PB103
August 2007

Plasterboard Installation Manual

Contents

Introduction

This manual is intended for use by plastering contractors and builders. It covers the installation, jointing and finishing of Boral plasterboard linings in housing construction.

A full list of Boral plasterboard products is contained in the Boral Plasterboard Products Catalogue.

What is Plasterboard?

Plasterboard is a lining material for walls and ceilings. It consists of a gypsum plaster core that is encased in a heavy-duty paper liner, which wraps around the long edges of the sheet. It is available in many types and sheet sizes to suit a variety of applications.

Plasterboard types and applications

Boral plasterboard is ideal for:

- walls – 10/13mm Standard Core
- ceilings and weather-protected garage and verandah soffits – 10mm UniSPAN™ and 13mm Standard Core
- use as a tiling substrate on wet area walls – 10/13mm Wet Area Board
- curved surfaces – 6.5mm FlexiBOARD®
- reducing noise – 10/13mm SoundSTOP®
- fire rated walls – 13/16mm FireStop™ and 25mm ShaftLINER™.

Features and benefits

Boral plasterboard:

- is lightweight and fast and easy to install
- provides a smooth, stable and durable surface ready for paint or wallpaper
- can be fitted to timber, steel or masonry substrates
- can provide high levels of acoustic insulation in specially designed wall and ceiling systems
- is non-toxic.

Standards

Boral plasterboard is manufactured under strict factory conditions in accordance with the Australia/New Zealand Standard AS/NZS 2588:1998 Gypsum plasterboard.

Stability

Under normal temperature and humidity conditions, Boral plasterboard has a:

- Thermal Coefficient of Linear Expansion = 16.2×10^{-6} mm/(mm°C) at temperature range 4 to 38°C
- Hygrometric Coefficient of Expansion = 7.2×10^{-6} mm/mm/%RH (5 to 90%RH).

Thermal resistance

Under normal ambient temperatures, the 'R' values for plasterboard sheet thicknesses are as follows:

Thermal Resistance

Plasterboard Product	R-value
10mm Std Core pbd	0.056m²K/W ±10%
13mm Std Core pbd	0.073m²K/W ±10%
13mm FireSTOP™ pbd	0.061m²K/W ±10%
16mm FireSTOP™ pbd	0.074m²K/W ±10%
25mm ShaftLINER™	0.112m²K/W ±10%

Higher 'R' thermal resistance values can be achieved for walls and ceilings when Boral plasterboard is used with approved thermal insulation materials.

Introduction

Safety

Although there are no known health hazards associated with standard plasterboard installation, the following precautions are recommended:

- Avoid creating dust when handling plasterboard or mixing plasterboard compounds.
- After trowelling, reduce sanding by wiping a wet sponge over the edges of finished joints.
- If dry sanding is necessary, minimise the effect of dust by:
  - providing adequate ventilation
  - wearing eye protection
  - wearing a respiratory mask conforming to Australia/New Zealand Standard AS/NZS 1716:1994 Respiratory protective devices.
- Keep all tools and materials out of the reach of children.
- Use mechanical sanding tool fitted with dust extractor and storage bag.

First Aid

- If plaster compound or dust comes into contact with the eyes
  - wash eyes thoroughly with water.
- If plaster compound or dust comes into contact with skin
  - wash skin thoroughly with soap and water.
- If dust is inhaled
  - move to a fresh air environment.
- If plastering compound or dust is ingested
  - drink plenty of water.

Material Safety Data Sheets for Boral plasterboard products can be obtained from the Boral website www.boral.com.au or by phoning TecASSIST on 1800 811 222.

Design

Design Possibilities

A wide range of design options is possible using Boral plasterboard wall and ceiling systems.

These systems have been developed through Boral Plasterboard's commitment to research and development and include solutions for:

- standard construction
- fire rated boundary walls
- multi-residential dividing walls
- acoustic walls and ceilings
- home cinemas
- curved walls
- wet area walls.

Standard Construction

Common types of Boral plasterboard used in homes throughout Australia include:

- 10mm Standard Core for walls
- 10mm Wet Area Board as a tiling substrate on wet area walls
- 10mm UniSPAN™ and 13mm Standard Core for ceilings and weather protected garage and verandah soffits.

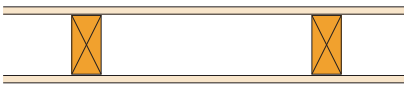


Figure 1 Standard wall construction

Fire-Rated Boundary Walls

The OutRWALL® exterior wall system allows framed walls to be built on or near a boundary. Fire-rated systems up to 1.5 hours are available to suit timber floor and slab-on-ground construction.

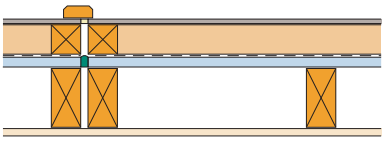


Figure 2 OutRWALL® fire-rated boundary walls

Multi-Residential Dividing Walls - Timber or Steel Studs

Party walls in attached dwellings can be constructed using the PartiWALL® system, which has fire ratings up to 1.5 hours and acoustic ratings up to R_w = 66dB and $R_w + C_{tr}$ = 52dB.

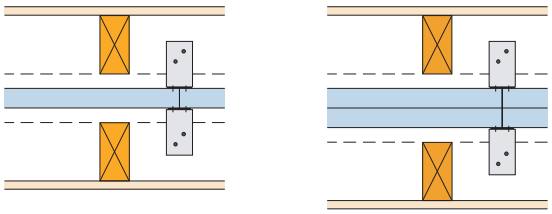


Figure 3 PartiWALL® multi-residential dividing wall

Acoustic Walls and Ceilings

There are many SoundSTOP® systems available to improve acoustic isolation between rooms, floor levels etc.

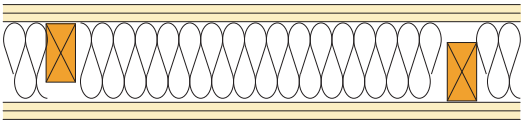


Figure 4 Acoustic wall

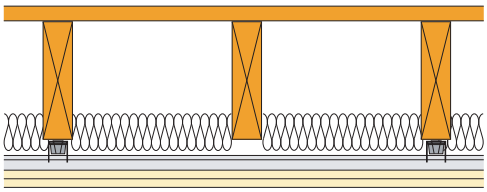


Figure 5 Acoustic floor/ceiling

Design

Home Cinemas

CinemaZone® is a suite of high performance acoustic plasterboard systems specifically designed for home cinemas.

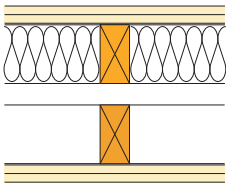


Figure 6 CinemaZone® wall

Curved Walls

FlexiBOARD® is a 6.5mm flexible plasterboard designed for making curved features in walls, ceilings and bulkheads.

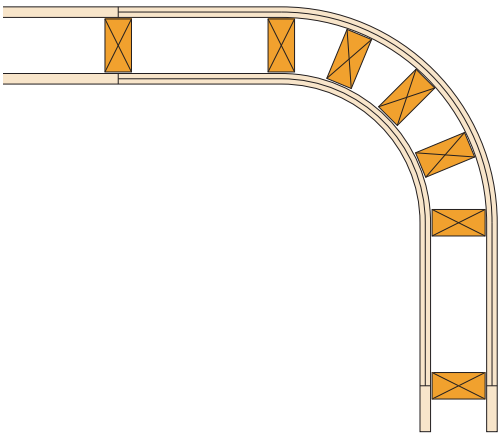


Figure 7 Curved wall

Full details of these systems are available on the Boral website www.boral.com.au or by phoning TecASSIST on 1800 811 222.

Design Considerations

Several factors relating to plasterboard linings need to be considered when designing a house.

These include:

- condensation
- ventilation
- control joints
- acoustics
- levels of finish
- glancing light
- thermal insulation
- wet areas.

Condensation

Condensation occurs when water vapour from cooled air gathers to form moisture on or in floors, walls and ceilings.

Condensation is more likely to occur where there are frequent temperature fluctuations and the moisture content inside a house (often generated in a bathroom, laundry or kitchen) is high.

Condensation may lead to serious problems if the moisture does not evaporate quickly. In plasterboard systems, this can lead to:

- nail-popping
- sagging ceiling linings
- rotting
- mould growth
- joint and corner fracture.

The following precautions will help minimise condensation:

- keep air spaces well ventilated to promote moisture evaporation, especially in ceiling cavity and sub-floor spaces
- use a vapour barrier to keep moist air away from cold surfaces
- use vapour barriers in conjunction with insulation
- place vapour barriers on the warm side of the insulation.

Design

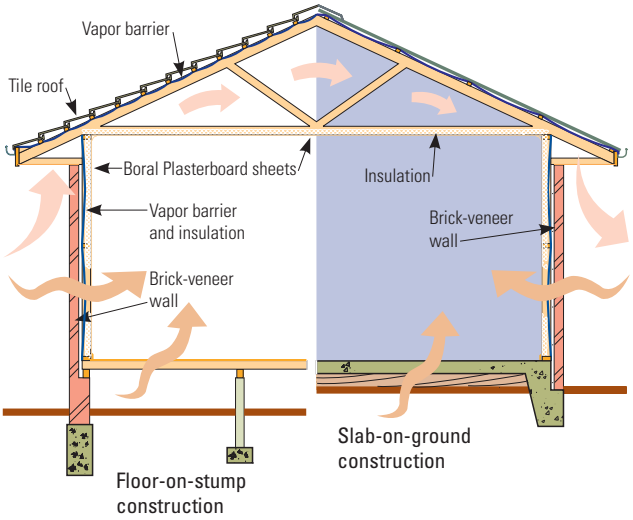


Figure 8 House ventilation

Ventilation

Ventilation is the controlled movement of air between the inside and outside of a house.

Ceiling linings should only be installed under roof and floor structures that are well ventilated.

Ample air space is necessary for good ventilation in ceiling areas, particularly below metal decks and tiled roofs with aluminium sarking. In cold or moderate climates, ventilate unheated spaces above ceilings by:

- using louvres (or similar approved devices) to cross-ventilate all spaces between top floor ceilings and the roof
- ensuring any attic space suitable for use as a habitable room, or walled-off storage area has at least 50% of the required ventilating area located in the upper part of the ventilated space
- restricting the unheated space to as near the high point of the roof as possible and above the anticipated level of any future ceilings
- maintaining the ratio of total net free ventilating area to ceiling area at a level not less than 1:150.

Control Joints

Boral Plasterboard is not designed to withstand stress due to structural movement or excessive changes in temperature or humidity.

Potential stress and fracturing can be minimised by fitting control joints as follows:

- provide control joints in walls and ceilings at maximum 12 metre intervals in both directions and at every change of material
- place plasterboard control joints over control joints in the substrate or structural elements and at every change of substrate material
- utilise floor to ceiling openings as control joints
- fit double studs or joists, spaced slightly apart, in the frame at control joint locations. Refer detail below.

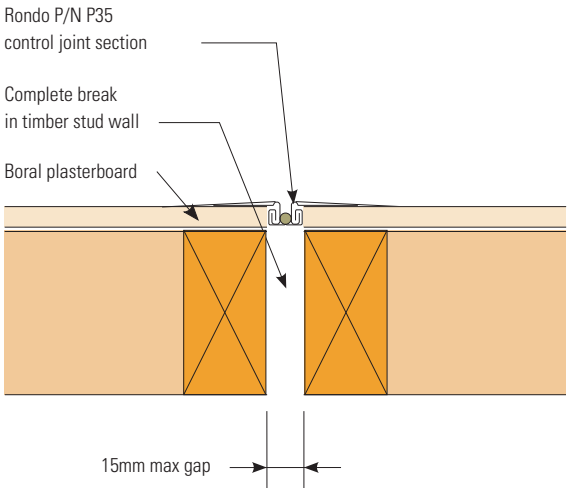


Figure 9 Control joint

Design

Acoustics

The minimization of noise pollution is an essential element of good house design. Sustained and/or loud sound emanating from traffic, neighbours, stereos etc can lead to an unpleasant home environment.

Common design factors that can influence the level of noise in a house include:

- the orientation of the house
- positioning of rooms relative to internal noise sources
- location of doors, windows, and penetrations such as light and power points
- service ducts, appliances, party walls etc.

Boral Plasterboard has developed many acoustic-rated systems which minimise the transmission of noise inside a house.

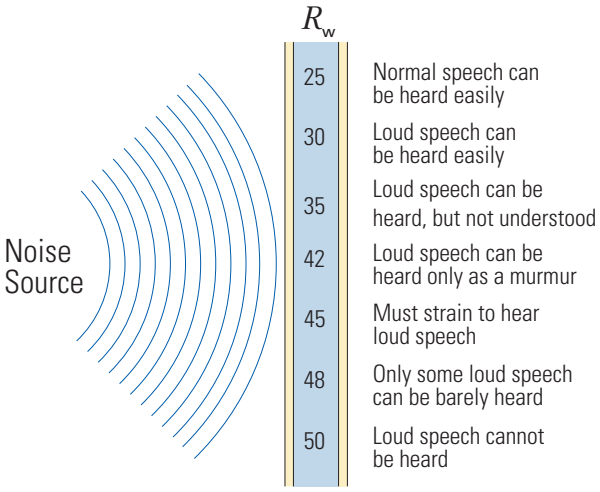


Figure 10 Acoustic ratings

Levels of Finish

The term 'Level of Finish' refers to the quality of finish required for plasterboard clad walls and ceilings.

There are six Levels of Finish (0-5) outlined in the Australian Standard AS/NZS 2589.1:1997 Gypsum Linings in Residential and Light Commercial Construction – Application and Finishing. Part 1 Gypsum Plasterboard.

The desired Level of Finish should be determined at the design stage as each Level has specific:

- frame tolerances
- plasterboard fixing and finishing requirements
- methods of jointing
- stopping requirements
- corner/angle accessories.

Level 0

This Level may be useful for temporary construction where there is no requirement for stopping, taping, finishing, or accessories. The installation only involves gluing and screwing/nailing plasterboard sheets into place.

Level 1

Used in concealed applications such as plenum areas above ceilings and building service corridors. All joints and interior angles have tape embedded in the joint compound. The surface is to be free of excess joint compound, and tool marks and ridges are generally acceptable.

Level 2

Level 2 is suitable for storage areas where surface appearance is not of primary concern. All joints and interior angles shall have tape embedded in the joint compound. Apply one separate coat of joint compound over all joints and fastener heads. The surface should be free of excess joint compound. Some minor tool marks and visible edges are acceptable.

Design

Level 3

Suitable for surfaces intended to have sprayed or hand-applied heavy or medium texture finishes and where heavy wall covering is the desired final decoration. All joints and interior angles shall have tape embedded in the joint compound. Apply one separate coat of joint compound over all joints and fastener heads. The joint compound shall be left with a smooth finish by scraping off nibs and ridges with the edge of a trowel.

Level 4

Level 4 is the accepted level of finish for domestic construction. It is particularly useful where lighting shines on light textures, light wall coverings and smooth textured finishes. It is also used where smooth textured finishes and satin/flat/low sheen paints are illuminated by non-critical lighting. Flat paints in this situation help to conceal joints.

Carefully evaluate weight, texture, and sheen level of wall coverings. Conceal all joints adequately if wall covering material is lightweight, glossy, or lightly patterned, or any combination of these.

All joints and interior angles shall be taped and finished with three coats of jointing material. Ensure the joint compound is left smooth and free of tool marks and ridges.

Level 5

Is used where gloss or semi-gloss paints are specified and where critical lighting affects satin, flat, or low sheen paints. All joints and interior angles shall have tape embedded in the joint compound. Apply a minimum of two separate coats of joint compound over all joints, angles, fastener heads, and accessories. Ensure the joint compound is left smooth and free of tool marks and ridges.

Complete the work with proprietary surface preparations or, if required, skim coating to remove differential surface textures and porosity.

Note:

1 Substrate framing should be carefully inspected before plastering commences to ensure that it is acceptable to the installer. Once the installer accepts the framing, he or she becomes fully responsible for the level of finish of the plasterboard surface.

2 Residential Level 4 constructions with paint finish should not be subjected to critical glancing light.

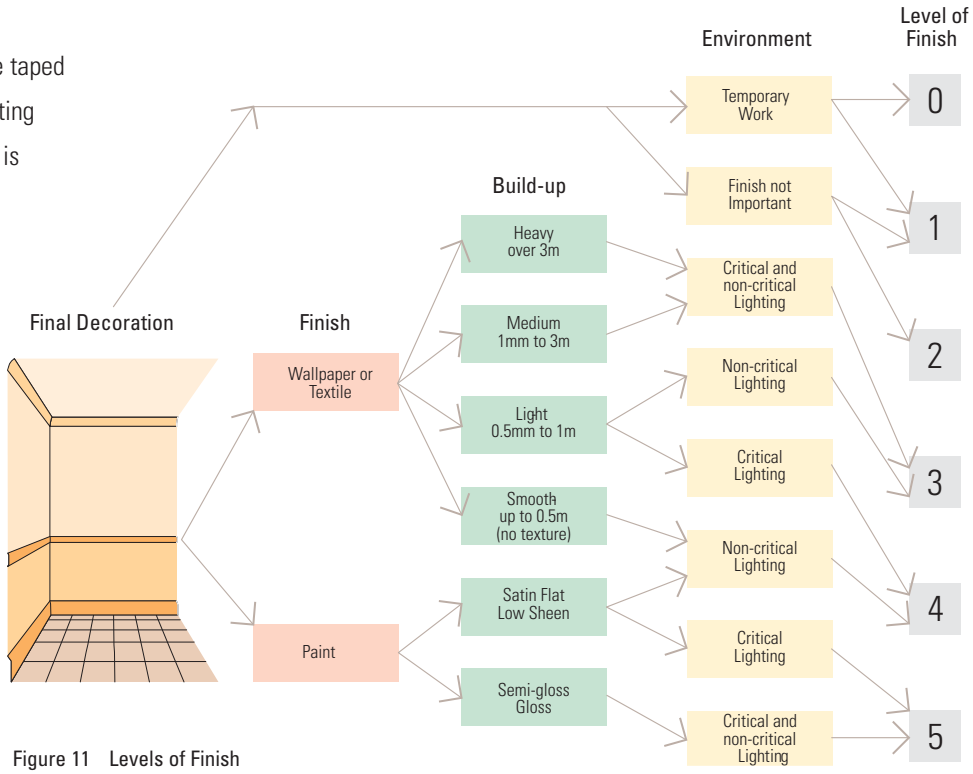


Figure 11 Levels of Finish

Reference:
AS/NZ S 2589.1:1997
Gypsum lining in residential and light commercial construction application and finishing

Design

Glancing Light

Glancing light is light that shines across a surface rather than directly at it. It illuminates minute undulations by casting shadows that wouldn't normally be visible in diffuse (non-directional) lighting.

No matter how flat a surface may appear, there will always be a number of imperfections – even with a Level 5 finish. What can be achieved though is the appearance of flatness and this will depend predominantly on the amount of glancing light the surface receives and to some degree its intensity and direction.

Artificial Light

The worst instances of glancing light occur with ceiling-mounted unshaded light globes and where windows are located close to ceiling or wall surfaces allowing sunlight to shine across adjacent surfaces.

In order to avoid the effects of glancing light, it is important to carefully plan the selection and placement of windows and lighting during the design phase.

It is recommended that artificial lighting should either be hung below the ceiling surface and fitted with shades or recessed into the ceiling ie, downlights.

The positioning of feature lighting, such as spot and flood lights needs to be planned to allow for a liberal angle of incidence on a featured surface.

Wall mounted lights, shining up on the ceiling, tend to accentuate wall imperfections.

High output lights are more severe in their effect because they create deeper shadows. Similarly, the whiter the light, the stronger the contrast and the greater the perceived imperfections.

Soft, low wattage, diffused lighting provides the best lighting conditions for wall and ceiling surfaces.

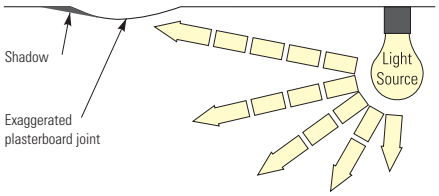


Figure 12 Glancing light shining along surface

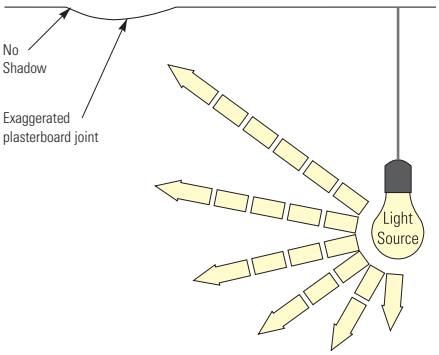


Figure 13 Glancing light shining at surface

Natural Light

The effects of natural glancing light can be exaggerated by late afternoon or early morning sunlight as well as reflections from adjacent walls, roofs and water features such as swimming pools, canals and waterways.

Wall surfaces abutting a tall, narrow window facing the sun (or a reflecting surface) are likely to be affected, as will raked ceilings abutting clerestory windows and flat ceilings abutting window heads.

Where a building design cannot be changed, the effects of glancing light can be improved by using light shades, soft furnishings, curtains, blinds and pelmets.

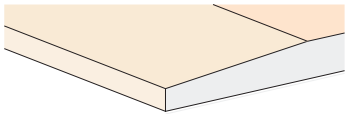
Avoid using dark, high-gloss paint finishes as they highlight glancing light problems; instead, use light, matt finishes to minimise the effect.

Note:

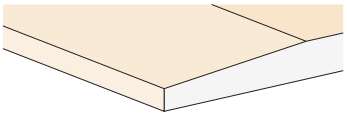
Boral Plasterboard 'Lighting and Decoration the Facts' is an industry guide to understanding the importance of good lighting and decoration practice.

Materials

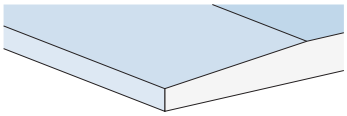
Plasterboard



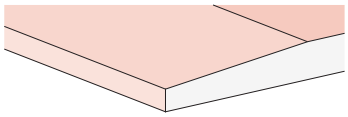
Standard Core – 10/13mm



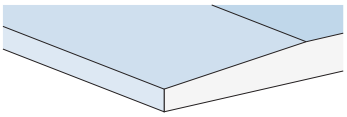
UniSPAN™ – 10mm



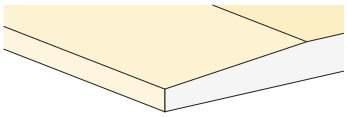
Wet Area Plasterboard™ – 10/13mm



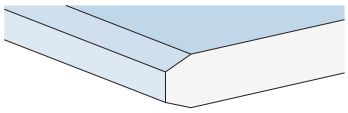
FireSTOP™ – 13/16mm



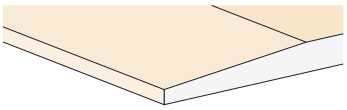
Wet Area FireSTOP™ – 13/16mm



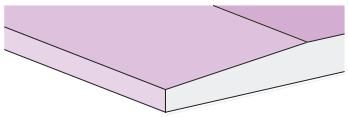
SoundSTOP® – 10/13mm



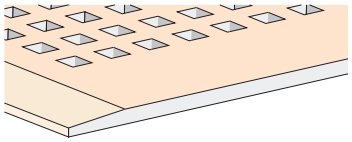
ShaftLINER™ – 25mm



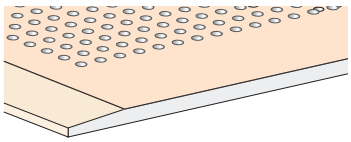
FlexiBOARD® – 6.5mm



ImpactSTOP™ – 13mm



EchoSTOP™ Square– 13mm



EchoSTOP™ Round – 13mm

Figure 14 Plasterboard Types

Cornices

ScotiaCove® Range

NovaScotia™ – 55mm

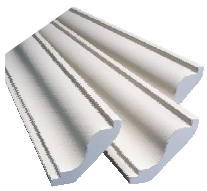
TruScotia® – 75mm

SupaScotia™ – 90mm

ClassiCove™ Range

New York Cornice – 90mm

Sydney Cove – 90mm



Manly Cove – 75mm

Cairo Cornice – 50mm (2 Step)
75mm (3 Step)
100mm (4 Step)

Figure 15 Cornice types

Materials

Quantities

Plasterboard coverage areas and approximate fixing and compound requirements are given in the following tables.

Fixing and Jointing Materials per 100m² of plasterboard — Table 1

	Walls		Ceilings	
Frame Spacing	600mm	450mm	600mm	450mm
Fixing Method				
Nails only	1250	1490	N/A	N/A
Nails and Adhesives	840 2.9kg stud adhesive	870 4.3kg stud adhesive	N/A	N/A
Screws only	910	1050	1010	1210
Screws and Adhesives	700 2.9kg stud adhesive	750 4.3kg stud adhesive	800 2.9kg stud adhesive	900 4.3kg stud adhesive
Jointing Materials				
Tape	75m			
BaseCote™	16kg			
TopCote™	8kg			

Boral Plasterboard Coverage Area in m² — Table 2

Width mm	Length mm	Number of Sheets														
		1	2	3	4	5	6	7	8	9	10	20	30	40	50	60
1200	2400	2.88	5.76	8.64	11.52	14.40	17.28	20.16	23.04	25.92	28.80	57.60	86.40	115.20	144.00	172.80
	2700	3.24	6.48	9.72	12.96	16.20	19.44	22.68	25.92	29.16	32.40	64.80	97.20	129.60	162.00	194.40
	3000	3.60	7.20	10.80	14.40	18.00	21.60	25.20	28.80	32.40	36.00	72.00	108.00	144.00	180.00	216.00
	3600	4.32	8.64	12.96	17.28	21.60	25.92	30.24	34.56	38.88	43.20	86.40	129.60	172.80	216.00	259.20
	4200	5.04	10.08	15.12	20.16	25.20	30.24	35.28	40.32	45.36	50.40	100.80	151.20	201.60	252.00	302.40
	4800	5.76	11.52	17.28	23.04	28.80	34.56	40.32	46.08	51.84	57.60	115.20	172.80	230.40	288.00	345.60
	5400	6.48	12.96	19.44	25.92	32.40	38.88	45.36	51.84	58.32	64.80	129.60	194.40	259.20	324.00	388.80
	6000	7.20	14.40	21.60	28.80	36.00	43.20	50.40	57.60	64.80	72.00	144.00	216.00	288.00	360.00	432.00
1350	3000	4.05	8.10	12.15	16.20	20.25	24.30	28.35	32.40	36.45	40.50	81.00	121.50	162.00	202.50	243.00
	3600	4.86	9.72	14.58	19.44	24.30	29.16	34.02	38.88	43.74	48.60	97.20	145.80	194.40	243.00	291.60
	4200	5.67	11.34	17.01	22.68	28.35	34.02	39.69	45.36	51.03	56.70	113.40	170.10	226.80	283.50	340.20
	4800	6.48	12.96	19.44	25.92	32.40	38.88	45.36	51.84	58.32	64.80	129.60	194.40	259.20	324.00	388.80
	5400	7.29	14.58	21.87	29.16	36.45	43.74	51.03	58.32	65.61	72.90	145.80	218.70	291.60	364.50	437.40
	6000	8.10	16.20	24.30	32.40	40.50	48.60	56.70	64.80	72.90	81.00	162.00	243.00	324.00	405.00	486.00

Materials

Delivery, Handling and Storage

To reduce the risk of damage, plasterboard should be delivered to site just prior to installation.

During handling and storage, sheets should be carried in an 'upright' position with particular care taken to protect the edges.

Plasterboard should be stored in neat, flat stacks off the ground/floor in a dry covered area. This will prevent sagging and minimise damage to board edges and surfaces.

If storing outdoors, stack sheets on a level, moisture-free platform, and keep fully protected from the weather. Ensure the platform can support a load up to 800kg/m^3.

Plasterboard stacking supports should be spaced at no more than 600mm centres. (400mm centres for 6.5mm FlexiBOARD®).

How to position a load

- Billet width and height should be uniform
- Billet length should reflect plasterboard width, for example
  - 1200mm long billets for 1200mm wide plasterboard,
  - 1350mm long billets for 1350mm wide plasterboard.

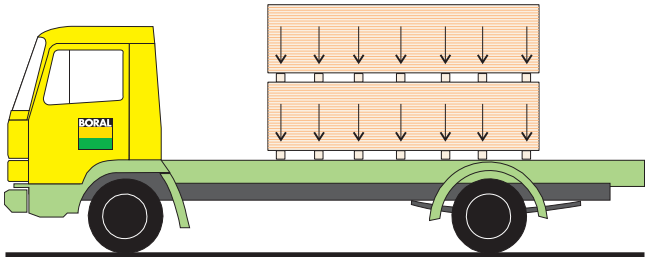


Figure 16 How to position a load

Placing Billets

Correct Placement

All billets are to be placed in proper vertical alignment so each tier is evenly supported. Arrows indicate pressure.

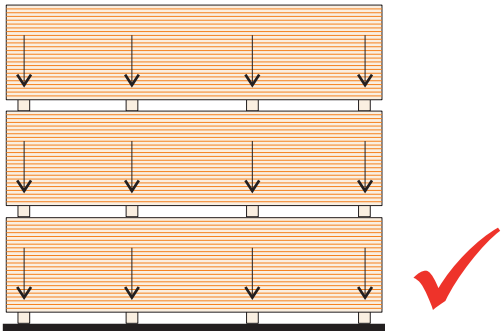


Figure 17 Correct placement of billets

Incorrect Placement

Cumulative pressure on unsupported lower units causes plasterboard to sag, if billets are not spaced evenly or in vertical alignment.

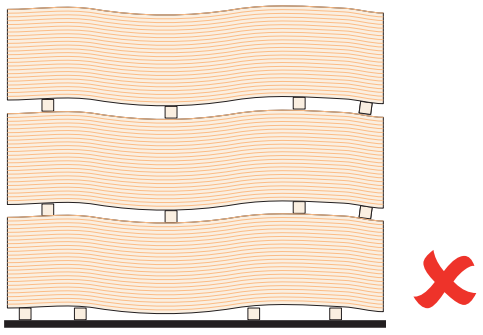


Figure 18 Incorrect placement of billets

Installation

Framing

Framing Check

Prior to installing plasterboard, a building should be thoroughly checked to ensure that:

- the framing is plumb, level and square
- other trades have finished their 'rough-ins'
- noggings supporting services such as taps and cisterns do not protrude beyond the face of the framing
- plumbing and electrical services have been installed and do not protrude beyond the face of the framing
- the area is weatherproof
- the spacing of studs, joists or battens takes into account the spacing required by the linings given in the Frame Spacing table
- when the installation is completed, the plasterboard will comply with the required level of finish.

If the substrate is:

- timber framed, it should comply with the:
  Australian Standard AS1684–1999
  Timber Framed Construction
- metal framed, it should comply with the:
  Australian Standard AS1397–2001
  Steel sheet and strip – Hot-dipped, zinc-coated, or aluminium/zinc-coated
- masonry, it should comply with the:
  Australian Standard AS3700–2001
  Masonry Structures.

Timber Framing

Timber used as a substrate for plasterboard is classified by one of the following categories:

- Category A
  - Timber with a moisture content under 16% at the time of lining. Generally includes seasoned or kiln dried timbers such as F5/F7 Radiata Pine.
  - Timber with a moisture content at or above 16% but a tangential shrinkage below 8%. Generally includes green timbers such as Radiata Pine, Hoop Pine, Douglas Fir, Cypress Pine, Western Hemlock, Jarrah, Red Narrow-Leaved Ironbark, Rose/Flooded Gum, Spotted Gum.
- Category B

  Timber with a moisture content above 16% at the time of lining and a tangential shrinkage of more than 8%. Generally includes green timbers such as: Mountain Ash, Messmate, River Red Gum, Alpine Ash, Karri, Blackbutt – commonly referred to as 'Builders' or 'OB' Hard Wood.

Treated Timber

Boral Acrylic and Boral Gold Bond stud adhesives can be used with any type of treated and untreated internal timber.
H2F treated timber should be aired for a minimum 14 days prior to application of stud adhesive.

Note:
When fixing plasterboard to Category B timbers, a combined adhesive/fastener system must be used.

Steel Framing

Before fixing plasterboard to steel framing, check that:

- the framing has been assembled and erected in accordance with manufacturer's instructions
- all contact surfaces of the steel frame are dry, clean and free from foreign materials such as oil, grease and dirt.

Installation

Dimensional Tolerances on Fixing Surfaces

Level 4 Finish

At least 90% of measurements taken over any 1.8m span of the substrate shall not deviate from the plane by more than 4mm. The remaining 10% shall be within 5mm. A suitable levelling system must be used to correct deviations falling outside these tolerances.

Use metal battens or furring channels on sliding clips to level ceilings and maintain independent movement. Plasterboard is not designed to provide lateral bracing. Supplementary bottom chord bracing may also be required.

Note:

Dimensional tolerances vary depending on the levels of Finish specified in AS/NZS 2589.1:1994.

Frame Spacing — Table 3

Product	Thickness	Maximum Frame Centres	
		Walls	Ceilings
UniSPAN™	10mm	600mm	600mm
Standard Core	10mm	600mm	450mm
Standard Core	13mm	600mm	600mm

Vertical Fixing Face Requirements

For nail fixing, framing members supporting a joint must have a minimum fixing face of 35mm.

For screw fixing, substrate members supporting a joint must have a minimum fixing face of 32mm. The fixing face of all other substrate members must be a minimum of 30mm.

Boral Plasterboard may be fixed directly over existing linings if they are firm, sound and suitably straight for the Level of Finish chosen.

Ceiling Framing

The two basic methods for fixing plasterboard to ceilings are:

- direct fixing, where sheets are fixed directly to structural ceiling members
- furred or battened fixing, where sheets are fixed to secondary framing members, such as metal furring channels or timber battens.

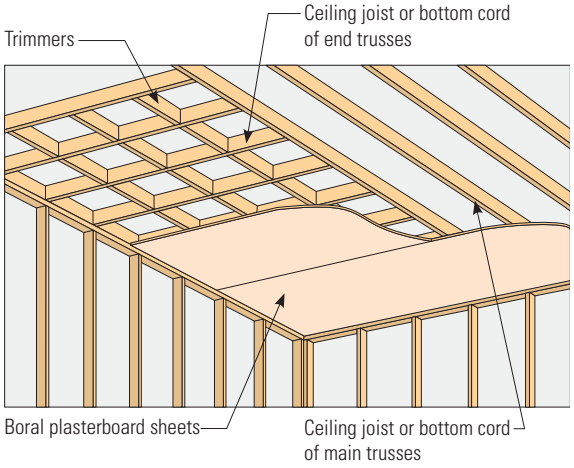


Figure 19 Direct fixed to ceilings

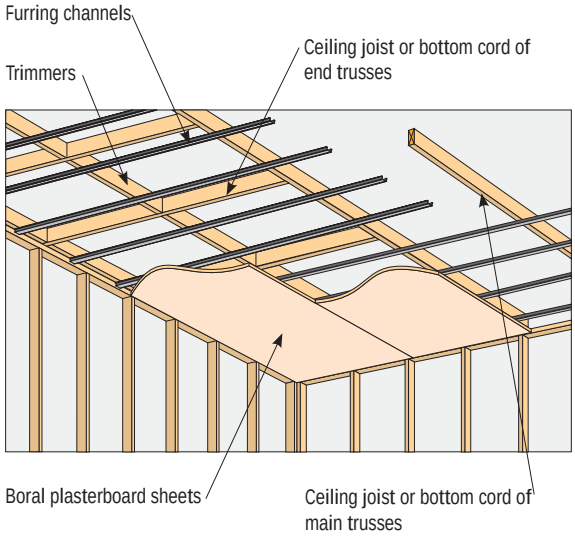


Figure 20 Fixed to metal battens over ceiling members

Installation

Experience has shown that metal furring channels will generally produce a superior ceiling and it is the recommended method for use under trussed roofs subject to significant structural movement.

Trimmers are to be installed by the builder where primary ceiling support members such as girders, trusses and joists, change direction within a room.

Furring Channels and Battens

Steel furring channels or battens are fixed at right angles to the underside of joists by means of clips or fasteners. Anchor clips are used to fix steel furring to a concrete slab ceiling.

Furring channels and battens should be spaced according to the sheet thickness given in the Frame Spacing Table (Table 3).

- For spans up to 900mm,
  use Rondo Ceiling Battens P/N 303 (nailed directly to joist) or Rondo P/N 301 (either nailed or clipped).
- For spans up to 1200mm,
  use Rondo Furring Channel P/N 129 (clipped).
- For fixing to concrete ceilings,
  use Rondo Furring Channel P/N 129 (clipped).

Note:

In external ceilings, spans may depend on region, terrain category and topographical locations. Refer Rondo Technical Department.

Installation

Layout

- Carefully plan the installation. Sheets should be set out to ensure best coverage and to minimise butt joints and waste.
- Plasterboard is generally applied horizontally in residential construction and is necessary if a Level of Finish of 3, 4, or 5 is required. However, sheeting may be fixed vertically if it is to cover the whole wall.
- Where possible, sheets should run across doors and windows and be cut out after fixing. The cut-outs can be used to cover small areas.
- Full length sheets should be used where possible to eliminate the need for sheet-end butt joints.
- Where sheet-end butt joints are necessary, they should be positioned between supports. (Butt joints in walls may be made on a framing member, however, this may not permit the forming of a recessed joint.)
- Stagger butt joints on adjoining sheets and with those on opposite sides of the wall.
- Vertical joints should be kept a minimum of 200mm from the edge of openings.
- Ceiling sheets should be installed with the long edge at right angles to the direction of the support members.
- Provide control joints in walls and ceilings at:
  - maximum 12m intervals in both directions
  - at every change of material
  - over control joints in the substrate
  - at every change of substrate material.

Note:

- Horizontal fixing minimises the effects of glancing light, reduces jointing, provides a stronger wall, and places joints at a convenient height for stopping and is the preferred sheet orientation for a Level 4 Finish.
- Noggins are not required behind recessed joints in horizontal applications.

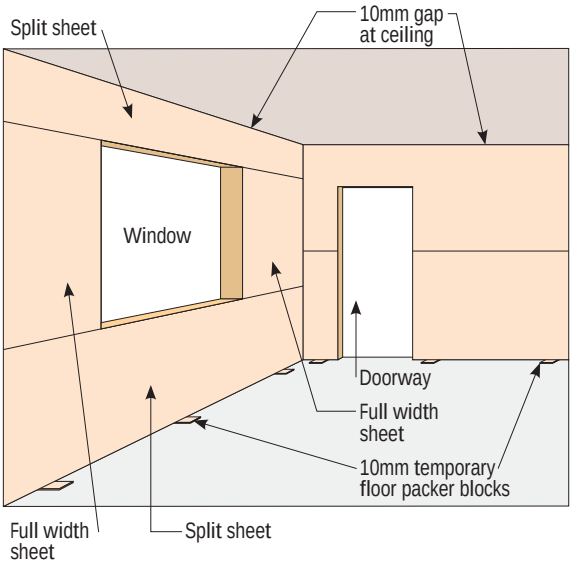


Figure 21 Room layout alternative 1

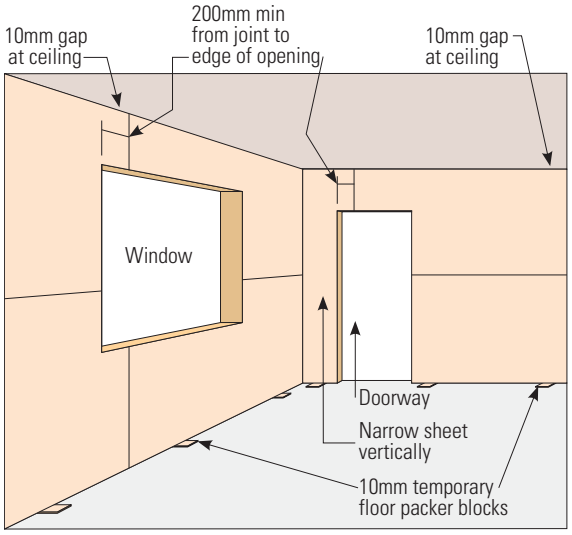


Figure 22 Room layout alternative 2

Installation

Fixing

Plasterboard should preferably be applied to ceilings first and then to walls. This will minimise sheet handling and damage.

Fastening Systems

Plasterboard should be fixed to the substrate using one of the following systems:

- Combination adhesive and fastener
- Screw fixed only
- Nail fixed only.

General Screw and Nail Fixing

- Plasterboard sheets must be held firm against framing while driving fasteners.
- Nails and screws should be slightly overdriven to allow for stopping but should not break the face paper.
- Screws and nails should be positioned 10–16mm from sheet edges and ends.
- Nails should be selected from Table 4.
- Screws should be selected from Table 5.
- Screws used for plasterboard fixing must comply with AS3566.2-2002 'Self-drilling screws for the building and construction industries. Part 2: Corrosion resistance requirements'.

Note:

- The combination adhesive and fastener system is the preferred option for general applications.
- Combination adhesive and fastener system must be used on Category B timbers.
- A nail or screw fix only system is not recommended where a Level 4 finish is required.
- When fixing to a Category B timber ceiling, screws must be used in combination with adhesive.
- Use a fastener-only system on wet area walls that are to be tiled or that may carry surface-mounted items such as mirrors – do not use adhesive.
- The use of panel lifters will assist the placement and fixing of ceiling sheets.

Plasterboard Nails

Gold Passivated Nails

for fixing plasterboard to softwood wall framing

LH Smoothshank Gold

LH Ringshank Gold

Galvanised Nails

for fixing plasterboard to softwood wall framing

LH Ringshank Nail

Galvanised Nails

for fixing plasterboard to hardwood wall framing

LH Smoothshank Nail

Zinc Uninails

for fixing plasterboard to soft or hardwood wall framing

Uninail Zinc

Figure 23 Nail types

Nail Length — Table 4

Plasterboard Thickness	Hardwood	Softwood
	Smoothshanked	
10mm	30mm	40mm
13mm	30mm	40mm
	Annular Ringshanked and Uni-Nail	
10mm	30mm	30mm
13mm	30mm	30mm

Plasterboard Screws

'S' Type Screw
for steel BMT up to 0.8mm

'W' Type Screw
for wood/timber only

'D' Type Screw
for steel BMT 0.8mm–2.00mm

'L' Type Screw
for laminating plasterboard

Figure 24 Screw types

Screw Length — Table 5

Plasterboard	Hardwood	Softwood	Metal
10mm	25mm*	25mm*	25mm
13mm	30mm	30mm	25mm

* 32mm screws are recommended for ceilings direct fixed to timber trusses.

Installation

Fixing to Ceilings

Fixing with combination of adhesive and screw fasteners

General Fixing Notes

- Framing members should be clean and free from dust, dirt, grease and surface moisture.
- Stud adhesive daubs should be approximately 25mm diameter x 15mm high.
- Do not use adhesive at sheet ends.
- Keep daubs 200mm (min) from sheet edges.
- Keep daubs 200mm (min) from screw points.

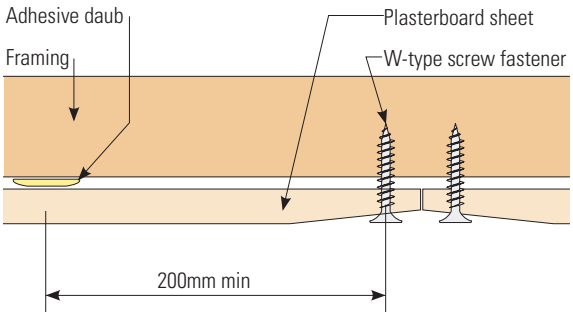


Figure 25 Adhesives and screw fasteners at sheet edges

Adhesive and Fastener Layout

- Use Table 6 and Figure 26 for ceiling fastener and adhesive layout.
- Refer also to 'General Screw and Nail Fixing' on Page 18.
- **1/3 fixing method (preferred)**
  space fasteners at 1/3 points across the width of the sheet and daubs half way between fasteners.
- **Conventional method**
  use double fasteners along the sheet centreline and space daubs between the fasteners at 230mm maximum centres.
- Boral plasterboard has lines printed on the face of the sheet to guide fixing.

Note:

1/3 fixing must be used for ceiling linings applied to H2F treated timber.

Adhesive and Fastener Layout for Ceilings Table 6

Sheet Width	Conventional Spacing	1/3 Spacing
900mm	FAF/FAF	FAFAF
1200mm	FAAF/FAAF	FAFAFAF
1350mm	FAAF/FAAF	FAFAFAF

F = screw F/F = double screws A = adhesive

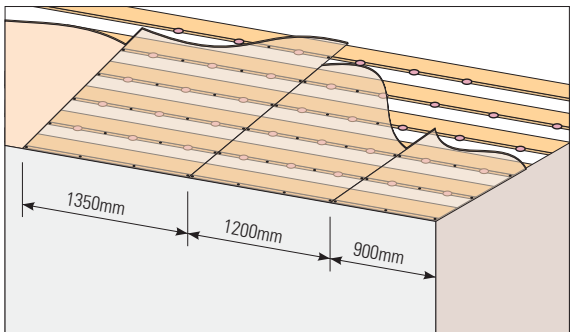


Figure 26 Combination adhesive and screw fixing on ceilings – 1/3 fixing method

Fixing with Screws only

- Space screws at maximum 300mm centres across the width of the sheet.
- Use Table 7 and Figure 27 for the number of screwing points across the sheet width.
- Refer also to 'General Screw and Nail Fixing' on Page 18.

Screw Fixing (only) Layout for Ceilings Table 7

Sheet width	Screw Points
900mm	4
1200mm	5
1350mm	6

Note: Screw points should be equally spaced.

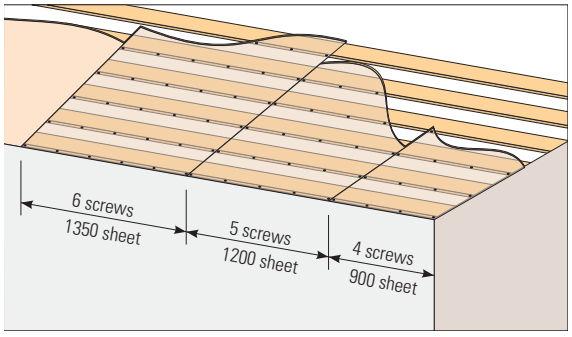


Figure 27 Screw fixing (only) layout for ceilings

Installation

Butt Joints in Ceilings

Wherever possible, avoid the need for butt joints by using full length plasterboard sheets.

If sheets must be joined 'end-to-end' then the joints should fall centrally between framing members and be supported by back-blocking panels (min 400mm wide) for the length of the joint or between stitching battens.

Back-Blocking

Back-blocking is a reinforcing system designed to minimise cracking and deformation along recessed edge and butt joints.

The reinforcement consists of adhering plasterboard panels to the back of sheet joints with Boral Plasterboard Back-Blocking Adhesive or Cornice Adhesive.

Back-blocking became necessary because of changes in roof construction and the fracturing problems that followed. These include complex roof and truss designs that change direction without providing support for the plasterboard. Ceilings under low pitched roofs or where ceiling access is limited may need to be back-blocked progressively in sequence when fixing sheets.

Back-blocking now forms part of Australian Standard AS/NZS 2589.1:1997.

Boral recommends all ceiling joints should be back-blocked in order to comply with warranty requirements.

Back-Blocking Butt Joints

Butt joints can be back-blocked by forming a recess in the plasterboard face, where the sheet ends meet, using Rondo Stitching Battens or temporary wooden battens and packers.

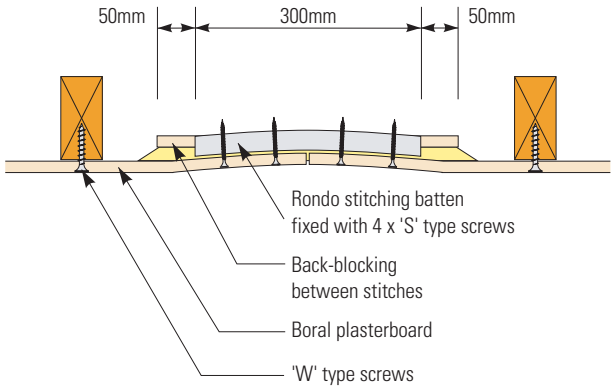


Figure 28 Back-blocking using stitching batten

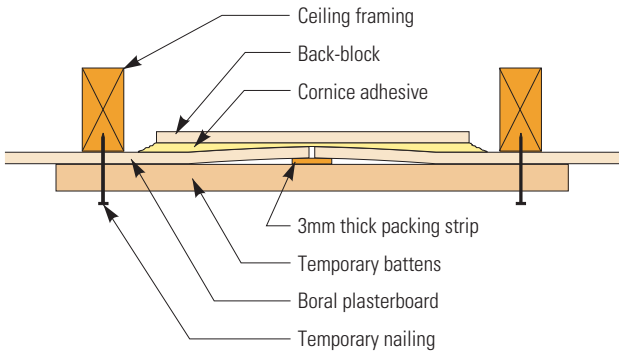


Figure 29 Back-blocking using temporary batten and packer

Installation

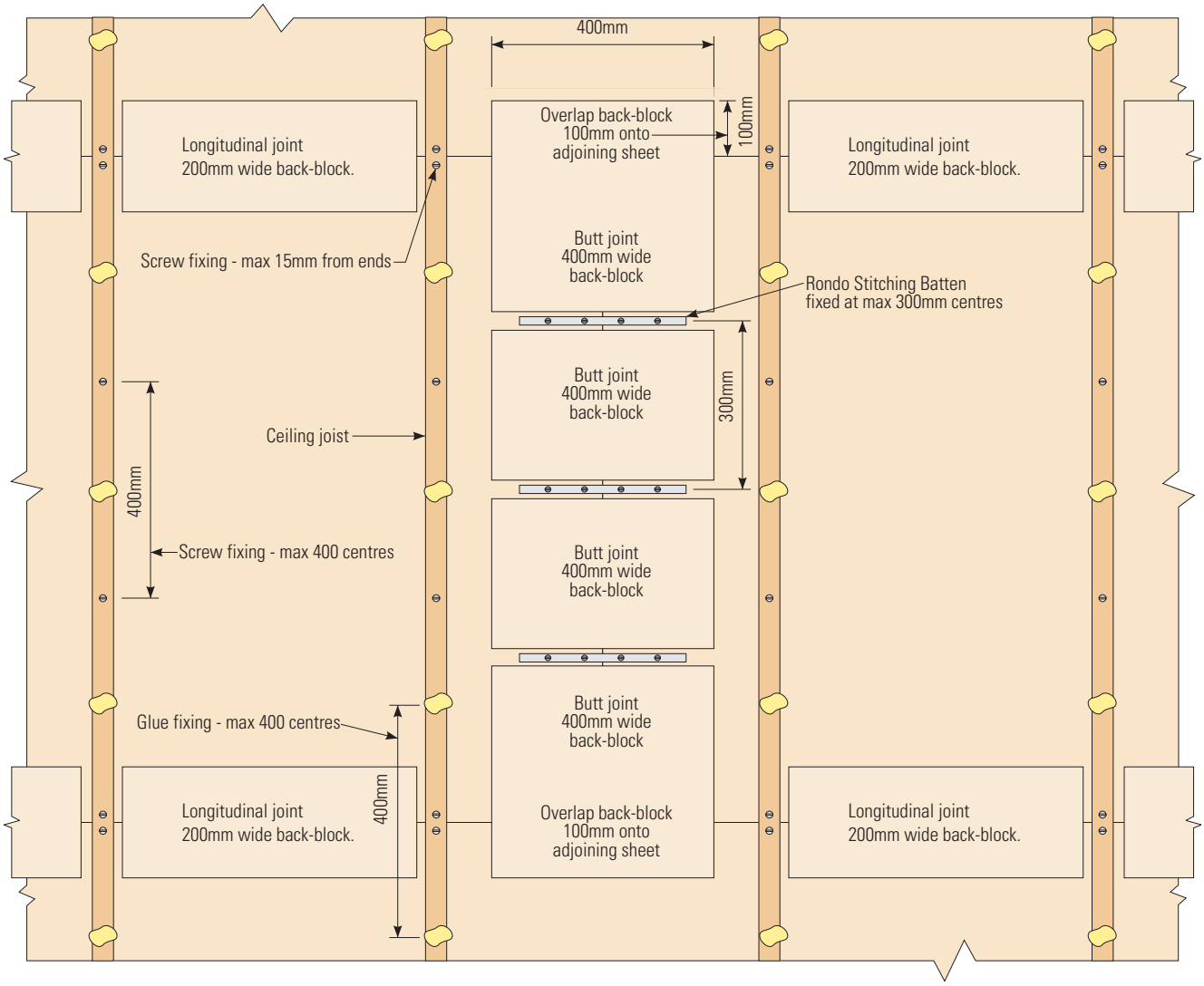


Figure 30 Back-blocking using stitching batten

Installation

Fixing to Walls

Fixing with Combination Adhesive and Fasteners

- Space daubs at 300mm (max) centres along the studs.
- Space screws or nails at 300mm centres at sheet ends (corners).
- Space nails at 150mm centres or screws at 200mm centres, where butt joints are allowed on a framing member.
- Butt joints in walls should be on studs or within 50mm of the mid-span point between framing members and be back-blocked.
- Refer also to 'General Screw and Nail Fixing' on Page 18.

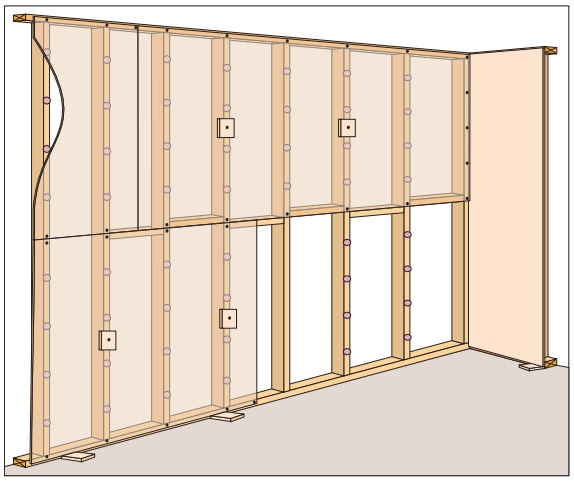


Figure 31 Combination adhesive and screw fixing on walls

Temporary Fasteners

Under normal drying conditions, temporary fasteners (nails or screws driven through plasterboard blocks to hold sheets in place while adhesive cures) should remain for at least 24 hours.

Door and window penetrations

Continuous fastening around door and window penetrations is optional as differential movement of wall framing, plasterboard lining and architraves is recommended for maintenance reduction.

Fixing with Screws only

- Space screws at maximum 300mm centres at sheet ends (corners).
- Space screws at maximum 200mm centres where butt joints are allowed on a framing member.
- Use Table 8 and Figure 32 for wall fastener spacings.
- Refer also to 'General Screw and Nail Fixing' on Page 18.

Screw Fixing (only) Layout for Walls — Table 8

Sheet width	Screw Points - Field	Screw Points - Sheet End
900mm	4	4
1200mm	4	5
1350mm	5	6

Note: Screw points should be equally spaced.

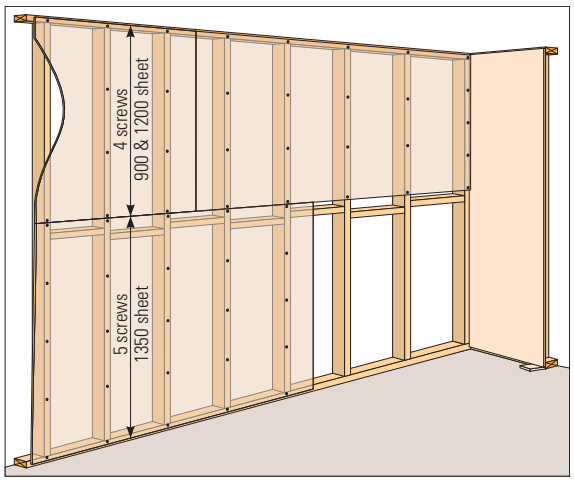


Figure 32 Screw fixing to walls

Fixing with Nails only

- Space nails at maximum 300mm centres at sheet ends (corners).
- Space nails at maximum 150mm centres where butt joints are allowed on a framing member.
- Double nails should be 50–75mm apart.
- Use Table 9 and Figure 33 for wall fastener spacings.
- Refer also to 'General Screw and Nail Fixing' on Page 18.

Installation

Nail Fixing (only) Layout for Walls Table 9

	Single Nails	
Sheet Width	Nail Points - Field	Nail Points - Sheet End
900mm	5	5
1200mm	6	6
1350mm	7	7
	Double Nails	
Sheet Width	Nail Points - Field	Nail Points - Sheet End
900mm	4	4
1200mm	4	5
1350mm	5	6

Note: Nail points should be equally spaced.

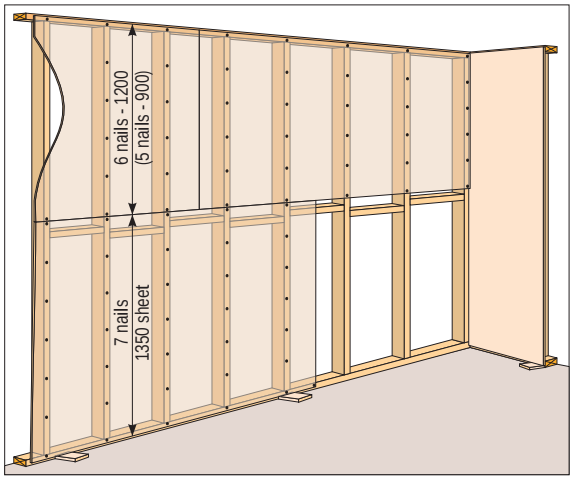


Figure 33 Nail fixing to walls (single nails)
Note: Nail points equally spaced

Butt Joints in Walls

Wherever possible, avoid the need for butt joints by using full length plasterboard sheets.

If sheets must be joined 'end-to-end', the joints should fall centrally between framing members and be supported by back-blocking panels (min 400mm wide) for the length of the joint. Butt joints on opposite sides of the wall should fall between different framing members.

Butt joints in walls may be made on a framing member, however, this may not permit the forming of a recessed joint.

Internal Angles

The ends of plasterboard sheets, at internal angles, may be supported by one of two methods shown below.

Where Category B timber framing is used the sheets must not be nailed/screwed on both sides of the corner and only Method 2 may be used (Figure 35).

Use a metal plasterers angle to support sheet ends at internal angles with only one stud.

Method 1 – Sheets fastened both sides

Internal Corner with 2 studs shown.

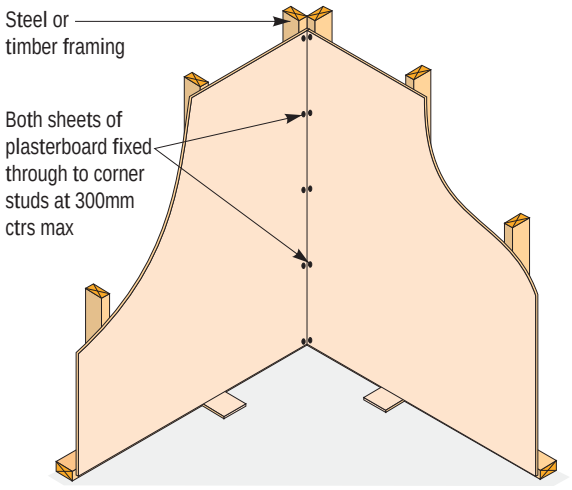


Figure 34 Method 1 – Both sheets fixed

- Position first sheet firmly into corner and fasten along the edge at 300mm centres.
- Fit the second sheet with the edge firmly against the first sheet and fasten at 300mm centres.

Installation

Method 2 – Both sheets floating

Internal Corner with 1 stud + metal angle shown.

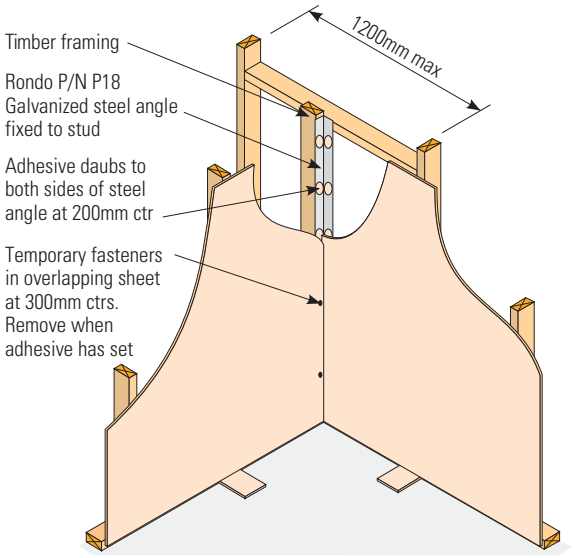


Figure 35 Method 2 – Internal angle – both sheets floating

- Cut the metal angle 10mm shorter than the wall height and tack fix the angle to the stud.
- Apply stud adhesive daubs @ 200mm centres to both sides of the angle.
- Fit the underlying sheet first.
- Fit the abutting sheet second, hard up against the first.

Apply temporary fasteners or surface blocks for 24hrs until adhesive has cured.

Control Joints

Control or expansion joints in plasterboard are used to absorb movement in the underlying substrate and minimise potential stress and cracking in plasterboard surfaces. They are formed by fitting the Rondo P/N P35 Control Joint that leaves a neat, clean and flexible joint.

Control joints should be installed:

- in walls and ceilings at maximum 12m intervals in both directions and at every change of material
- over control joints in the substrate and at every change in substrate material.

Full height floor to ceiling openings can also form effective control joints.

Installation:

- Leave gap of 15mm (minimum) between the ends of plasterboard sheets.
- Insert the surface mounted P35 Control Joint in the gap and fix by stapling or temporary nailing on to the board at 300mm centres.
- Stop and finish the joint.

When dry, remove the filament tape, protecting the centre of the P35, to leave a clean, neat joint.

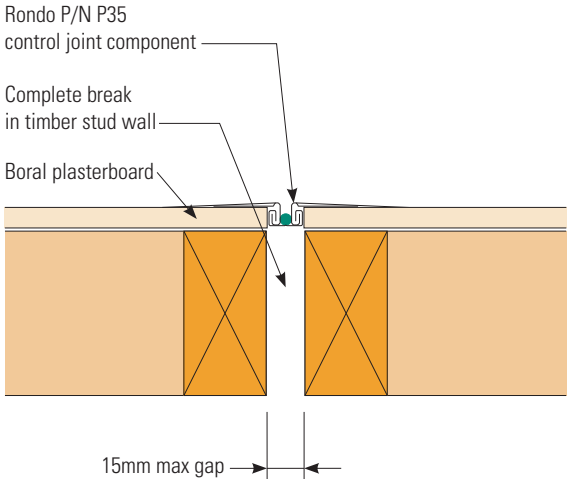


Figure 36 Control joint in stud wall

Installation

Door Jambs

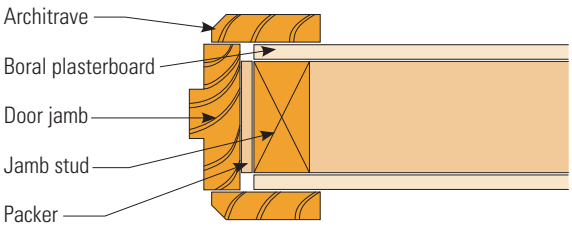


Figure 37 Timber framing

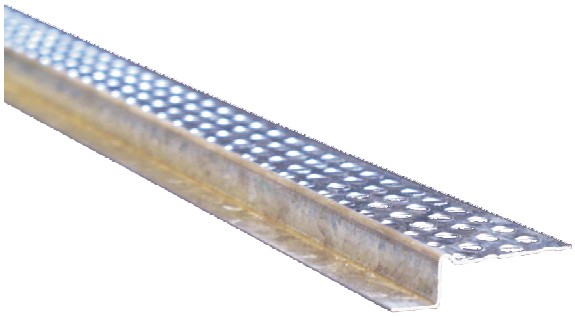


Figure 38 Shadowline stopping angle Rondo P/N P50

Trims

A variety of trims exist for finishing corners, edges and joints of plasterboard to create neat sharp lines, minimise cracking and to offer a higher level of impact resistance.

Trims may be fixed with nails, staples or with cornice adhesive and then stopped and finished with the normal 3-coat system.

Shadowline Stopping Angle

The Rondo P/N P50 Shadowline Stopping Angle can be used to neatly finish plasterboard where:

- a set joint or internal corner is not possible
- cracking may occur
- a shadowline effect is required such as:
  - plasterboard and masonry wall junctions
  - ceiling and wall junctions
  - door and window jambs.

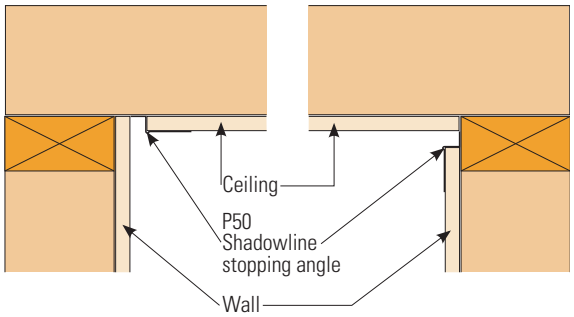


Figure 39 Shadowline stopping angle at ceiling

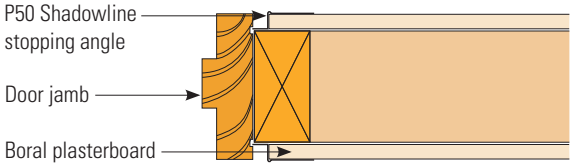


Figure 40 Shadowline stopping angle at door jamb

Installation

Garage, Eaves and External Ceilings

Ceilings in garages, carports, eaves and verandahs are subject to more extreme loads and conditions than standard internal construction and require more attention to their fixing and detailing.

Factors contributing to these loads and adverse conditions include:

- wind pressure/load
- condensation
- roller door vibrations
- insufficient perimeter support
- exposure to atmospheric variations such as humidity and temperature extremes.

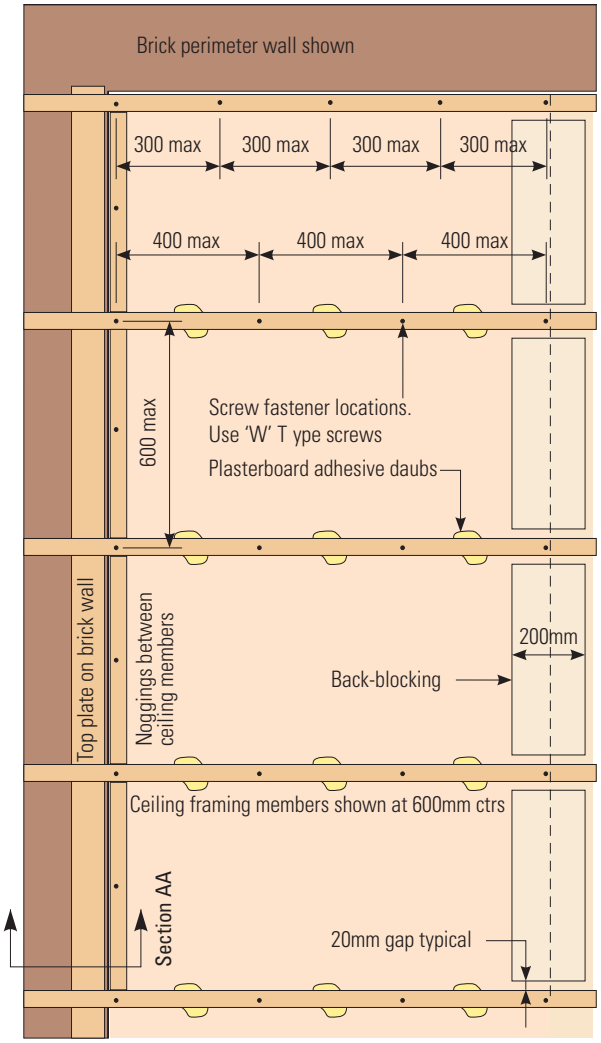
Design notes

- Use 13mm Standard Core or 10mm UniSPAN™ plasterboard for garage ceilings and eaves and verandahs in sheltered/ protected areas.
- Provide foil sarking and good ventilation to prevent condensation pooling on the top face of plasterboard.
- Provide a min. 6mm wide gap between the edges of plasterboard sheet and adjacent walls, beams, columns and fascias.
- Fascia boards should extend a minimum of 6mm below plasterboard or adjacent trim moulding, whichever is lower, to provide a drip edge.

Installation of Garage Ceilings

- Ensure there are adequate perimeter noggings.
- Space adhesive daubs as illustrated.
- Use the 1/3 fixing method for fasteners as illustrated.
- Fasten the perimeter lines @ 300mm centres as illustrated.
- The lower portion of the cornice may require fastening to perimeter timber beams above roller doors.
- A Rondo metal plasterer's angle (P/N P18), could also be fastened to the beam to provide concealed added support to the ceiling at the rear of the cornice.

Thicken cornice adhesive to avoid dribble on brick wall face.



Plan of Ceiling Fixing Points. 1/3 Fixing Method.
Layout shown for 2400mm x 1200mm plasterboard sheet.

Figure 41 Garage ceiling fixing layout

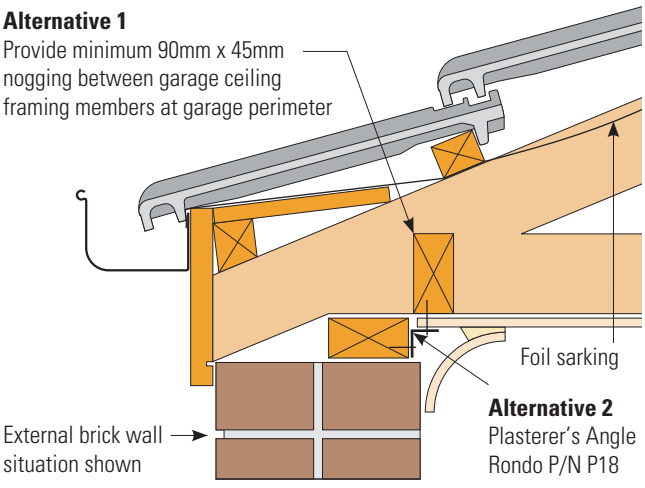


Figure 42 Section AA through garage ceiling

Installation (cont)

Installation of Eaves and External Ceilings

- Framing members should be spaced at max. 450mm centres. In areas where ceiling joists or roof trusses are spaced at more than 450mm, suitable ceiling battens should be provided at max. 450mm centres. Metal ceiling battens and furring channels should be installed in accordance with Rondo specifications.
- Run plasterboard sheets at right angles to framing members.
- Ceiling linings should be fully screw fixed at max. 300mm centres. 32mm 'W' type screws should be used for fixing into timber framing. 25mm 'S' or 'D' type screws, as appropriate, should be used for fixing into steel framing.
- Back-block all joints in ceiling linings as per Boral Plasterboard back-blocking specifications
- Control joints should be provided in external ceilings at max. 6m centres in both directions
- External ceilings should be painted with three coat exterior paint system applied in accordance with manufacturer's recommendations.

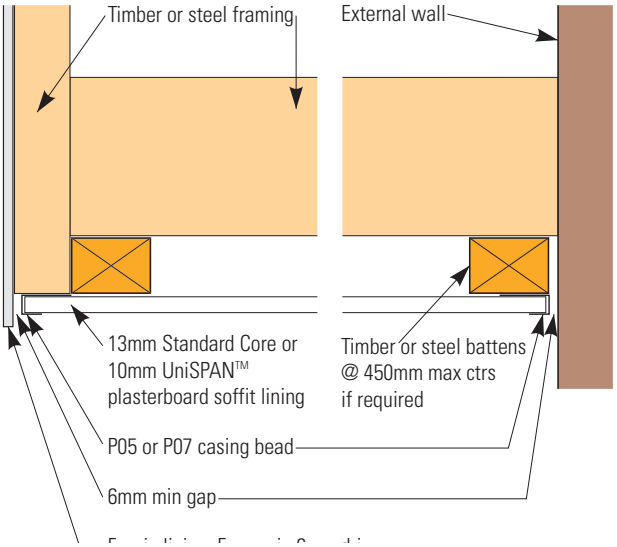


Figure 43 Section through eaves

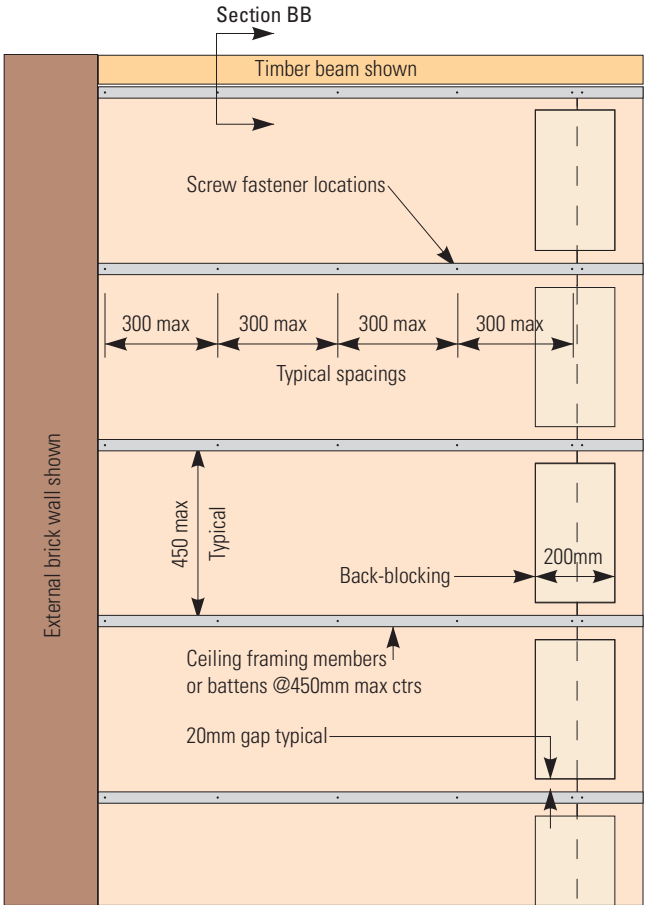


Figure 44 External Ceiling Fixing Layout (1200mm wide plasterboard sheets)

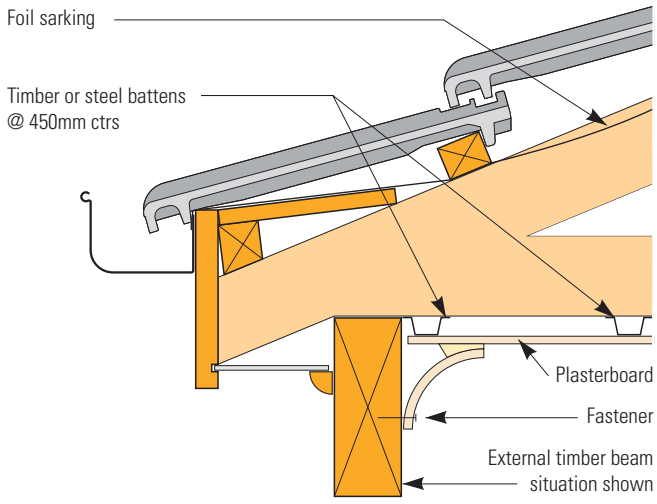


Figure 45 Section BB through external ceiling

Installation

Masonry Walls

Design

A fast, dry alternative to cement render and solid plaster finishes is to fix Boral plasterboard over masonry walls.

Two common methods include:

- fixing sheets directly to masonry using Boral Masonry Adhesive
- fixing sheets over timber battens or metal furring channels fastened to masonry.

It is essential that all new masonry surfaces be allowed to dry to normal levels before installing Boral plasterboard sheets.

Masonry walls in wet areas, such as bathrooms and laundries may be covered with Boral Wet Area Plasterboard as per the Wet Area Installation requirements.

Wet Area Plasterboard in tiled areas must be mechanically fastened to furring channels or timber battens and never fixed using the direct adhesive method.

Masonry walls should be checked for flatness and level using a straight edge or string line before determining the fixing method.

Adhesive method should not be used for walls over 3.6m high or where the wall surface requires more than 25mm of packing to bring it back to a true line.

All services should be in place prior to plasterboard installation. The batten/furring channel method will allow a cavity space for services to run between the masonry wall and plasterboard as well as providing a true fixing surface and air flow.

Butt joints, control joints, stopping and finishing should be carried out as per standard practice.

Installation Using Adhesive Method

Masonry walls must be dry and free from dust, oil, flaking paint, efflorescence, release agents, or any other material that could adversely affect the bonding of an adhesive.

Adhesives can also be affected by the porosity and/or previous surface treatment of a wall. Surfaces that are particularly dry or porous may need to be dampened or coated with a bonding agent before applying adhesive.

Adhesive may be applied to either a wall or to the back of a sheet. (If glueing plasterboard to an Autoclaved Aerated Concrete (AAC) wall, then adhesive should only be applied to the back of the sheet.)

For best results, it is important to:

- mix only enough adhesive to fix one sheet of plasterboard at a time
- not use adhesive once it has started to harden or set
- hold sheets in position with props or masonry nails until the adhesive sets.

Installation

Adhesive Method Installation Notes

- Strike chalk lines on the floor and ceiling as a guide for positioning sheets. Allow for board and daub thicknesses.
- Mark lines on the wall to assist in positioning the adhesive daubs.
- Adhesive daubs should be about 50mm diameter by 10mm thickness.
- Space adhesive daubs at maximum 450mm centres vertically and horizontally and 50mm from the edges and ends of sheets. End ribbons will provide total support at butt joints.
- Alternatively, a 'solid wall' effect can be achieved by applying cornice or masonry adhesive to the entire back face of the sheets, using a 15mm x 15mm notched trowel.
- Keep sheets 10mm off the floor.
- Place plasterboard and press firmly into position using a long straight edge to level the sheets vertically and horizontally.
- Hold the sheets in position with props or masonry nails until adhesive sets.

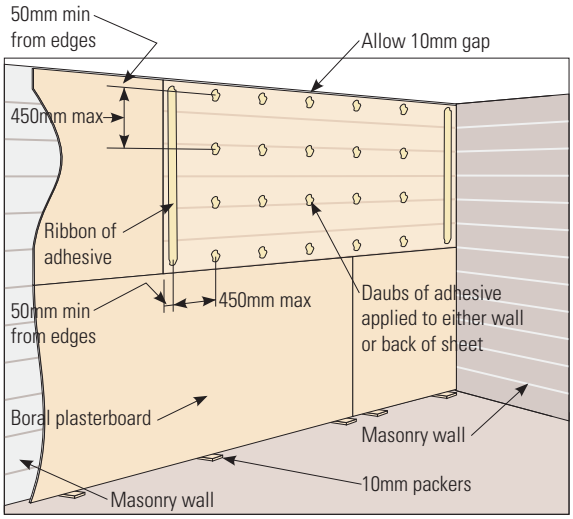


Figure 46 Fixing to a true wall surface

Fixing to Irregular Wall Surfaces

- Wall surfaces with high/low spots over 15mm or out of plumb by more than 15mm will need to be straightened with a series of levelling pads or installed using furring channels.

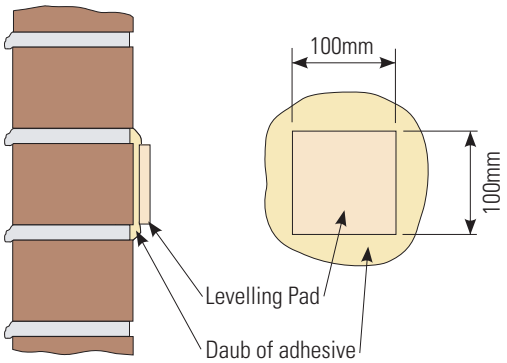


Figure 47 Levelling pads

Note:

The Adhesive method is not recommended for walls higher than 3.6m.

Installation

Installation Using Furring Channels

Boral plasterboard sheets can be installed on masonry walls with the use of metal furring channels or timber battens. Metal furring channels can either be direct fixed or clipped:

For direct fix channels

- Use one of the following:
  - Rondo Ceiling Batten P/N 301
  - Rondo Recessed Furring Channel P/N 333
  - 42 x 19mm (min) timber battens.
- Pack where required to achieve a true surface.
- Fix to masonry with suitable fasteners.
  Refer Figure 48

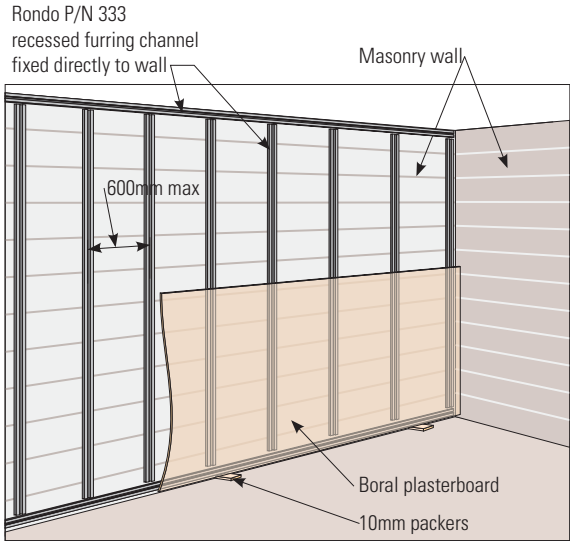


Figure 48 Fixing to furring channels fastened direct to wall

Figure 50 Recessed Furring channel
Rondo P/N 333

For clipped channels

- Use one of the following:
  - Rondo Furring Channel P/N 129
  - Rondo Furring Channel P/N 308
  - Rondo Fixing Clips P/N 237 or P/N 239
  - Beta Fixing Clips
- Set out fixing clips for vertical channels spaced at maximum 600mm centres and top and bottom horizontal channels.
- Pack where required to achieve a true surface.
- Fix to masonry with suitable fasteners.
  Refer Figure 49

Fix plasterboard to furring channels using the appropriate method (adhesive + fasteners or fasteners only) then joint and finish in the normal manner.

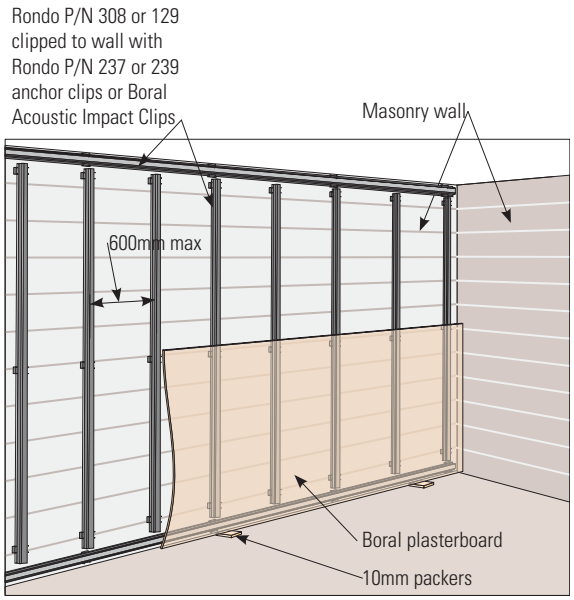


Figure 49 Fixing to furring channels clipped to wall

Installation

Boral Wet Area System™

Application

Boral Wet Area System™ is designed for use in residential buildings and other buildings where the usage of wet areas is similar to that in residential buildings.

A Wet Area is defined as an area within a building supplied with water from a water supply system and includes bathrooms, showers, laundries and sanitary compartments.

The extent of wall treatment in wet areas is shown in Figures 51-56.

Description

Boral Wet Area System™ is a wall system comprising Boral Wet Area Plasterboard™, Boral Wet Area Taping Cement™, Boral Wet Area Sealant™ and Boral Wet Area SealCote™ (if required).

Boral Wet Area System™ must be installed in accordance with Boral specifications in order to achieve the intended performance and to be covered by the manufacturer's Guarantee.

Standards

Boral Wet Area System™ complies with the requirements of AS3740-2004 'Waterproofing of wet areas within residential buildings'.

Note: In South Australia the installers should also refer to Minister's Specification F1.7 for additional waterproofing requirements in wet areas.

Boral Wet Area Plasterboard is manufactured to the requirements of ASTM C630 'Specification water-resistant gypsum backing board'.

Two liberal coats of Boral Wet Area SealCote™ (min coating 500ml/m^2 each coat) constitute a waterproofing membrane complying with the requirements of AS/NZS 4858-2004 ' Wet area membranes'.

Boral Wet Area Plasterboard™

Boral Wet Area Plasterboard™ is manufactured with a moisture resistant core that stops water wicking up the board causing damage to the substrate or surface finish.

Boral Wet Area Plasterboard™ can be recognised by its blue-grey face liner and is manufactured with recessed edges for flush jointing within and outside of tiled areas.

Boral Wet Area Plasterboard™ must:

- be fixed to framing only with mechanical fasteners when used as a substrate for tiling. Stud adhesives must not be used in tiled areas.
- be faced with ceramic tiles or other approved water resistant materials when installed in wet areas
- only be applied to timber or steel framing or to a base layer of Boral Wet Area Plasterboard™, never to other types of plasterboard, plaster (gypsum or cement) or similar materials. Multiple layers of Boral Wet Area Plasterboard™ must be fastened to framing individually.
- be jointed with paper tape
- not be installed over a vapour barrier
- not be used in critical exposure areas such as group shower rooms or steam rooms
- not be used in un-protected external applications
- not be used if fractured or damaged.

Installation

Extent of Wet Areas

Enclosed Showers

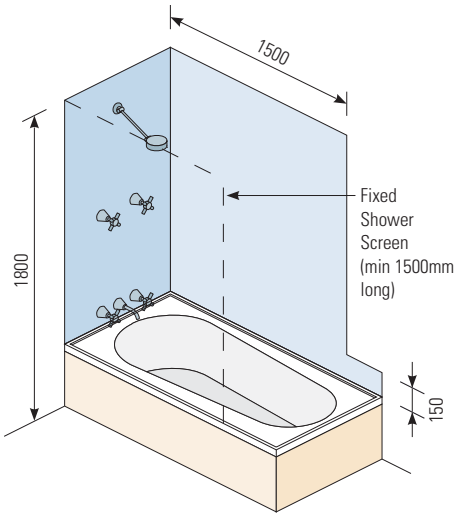


Figure 51 Enclosed shower over bath

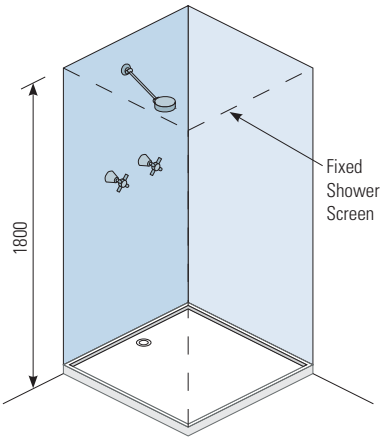


Figure 52 Enclosed shower

Note:

A shower fitted with a frameless glass shower screen, shower curtain or screen over a bath less than 1500mm long is not considered to be an enclosed shower.

Unenclosed Showers

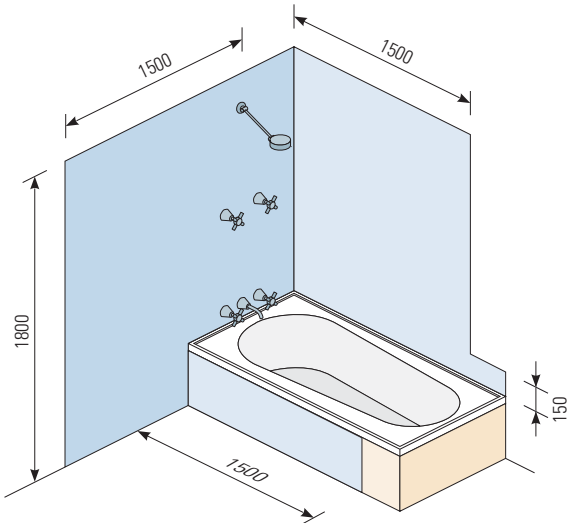


Figure 53 Unenclosed shower over bath

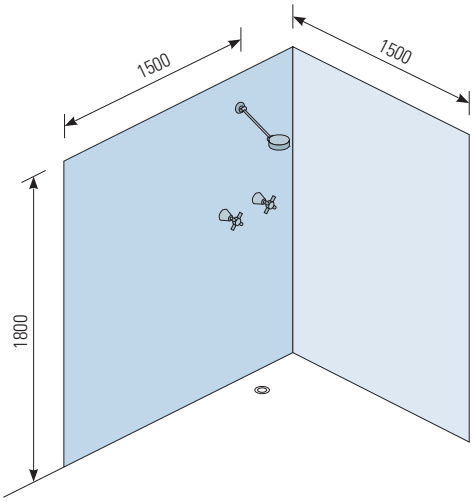


Figure 54 Unenclosed shower

Installation

Extent of Wet Areas

Other vessels

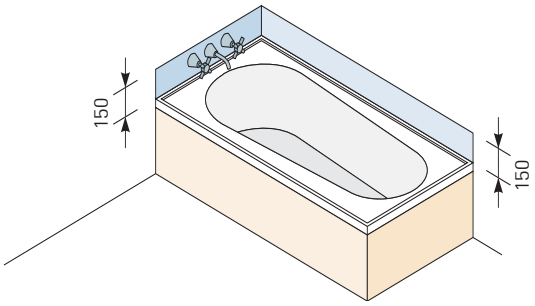


Figure 55 Bath

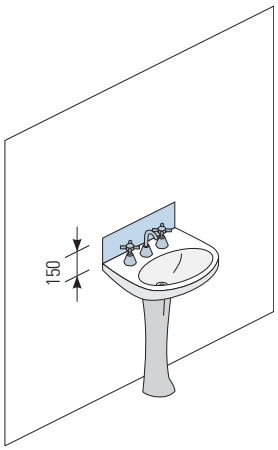


Figure 56 Basin

Waterproofing of Joints and Junctions within Wet Areas

Joints and junctions within the wet area must be waterproofed prior to installation of tiling or other approved surface materials.

Unless a waterproofing membrane installed by a specialist contractor and complying with the requirements of AS/NZS 4858-2004 is applied over the whole face of wet area walls, joints and junctions within the wet area must be waterproofed with two liberal coats of Boral Wet Area SealCote™ (min coating 500ml/m^2 each coat) over Boral Wet Area Taping Cement™. Minimum extent of waterproofing of joints and junctions is outlined in Table 10.

Cut edges of plasterboard at wall-floor junctions (including preformed shower bases and over bath lip) must be protected by sealing with Boral Wet Area Sealant™ (refer Figures 68-71).

Waterproofing of Penetrations

Cut edges of plasterboard at penetrations for taps, shower nozzles and the like must be waterproofed by sealing with Boral Wet Area Sealant™ or a proprietary flange system (refer Figure 66).

Fastener penetrations must be waterproofed with two liberal coats of Boral Wet Area SealCote™ (min coating 500ml/m^2 each coat) over Boral Wet Area Taping Cement™.

Waterproofing of Wet Area Joints and Junctions — Table 10

Wet Area Location	Wall-Floor Junctions	Wall Joints and Junctions
Showers (enclosed and unenclosed).	Waterproof to 150mm min above the shower floor level or 25mm min above the max retained water level.	Waterproof internal and external corners and horizontal joints to a min height of 1800mm above the floor level with a minimum width of 40mm min either side of junction.
Areas adjacent to baths and spas.	Waterproof min 25mm above bath or spa lip (recessed bath) or supporting horizontal surface (insert bath).	If a shower is included in a bath, refer to the requirements for shower areas.

Installation

Wet Area Materials

Boral Wet Area Plasterboard™

Complies with the performance requirements of ASTM C 630 'Specification for water-resistant gypsum backing board'.

Boral Wet Area Plasterboard™ can be recognised by its blue-grey face liner and is manufactured with recessed edges for flush jointing within and outside of tiled areas.

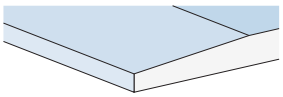


Figure 57 Boral Wet Area Plasterboard™

Boral Wet Area Sealant™

Boral Wet Area Sealant™ is a flexible acrylic water-resistant sealant suitable for sealing:

- junctions and cutouts
- bottom of sheets in shower bases or bath abuttments
- around plumbing fixtures and penetrations

It is available in 450gram cartridges.

Figure 58 Boral Wet Area Sealant™

Boral Wet Area Taping Cement™

Boral Wet Area Taping Cement™ is used with paper tape for jointing and waterproofing of Boral Wet Area Plasterboard™ sheets in tiled areas.

Figure 59 Boral Wet Area Taping Cement™

Boral Wet Area SealCote™

Boral Wet Area SealCote™ is a water resistant sealer that is painted over the face of wet area plasterboard joints. Two liberal coats of Boral Wet Area SealCote™ (min coating 500ml/m^2 each coat) constitute a waterproofing membrane complying with the requirements of AS/NZS 4858-2004 'Wet area membranes'.

Figure 60 Boral Wet Area SealCote™

Wet Area Flashing Angle

40mm x 40mm galvanised metal angle Rondo P/N P40 is used to support internal corners in wet areas. It is available in 1.8m lengths.

Figure 61 Flashing Angle
Rondo P/N P40

Installation

Preparation of wet areas

Check framing for layout and the fixing of additional noggings to support wet area fittings such as screens and taps and the continuous support for Boral Wet Area Plasterboard™ at the shower base and bath rims.

Boral Wet Area Plasterboard™ sheets are best run the full length of the wall to avoid butt joints.

Ensure sheets sit flat against framing and that plumbing pipes and noggings do not protrude beyond the face of the studs.

Provide adequate noggins 25mm above bath, shower bases, tubs and sinks for fixing the edges of Boral Wet Area Plasterboard™.

Recess preformed shower bases and baths into studs so that Boral Wet Area Plasterboard™ can sit correctly in front of the shower base upstand. This will provide a natural flashing point.

Installation in tiled areas

General fixing notes

- Boral Wet Area Plasterboard™ must be fixed using a full fastener system in tiled areas. Adhesive is not permitted.
- Sheets are usually fixed horizontally.
- Fix the bottom sheet first ensuring the bottom edge is 6–10mm clear of the finished floor level or fixture.
- Neatly cut out penetrations and holes allowing approx 6mm gap for sealant.
- Fix 40 x 40 x 1800mm internal flashing angles where required leaving a 6mm gap top and bottom.

Fixing to walls in tiled areas

- Select screws and nails from Tables 4 and 5 on page 18.
- Hold plasterboard sheets firm against framing while driving fasteners.
- Position screws 10–16mm from sheet edges.

Substrate fastener spacing for wall tiles 6.5mm thick or less:

- 200 centres on intermediate studs
- 150 centres on sheet ends.

Substrate fastener spacing for wall tiles greater than 6.5mm thick.

- 100 centres on intermediate studs
- 100 centres on sheet ends.

Fixing to walls in non-tiled areas

Boral Wet Area Plasterboard™ in non-tiled areas may be fixed as per standard installation applications.
Refer page 20.

Fixing to ceilings in wet areas

UniSPAN™ or Standard Core plasterboard is recommended for ceilings throughout the home. Boral Wet Area Plasterboard™ offers no benefit for ceilings in wet areas.

UniSPAN™ or Standard Core plasterboard should be fixed as per standard installation applications.
Refer page 19.

Installation

Sealing Wet Area Board

Seal penetrations through Boral Wet Area Plasterboard™, such as taps, to the full depth of the board using Boral Wet Area Sealant™.

Seal sheet edges above baths, shower bases, laundry tubs etc to the full depth of the board using Boral Wet Area Sealant™.

Seal floor and wall junctions to the full depth of the board using Boral Wet Area Sealant™.

Figure 62 Seal penetrations

Figure 63 Seal sheet edges over baths, shower bases, laundry tubs

Figure 64 Seal floor and wall junctions

Installation

Jointing and Waterproofing Boral Wet Area Plasterboard™ in Tiled Areas

Boral Wet Area Plasterboard™ in tiled areas should be jointed using Boral Wet Area Taping Cement™ and paper tape.

With a broad knife evenly fill joint recesses with Boral Wet Area Taping Cement™ and also apply to both sides of internal and external angles.

Centre reinforcement paper tape over joints, internal and external angles and firmly bed into the Boral Wet Area Taping Cement™, ensuring there are no trapped air bubbles.

When the tape is embedded, immediately apply a skim coat of Boral Wet Area Taping Cement™ with a broad knife ensuring the tape is completely covered, with no tape curling at the edges.

Cover fastener heads with Boral Wet Area Taping Cement™.

Following application of Boral Wet Area Sealant™, apply a skim coat of Boral Wet Area Taping Cement™ to the cut edges of plasterboard sheets adjoining the shower base, bath rim and around penetrations. Feather out across the surface of the board.

After the Boral Wet Area Taping Cement™ has dried (usually 1–3 hours) waterproof all joints, penetrations and fastener heads with two liberal coats of Boral Wet Area SealCote™ (min coating 500ml/m^2 each coat). Refer to Table 10 for the minimum requirements of waterproofing at joints.

Note:

Application of Boral Wet Area SealCote™ is not required if a waterproofing membrane is applied by a specialist contractor over the whole face of wet area walls.

Step 1

Step 2

Step 3

Step 4

Step 5

Step 6

Step 7

Completed shower enclosure

Figure 65 Jointing and waterproofing of wet areas

Installation

Wet Areas

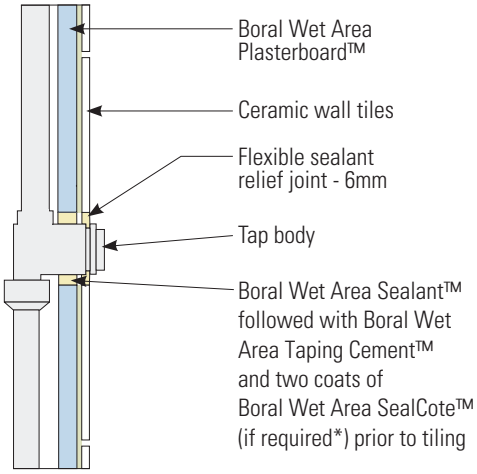


Figure 66 Typical tap penetration

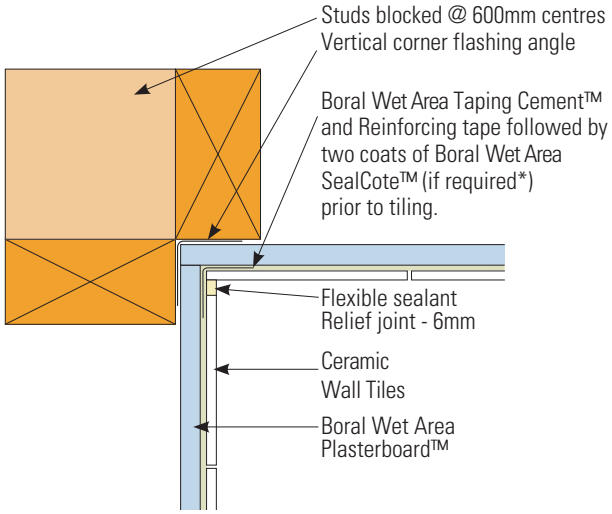


Figure 67 Internal corner

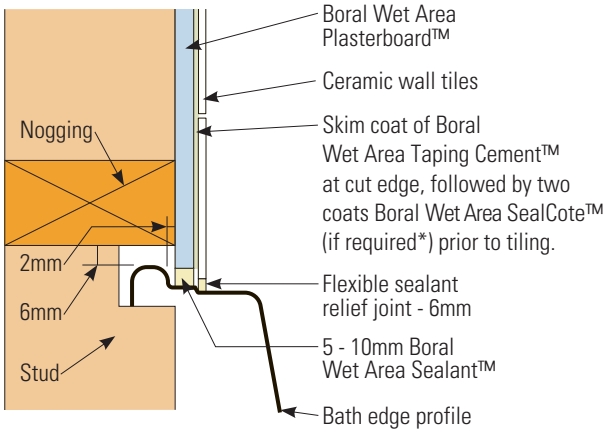


Figure 68 Bath and wall junction

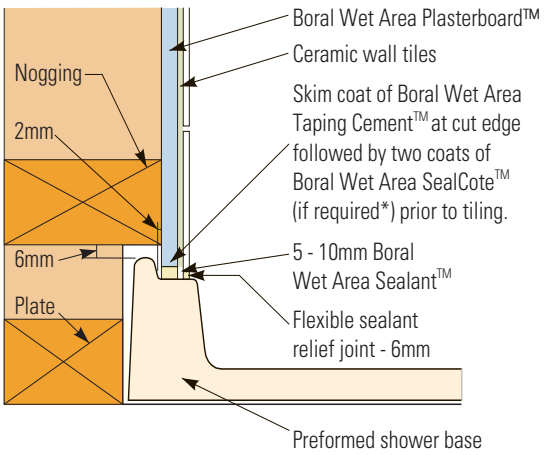


Figure 69 Preformed shower base and wall junction

* The application of Boral Wet Area SealCote™ is not required if a waterproofing membrane is applied by a specialist contractor over the whole face of wet area walls.

Installation

Wet Areas

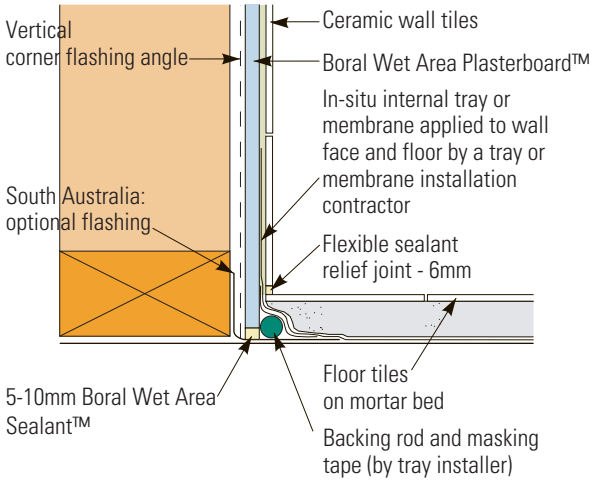


Figure 70 In-situ shower base and wall junction

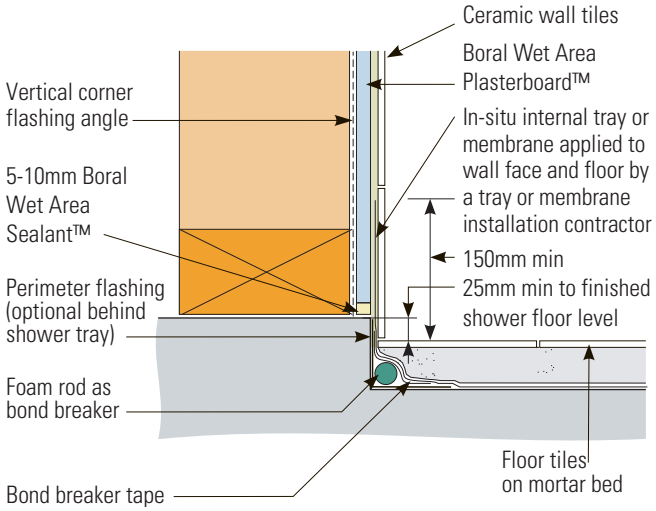


Figure 71 In-situ shower base and wall junction

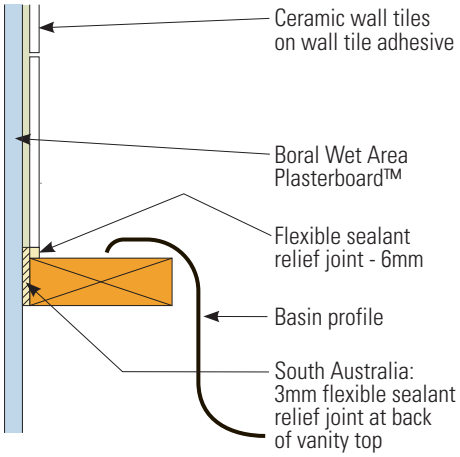


Figure 72 Vanity unit and wall junction

* The application of Boral Wet Area SealCote™ is not required if a waterproofing membrane is applied by a specialist contractor over the whole face of wet area walls.

Installation

Curves and Arches

Curves and arches can be constructed using Boral Standard Core Plasterboard or, for tight radius curves, 6.5mm FlexiBOARD® plasterboard.

Constructing Curved Walls and Ceilings

The minimum bending radii for various thicknesses of plasterboard are as follows:

Bending Radii — Table 11

Plasterboard Thickness	Minimum bending radius for plasterboard fixed horizontally
6.5mm	650mm – concave 450mm – convex
10mm	900mm
13mm	1000mm

Shorter radii can be achieved by moistening the compressed face of plasterboard. When wetting the board, apply a small amount of clean water with a paint roller or sponge. Allow the water to soak for 15 minutes before attempting to bend the board. To prevent flat areas between the studs, space framing closer together than normal.

Note:

- Screw fasteners are preferable to nails to minimise possible impact damage.
- Avoid butt joints occurring in the curved section of the wall by using plasterboard sheets of suitable length.
- Make sure the sheet edge (or end) is correctly aligned to framing before driving fasteners.
- Ensure the board is in close contact with framing when fasteners are driven.
- To ensure a smooth curve, fasten in the field of board only where necessary.
- Fasten only to studs, not to top or bottom plates.

Refer to relevant plasterboard publication for detailed instructions on fixing FlexiBOARD® plasterboard.

Arches

Interior wall arches, framed in timber or steel, may be lined with Boral Plasterboard Standard Core and the arch angles reinforced with Rondo Arch Bead (P/N P10 or P30).

Straight corners below the arch line should be finished with standard corner bead, (Rondo P/N P32 or P01).

Archway templates from min 12mm thick particle board/mdf cut to the required profile must be in place before the installation of Boral plasterboard sheets.

Installation

- Fix Boral plasterboard sheets, horizontally, to studs on one side of the wall as per standard installation.
- Screw/nail fix to templates and around the edge of the arch at 300mm centres or use stud adhesive.
- Keep fasteners a minimum 10mm from the edge of the arch.
- Do not place butt joints over or within 200mm of the arch.
- Allowing a 10mm projection beyond the template, accurately mark the profile of the arch on the back of the sheet.
- Cut out neatly with a keyhole saw.
- Fix sheets on the other side of the wall.
- From the cut side, square the line of cut across to the uncut sheet, mark the curve and cut out neatly as before.
- Cut a strip of plasterboard to fit into the arch soffit, allowing enough length to reach 50mm below the springing line on both sides of the arch.
- Apply continuous beads of cornice adhesive to the back edges of the wall sheets around the arch.
- If the arch has a tight radius, dampen the soffit strip to assist bending.
- Fasten one end of the soffit strip 50mm below the springing line and bed the strip into the cornice adhesive, progressively working around the arch.
- Check that the soffit strip is installed neatly and tightly throughout the arch and fix the free end.

Installation

- Cut plasterboard strips for the side of the archway and fix using Stud Adhesive or fasteners.
- Bend the Rondo Arch Bead into position around the arch with the short leg on the face of the wall. Allow a minimum of 150mm projection below the springing line at each end.
- Fix one end of the arch bead at the springing line, then fix around the remaining arch at maximum 300mm centres.
- Fit standard external corner beads (Rondo P/N P32 or P01) to the straight sides of the archway at 300 centres.
- Joint and finish as per standard methods.

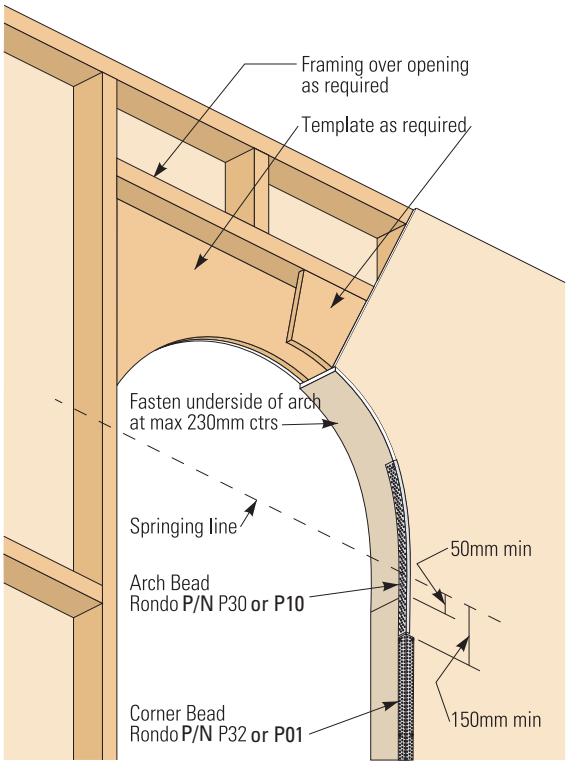


Figure 73 Arch construction

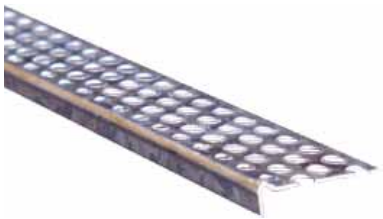


Figure 74 Arch bead Rondo P/N P10

Cornices

Boral Plasterboard paper-faced cornice comes in a range of styles, sizes and profiles including:

- ScotiaCove® (50mm, 75mm, 90mm)
- ClassiCove™.

Alternatively, true period style plaster cast cornices, ceiling roses and decorative items are available through Boral Direct outlets.

The installation methods detailed below are applicable to most cornices.

Handling and Layout

- Cornice should be carried and handled 'on edge' to avoid cracking the core or wrinkling the paper liner.
- Where possible, use full lengths of cornice and mitre all joints.
- Ensure accurate and level placement by marking ceilings and walls with a line at the cornice edge.
- Measure and precut cornice to length before mixing the Cornice Adhesive.
- Install shorter lengths of cornice first then fit longer lengths by bowing out to spring mitres into place.

Cutting Cornice

- Measure, mark and cut cornice with a mitre cut each end, using a fine-tooth saw and a mitre box.
- Cut internal angles from the long point, and external angles from the short point.
- Check each cut piece of cornice for actual fit.

Figure 75 Cornice mitre box

Installation

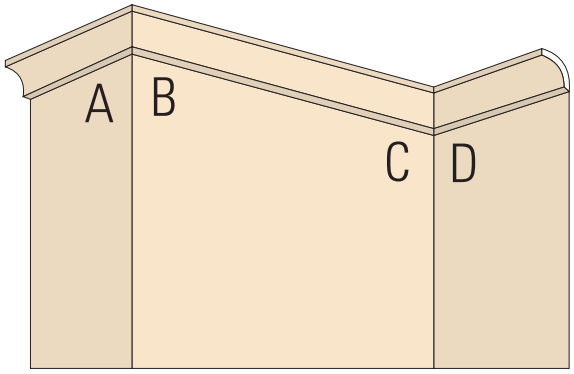
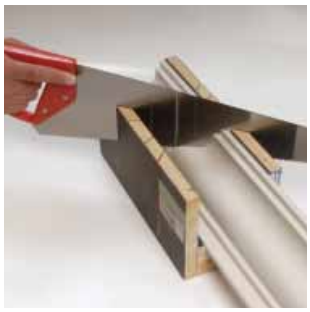


Figure 76 Cornice layout



Position A

Position B

Position C

Position D

Figure 77 Cutting cornices using a mitre box

Cornice Adhesive

- Fix cornice to plasterboard walls and ceilings using Boral Cornice Adhesive with nails as temporary support for 20 mins.
- Only mix quantities of cornice adhesive that can be used before setting.
- In hot and dry conditions, take care to avoid premature drying of adhesive and subsequent loss of adhesion.
- In these conditions, surfaces may need to be slightly dampened.
- Use clean water and containers for mixing.
- Add Cornice Adhesive powder to water and mix to a useable paste.
- Avoid overmixing as this may accelerate setting.

Reinforcer

The Reinforcer is a perforated plastic unit that was designed specifically to prevent joint and mitre cracks in paper-faced cornices.

When installed correctly, the Reinforcer will greatly reduce the risk of cornice cracking due to normal building movement.

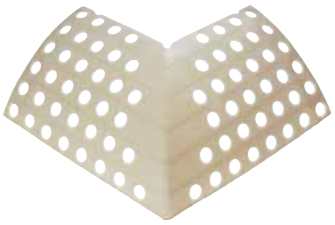
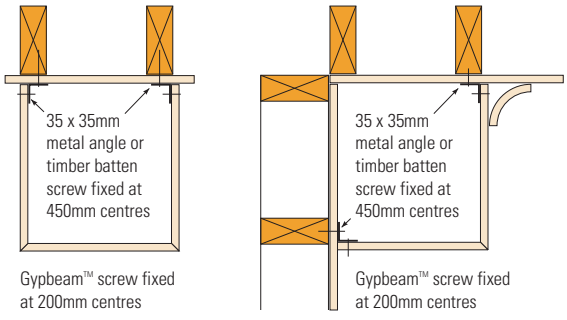


Figure 78 Reinforcer

Gypbeam™

Gypbeams™ are prefabricated plasterboard bulkhead and column sections that can be manufactured in a variety of shapes and sizes. Due to a high strength and continuous paper surface provided by a unique manufacturing process, Gypbeams™ require minimum structural support, finishing and decoration. The installation details below can be used for both wall and ceiling applications.



Boxed Gypbeam™ Corner Gypbeam™

Figure 79 Gypbeams™

Jointing and Finishing

General

Jointing and finishing of plasterboard should be carried out according to the required Level of Finish. Refer page 8.

Level 4 is the generally accepted Level of Finish for domestic construction. It requires all joints and internal angles to be taped and coated as follows:

- bed jointing tape into an initial coat of joint compound
- apply a second coat of joint compound
- apply a finishing top coat.

The joint compound should be finished smooth and be free of tool marks and ridges. Internal angles are to be completed with a two coat application.

Extreme care must be taken with jointing and finishing where walls or ceilings are subject to critical lighting. Refer to Boral Plasterboard's publication 'Lighting and Decoration – the Facts'.

There are two types of jointing compounds, air drying and setting. A jointing system may consist of one or both of these compounds in combination with jointing tape.

Setting Compounds

Setting compounds are plaster-based and mainly used for basecoating and bedding. They can be applied with either hand or mechanical tools. Additional coats can be added after setting and before drying out but not 'wet on wet'.

Setting compounds suitable for bedding and basecoating include:

- BaseCote™ 45 – approx. 45 min. working time
- BaseCote™ 60 – approx. 60 min. working time
- BaseCote™ 90 – approx. 90 min. working time.

Setting compounds suitable for bedding, basecoating and topping include:

- All Purpose Plaster – approx. 40 min. working time.

Note:

Setting compounds should be used with caution in windy, dry and very hot conditions, as the compound may dry out before setting.

Drying Compounds

Drying compounds are vinyl based, either all purpose (base coating and top coating) or top coating only and may require 24 hours drying time between coats, depending on weather conditions.

Drying compounds suitable for bedding, basecoating and topcoating include:

- All Purpose PreMix™ Compound
- All Purpose DryMix™ Compound.

Drying compounds suitable for top coating include:

- TopCote 550™
- FinalCote™
- All Purpose PreMix™ Compound
- All Purpose DryMix™ Compound.

Note:

Drying compounds should not be applied when the interior temperature is less than 10°C.

Storage

Compounds should be stored in a dry place above ground and protected from the elements and temperature extremes. Storage in an unsuitable environment or once container or bag is opened can shorten the life of the product.

Manufacturer's Warranty

The use of non-specified additives or jointing compounds will void Boral Plasterboard's warranty on the total jointing system.

Jointing and Finishing

Mixing Compounds

For best results:

- Check the 'best before' date on packaging to ensure compounds are fit for use.
- Always use clean, cold water and clean containers and tools for mixing. Using dirty containers/water/tools may affect the setting time and set strength.
- Slowly add powder to water and allow powder to soak for 1–3 minutes before mixing.
- Mix only enough compound for stated working time when using setting compounds.
- Mix by hand or with a power mixer (max. of 400 rpm - mixing at higher speeds will draw air into the mix, creating air bubbles). Mix until a smooth workable paste has been achieved. Avoid overmixing as this may accelerate setting and shorten the working life of the compound.
- For setting compounds, once setting has commenced, the material cannot be remixed and should not be agitated or retempered by the addition of water.
- The inclusion of other materials in the mix could impair the performance of the compound and will void product warranty.

Jointing Tapes

Perforated Paper Tape is recommended for all Boral plasterboard walls and ceilings due to its high strength and suitability for all compounds and jointing applications – standard, wet area, and fire rated.

Boral Plasterboard strongly recommends using only paper tape with all-purpose compounds.

Tools and Equipment

A complete range of plastering tools is available through Boral Plasterboard outlets.

Quality stainless steel plastering tools will ensure the best possible finish and if properly cared for will give a lifetime of service.

Low cost plastic tools are also available and may be suitable where a low cost or disposable tool is required.

Plasterers trestles or scaffolding should be used to ensure correct working heights.

Tools should be cleaned in water before compounds have fully set and stainless steel tools given a light rub with an oil cloth to prevent rusting.

As a safety conscious company, Boral Plasterboard encourages all users to observe the occupational health and safety tips contained on the packaging labels of all Boral Plasterboard products.

Material Safety Data Sheets can be readily obtained by contacting TecASSIST on 1800 811 222, (8.30am–4.30pm EST).

Jointing and Finishing

Materials

Paper Tape

A high strength special cross-fibre slotted paper tape possessing exceptional wet strength. Resists stretching wrinkling and tearing. A wafer thin edge aids smooth finishing and produces a superior bond to jointing cements. Centre creased for application to angles.

Figure 80 Paper tape

Application / Use

Used to provide reinforcement to plasterboard joints and angles.

Size: 22m and 75m x 50mm wide rolls.

BaseCote™ 45, 60 and 90

A plaster-based jointing compound that is suitable for use with hand trowels and mechanical tools.

Figure 81 BaseCote™ 45
BaseCote™ 60
BaseCote™ 90

Application / Use

Used for bedding and basecoating plasterboard joints, angles and spotting fastener heads.

Packaging: 20kg paper bags

Working time: BaseCote™ 45 has a working time of approx. 45 minutes.
BaseCote™ 60 has a working time of approx. 60 minutes.
BaseCote™ 90 has a working time of approx. 90 minutes.

Coverage: For bedding paper joint reinforcing tape and basecoating (2 coats).
20kg (1 bag) will joint approx. 125m^2 of board.

Jointing and Finishing

TopCote™ 550

A premixed, vinyl-based topping compound with a smooth finish.

Figure 82 TopCote™ 550

Application / Use

Used as an economical third or finishing coat over BaseCote™ 45, 60 or 90.
Suitable for use with hand trowels and mechanical tools.
Requires 24 hours min. drying time before sanding.

Packaging: 20kg carton and 20kg pail.

Coverage: 20g (1 pail) will topcoat approx. 270m^2 of board.

FinalCote™

A premixed, vinyl-based finishing compound that is lightweight and easier to sand than TopCote™ 550.

Figure 83 FinalCote™

Application / Use

Used as a premium finishing coat over BaseCote™ 45, 60 or 90.
Suitable for use with hand trowels and mechanical tools.
Requires 24 hours min. drying time before sanding.

Packaging: 20kg pail.

Coverage: 20kg (1 pail) will topcoat approx. 250m^2 of board.

Jointing and Finishing

Stopping Recessed Joints

Recessed joints should be stopped and finished with a straight or curved trowel to leave a slightly convex camber over the joint.

First Coat

- Fill recessed joint with a layer of BaseCote™ 45, 60 or 90 using a flexible 75 or 100mm broadknife.
- Centre and press the paper tape into the BaseCote™ compound using a 150mm broadknife, drawing along the joint with sufficient pressure to remove excess compound.
- Ensure all air bubbles have been expelled, taking care sufficient compound is left under the tape to provide a strong bond.
- After embedding tape, apply a skim coat of compound.
- Spot fastener heads.

Second Coat

- Allow at least one hour for BaseCote™ 45 or 60 to set (1.5 hours for BaseCote™ 90).
- Apply a second coat of compound approx 200mm wide, using a trowel or broadknife.
- Feather joint edges.
- Spot fastener heads again, extending beyond the first coat by 25mm.

Finishing Coat

- Ensure base coats have set and scrape to remove any rough spots or lumps.
- Using a trowel, apply a coat of finishing compound approx 250mm wide, feathering out at least 50mm beyond edges of the basecoat.
- Use a curved trowel on the finishing coat to produce a slight convex curve.
- Feather out the edges and use a damp sponge to wipe down edges of joints and corners to reduce the need for sanding (wet sanding).
- Allow a minimum of 24 hours to dry, longer in cold, wet weather conditions.
- When dry, lightly sand to a smooth finish with mesh or 150 grit paper (dry sand).

Step 1 – First coat

Step 2 – Bed tape

Step 3 – Skim coat

Step 4 – Second coat

Step 5 – Finish coat

Step 6 – Wet sanding

Step 7 – Dry sanding

Total recessed joint system

Figure 84 Stopping recessed joints

Jointing and Finishing

Stopping Butt Joints

Butt or end joints should be flush-jointed and finished with a three coat system as for recessed joints.

For a flatter finish, and to minimise surface build-up of compound, widen each jointing coat so that the final coat of the finished joint is about 500mm wide.

First Coat

- Using a trowel, apply a thin layer of base compound, approx 150mm wide to each side of the joint prefilling any recess gaps at the joints.
- Centre and press the paper tape into the base compound using a 150mm broadknife, drawing along the joint with sufficient pressure to remove excess compound.
- Ensure all air bubbles have been expelled, taking care sufficient compound is left under the tape to provide a strong bond.
- After embedding tape apply a skim coat of compound over the paper tape.

Second Coat

- Allow at least one hour for BaseCote™ 45 or 60 to set (1.5 hours for BaseCote™ 90) before applying a second coat.
- Apply a second coat of compound approx 200mm wide to each side of the centre.
- Feather joint edges.
- The second coat should have a gradual convex curve.

Finishing Coat

- Ensure basecoats have set and remove any rough spots or lumps.
- Using a straight bladed trowel, apply a coat of finishing compound approx 250mm wide to each side of the joint.
- Feather out the edges and use a damp sponge to wipe down edges of joints and corners to reduce the need for sanding (wet sanding).
- The finished coat should have a slight convex curve.
- Allow a minimum of 24 hours to dry, longer in cold, wet weather conditions.
- When thoroughly dry, lightly sand to a smooth finish with mesh or 150 grit sand paper (dry sanding).

Jointing and Finishing

Corners and Angles

Internal Angles

Internal angles should be jointed with a two coat system using paper tape. Gaps in excess of 4mm should be filled with a setting compound.

Installation:

- Apply compound to both sides of internal corner using a 75mm broadknife.
- Measure and cut reinforcing tape, fold along centreline and bed into angle, using a 50mm corner taping tool.
- Apply a skim coat of compound over tape.
- When dry apply a second coat of compound with the broad knife, then finish with a 100mm corner finishing tool, feathering beyond edges of first coat.
- Use a damp sponge to wipe down the edges of joints and corners to reduce the need for sanding.
- Allow a minimum of 24 hours to dry, longer in cold, wet weather conditions.
- When thoroughly dry, lightly sand to a smooth finish with mesh or 150 grit paper (dry sanding).

Step 1 – Apply base compound

Step 2/3 – Bed tape & apply skim coat

Step 4/5 – Apply second coat & sand

Internal angle jointing system

Figure 85 Stopping internal corners

Jointing and Finishing

External Angles

External corners should be strengthened with perforated metal angles then jointed and finished with a three coat system.

Suitable metal angles include:

- Rondo Corner Beads P/N P01 or P32

Installation:

- Cut corner angle to length and position so that the angle is both straight and in line with the wall surfaces.
- Fix with plasterboard nails at maximum 300mm centres along each face with nails opposite each other.
- Stop and finish with a three coat system as per jointing.
- Ensure that the first coat of compound covers the 150mm angle faces and is forced through the perforations.
- The second coat should extend approx 200mm from the corner bead.
- The final coat should extend approx 280mm back from the corner with the edges feathered out.
- Ensure that the final coat is built up to the corner bead.
- Fix and finish other beads and angles (Shadowline, Stopping angle etc) in the same manner.

Step 1 – Cut angle and fix to both sides of corner @ 300mm

Step 2 – Apply 150mm wide first coat to corner faces

Step 3 – Apply 200mm wide second coat to corner faces

Step 4 – Apply 280mm third coat to corner faces

External Angle Jointing system

Figure 86 Stopping external angles

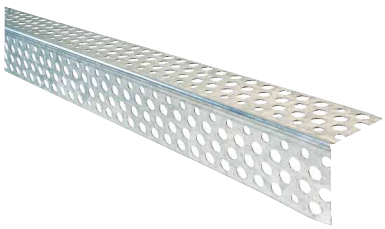


Figure 87 External corner bead Rondo P/N P01

Painting and Decoration

General Requirements

Boral plasterboard linings are an excellent base for:

- painting
- wallpapering
- special finishes.

When preparing and decorating plasterboard surfaces, ensure that only high quality paints and wallpapers etc. are used and applied in accordance with the paint manufacturer's instructions.

If you intend to use satin or high-gloss paint, make sure the plasterboard has an even surface as these finishes will highlight imperfections.

Take care, when sanding and finishing joints and fastener heads, to avoid scuffing the linerboard surface adjacent to the jointed areas.

Surface Preparation

Make sure the Boral plasterboard linings are dry and free of dust, oil, or greasy stains before decorating surfaces. Correct all surface imperfections with an approved filler.

Painting

When painting plasterboard walls and ceilings, follow the procedures set down by the Australian Standard AS2311–1992 The Painting of Buildings.

It is recommended that a coat of quality sealer be applied to the plasterboard surface prior to the application of subsequent coats of paint. Solvent borne sealers are recommended for plasterboard surfaces that may have discoloured due to prolonged exposure to ultra violet light.

Glancing Light

When finishing Boral plasterboard walls and ceilings, consider the effects of glancing light. Walls and ceilings that seem perfectly flat in diffused light may appear rough when lit by light falling parallel to the plasterboard surface.

Avoid glancing light problems through careful planning of lighting and paint application at the design stage (refer page 10).

For more information, refer to the CSIRO Division of Building, Construction and Engineering Report No. TR 90/1 (5th Edition), 'Illumination and Decoration of Flat Surfaces', the FWCIANZ publication 'Glancing Light' or the Boral Plasterboard publication 'Lighting and Decoration – the Facts'.

Technical Enquiries

TecASSIST
add a valuable member to your team
1800 811 222

Through TecASSIST Boral Plasterboard is demonstrating its commitment to providing excellent technical service and support to design, building and construction professionals Australia wide.

A free-call architectural support line, TecASSIST is available to provide sound advice on all matters relating to drywall plasterboard construction.

Combining years of professional experience with the latest design information and technology, the TecASSIST team has the skills to help you.

Boral Plasterboard TecASSIST phone line is open to receive calls from 8.30am to 4.30pm Monday to Friday, Melbourne time (Victorian public holidays excepted).

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Guarantee

Products manufactured and supplied by Boral Australian Gypsum Limited (BAGL) A.C.N. 004 231 976 (trading as Boral Plasterboard) are guaranteed to be of consistent quality and free from any defects.

Boral Plasterboard may limit its liability under this guarantee to, at its option, the replacement or payment of the cost of replacing OR supplying equivalent or payment of the cost of supplying equivalent OR the repair or payment of the cost of repairing products found to be defective.

Health and Safety

For information regarding the safe use of Boral Plasterboard products and accessories please refer to instructions on the product packaging or contact your local Boral Plasterboard Sales Office or TecASSIST for a current copy of the Material Safety Data Sheet.

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The technical information contained in this manual was correct at the time of printing. Building Systems and details are, however, subject to change. To ensure the information you are using is current, Boral recommends you review the latest building information available on the Boral website, contact TecASSIST or your nearest Boral Plasterboard Sales Office.

BORAL