entry: As defined in EN 1995-1-1, this value corresponds to a specified percentile of the assumed distribution of the property under consideration.

Note 2 to entry: For plywood determined as stipulated in this document.

3.2

service class 1

conditions of exposure resulting in moisture content in the materials corresponding to a temperature of 20 °C and the relative humidity of the surrounding air exceeding 65 % for only a few weeks per year

Note 1 to entry: In these conditions the moisture content of coniferous plywood can be expected not to exceed 12 %.

[SOURCE: EN 1995-1-1:2004, 2.3.1.3, modified – Moisture content for plywood has been added in Note 1 to entry.]

3.3

service class 2

conditions of exposure resulting in moisture content in the materials corresponding to a temperature of 20 °C and the relative humidity of the surrounding air exceeding 85 % for only a few weeks per year

Note 1 to entry: In these conditions the moisture content of coniferous plywood can be expected not to exceed 18 %.

[SOURCE: EN 1995-1-1:2004, 2.3.1.3, modified – Moisture content for plywood has been added in Note 1 to entry.]

3.4

service class 3

conditions of exposure resulting in higher moisture content in the materials than in service class 2

Note 1 to entry: In these conditions the moisture content of coniferous plywood can be expected to exceed 18 %.

[SOURCE: EN 1995-1-1:2004, 2.3.1.3, modified – Moisture content for plywood has been added in Note 1 to entry.]

3.5

load duration class

class characterized by the effect of a constant load acting for a certain period of time in the life of the structure