

MULTIPANEL

Waterproof Graded Panel System

Installation guide

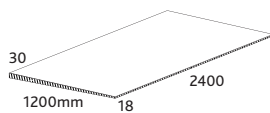
Product information

FALL TYPE	DESCRIPTION	SIZE (MM)	THICKNESS	WEIGHT
TYPE A	Short fall (SF)	2400 x 1200	30 → 18mm	14Kg
TYPE B	Long fall (LF)	2200 x 1200	30 → 8mm	11Kg
TYPE C	V groove	2400 x 1200	30 → 24 → 30	16kg
TYPE D	Drain panel	2400 x 1200	30 → 20mm	15kg
TYPE E	Centre waste	2400x1200	30 → 18mm	14kg
Type F	Thick short fall	2400x1200	42 → 30mm	23kg

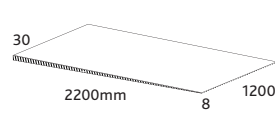
** The panels have a pre graded fall built into the panel with a 1:100mm fall ratio.

GRADED PANELS

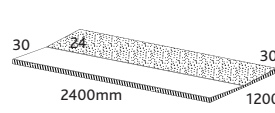
A — Short fall



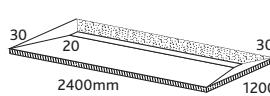
B — Long fall



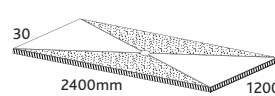
C — V groove



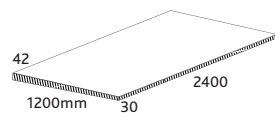
D — Drain panel



E — Centre waste



F — Thick short fall



Application

MULTIPANEL is 100% waterproof, making it an ideal screed replacement for external residential balconies.

This guide will outline two methods of detailing a balcony graded panel system to achieve a 100% waterproof finish. Utilising a combination of Long Fall and Short Fall graded panels can help achieve the fall to waste outlets required.

Adhesion

MULTIPANEL recommends polyurethane adhesive, in conjunction with mechanical fixing, when gluing panels to substrates. The MULTIPANEL PU is recommended and is the preferred method for adhering to a structural platform floor. For alternate adhesives refer to manufacturer's specifications.

A and B surfaces of MULTIPANEL

During the manufacturing process some air pockets may form. These air bubbles are small in size and appear on the "B" side of the panel only. Every panel produced is stamped to advise the "B" side.

CODEMARK Certification

The MULTIPANEL Waterproof Graded Panel System is CODEMARK Certified. For more information on the certification please visit www.multipanel.com.au.

Cutting

Standard woodworking tools can be used for all cutting of MULTIPANEL.

Storage and handling

MULTIPANEL should always be stored flat, on a level surface, and away from direct sunlight. UV light will cause discolouration of MULTIPANEL however will not change the structural integrity.

Safety

MULTIPANEL is an inert, non-toxic, non-carcinogenic material and is not considered harmful, however, inhalation of dust produced during cutting should be avoided.

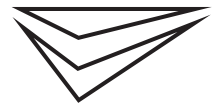
Eye, ear and mouth protection should be worn whenever cutting or sanding MULTIPANEL. Gloves are recommended when applying MULTIPANEL adhesive.

Uncured adhesive may be removed from tools and timber and tiles with alcohol cleaner such as Methylated spirits. Cured adhesive must be removed mechanically.



Certificate CM20270 Rev 2

MULTIPANEL



What is MULTIPANEL?

MULTIPANEL manufactures a revolutionary, high-density, polyurethane composite building panel, ideal for waterproofing balconies as it is lightweight, 100% waterproof, highly versatile and replaces the need for a liquid membrane.

Product advantages

- / Lightweight
- / 100% waterproof
- / Eco-Friendly
- / Labour saving
- / Insulating

Accessories/components supplied by MULTIPANEL

COMPONENT	DESCRIPTION
MULTIPANEL FOAMING Adhesive	PU foaming adhesive 310mL Colour: Opaque
MULTIPANEL SEALANT	PU sealant adhesive. 310mL Colour: Grey
T&G router bit	For creating tongue and groove joint detail
MULTIPANEL Butyl Tape	80mm

Accessories/components not supplied by MULTIPANEL

Screws	For fixing 2.8 x 50mm min class 3 fixing. Refer to manufacturers or suitability
Flashing screws	10-16 x 16mm Self-Drilling screw, Wafer, Class 3
Nails	Nails – min class 3 2.8 x 50mm
Blade	For spreading adhesive over all sheet joints and fixings
Gloves	Recommended when using adhesive

MULTIPANEL Graded Panel Installation method

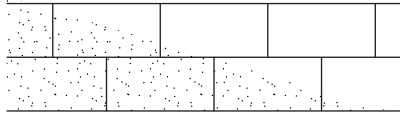
Step 1

Ensure a sound working platform is installed in accordance with AS/NZS 1170.1 – 'Structural design actions'. **NOTE** — Prepare surface ensuring substrate is free from dust and debris.

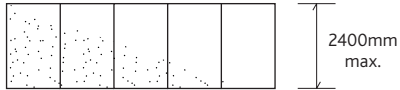
Step 2

PANEL LAYOUT

Ensure sheets are installed in a brick staggered panel layout or a squared panel layout if the balcony is 2400mm or less as shown below. Squared panel layout.



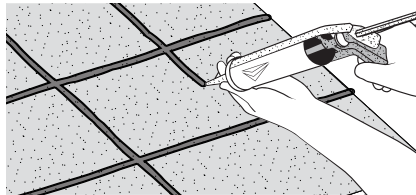
Squared panel layout



Step 3

SURFACE PREPARATION

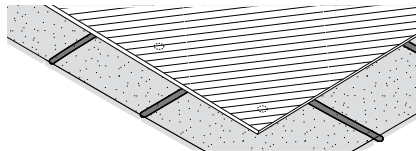
Apply MULTIPANEL FOAMING adhesive in a continuous 3mm bead and in a 300 x 300mm grid pattern as shown above.



Step 4

INSTALLING FIRST SHEET

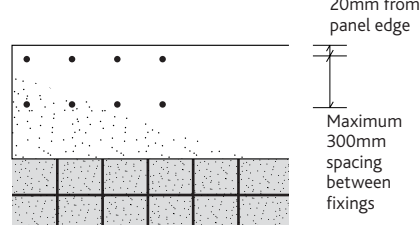
Install first panel working back from the channel grate to ensure correct heights at waste. Refer to linear drain detail to ensure an allowance is made depending on the type of strip drain/box gutter detail used.



** The last row of fasteners adjacent to the next panel should be fixed later.

FASTENER LAYOUT

Min 20mm from edge of panel

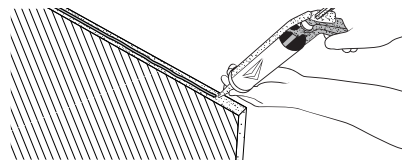


Step 5

INSTALLING SECOND PANEL

Apply MULTIPANEL FOAMING adhesive, in a continuous 3mm bead, to the edge of the graded sheet. Install second

Panel, and fix off remaining fasteners from the previous panel.

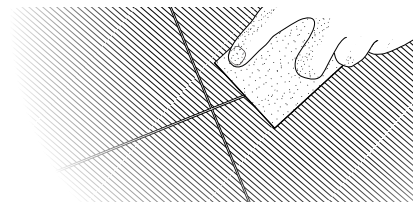


NOTE — ensure the panels are square and in tight using a straight edge and chisel to lever the panel in.)

Step 6

WATERPROOFING THE JOINS

Blade off excess adhesive over the joints ensuring a continuous bead of the MULTIPANEL Foaming adhesive is visible from the top side of the panel. Allow MULTIPANEL FOAMING adhesive three (3) hours for initial set.

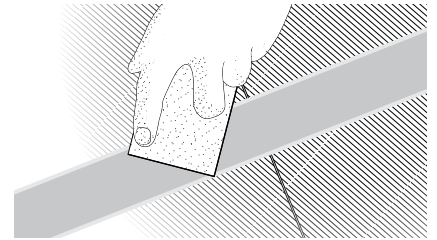


NOTE — This process needs to be repeated 2–3 times or until the MULTIPANEL FOAMING adhesive has finished expanding.

Step 7

WATERPROOFING THE JOINS/FASTENERS

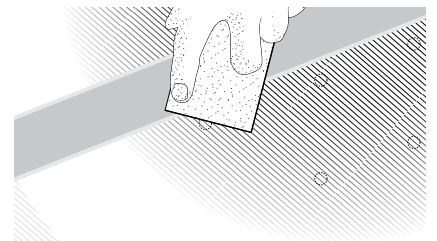
Apply a 80mm bandage of MULTIPANEL butyl tape along the sheet joints and smooth out to prevent air entrapment on the underside of the tape. Apply MULTIPANEL SEALANT over all fixings and penetrations.



Step 8

SEALING FASTENERS

Apply MULTIPANEL SEALANT over all fixings and penetrations.



Optional — Step 9

WATERPROOFING THE GRADED PANEL SYSTEM

Allow 12 Hours for adhesives to fully cure then Apply a liquid/Sheet applied waterproof membrane over the top of the entire graded panel system ensuring compliance to AS 4564.1 and AS 4564.2. For a list of all recommended waterproof membranes, please visit our downloads section available at www.multipanel.com.au/video-downloads

Design Considerations

FRAMING

MULTIPANEL Waterproof Graded Panel System must be installed over a structural platform floor.

Suitable substrates must also be in accordance with AS 4564.2. They include the following:

Concrete, installed to AS3600

Timber, installed to AS1684

Plywood, Installed to AS/NZS 2269

Cellulose – Cement products, installed to AS/NZS 2908.2 or ISO 8336

NOTE — The substrate shall be resistant to moisture damage caused by condensation forming on the underside. Particle board shall not be used as a substrate for external waterproofing systems.

TIMBER FRAMING

Timber framing must be in accordance with AS 1684 – 'Residential timber-framed construction', the building code of Australia and the framing manufacturer's specifications.

Adequate ventilation in the floor space is recommended.

STEEL FRAMING

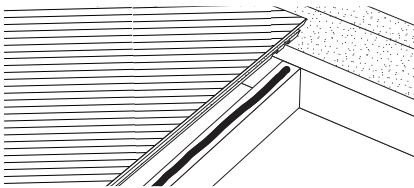
Steel framing must be in accordance with AS 3623 – 'Domestic metal framing' and the framing manufacturer's specifications.

TOLERANCES

Framing must be straight and true. Framing tolerances must comply with relevant codes and manufacturer's specifications.

DRIP LINE AND BOX GUTTER DETAIL

Router out two slots to achieve a drip line with a box gutter. First slot is drip line. Second slot to fit over box gutter edge with MULTIPANEL SEALANT.

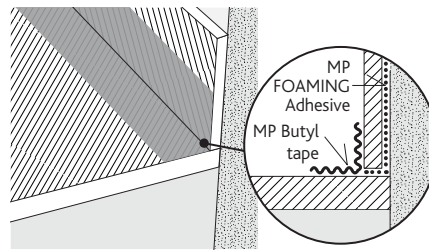


TILING

Install tiles as per AS 3958.1-2007. When tiling, please ensure a compatible polyurethane tile adhesive is used. For a list of recommended adhesives visit www.multipanel.com.au or call MULTIPANEL on (03) 9787 2544.

WALL/FLOOR JUNCTION

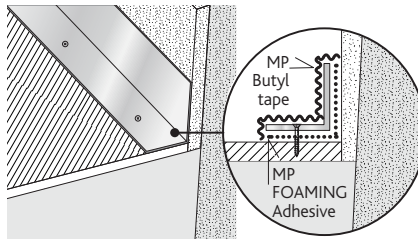
Install MP upstand relevant to wind class classification.* Apply MULTIPANEL Foaming adhesive in a continuous 3mm bead to the subframe and the underside of the upstand to fix to MULTIPANEL flooring substrate as shown in diagram.



Alternate flashing detail

Use minimum 40mm x 50mm metal flashing to seal the corner using MULTIPANEL SEALANT adhesive as shown in diagram below.

NOTE — Upward termination height may vary depending on wind class of building. Refer to table 1.1 on page 5 of guide.

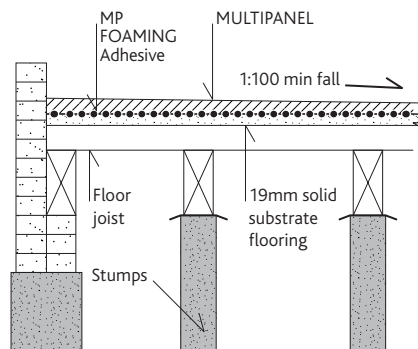


* The thickness of the MULTIPANEL upstand is dependant on the support structure behind it. A minimum 16mm MULTIPANEL upstand is required when wall frame spacings are at 450mm centres. If adhering MULTIPANEL upstands to a solid surface, any thickness MULTIPANEL can be used to suit the overall wall finish.

NOTE — Fix metal flashing with 20mm maximum screws into graded MULTIPANEL and 10mm maximum screws into 16mm MULTIPANEL spaced every 300mm.

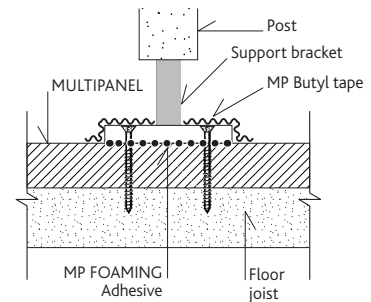
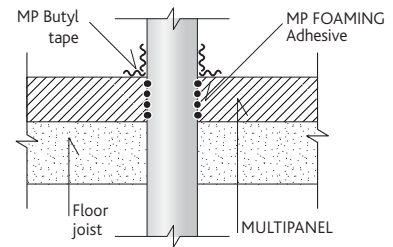
FALL/DRAINAGE

Decks must have a fall to facilitate drainage. Decks must have a fall of at least 1 in 100 away from the building. MULTIPANEL sheets come with pre-graded 1:100 fall therefore the structural platform floor must be laid flat and true.

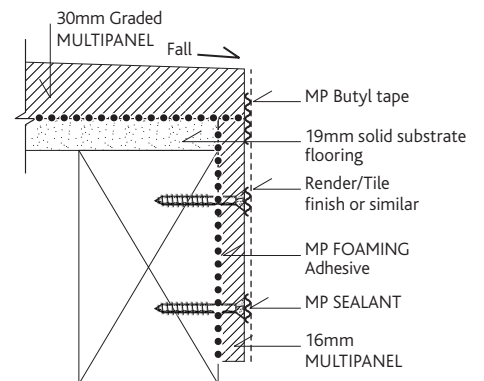


BALUSTRADE

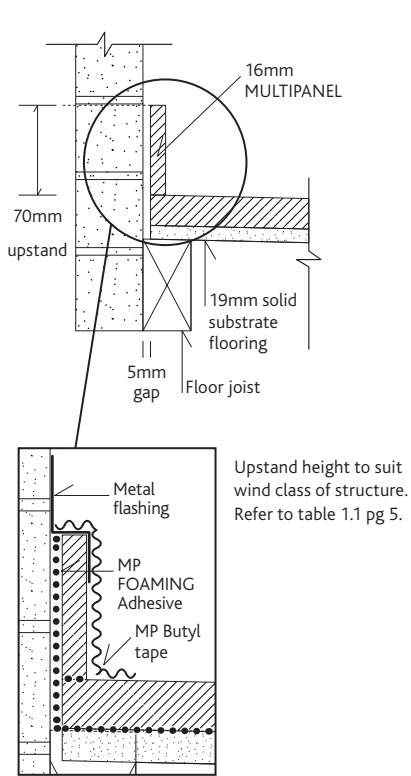
The balustrade upright supports must be fixed to the structural frame and not to the MULTIPANEL Exterior flooring. Ensure that all fixings and penetrations are sealed using MP Butyl Tape around the base support of the balustrade.



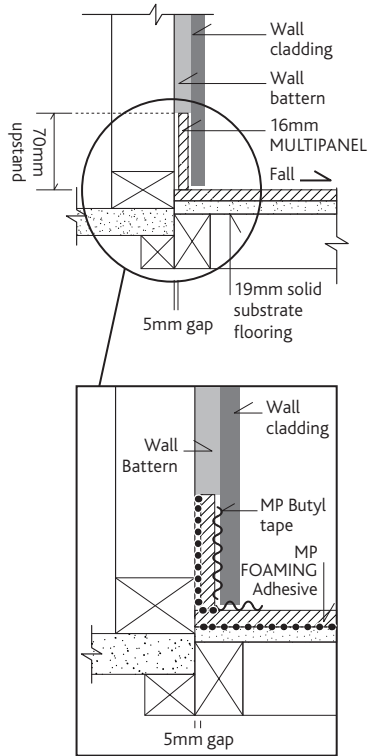
EDGE DETAIL USING PAINT RENDER FINISH



WALL/FLOOR JUNCTION

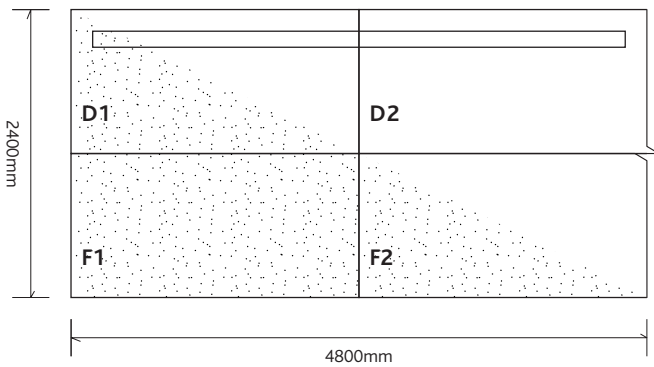


WALL TO DECK FLASHING



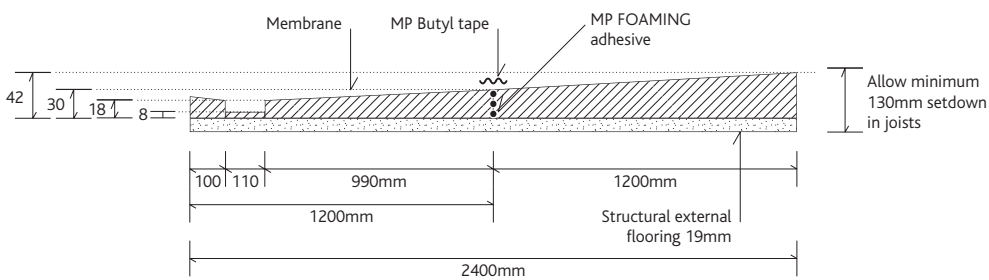
GRADED PANEL SYSTEM TYPICAL LAYOUT

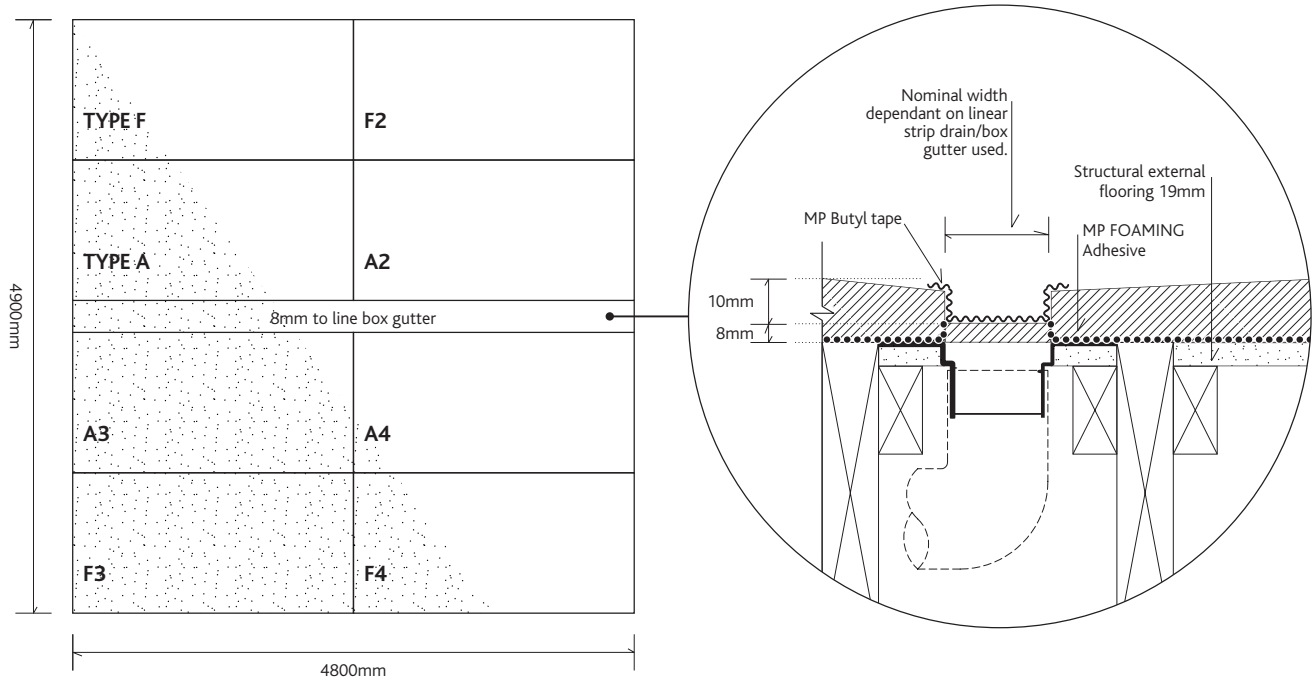
** Can replicate to extend balcony length as long as need be.



Waterproof Graded Panel System detail

TYPICAL GRADED BALCONY PANEL LAYOUT





Design Compliance

All design and construction must comply with the appropriate requirements of the current Building Code of Australia (BCA) and other applicable regulations and standards current at the time of construction. It is the responsibility of the specifier to carry out the necessary design and detailing to ensure the waterproofing and finish, satisfy all relevant codes, regulations and system waterproofing manufacturer recommendations.

STEP DOWN

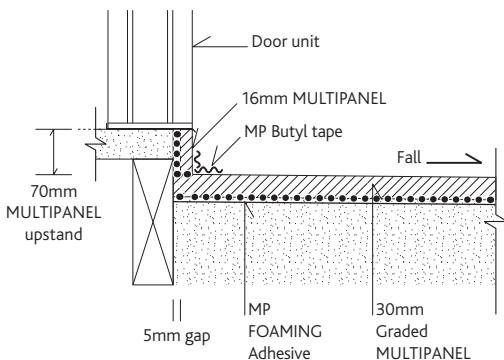
Please refer to the table below to determine the step down which is suitable for locations with a wind class of N1, N2 or N3. A larger step down may be required for other locations (refer to the Building Code of Australia or the relevant building surveyor for further information).

Where a window or door sill butts the wall upstand or flashing, the sill is to be flashed or sealed in accordance with the manufacturer's installation instructions. The following diagrams provide examples of typical installations.

Vertical upward termination heights

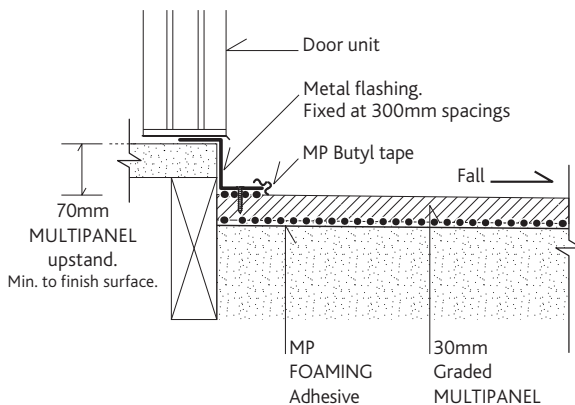
WIND CLASS REGIONS A & B (NON-CYCLONIC) AS 4055	WIND CLASS REGIONS C & D (CYCLONIC) AS 4055	ULTIMATE LIMIT STATE WIND SPEED ($V_{h,u}$) AS/NZS 1170.2	TERMINATION HEIGHT mm
N1	—	34	40
N2	—	40	50
N3	C1	50	70
N4	C2	61	100
N5	C3	74	150
N6	C4	86	180

DOOR SILL



Refer to table 1.1 to determine step down requirements

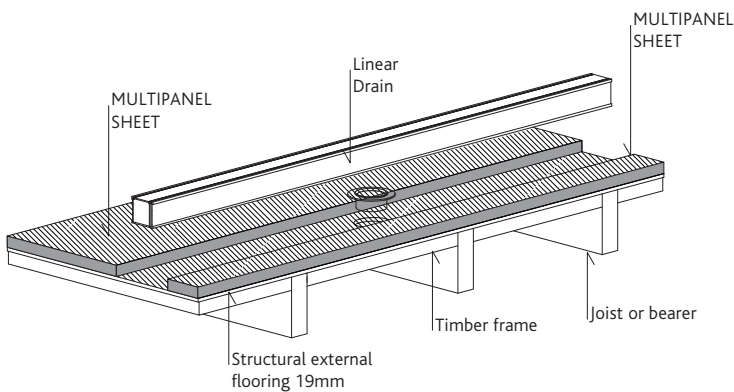
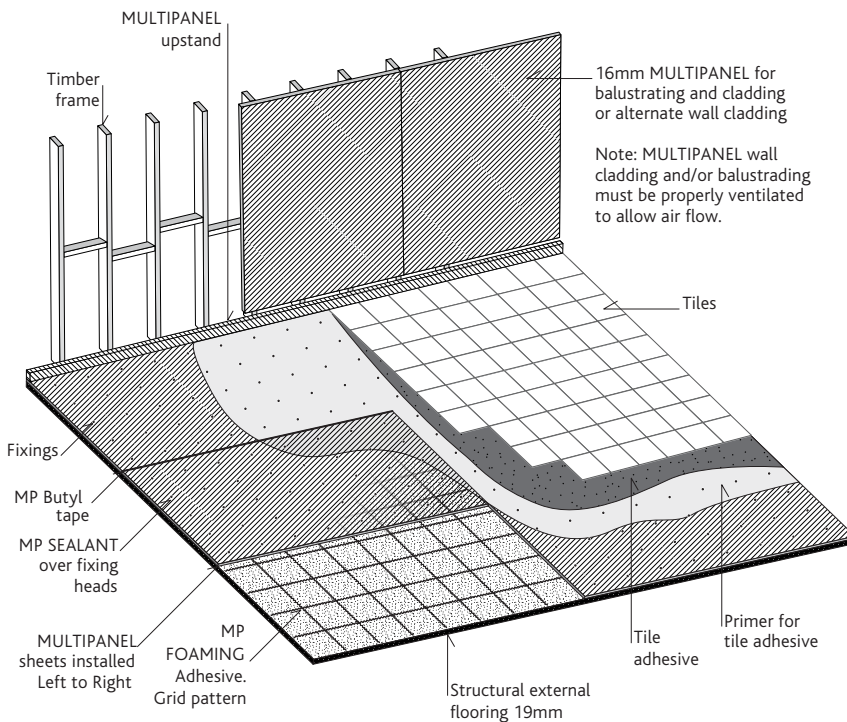
DOOR SILL — WITH METAL FLASHING



Refer to table 1.1 to determine step down requirements

MULTIPANEL Waterproof Graded Panel System

MULTIPANEL sheets installed left to right from gutter low point and work back towards door.



Warranty and conditions

The company warrants the MULTIPANEL Waterproof Balcony ("the product") for period of (10) years ("the warranty period") from the date of purchase, that it will be free from defects due to faulty manufacturing, and will be resistant to cracking, rotting, water, fire, and damage to the extent set out in the relevant MULTIPANEL published literature, and subject to compliance to the conditions set out below.

Conditions of warranty

The warranty is strictly subject to the following conditions (which are in addition to and do not displace the MULTIPANEL Terms and Conditions of Sale).

- a. The product and any other components of the system must be installed in accordance with the relevant MULTIPANEL literature current at the time of installation. Further to all other products including jointing and sealing systems, that are applied or used in conjunction with the product must be installed as per the relevant manufacturer's specifications at the time of installation.
- b. MULTIPANEL will not be liable for, and will not accept any breach of Warranty claims, unless the claimant provides proof of purchase within 30 days of the alleged defect becoming apparent.
- c. Under no circumstances is the Warranty transferable.
- d. MULTIPANEL will not be liable for defects arising from materials and components not supplied by MULTIPANEL, or the use of goods by a person in a manner not consistent with the recommendations made by MULTIPANEL.
- e. A claimant's sole remedy for breach of Warranty is (at the company's option) that MULTIPANEL will repair or replace the defect, pay the cost of replacement or rectification of the affected product, or supply replacement product.
- f. Under no circumstances will MULTIPANEL be liable for any damages or losses to property damage and personal injury, economic loss or loss of profits, arising from contract or negligence or howsoever arising. Without limiting the foregoing, MULTIPANEL will not be liable for any claims, damages or defects arising or in any way attributable to poor or defective workmanship, poor design and detailing, defective materials, structural movement and/or movement of materials to which the product is attached to, acts of God including but not limiting to severe weather conditions or unusual climate conditions, normal wear and tear, or growth of any organism on the product.

Disclaimer

The recommendations in this literature are based on good building practice, but is not an exhaustive statement of all relevant information as the successful performance of the system depends on several factors outside the control of MULTIPANEL, for example the quality of workmanship and design.

MULTIPANEL



MULTIPANEL Pty Ltd
 11 Sonia Street, Carrum Downs
 Victoria Australia 3201
 Phone +61 3 9787 2544
 Fax +61 3 9787 9582
 Email info@multipanel.com.au
 www.multipanel.com.au