

Australian Standard[®]

Particleboard flooring

Part 2: Installation



This Australian Standard® was prepared by Committee TM-005, Reconstituted Timber Panel Products. It was approved on behalf of the Council of Standards Australia on 19 May 2006. This Standard was published on 26 June 2006.

The following are represented on Committee TM-005:

- Australian Building Codes Board
- Australian Wood Panels Association
- Ensis
- Forests NSW
- Furnishing Industry Association of Australia
- Furntech
- Master Builders Australia
- New Zealand Wood Panel Manufacturers Association

Additional Interests:

- Dr Alan Halligan
-

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Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Standard through their representation on the Committee and through the public comment period.

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Part 2: Installation

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PREFACE

This Standard was prepared by the Joint Standards Australia/ Standards New Zealand Committee TM-005, Reconstituted Timber Panel Products, to supersede AS 1860—1998, *Installation of particleboard flooring*. After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Standard as an Australian Standard rather than an Australian/New Zealand Standard.

This Standard incorporates Amendment No. 1 (December 2010). The changes required by the Amendment are indicated in the text by a marginal bar and amendment number against the clause, note, table, figure, or part thereof affected.

The objective of this Standard is to set out the minimum performance requirements for the installation of particleboard flooring, which are acceptable to building authorities in Australia.

The objective of this revision is to provide a series of Standard series that deals with particleboard flooring, as follows:

AS/NZS 1860	Particleboard flooring
AS/NZS 1860.1	Part 1: Specifications
AS 1860.2	Part 2: Installation (this Standard)

An informative Appendix D has been incorporated to provide guidelines for flooring installation in wet areas.

During the course of preparation of this Standard, consideration was given to research and testing information from resources in Australia, New Zealand and overseas.

This Standard will be referenced in the Building Code of Australia 2007, thereby superseding the previous edition, AS 1860—1998, which will be withdrawn 12 months from the date of publication of this edition.

The term ‘informative’ has been used in this Standard to define the application of the appendix to which it applies. An ‘informative’ appendix is only for information and guidance.

CONTENTS

	<i>Page</i>
1 SCOPE.....	4
2 APPLICATION	4
3 NORMATIVE REFERENCED DOCUMENTS.....	4
4 DEFINITIONS.....	4
5 SUBFLOOR VENTILATION.....	6
6 SUBTERRANEAN TERMITES.....	6
7 ON-SITE STORAGE OF PARTICLEBOARD FLOORING	6
8 FLOOR FRAME INSTALLATION.....	6
9 PANEL INSTALLATION	7
10 FIXING REQUIREMENTS.....	8
11 PROTECTION OF INSTALLED PARTICLEBOARD FLOORING.....	11
12 SURFACE FINISHING	11
APPENDICES	
A INFORMATIVE REFERENCED DOCUMENTS.....	13
B INSTALLATION GUIDELINES	14
C RECOMMENDATIONS FOR SUBFLOOR VENTILATION	17
D WET AREA FLOORING	18

STANDARDS AUSTRALIA

Australian Standard
Particleboard flooring

Part 2: Installation

1 SCOPE

This Standard sets out procedures for the selection, placement and fixing of Class 1 particleboard flooring complying with AS/NZS 1860.1.

NOTE: This Standard does not cover waterproofing procedures necessary for wet area rooms. Wet area rooms are covered by AS 3740.

2 APPLICATION

The main application of this Standard is in domestic construction; however, the procedures and requirements herein may apply to particleboard used as flooring in applications where the particleboard is applied over a system of parallel joists of either timber or steel.

NOTE: Particleboard flooring is not suitable for external decking.

3 NORMATIVE REFERENCED DOCUMENTS

The following referenced documents are indispensable for the application of this Standard.

NOTE: Informative referenced documents are listed in Appendix A. They are not an integral part of the Standard.

AS

- 1684 Residential timber-framed construction
- 1684.2 Part 2: Non-cyclonic areas
- 1684.3 Part 3: Cyclonic areas
- 1684.4 Part 4: Simplified—Non-cyclonic areas
- 1789 Electroplated zinc (electrogalvanized) coatings on ferrous articles (batch process)

AS/NZS

- 1860 Particleboard flooring
- 1860.1 Part 1: Specifications
- 4491 Timber—Glossary of terms in timber-related Standards

ABCB

- BCA Building Codes of Australia

4 DEFINITIONS

For the purpose of this Standard definitions in AS/NZS 4491 and those below apply. Where the definitions below differ from those in AS/NZS 4491, those below take precedence.

4.1 Floor construction system**4.1.1 Fitted floor construction**

A technique whereby flooring is laid over a system of parallel joists and fitted between the bottom wall plates of each room and hallway. This procedure is usually carried out after the roof covering and external wall cladding have been completed (see Figures 1 and 2).

4.1.2 Platform floor construction

A technique whereby flooring is laid over the whole joist/floor area prior to the construction of the external and internal wall framing. The laid floor is then used as a working platform (see Figures 1 and 2).

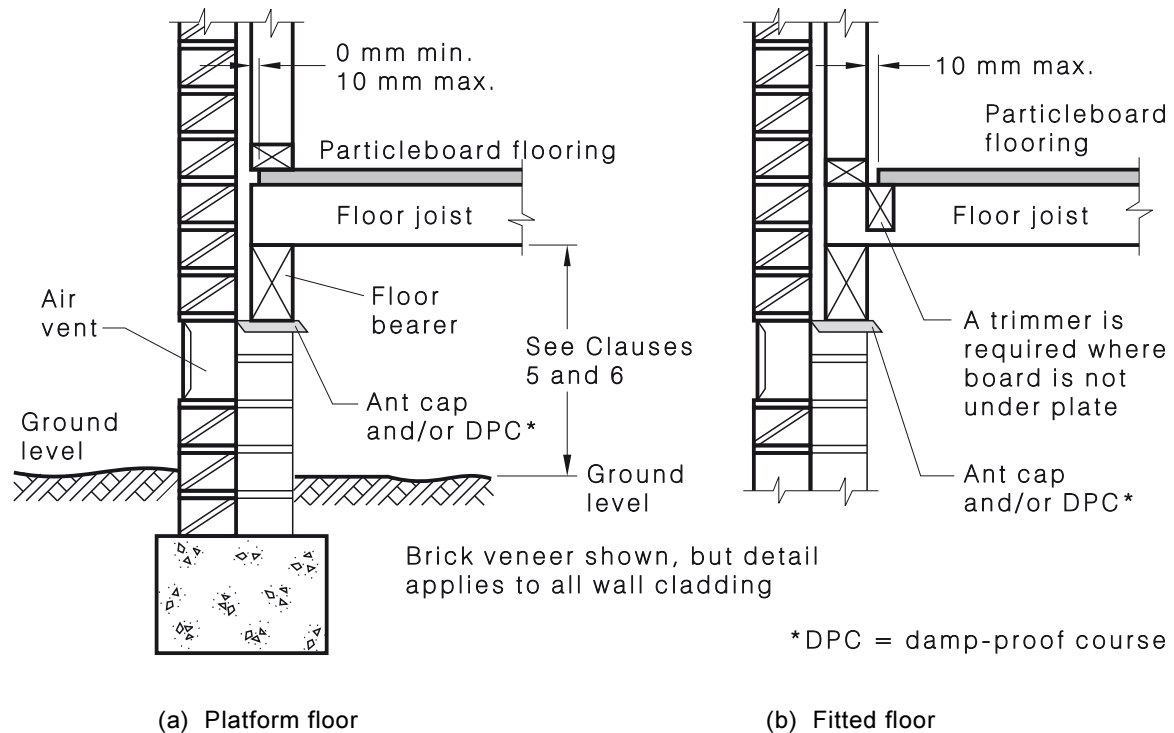


FIGURE 1 DETAIL OF FLOORING CONSTRUCTION AT EXTERNAL WALLS THAT ARE PARALLEL TO BEARERS

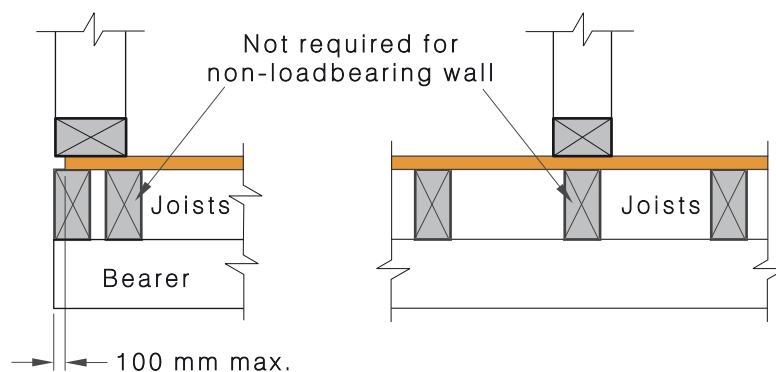


FIGURE 2 DETAIL OF FLOORING CONSTRUCTION AT WALLS THAT ARE PARALLEL TO JOISTS

4.2 Particleboard flooring

Particleboard that is manufactured to provide the durability and stiffness specified in this Standard as required for flooring and other structural applications.

4.3 Particleboard flooring F

A term indicating that the panel features increased resistance to fungi attack (see AS/NZS 1860.1).

4.4 Particleboard flooring FR

A term indicating that the panel features increased resistance to fire (see AS/NZS 1860.1).

4.5 Particleboard flooring H2

A term indicating that the panel features increased resistance to termite attack when used in dry, above ground applications (see AS/NZS 1860.1).

4.6 Subfloor ventilation

The provision of air movement under a suspended timber floor to reduce the risk of mould and decay of timber associated with moisture.

5 SUBFLOOR VENTILATION

Where particleboard flooring is to be installed as a ground floor, moisture from the ground shall be prevented from causing undue dampness or deterioration of building elements.

NOTES:

- 1 Subfloor ventilation requirements are contained in the Building Code of Australia.
- 2 Appendix B provides information on installation guidelines.
- 3 Appendix C provides information on subfloor ventilation.
- 4 Particleboard flooring is not suitable for conditions of permanent dampness, i.e., where particleboard moisture content is permanently in excess of 16%.

6 SUBTERRANEAN TERMITES

Where particleboard flooring is considered to be at risk of being attacked by subterranean termites—

- (a) barriers shall be installed in accordance with the Building Code of Australia; and
- (b) subfloor clearance shall be provided in accordance with the Building Code of Australia to facilitate inspection for termite activity.

NOTE: Where extra protection against termite attack is desired, particleboard-flooring H2 is recommended.

7 ON-SITE STORAGE OF PARTICLEBOARD FLOORING

Particleboard flooring shall be protected from the weather and from the ingress of moisture while on site, prior to installation. Packs of boards shall be stored off the ground, on bearers or slats with the top surfaces in a common plane and spacing that shall not exceed 600 mm. Packs shall be stored away from any ground water and shall be protected on the top and sides with waterproof material (such as plastic sheeting). Packing shall be used to keep plastic sheeting clear of the flooring pack so that air circulation can occur.

NOTE: There is an undesirable practice to leave packs unprotected on site. Wetting of particleboard will cause the panels to expand, which will lead to gaps in the floor when the panels dry out.

8 FLOOR FRAME INSTALLATION

Floor framing supporting particleboard flooring shall comply with the following:

- (a) The centre-to-centre joist spacing over which flooring panels are to be laid shall not exceed the maximum permissible span marked on the panels, e.g., 450 mm for 19 mm, and 600 mm for 22 mm thick panel, respectively.
- (b) In all other respects the floor framing shall comply with the relevant requirements specified in AS 1684.2, AS 1684.3, or AS 1684.4, and Figure 1 or Figure 2 as appropriate.

- (c) Joists and trimmers shall have their top surfaces brought to a common plane to receive the panels.

NOTE: Timber joists are recommended to be sized and seasoned when joist depth exceeds 150 mm as shrinkage or movement may prevent compliance with Item (c) above, and cause the finished floor to squeak.

9 PANEL INSTALLATION

9.1 General requirements

Particleboard flooring shall be either fitted or platform floor construction as defined in Clause 4.1 or 4.1.2, respectively.

The arrangement of all flooring panels shall comply with the following:

- (a) Where possible, each panel shall be supported by not less than three joists.
- Where this arrangement is not possible, or where small insert-panels are necessary for finishing off the floor area, panels spanning only two joists shall be additionally supported by a trimmer, not less than 70 mm × 35 mm, fixed between these two joists to support the middle of the panel (see Figure 3).
- (b) Tongued and grooved edge joints between adjoining panels that occur at right angles to the joists do not require support by trimmers, provided the panels are of the same manufacture. Square edge joints shall be butted centrally over joists or trimmers.
- (c) Ends of panels shall be butted centrally over joists or trimmers, and end joints shall be staggered.
- (d) The minimum bearing of particleboard flooring panel onto its supporting joist or trimmer shall be 12 mm.

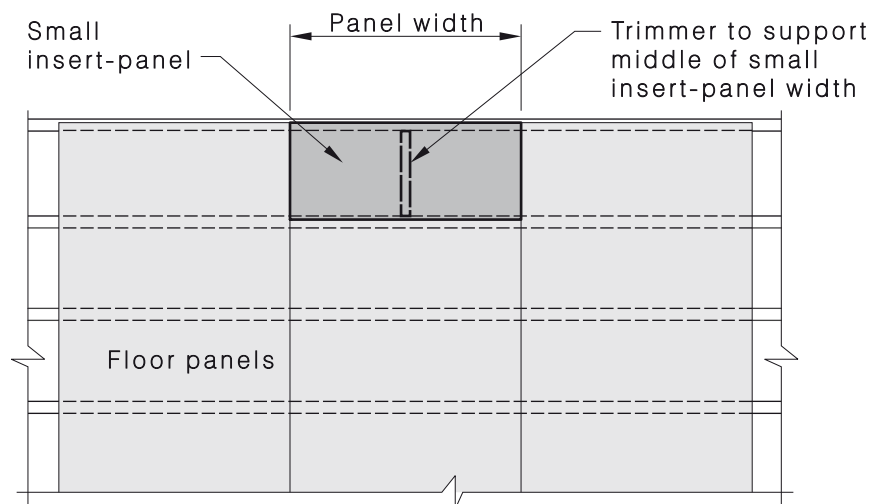


FIGURE 3 PANEL SPANNING TWO JOISTS ONLY—
TRIMMER TO SUPPORT MIDDLE OF PANEL

9.2 Requirements for platform flooring

9.2.1 Support for panel edges

Free edges of panels, which extend 60 mm or more beneath bottom wall plates that are generally at right angles to the joists, such as at external walls or at internal walls where there is a change in flooring material, do not require support by trimmers or solid blocking (see Figures 1 and 2).