
**Wood-based panels — Particleboard —
Part 2:
Requirements**

*Panneaux à base de bois — Panneaux de particules —
Partie 2: Exigences*



PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS



COPYRIGHT PROTECTED DOCUMENT

© ISO 2010

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms, definitions and abbreviations	2
4 Expression of specification limits and general requirements	2
4.1 Expression of specification limits	2
4.2 Lower specification limits	3
4.3 Upper specification limits	3
4.4 Moisture resistance requirement options	3
4.5 Density variation, dimension and moisture content requirements	4
4.6 Formaldehyde requirements	4
4.7 Requirements for load bearing particleboard for use in dry conditions (P-LB REG)	4
5 Specific property requirements	5
5.1 Requirements for general purpose particleboard for use in dry conditions (P-GP REG)	5
5.2 Requirements for furniture type particleboard for use in dry conditions (P-FN REG)	5
5.3 Requirements for heavy-duty load bearing particleboard for use in dry conditions (P-HLB REG)	6
5.4 Requirements for general purpose particleboard for use in humid conditions (P-GP MR)	6
5.5 Requirements for furniture type particleboard for use in humid conditions (P-FN MR)	7
5.6 Requirements for load bearing particleboard for use in humid conditions (P-LB MR)	8
5.7 Requirements for heavy-duty load bearing particleboard for use in humid conditions (P-HLB MR)	9
5.8 Requirements for general purpose particleboard for use in high humid conditions (P-GP HMR)	10
5.9 Requirements for furniture type particleboard for use in high humid conditions (P-FN HMR)	11
5.10 Requirements for load bearing particleboard for use in high humid conditions (P-LB HMR)	12
5.11 Requirements for heavy-duty load bearing particleboard for use in high humid conditions (P-HLB HMR)	13
6 Marking	13
Annex A (normative) Calculation of 5-percentile and 95-percentile values	14

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 16893-2 was prepared by Technical Committee ISO/TC 89, *Wood-based panels*, Subcommittee SC 2, *Particle boards*.

ISO 16893 consists of the following parts, under the general title *Wood-based panels — Particleboard*:

- *Part 1: Classifications*
- *Part 2: Requirements*

Wood-based panels — Particleboard —

Part 2: Requirements

1 Scope

This part of ISO 16893 provides the manufacturing property requirements for uncoated particleboard.

The values listed in this part of ISO 16893 relate to product properties used to classify particleboards into one of four types, P-GP, P-FN, P-LB or P-HLB (see Clause 3), for use in three service conditions, REG, MR and HMR. The values are not characteristic values to be used for design purposes.

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.

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 12460-2, *Wood-based panels — Determination of formaldehyde release — Part 2: Small-scale 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: Perforator method*

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

ISO 16893-1, *Wood-based panels — Particleboard — Part 1: Classifications*

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

3 Terms, definitions and abbreviations

For the purposes of this document, the terms and definitions given in ISO 17064 and ISO 16893-1 and the following abbreviations apply.

EXT	exterior
FN	furniture
GP	general purpose
HLB	heavy-duty load bearing
HMR	highly moisture resistant
LB	load bearing
MR	moisture resistant
REG	regular
UDF	ultra-low-density fibreboard

4 Expression of specification limits and general requirements

4.1 Expression of specification limits

This International Standard may be used to evaluate groups of panels or production batches. To evaluate a group of panels, this requires that:

- The mandatory tests of Table 2, ISO 16893-1, be applied to samples of the group. Conditioning of test specimens is required as specified in each test method; and
- The results of the tests be evaluated against the appropriate specification limits in Tables 1 to 14, according to the product type and thickness range of the panels. Tables 1 and 2 apply to all product types and thickness ranges of panels.

For density variation and dimensions (Table 1), specification limits are based on the mean values for individual panels (calculated in accordance with Annex A) and are maximum tolerances. For formaldehyde emission, Table 2 gives upper specification limits for individual panel results.

Specification limits in Tables 3 to 14 are based on 5 (lower) or 95 (upper) percentile expressions, according to 4.2 and 4.3.

Particleboard shall comply with the relevant requirements of this International Standard when despatched from the producing factory.