INTERNATIONAL STANDARD

ISO 16893

First edition
2016-01-15

Corrected version
2016-03-15

Wood-based panels — Particleboard

Panneaux à base de bois — Panneaux de particules

Reference number
ISO 16893:2016(E)

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 89, *Wood-based panels*, Subcommittee SC 2, *Particle boards*.

This first edition cancels and replaces ISO 16893-1:2008 and ISO 16893-2:2010, which have been technically revised.

This corrected version of ISO 16893:2016 incorporates the following corrections.

The revision statement has been corrected in the Foreword, correctly identifying the documents which this International Standard cancels and replaces.

The footer [a] in Table 4 has been amended and changed to NOTE 2.

The expression of thickness ranges have been corrected in the headers in Tables 5 to 16.

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Wood-based panels — Particleboard

1 Scope

This International Standard specifies a classification matrix and the related mandatory tests and thickness ranges to be applied to wood-based particleboard for general purposes, furniture, load-bearing applications and heavy-duty load-bearing applications. It then provides the manufacturing property requirements for these types of uncoated particleboard.

The values listed in this International Standard relate to product properties used to classify particleboards into one of four grades (P-GP, P-FN, P-LB or P-HLB, see Clause 3), for use in three service conditions (REG, MR1 and MR2). The values are not characteristic values to be used for design purposes.

2 Normative references

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

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

ISO 9426, *Wood-based panels — Determination of dimensions of panels*

ISO 9427, *Wood-based panels — Determination of density*

ISO 12460-1, *Wood-based panels — Determination of formaldehyde release — Part 1: Formaldehyde emission by the 1-cubic-metre chamber method*

ISO 12460-3, *Wood-based panels — Determination of formaldehyde release — Part 3: Gas analysis method*

ISO 12460-4, *Wood-based panels — Determination of formaldehyde release — Part 4: Desiccator method*

ISO 12460-5, *Wood-based panels — Determination of formaldehyde release — Part 5: Extraction method (called the perforator method)*

ISO 16572, *Timber structures — Wood-based panels — Test methods for structural properties*

ISO 16978, *Wood-based panels — Determination of modulus of elasticity in bending and of bending strength*

ISO 16979, *Wood-based panels — Determination of moisture content*

ISO 16981, *Wood-based panels — Determination of surface soundness*

ISO 16983, *Wood-based panels — Determination of swelling in thickness after immersion in water*

ISO 16984, *Wood-based panels — Determination of tensile strength perpendicular to the plane of the panel*

ISO 16985, *Wood-based panels — Determination of dimensional changes associated with changes in relative humidity*

ISO 16987, *Wood-based panels — Determination of moisture resistance under cyclic test conditions*

ISO 16998, *Wood-based panels — Determination of moisture resistance — Boil test*

ISO 17064, *Wood-based panels — Fibreboard, particleboard and oriented strand board (OSB) — Vocabulary*

ISO 20585:2005, *Wood-based panels — Determination of wet bending strength after immersion in water at 70 degrees C or 100 degrees C (boiling temperature)*

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ISO 27528, *Wood-based panels — Determination of resistance to axial withdrawal of screws*

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 17064 apply.

3.2 Abbreviated terms

For the purposes of this document, the following abbreviated terms apply.

EXT exterior

F fungi resistant

FN furniture

FR fire retardant

GP general purpose

HLB heavy-duty load bearing

I insect resistant

LB load bearing

MR1 moisture resistant — temperate

MR2 moisture resistant — tropical

P particleboard

REG regular

δ thickness

4 Classifications

4.1 Classification matrices

An overall classification matrix, which includes all major classes available at the time of publication, is shown in Table 1. Table 1 allows for future classes to be included as they become available on international markets.

Not all products in the matrix are currently available or under development. For example, there are no existing exterior condition products. Realistic property tables can only be developed for existing products. The remainder are potential future products and property tables will be developed when necessary.

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