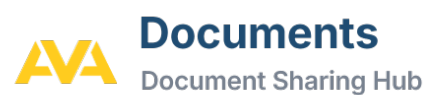


Australian/New Zealand Standard™

Gypsum plasterboard



AS/NZS 2588:2018

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- Association of Wall and Ceiling Industries of New Zealand
- Association of Wall and Ceiling Industries of Australia
- Australian Chamber of Commerce and Industry
- Australian Paint Manufacturers Federation
- Gypsum Board Manufacturers of Australasia
- Housing Industry Association

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Gypsum plasterboard

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Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee BD-011, Interior Board Linings, to supersede AS/NZS 2588:1998.

The objective of this Standard is to provide manufacturers of gypsum plasterboard with specifications for the manufacture and performance of plasterboard used in domestic, commercial and industrial applications. This Standard also provides a reference for the building industry and specifiers.

The changes in this edition are as follows:

- (a) Minor changes to wording in Preface and [Clause 9.2.2](#).
- (b) Standardize and align the nominal thicknesses of gypsum plasterboard as adopted by the Australian and New Zealand construction industries.

NOTE See [Clause 6.1](#) and [Table 1](#).

- (c) Corrections to a heading in [Table 3](#).
- (d) Amendments to [Appendices D](#), [E](#) and [F](#) aimed at simplifying the test method and improving reliability.
- (e) New test methods for water-resistant grade plasterboard in [Appendices H](#) and [I](#) aimed at simplifying ongoing maintenance of the Standard.

The terms “normative” and “informative” have been used in this Standard to define the application of the appendix to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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NOTES

Australian/New Zealand Standard

Gypsum plasterboard

1 Scope

This Standard specifies requirements for gypsum plasterboard intended for use in buildings as a lining material for walls, ceilings and partitions and providing a surface suitable for receiving decorative treatments.

NOTE 1 Alternative methods for demonstrating conformance with this Standard are given in [Appendix A](#).

NOTE 2 Prolonged exposure to heat where the surface temperature of the board exceeds 45 °C will be detrimental to the performance of gypsum plasterboard.

NOTE 3 Speciality grades of gypsum plasterboard may have requirements which exceed this standard depending on the application.

2 Application

This Standard is intended for use by manufacturers to assist in producing gypsum plasterboard materials, and by end users determining the correct grade of gypsum plasterboard material for their specific purposes.

3 Normative documents

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.

NOTE Documents for informative purposes are listed in the Bibliography.

AS 2193, *Calibration and classification of force measuring systems*

AS 2753, *Adhesives — For bonding gypsum plaster linings to wood and metal framing members*

4 Definitions

For the purpose of this Standard, the definitions below apply.

4.1

edge

the machine-wrapped edge of a gypsum plasterboard sheet

4.2

end

a factory-cut or field-cut of a gypsum plasterboard sheet which exposes the gypsum core

4.3

gypsum plasterboard

a machine-made board consisting of a core essentially of cast gypsum plaster with both faces and the longitudinal edges encased in a plasterboard liner

4.3.1

bracing grade

gypsum plasterboard that forms part of a system to provide a defined bracing resistance

4.3.2**fire-resistant grade**

gypsum plasterboard that forms part of a system to provide a defined fire resistance

Note 1 to entry: This is generally achieved by additives to the core to improve core adhesion at high temperatures and the addition of mineral fibres for strength.

4.3.3**standard grade**

gypsum plasterboard with basic attributes which is capable of accepting decoration

4.3.4**water-resistant grade**

gypsum plasterboard with additives in the core and/or the paper liners to reduce the water absorption rate

4.4**may**

indicates the existence of an option

4.5**recessed edge**

an edge which is tapered on the face side to form a recess for jointing

4.6**shall**

indicates that a statement is mandatory

4.7**should**

indicates a recommendation

5 Classification

Gypsum plasterboard shall be classified by the following grades (see [Clause 4.3](#)) and by performance requirements (see [Clause 9](#)):

- (a) Bracing grade.
- (b) Fire-resistant grade.
- (c) Standard grade.
- (d) Water-resistant grade.

6 Dimensions**6.1 Thickness**

The nominal thickness of gypsum plasterboard shall be —

- (a) 10 mm;
- (b) 13 mm;
- (c) 16 mm;
- (d) 19 mm; or
- (e) 25 mm.

The average thickness of gypsum plasterboard, when measured in accordance with [Appendix B](#), shall be within ± 0.5 mm of the nominal thickness.

The thickness range for each board measured shall not exceed 0.8 mm for standard grade plasterboard and 1.2 mm for fire-resistant grade plasterboard.

NOTE Other thicknesses of gypsum plasterboard may be manufactured to special order but are not covered by this Standard.

6.2 Width

The nominal width of gypsum plasterboard shall be —

- (a) 600 mm;
- (b) 900 mm;
- (c) 1200 mm; or
- (d) 1350 mm.

The actual width of gypsum plasterboard shall be within ± 3 mm of the nominal width.

6.3 Length

The length of gypsum plasterboard sheets shall be within ± 5 mm of the nominal specified length.

6.4 Squareness

The cut ends of the board shall be square with the edges within ± 3 mm in the full width of the board.

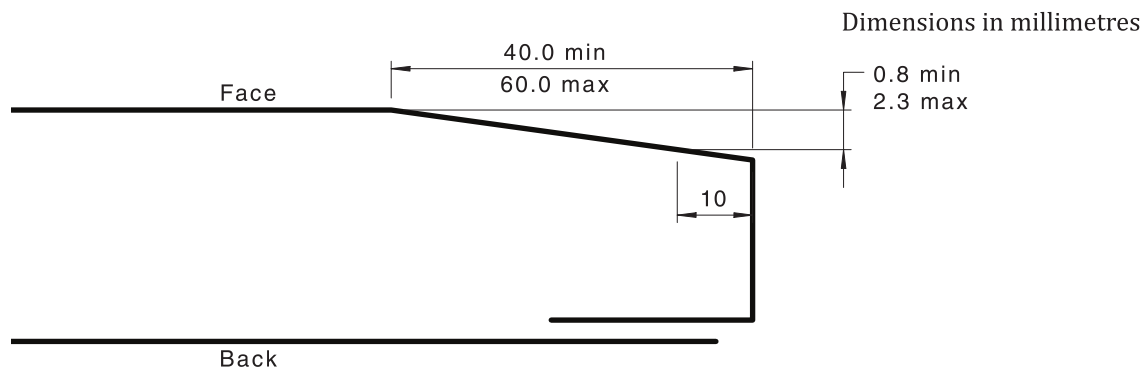
7 Edge finish

Edges of gypsum plasterboard shall be square, recessed or bevelled to suit the specified joint finish, see [Figure 1](#).

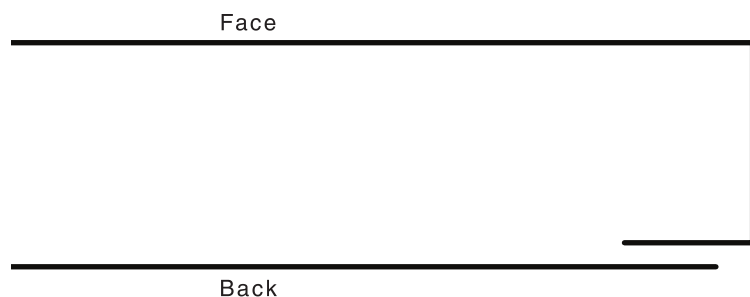
8 Suitability for decoration

Gypsum plasterboard should have a face which is free from defects such as —

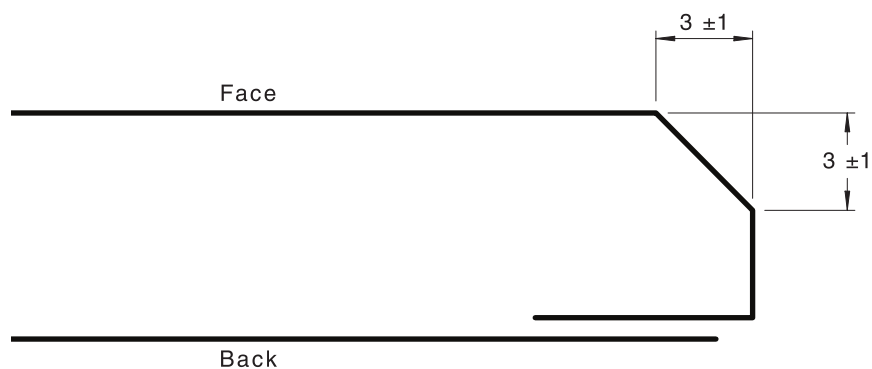
- (a) corrugations;
- (b) ripples;
- (c) stains which would bleed through a painted finish; or
- (d) any other defects which would adversely affect decorative paint finishes.



(a) Recessed edge



(b) Square edge



(c) Bevelled edge

Figure 1 — Edge finish

9 Performance requirements

9.1 Gypsum plasterboard

9.1.1 General

All classifications of gypsum plasterboard shall conform with [Clauses 9.1.2 to 9.1.6](#). In addition, water-resistant grade plasterboard shall conform with [Clause 9.2](#).

9.1.2 Bending strength

When tested in accordance with [Appendix C](#) using the loads given in [Table 1](#), the plasterboard shall not break or delaminate.

NOTE The bending strength test is used to ensure the gypsum plasterboard has sufficient strength to withstand bending during installation and the resistance to in-service loads.

Table 1 — Minimum average breaking forces perpendicular and parallel to wrapped edge of board

Nominal thickness of board mm	Load N	
	Perpendicular	Parallel
10	360	150
13	490	200
16	670	280
19	730	305
25	910	380

9.1.3 Edge hardness

When tested in accordance with [Appendix D](#), gypsum plasterboard shall have an edge hardness of not less than 45 N.

NOTE The edge hardness test is used to ensure the gypsum plasterboard edge can resist crushing during handling and installation.

9.1.4 Nail pull resistance

When tested in accordance with [Appendix E](#), gypsum plasterboard shall have minimum nail pull resistance appropriate to its intended use as shown in [Table 2](#).

NOTE The nail pull test is used to ensure the gypsum plasterboard has sufficient strength to resist fastener pull through due to in-service loads.

Table 2 — Minimum nail pull resistance

Walls (Studs max. 600 mm centres) N	Ceilings (Joists/furring max. 450 mm centres) N	Ceilings (Joists/furring max. 600 mm centres) N
270	270	300
NOTE The nail pull resistance requirement is based on the ability of the fastener to withstand a differential pressure of 0.5 kPa, with a suitable safety margin. For further information refer to AS 4055 for pressures for regions A and B up to and including wind category N4.		

9.1.5 Bond strength

When tested in accordance with [Appendix F](#), the bond strength of the test specimen in tension shall be not less than 250 N after 24 h drying.

NOTE This test is to assess the adequacy of the gypsum plasterboard back paper lining bond to the gypsum core and the inter-ply or cohesive bond strength of the back paper liner. This is particularly important where gypsum plasterboard is applied to a substrate with a combination of mechanical fasteners and adhesive system in accordance with AS/NZS 2589.

9.1.6 Humidified deflection

When tested in accordance with [Appendix G](#), the maximum deflection of the board shall not exceed the figures specified in [Table 3](#).

NOTE The humidified deflection test is to ensure the gypsum plasterboard has adequate resistance to in-service deflection or sag due to variable climatic conditions, particularly in ceilings.

Table 3 — Humidified deflection

Test method (see Appendix G)	Maximum deflection mm	
	Spanning board 450 mm	Spanning board 600 mm
A — Cantilever method	50	25
B — Simply supported method	10	5

9.2 Water-resistant grade gypsum plasterboard

9.2.1 General

In addition to the requirements of [Clause 9.1](#), water-resistant grade gypsum plasterboard shall conform with [Clauses 9.2.2](#) and [9.2.3](#).

9.2.2 Water resistance

When tested in accordance with [Appendix H](#), the plasterboard specimens shall have an average water absorption of not more than 5 % weight after two hours of testing.

9.2.3 Surface water resistance

When tested in accordance with [Appendix I](#), the average difference between the dry and wet weights of the specimens shall not exceed 1.6 g after two hours of testing.

10 Marking

Each sheet of gypsum plasterboard shall be clearly marked with the following particulars:

- (a) The manufacturer's name or trademark.
- (b) Nominal thickness.
- (c) Width.
- (d) Type of edge.
- (e) Product name or classification.

The grade of plasterboard shall be displayed on the back of the sheet at no greater than 1.2 m intervals. This grading shall be displayed by the use of registered marks, trademarks or other means that clearly classifies the plasterboard.

NOTE A date and time mark is commonly also applied to facilitate production control.