

Installation Manual

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WE VALUE YOUR FEEDBACK

To continue with the development of our products and systems, we value your input. Please send any suggestions, including your name, contact details, and relevant sketches to:

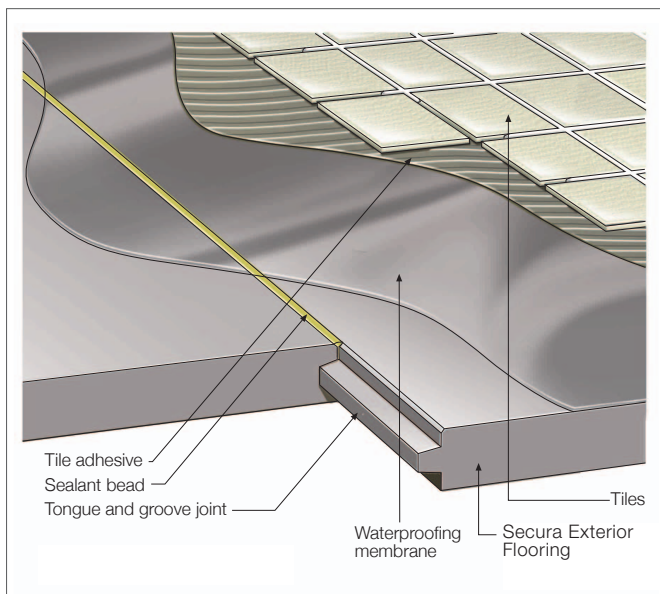
Ask James Hardie™
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1 Introduction

Secura™ Exterior Flooring is a substrate specifically engineered for use in external flooring applications such as balconies and decks to overlay with tiles. Secura Exterior Flooring provides a durable, stable and moisture resistant substrate.

Secura Exterior Flooring is manufactured using James Hardie's unique CLD™ (Ceramic Low Density) fibre cement technology, making it easier to cut and gun nail.

Secura Exterior Flooring is a 19mm thick structural tongue and groove flooring with moisture-resistant sealer applied on all six sides. It has been engineered to provide a long term durability and impact resistance required for external flooring applications and is the most suitable alternative to other timber based exterior products. It's lighter than traditional James Hardie 18mm HardiePanel™ Compressed Sheet thus making it easier to handle and install in upper storey constructions.



Constructing a deck/external floor involves the installation of two components;

1. Installing Secura Exterior Flooring.
2. Waterproofing and tiling (supplied by third party).

To obtain the third party warranty, the entire waterproofing system must be as per the manufacturer. Waterproofing information provided in this manual is only to be used as a guide. James Hardie are not waterproofing experts and therefore the specifier is responsible for the necessary design and detailing to ensure the correct waterproofing and finish are in accordance with waterproofing manufacturers standard recommendations and the NZBC requirements.

All components must be fully compatible with one another.

For information on suitable waterproofing, adhesive and tiles, including installation instructions and warranty, refer to a reputable waterproof, tile adhesive manufacturer. Refer to Table 5.

Two types of decks discussed in this manual are:

1. Water resistant decks (external floor over open outdoor area).
2. Waterproof decks (external floor over habitable area).

Responsibility

The specifier or other responsible party for the project must ensure the information and details provided in this guide are appropriate for the intended application and a specific design and detailing is undertaken for areas which fall outside the scope of this manual. This installation manual must be read in conjunction with other relevant standards/regulations relating to deck construction and various clauses of the New Zealand Building Code (NZBC) applicable to this construction.

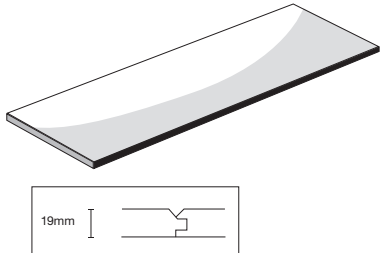
Scope

This installation manual covers the use of Secura Exterior Flooring in external flooring/decking applications areas of buildings within the scope of NZS 3604 or specific engineering design (SED) projects where the loading concentrations do not exceed those specified in the NZS 3604.

Make sure your information is up to date


When specifying or installing James Hardie products, ensure you have the current manual. If you're not sure you do, or you need more information, visit www.jameshardie.co.nz or Ask James Hardie™ on 0800 808 868.



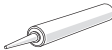
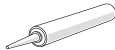





Table 1

James Hardie product information			
Product	Description	Size (mm)	Code
	<p>A structural flooring product sealed on all six sides with mesh on back used in exterior tiled flooring applications</p> <p>Long edges have a tongue and groove for easy jointing across the joists.</p>	2700 x 600	404406

All dimensions provided are approximate only and subject to manufacturing tolerances

Table 2

Accessories supplied by James Hardie			
Accessories		Description	Code
		HardieBlade™ Saw Blade HardieBlade Saw Blade 184mm diameter Used to cut Secura Exterior Flooring	300660

Accessories not supplied by James Hardie					
James Hardie recommends the following products for use in conjunction with its flooring products. James Hardie does not supply these products and does not provide a warranty for their use. Please contact the component manufacturer for information on their warranties and further information on their products.					
Accessories		Description	Accessories		Description
		Backing rod PEF backing rod to be used with sealant in control joints.			Waterproofing membrane Used over the Secura Exterior Flooring in exterior areas. Use the approved water based products and applications as per their manufacturer's recommendations. Refer Table 5.
		Sealant Sealant used in v joint and over fastener heads in tiled applications, Ensure compatible with waterproofing membrane system selected.			Adhesive Adhesive used over joists prior to installation of Secura Exterior Flooring. Bostik Seal 'n' Flex 1 Sika Sikaflex 11FC No more nails Gorilla Grip
		Level/straight edge PEF backing rod to be used with sealant in control joints.			Screws for timber 10g x 40mm wood thread self embedding screws.
		Paslode Impulse FrameMaster			Screws for steel 8-10g x 40-45mm wing tek class 3 or class 4 coating.
		or Paslode Pneumatic Nailer			50 x 2.87mm stainless steel ring RounDrive nail 50 x 2.87mm dekfast HD galvanised RounDrive nail

2 Safe working practices

WARNING - DO NOT BREATHE DUST AND CUT ONLY IN WELL VENTILATED AREA

James Hardie products contain sand, a source of respirable crystalline silica. May cause cancer if dust from product is inhaled. Causes damage to lungs and respiratory system through prolonged or repeated inhalation of dust from product.

Intact fibre cement products are not expected to result in any adverse toxic effects. The hazard associated with fibre cement arises from the respirable crystalline silica present in dust generated by activities such as cutting, rebating, drilling, routing, sawing, crushing, or otherwise abrading fibre cement, and when cleaning up, disposing of or moving dust.

When doing any of these activities in a manner that generates dust, follow James Hardie instructions and best practices to reduce or limit the release of dust.

If using a dust mask or respirator, use an AS/NZS 1716 P1 filter and refer to Australian/New Zealand Standard 1715:2009 Selection, Use and Maintenance of Respiratory Protective Equipment for more extensive guidance and more options for selecting respirators for workplaces. For further information, refer to our installation instructions and Safety Data Sheets available at www.jameshardie.co.nz.

FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

Crystalline Silica is

- Commonly known as sand or quartz
- Found in many building products e.g. concrete, bricks, grout, wallboard, ceramic tiles, and all fibre cement materials

Why is Crystalline Silica a health hazard?

- Silica can be breathed deep into the lungs when present in the air as a very fine (respirable) dust
- Exposure to silica dust without taking the appropriate safety measures to minimise the amount being breathed in, can lead to a potentially fatal lung disease – silicosis – and has also been linked with other diseases including cancer. Some studies suggest that smoking may increase these risks
- The most hazardous dust is the dust you cannot see!

When is Crystalline Silica a health hazard?

- It's dangerous to health if safety protocols to control dust are not followed when cutting, drilling or rebating a product containing crystalline silica and when cleaning up
- Products containing silica are harmless if intact (e.g. an un-cut sheet of wall board)

Avoid breathing in crystalline silica dust

Safe working practices

- ✗ NEVER use a power saw indoors or in a poorly ventilated area
- ✗ NEVER dry sweep
- ✓ ALWAYS use M Class or higher vacuum or damp down dust before sweeping up
- ✗ NEVER use grinders
- ✓ ALWAYS use a dust reducing circular saw equipped with a sawblade specifically designed to minimise dust creation when cutting fibre cement – preferably a sawblade that carries the HardieBlade™ logo or one with at least equivalent performance – connected to an M Class or higher vacuum
- ✓ Before cutting warn others in the area to avoid dust
- ✓ ALWAYS follow tool manufacturers' safety recommendations
- ✓ ALWAYS expose only the minimum required depth of blade for the thickness of fibre cement to be cut
- ✓ ALWAYS wear a properly-fitted, approved dust mask or respirator P1 or higher in accordance with applicable government regulations and manufacturer instructions
- ✓ Consider rotating personnel across cutting tasks to further limit respirable silica exposures.

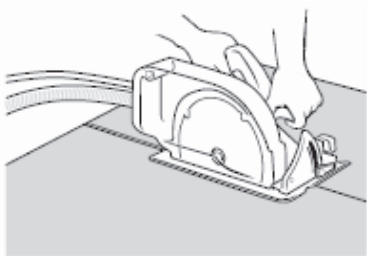
When cutting Secura Exterior Flooring

- ✓ Work outdoors only
- ✓ Make sure you work in a well ventilated area
- ✓ Position cutting station so wind will blow dust away from yourself and others in the working area
- ✓ Rotate employees across cutting task over duration of shift
- ✓ Cut products with a HardieBlade Saw Blade (or equivalent) and a dust reducing circular saw connected to a M Class or higher vacuum
- ✓ When sawing, sanding, rebating, drilling or machining fibre cement products, always:
 - Wear your P1 or higher (correctly fitted in accordance with manufacturers' instructions), ask others to do the same.
 - Keep persons on site at least 2 metres and as far as practicable away from the cutting station while the saw is in operation.
 - If you are not clean shaven, then use a powered air respirator with a loose fitting head top
 - Wear safety glasses
 - Wear hearing protection
 - When others are close by, ask them to do the same
- ✓ Make sure you clean up BUT never dry sweep. Always hose down with water/wet wipe or use an M Class or higher vacuum

Working instructions

HardieBlade™ Saw Blade

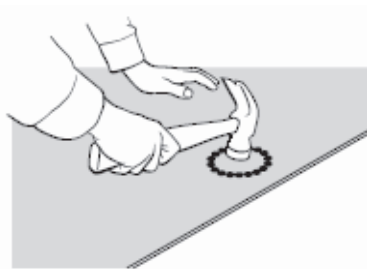
The HardieBlade Saw Blade used with a dust-reducing saw is ideal for fast, clean cutting of James Hardie fibre cement products. A dust-reducing saw uses a dust collector connected to a M Class or higher vacuum. When sawing, clamp a straight edge to the sheet as a guide and run the saw base plate along the straight edge when making the cut.



Hole forming

For smooth clean cut circular holes:

- Mark the centre of the hole on the sheet
- Pre-drill a 'pilot' hole
- Using the pilot hole as a guide, cut the hole to the appropriate diameter with a hole saw fitted to a heavy duty electric drill



For irregular holes:

- Small rectangular or circular holes can be cut by drilling a series of small holes around the perimeter of the hole then tapping out the waste piece from the sheet face
- Tap carefully to avoid damage to sheets, ensuring that the sheet edges are properly supported

2.1 STORAGE AND DELIVERY

Keeping products and people safe

Off loading

- James Hardie products should be off-loaded carefully by hand or by forklift
- James Hardie products should not be rolled or dumped off a truck during the delivery to the jobsite

Storage

James Hardie products should be stored:

- ✓ In their original packaging
- ✓ Under cover where possible or otherwise protected with a waterproof covering to keep products dry
- ✓ Off the ground – either on a pallet or adequately supported on timber or other spacers
- ✓ Flat so as to minimise bending

James Hardie products must not be stored:

- ✗ Directly on the ground
- ✗ In the open air exposed to the elements

James Hardie is not responsible for damage due to improper storage and handling.

2.2 TIPS FOR SAFE AND EASY HANDLING OF SECURA EXTERIOR FLOORING

- ✓ Carry with two people
- ✓ Hold near each end and on edge
- ✓ Exercise care when handling sheet products to avoid damaging the edges/corners

3 Design

3.1 GENERAL

Before the installation of Secura Exterior Flooring ensure that the construction complies with various requirements of regulations and New Zealand building standards. Secura Exterior Flooring must be installed in accordance with this installation manual.

Secura Exterior Flooring is also suitable for the construction of cantilevered decks. Refer to section 7 and Figure 16.

For all external flooring applications a solvent free waterproofing membrane must be applied over the Secura Exterior Flooring prior to the installation of tiles. The waterproofing system must be installed in accordance with the requirements set out by their manufacturers. Refer to Table 5 for information regarding suitable waterproofing membranes. Also refer to BRANZ web site at www.branz.co.nz for other appraised waterproofing membrane options. Check with the suppliers before selecting a membrane.

3.2 LOADING CONSIDERATION

Secura Exterior Flooring in this manual has been designed to satisfy the requirements for external floor areas in timber or steel framed buildings within the scope of the NZS 3604, 'Timber Framed Buildings', NASH 3405 'An Alternative Solution for Steel Framed Buildings' and load specified under domestic and residential activities of Table 3.1, (Category A) of AS/NZS 1170.1 'Structural Design Actions – Permanent, Imposed and Other Actions'.

Note: The Standard AS/NZS 1170 also specifies higher loads for external areas in public buildings which are subject to crowd loading, storage of materials and heavy wheel loadings etc. For these applications James Hardie's HardiePanel Compressed Sheet (18mm) must be used. Refer to Flooring Installation Manual.

Contact your builder, designer or engineer, if in doubt or Ask James Hardie 0800 808 868..

Notes:

- Secura Exterior Flooring must NOT be laid over concrete slabs. To build up the height of concrete floors, purpose-made concrete levelling compounds should be used.

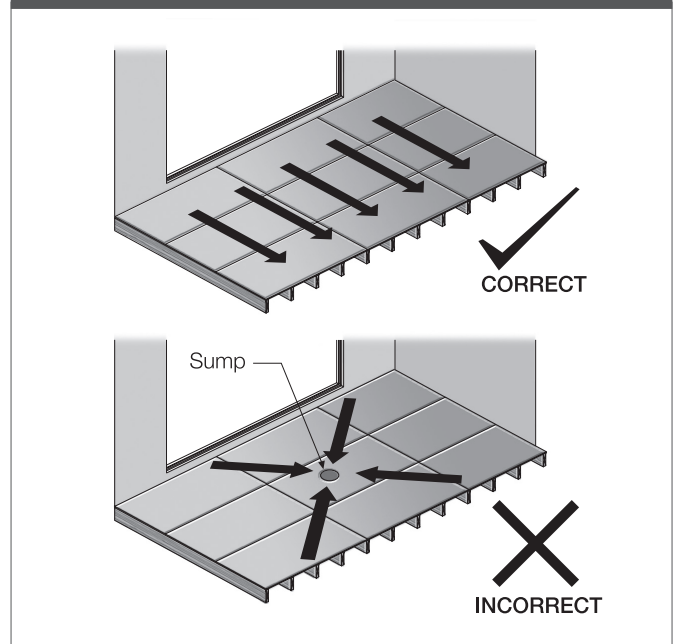
3.3 SLOPE

Decks must have a slope/fall to facilitate easy drainage. Decks must have a fall of at least 1 in 40 away from the building as per E2/AS1 of the NZBC. The best option is to set floor joists at a slope so that it is easier to achieve the required slope on the finished surface. Alternatively mortar beds can also be used to achieve the required slope.

The surface of the flooring must be thoroughly clean and dry prior to applying the mortar bed as per their manufacturer's instructions. To prevent cracking of floor tiles, the mortar bed must be reinforced over all joints in flooring sheets.

Do not provide fall by packing sheets.

Figure 1: Drainage



3.4 FRAMING

3.4.1 Timber frame

Timber floor joists must either be in accordance with NZS 3604: 'Timber-framed Buildings' or be specifically designed as per NZS 3603 'Timber Structure Standard' and loading considerations of AS/NZS 1170 'Structural Design Actions'. For steel frame construction refer to NASH 'Steel Frame Design Manual 3405. Floor joists must be 45mm minimum wide except for control joints where 75mm minimum wide are required. The framing centres must not exceed those given in Table 3.

Table 3

Secura Exterior Flooring Fixing	
Joist spacing centres (maximum)	Fastener maximum spacing centres
450mm	200mm

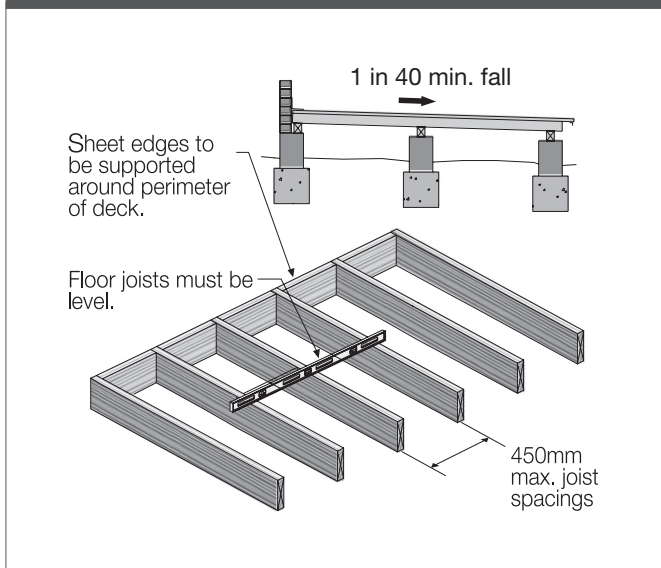
Moisture content in timber floor joists must not exceed 20% at the time of installation of Secura Exterior Flooring.

For further timber treatment and allowable moisture content information refer to NZS 3602 'Timber and Wood-Based Products for use in Buildings' and NZS 3640 'Chemical Preservation of Round Sawn Timber' for minimum timber treatment selection and treatment requirements. Also refer to framing manufacturer's literature for further guidance on timber selection. Framing must be protected from moisture on site in accordance with the recommendations of the framing manufacturers.

Tiles, tile grouts and adhesives can be detrimentally affected by even small deflections. Therefore it is recommended that for tiled applications reduce joist spans by 20% as specified in NZS 3604.

4 Layout

Figure 2: Frame preparation



For floor joist spacing and sizes refer to Section 3.

Secura Exterior Flooring must always be installed across the floor joists with short sheet edges fully supported on joists. Secura Exterior Flooring must be laid with all the short edges aligned along the floor joists. Refer Figure 1.

When using the site cut sheet pieces, the minimum length of the cut sheet to be used must be 900mm or more.

4.1 CONTROL JOINTS

Tiled Floors

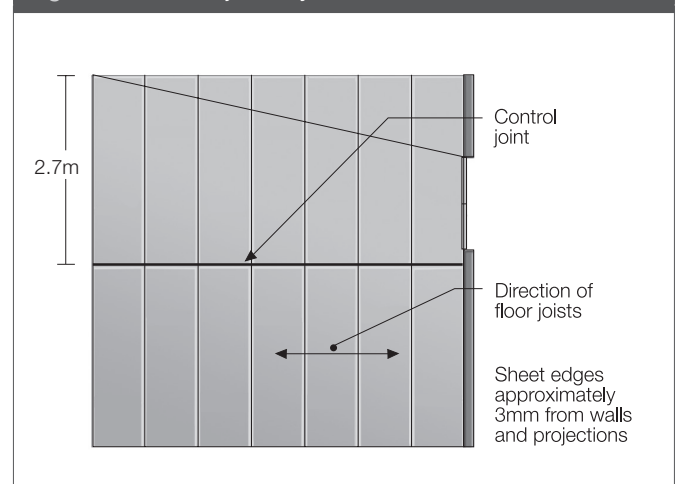
All aligned short edge joints form a control joint. Refer Figure 16. Control joints in the tiled floors are required where floor dimensions exceed 2.7 x 4.5m and where existing structural joints are located or where the floor changes in direction. It is recommended to position control joints symmetrically through the deck/balcony as shown in Figure 3. Additional control joints in the tiles may be required, refer to the current 'Good Tiling Practice Guide' by BRANZ for more information available at www.branz.co.nz.

Table 4

Sheet layout control joint selection	
Squared	2.7m in directions of sheet only. Refer Figure 6.

Also provide control joints where there are changes of direction,

Figure 3: Control joint layout



3.4.2 Steel Frame

The use of steel framing must be in accordance with NASH "Steel Frame Design Manual 3405" and the steel framing manufacturer's specifications. Steel framing thickness must be between 0.75mm to 1.9mm BMT.

Steel frame must have appropriate level of coating to meet the durability requirement of Clause B2 of the NZBC.

3.5 TOLERANCES

In order to achieve an acceptable finish, it is imperative that framing is straight and true. Framing tolerances must comply with relevant codes and the manufacturer's specifications.

3.6 SUB FLOOR VENTILATION

Check that adequate ventilation exists under all framed floors (especially new floors) and that the sub floor area is free from dampness. Refer to the NZS 3604 for minimum ventilation requirements.

3.7 FASTENER DURABILITY

Fasteners used must meet the minimum durability requirements of 'Clause B2' of the NZBC.

Contact fastener manufacturers/suppliers for more information.

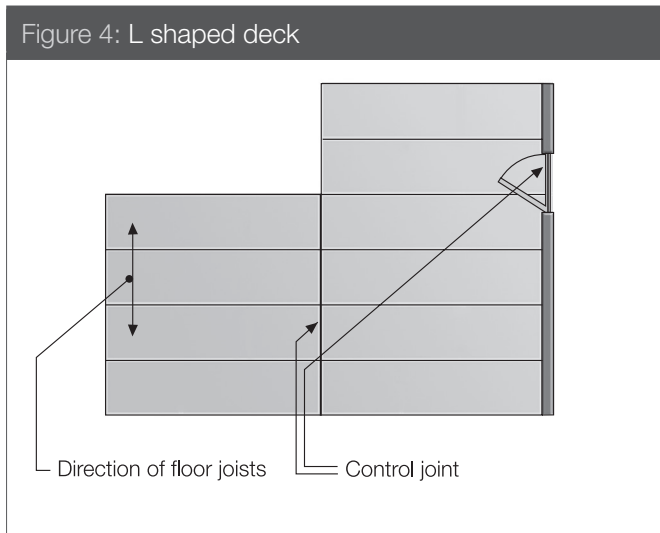
3.8 BALUSTRADE

The balustrade upright supports must be fixed to the structural frame and not the Secura Exterior Flooring.

The balustrade must not compromise the waterproofing of the deck. Furthermore, the specifier is responsible for any moisture ingress that could occur due to the penetration of the balustrade uprights including fixings and flashing etc. through the waterproofing membrane.

such as an L-shaped room, and at doorways where the tiled surface is carried through to the next room as shown in Figure 4.

Figure 4: L shaped deck



Place a 6-8mm diameter polyethylene backing rod in the bottom of the joint between the sheets and fill the joint with a suitable flexible sealant. All square edges must be fully supported as per Figure 6.

It is important that the control joints be carried through to the top of the floor surface i.e. they should not be covered OVER by tiles.

Figure 5: Squared sheet layout

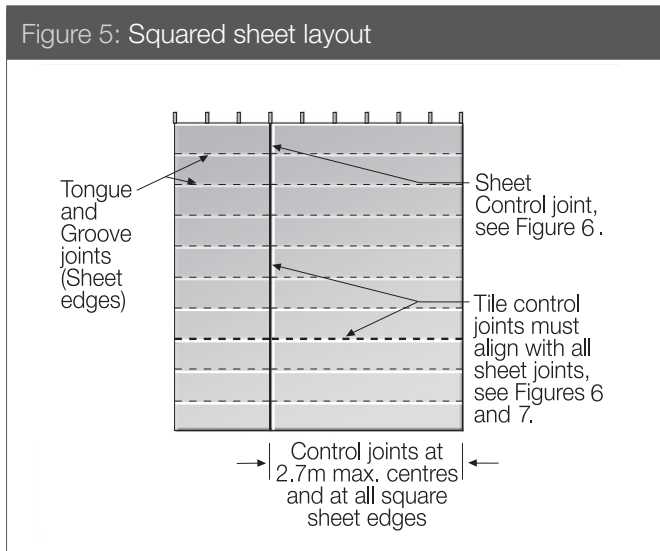


Figure 6: Direct tile - tile movement joint over sheet movement joint

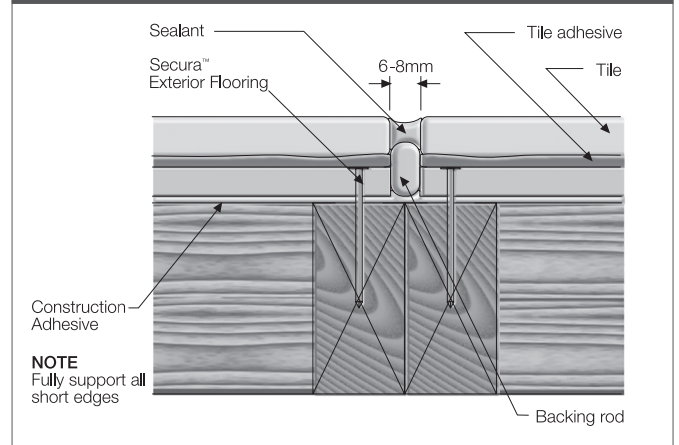
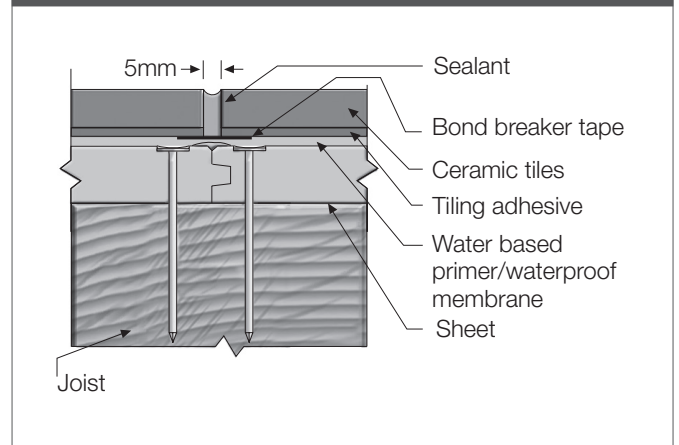


Figure 7: Direct tile - tile movement joints over tongue and groove joint



5 Installation

The sheets must be installed with the mesh facing down.

Ensure that the product is of acceptable quality standard prior to installation.

All site cut sheet edges must be sealed with an acrylic sealer Dulux Acraprime 501/1, Dulux 1 Step or similar that is compatible with the waterproofing membrane.

The following illustrations show how to install the Secura Exterior Flooring in a squared pattern.

Figure 8: Construction adhesive

Apply a 6mm continuous bead of construction adhesive to joists

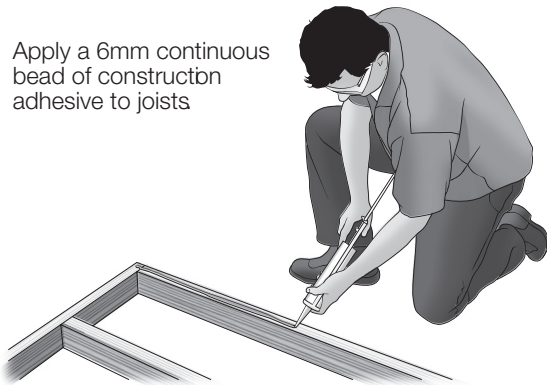


Figure 9: Fastener layout

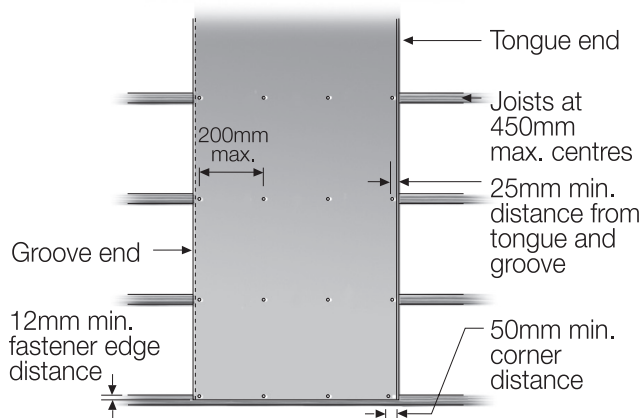
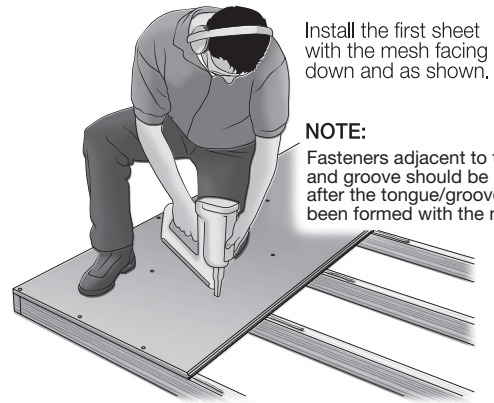


Figure 10: Fixing first panel



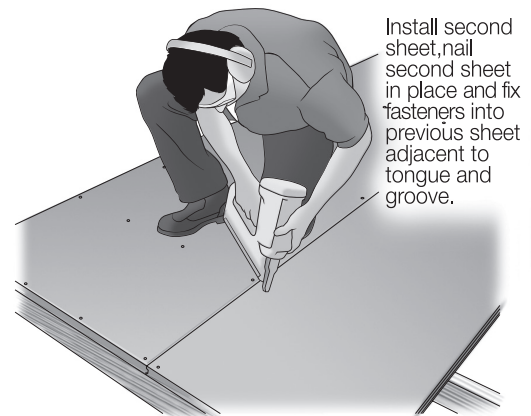
Install the first sheet with the mesh facing down and as shown.

NOTE:

Fasteners adjacent to the tongue and groove should be installed after the tongue/groove joint has been formed with the next sheet.

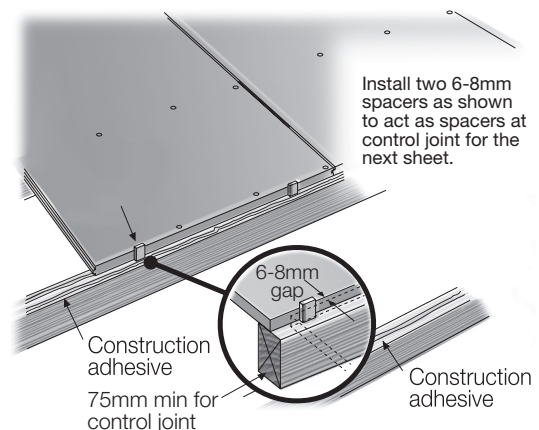
Fixings to be 50 x 2.87mm RounDrive nails at 200mm maximum centres. Refer Table 3. Alternatively a 10g x 40mm wood thread screw can be used.

Figure 11: Nailing second sheet



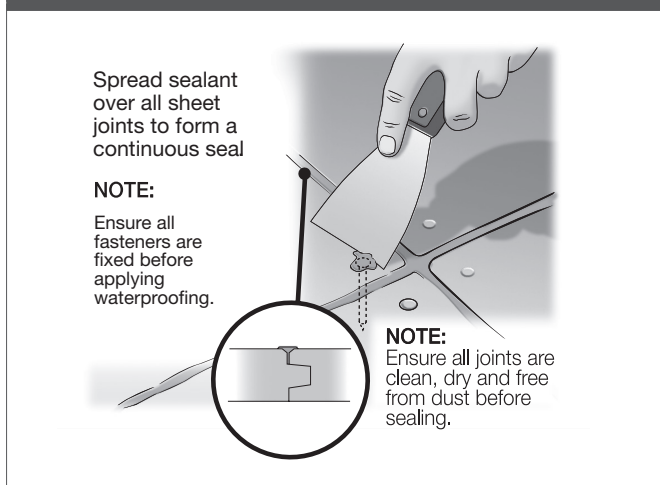
Install second sheet, nail second sheet in place and fix fasteners into previous sheet adjacent to tongue and groove.

Figure 12: Creating 6-8mm sheet joint



Install two 6-8mm spacers as shown to act as spacers at control joint for the next sheet.

Figure 13: Seal over all fasteners and joints



Note: Once all sheets are laid for the day, fill tongue and groove, butt joints and fastener heads with sealant. Refer Figure 13.

Avoid excessive foot traffic on the deck for at least 24 hours to allow sealant to set and dry out. Adverse weather conditions may increase this period to 48-72 hours. Protect the surface of the sheets from damage until final finish is applied.

6 Waterproofing

There are two types of decks discussed in this section:

1. Water resistant decks (over outdoor area).
2. Waterproof decks (over habitable area).

Note: This section DOES NOT contain all information relevant for waterproofing and is to be used as a guide only.

6.1 WATER RESISTANT DECKS

The cantilevered decks where the space beneath is not a habitable space or where water can easily drain into the ground can be built as a water resistant deck. The deck can be built in situations where traditional timber slatted decks can be built. Refer to section 7 and Figures 14, 15 and 16 of E2/AS1 for further guidance on the construction of water resistant decks. Water resistant decks must be separated from the building structure/cladding by a minimum of 12mm.

Timber framing used in the deck structure shall be treated as per the requirements of NZS 3602 to meet the durability requirements of the building code. Water resistant decks will have a reduced durability when compared to waterproof decks. Secura Exterior Flooring must be fixed as per this installation manual and the sheets are covered with ceramic tiles. During the installation of the Secura Exterior Flooring, the factory applied sealer is subject to damage from handling, tools, materials and traffic. The Secura Exterior

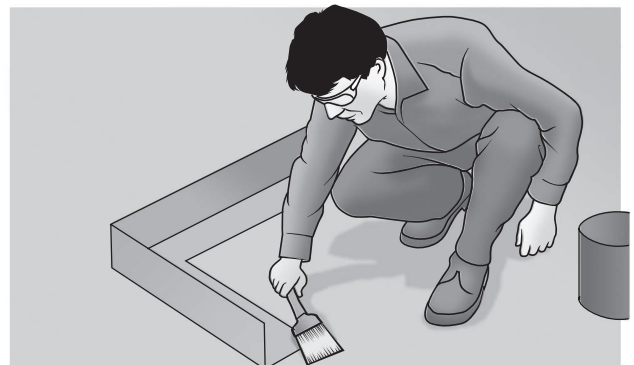
Flooring sheets therefore are required to be coated with a water based primer such as Ardex WPM 300 or other similar primers applied with roller before the installation of ceramic tiles.

6.2 WATERPROOF DECKS

The deck where the space beneath a deck is used/expected to be used as habitable space or where the deck is to be enclosed are required to be built as waterproof decks. Refer to section 7.1.2 and Figure 17A of E2/AS1 of the NZBC for further guidance on enclosed deck construction. To construct a waterproof deck, Secura Exterior Flooring requires a compatible and correctly installed waterproofing membrane. Refer to waterproofing membrane manufacturers listed in Table 5 for system applications, performance and their warranty information. Refer Figure 16.

During the installation of the Secura Exterior Flooring, the factory applied sealer is subject to damage from tools, material and traffic. It is therefore recommended that a primer is applied over the deck before waterproof membrane and tiles are installed.

Figure 14: Waterproofing floor to wall



All sheet fixing must be completed as per this installation manual before the primer and waterproofing membrane is applied.

Ensure the sheet is dry and free from surface dust and dirt before applying the primer.

The primer and water based waterproof membrane can be applied directly over the sealant flush nail heads. Ensure compatibility.

Apply a coat of suitable primer to the entire surface of the Secura Exterior Flooring. Follow the manufacturer’s instructions for coverage areas, and specific instructions.

For suitable water based waterproofing membranes refer to Table 5.

Table 5

Recommended waterproofing membranes/tile adhesives
Mapelastic and Mapelastic Smart from Mapei NZ Ltd
Superflex® Ardex Liquid Membranes’ from Ardex NZ Ltd
Flexi-Seal® from Flexco (NZ) Ltd
Gripset 2P® and Gripset 38 ® from Waterproofing Systems Ltd
ASA Waterproofing Membrane Dampfix 2 from Bostik

For coverage information of the selected waterproof membrane refer to manufacturer’s recommendations.

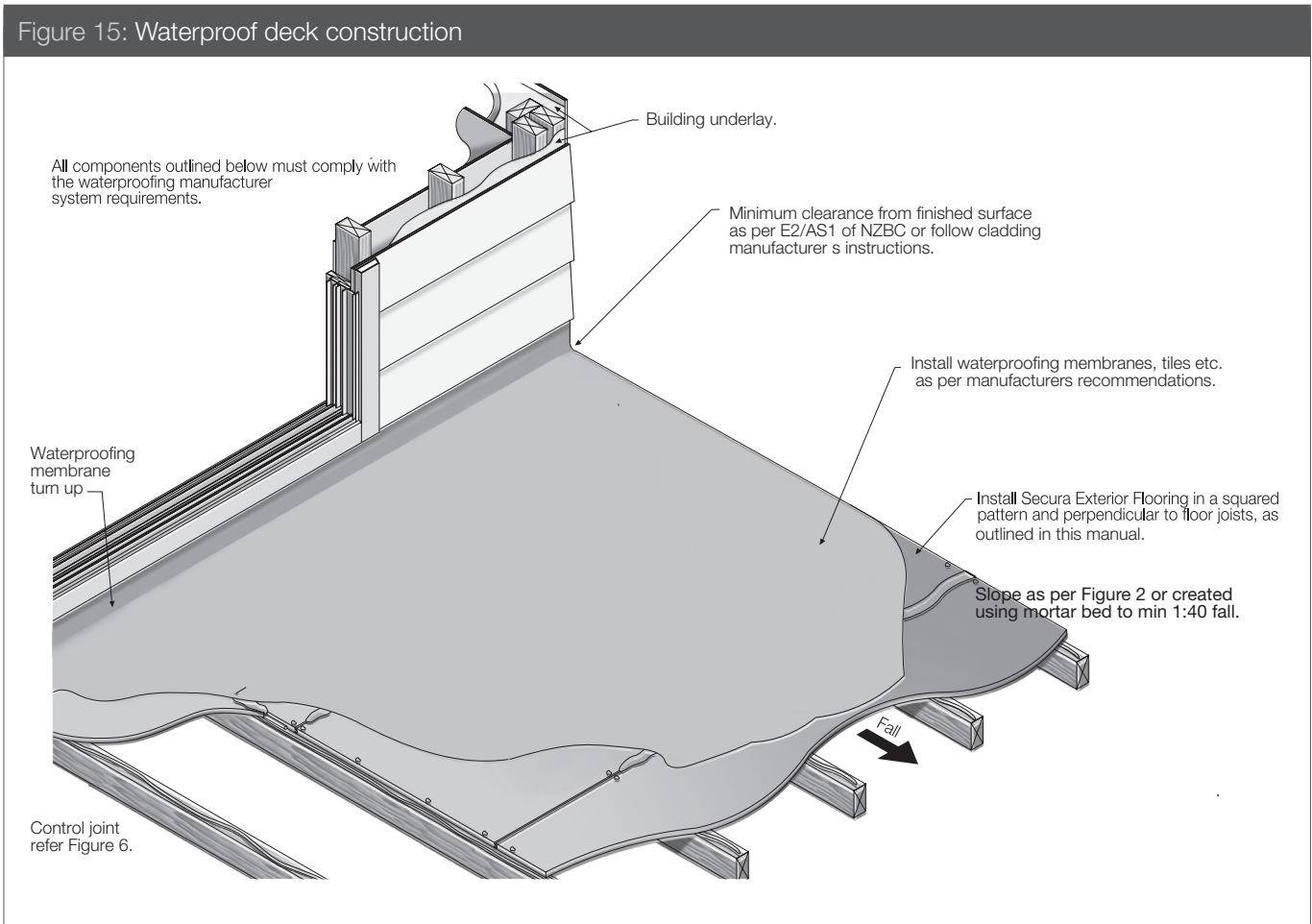
Waterproofing membranes must be applied in accordance with their manufacturer’s requirements.

Prime sheet and apply coat of selected waterproof membrane with associated mesh as per waterproof manufacturers’ recommendations.

The waterproofing membranes specified are water based membranes. Do not use solvent based membranes over the Secura Exterior Flooring. For coverage information of the selected waterproof membrane refer to manufacturer’s recommendations.

Waterproofing membranes must be applied in accordance with their manufacturer’s requirements.

Maximum control joint spacing for tiles 4.5m x 4.5m.
Only use flexible tile bedding compounds.



7 Finishes

Figure 16: Deck edge detail using drip angle

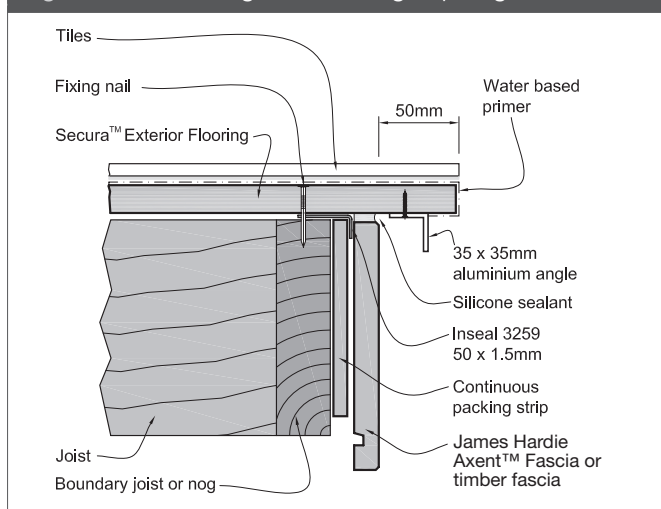
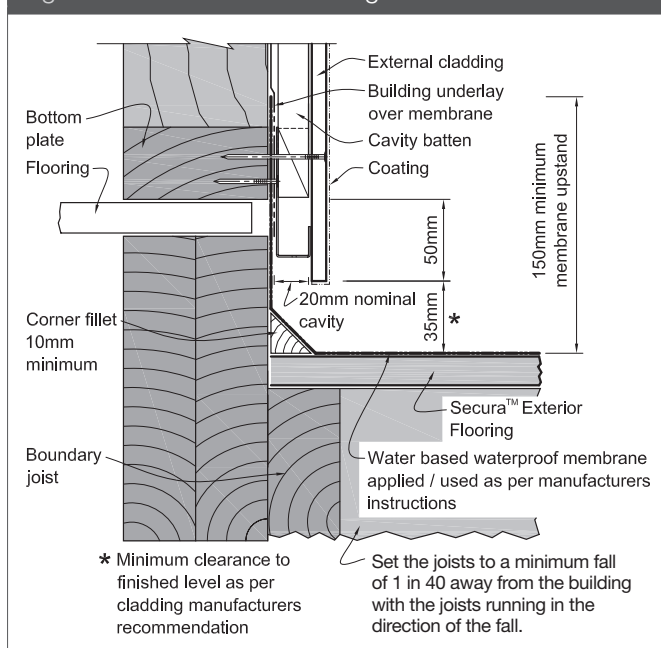


Figure 17: Wall to deck flashing



7.1 GENERAL

Secura Exterior Flooring must be finished with a ceramic tile to suit the intended application. For the suitability and installation requirements of ceramic tiles, check with the manufacturer.

7.2 PREPARATION

Where minor height variations (3mm or less) occur at butt joints, these may be levelled out by filling with self levelling compounds. Ensure final finish is compatible with all components eg. vinyl adhesive and waterproofing membrane.

Sanding of the Secura Exterior Flooring is not recommended.

7.3 SELECTION OF TILES

The following brief notes do not cover all aspects of tiling. Further advice should be sought from specialists in these areas.

The importance of choosing the proper tile for a given environment cannot be stressed enough. Manufacturer's catalogues indicate the recommended uses and limitations of their products and should be consulted when unsure.

7.4 TILE ADHESIVES

Because of possible differential movement between tiles and the Secura Exterior Flooring only approved flexible adhesive and grouts must be used.

Refer to the adhesive manufacturers' specifications for sheet preparation before applying the flexible tile adhesive.

The recommended brands of waterproof membranes are shown in Table 5. It is essential that all tile systems such as primers, waterproofing membranes, flexible adhesives and grouts are all supplied by the same manufacturer to ensure compatibility of products and warranty protection.

7.5 TILING

Tiles should be applied with proprietary adhesive that conform to AS 2358 and installed in accordance to 'Good Tiling Practice Guide' by BRANZ and to tile and adhesive manufacturer recommendations.

Use a flexible tile adhesive for external area applications and compatible with other materials.

It is recommended that tiles are laid from the control joint out. Ensure the tile adhesive used is suitable and compatible with adjoining surfaces for the intended application.

Refer to the waterproofing and tile manufacturer and relevant tiling practice guides for maximum tile control joint spacing, product suitability/compatibility, including grout, tile adhesive, tile/ waterproofing warranties and maintenance requirements.

Once Secura Exterior Flooring has been fixed in place, install waterproofing membranes and tiles in accordance with manufacturer's specifications within three months of Secura Exterior Flooring installation.

7.6 TILING PRACTICE

Refer to the requirements of local Building Consent Authority before the installation of tiles over the waterproofing membranes. Maintenance requirements for waterproofing membranes must be discussed with their manufacturers before tiling.

Structural floor tiles can be laid over the deck jacks/supports where tiling directly over the membranes is not allowed.

Also refer to the selected tile manufacturer for complete details regarding the laying and fixing of ceramic tiles, marble, slate

and granite stone. Reference can also be made to the BRANZ publication "Good Tiling Practice" available at www.branz.co.nz.

8 Maintenance

Regular cleaning, checks and maintenance of the finished surface, joints, junctions, penetrations, sealant, grout etc must be carried out at regular intervals and as per manufacturer's recommendations.

Maintain waterproofing membranes to meet the objectives of Clause B2 of the NZBC and as per the requirements of the manufacturer.

9 Product information

9.1 GENERAL

Secura Exterior Flooring is cellulose fibre reinforced cement building product. The basic composition is Portland cement, ground sand, cellulose fibre and water.

Secura Exterior Flooring is manufactured to AS/NZS 2908.2 'Cellulose- Cement Products Part 2: Flat Sheets' (ISO 8336 'Fibre Cement Flat Sheets').

Secura Exterior Flooring is classified Type A, Category 3 in accordance with AS/NZS 2908.2 'Cellulose-Cement Products'.

9.2 PRODUCT MASS

Based on equilibrium moisture content the approximate mass of:

- Secura Exterior Flooring is 24.5 kg/m².

9.3 DURABILITY

Resistance to moisture/rotting

Secura Exterior Flooring has demonstrated resistance to permanent moisture induced deterioration (rotting) by having passed the following tests in accordance with AS/NZS 2908.2:

- Heat rain (Clause 6.5)
- Water permeability (Clause 8.2.2)
- Warm water (Clause 8.2.4)
- Soak dry (Clause 8.2.5)

9.4 FIRE PROPERTIES

Secura Exterior Flooring is classified as a 'non-combustible material'.

Product Warranty



James Hardie New Zealand Limited ("James Hardie") warrants for a period of 15 years from the date of purchase that the Secura™ Exterior Flooring (the "Product"), will be free from defects due to defective factory workmanship or materials and, subject to compliance with the conditions below, will be resistant to cracking, rotting, fire and damage from termite attacks to the extent set out in James Hardie's relevant published literature current at the time of installation. James Hardie warrants for a period of 12 months from the date of purchase that the accessories supplied by James Hardie will be free from defects due to defective factory workmanship or materials.

Nothing in this document shall exclude or modify any legal rights a customer may have under the Consumer Guarantees Act or otherwise which cannot be excluded or modified at law.

CONDITIONS OF WARRANTY:

The warranty is strictly subject to the following conditions::

- a) James Hardie will not be liable for breach of warranty unless the claimant provides proof of purchase and makes a written claim either within 30 days after the defect would have become reasonably apparent or, if the defect was reasonably apparent prior to installation, then the claim must be made prior to installation;
- b) this warranty is not transferable;
- c) the Product must be installed and maintained strictly in accordance with the relevant James Hardie literature current at the time of installation and must be installed in conjunction with the components or products specified in the literature. Further, all other products, including coating and jointing systems, applied to or used in conjunction with the Product must be applied or installed and maintained strictly in accordance with the relevant manufacturer's instructions and good trade practice;
- d) the project must be designed and constructed in strict compliance with all relevant provisions of the current New Zealand Building Code (NZBC), regulations and standards;
- e) the claimant's sole remedy for breach of warranty is (at James Hardie's option) that James Hardie will either supply replacement product, rectify the affected product or pay for the cost of the replacement or rectification of the affected product;
- f) James Hardie will not be liable for any losses or damages (whether direct or indirect) including property damage or personal injury, consequential loss, economic loss or loss of profits, arising in contract or negligence or howsoever arising. Without limiting the foregoing James Hardie will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect design of the structure, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to the Product, normal wear and tear, growth of mould, mildew, fungi, bacteria, or any organism on any Product surface or Product (whether on the exposed or unexposed surfaces);
- g) all warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by law;
- h) if meeting a claim under this warranty involves re-coating of Products, there may be slight colour differences between the original and replacement Products due to the effects of weathering and variations in materials over time.

Disclaimer: The recommendations in James Hardie's literature are based on good building practice, but are not an exhaustive statement of all relevant information and are subject to conditions (c), (d), (f) and (g) above. James Hardie has tested the performance of the Secura Exterior Flooring when installed in accordance with the Secura Exterior Flooring Installation Manual, in accordance with the standards and verification methods required by the NZBC and those test results demonstrate the product complies with the performance criteria established by the NZBC. However, as the successful performance of the relevant system depends on numerous factors outside the control of James Hardie (e.g. quality of workmanship and design) James Hardie shall not be liable for the recommendations made in its literature and the performance of the relevant system, including its suitability for any purpose or ability to satisfy the relevant provisions of the NZBC, regulations and standards, as it is the responsibility of the building designer to ensure that the details and recommendations provided in the relevant James Hardie installation manual are suitable for the intended project and that specific design is conducted where appropriate.

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