



# Installation Guide

Hardie™ Secura™ Flooring

**STRUCTURAL FLOORING FOR  
EXTERIOR & INTERIOR APPLICATIONS**

**Australia** June 2025

**Make sure your information is up to date.**

When specifying or installing Hardie™ products, ensure that you have the current technical information and guides. If in doubt, or you need more information, visit [jameshardie.com.au](https://jameshardie.com.au) or Contact James Hardie on 13 11 03.

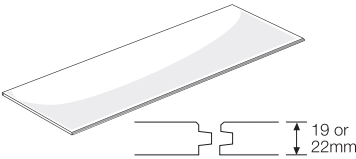


# 1 Products & Accessory Details

## IMPORTANT NOTES

- Hardie™ Secura™ Flooring is suitable for internal and external residential flooring applications only. The maximum loading capacities are outlined in the loading section of this guide.
- Failure to install, finish or maintain this product in accordance with applicable building codes, regulations, standards and this guide may lead to personal injury, affect system performance, violate local building codes, and void James Hardie's product warranty.
- Make sure your information is up to date. When specifying or installing Hardie™ products, ensure that you have the current technical information and guides. If in doubt, or you need more information, visit [www.jameshardie.com.au](http://www.jameshardie.com.au) or Ask James Hardie™ on 13 11 03.
- Only use recommended water based waterproofing systems tested and warranted by the waterproofing companies stated in this install guide on page 4 for Hardie™ Secura™ Flooring.






### Hardie™ Secura™ Flooring

|  |        | <b>Hardie™ Secura™ Flooring</b><br>Structural flooring product for internal and external residential flooring applications. <ul style="list-style-type: none"> <li>19mm thick board is marked green on the front corner edge.</li> <li>22mm thick board is marked grey on the front corner edge.</li> </ul> Long edges have a tongue and groove feature for easy jointing. |           |                   |           |            |
|----------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|-----------|------------|
| Product Code                                                                     | Length | Width                                                                                                                                                                                                                                                                                                                                                                      | Thickness | Max Supports (mm) | Mass (kg) | Units/Pack |
| 405591                                                                           | 1800   | 900                                                                                                                                                                                                                                                                                                                                                                        | 19        | 450               | 41.0      | 20         |
| 405592                                                                           | 2700   | 600                                                                                                                                                                                                                                                                                                                                                                        | 19        | 450               | 41.0      | 20         |
| 405593                                                                           | 2400   | 600                                                                                                                                                                                                                                                                                                                                                                        | 22        | 600               | 42.2      | 20         |

## NOTES














- All dimensions and masses provided are approximate only and subject to manufacturing tolerances. Masses are based on equilibrium moisture content of product.

### Product / Accessories / Tools

| Supplied by James Hardie                                                            |                                                                                                                                                                                                                                       |                                                                                     |                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Accessories                                                                         | Description                                                                                                                                                                                                                           | Accessories                                                                         | Description                                                                                                                                                                                                                   |
|  | <b>Hardie™ Blade Saw Blade. 185mm diameter</b><br>A poly-diamond blade for fast and clean cutting of Hardie™ fibre cement. 1 each. Part No. 300660                                                                                    |  | <b>Hardie™ Joint Sealant. 300ml cartridge and 600ml Sausage</b><br>A general purpose, paintable, exterior grade polyurethane joint sealant. Used for sealing of all sheet joints and can be used to adhere sheets to framing. |
|   | <b>Hardie™ Drive Screw 41mm long.</b><br>A class 3 self-tapping wing-tipped screw for fastening to 0.5mm to 1.6mm BMT light gauge steel frames. 1000 per box. Part No. 305984                                                         |  | 300ml tube 20 per box. 1 each. Part No. 305534<br>600ml sausage 20 per box. 1 each. Part No. 305672                                                                                                                           |
|   | <b>Hardie™ Drive Collated Screw 41mm long.</b><br>A class 3 self-tapping wing-tipped screw for fastening to 0.5mm to 1.6mm BMT light gauge steel frames. Suitable for use in most auto feed screw guns. 1000 per box. Part No. 305982 |                                                                                     |                                                                                                                                                                                                                               |

### Not Supplied by James Hardie

James Hardie recommends the following products for use in conjunction with its Hardie™ Secura™ Flooring. James Hardie does not supply these products and does not provide a warranty for their use. Please contact the product manufacturer for information on their warranties and further information on their products.

| Accessories                                                                        | Description                                                                                                                                                                                   | Accessories                                                                         | Description                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Nails</b><br>• 2.8 x 50mm corrosion resistant fibre cement nails.<br>• 50mm corrosion resistant D Head gun nails.                                                                          |  | <b>Gun Nailer</b><br>Suitable pneumatic or coil gun nailer.                                                                                                                                                   |
|  | <b>Screws</b><br>N° 8 x 40mm Corrosion resistant self embedding head for screwing to timber framing.                                                                                          |  | <b>Cordless Drill</b><br>Recommended tool for screw fixing the sheets to steel and timber framing.                                                                                                            |
|  | <b>QuickDrive Collated Screw</b><br>42mm long Class 3 screw for fixing to 0.8 - 1.6mm BMT steel framing. Part No. CBSDG158SA                                                                  |  | <b>Construction Adhesive</b><br>Suitable construction adhesive for gluing sheets to floor frame. Hardie™ Joint Sealant may be used.                                                                           |
|  | <b>Ring Shank Nail (Interior Installation Only)</b><br>Paslode 50 x 2.87mm Amor Galvanised Dekfast Impulse Nail for fixing Hardie™ Secura™ Flooring to narrow I-joists.                       |  | <b>M class or higher vacuum</b><br>Required to reduce the exposure to respirable dust and crystalline silica.                                                                                                 |
|  | <b>Spatula</b><br>For spreading adhesive over all sheet joints and fasteners.                                                                                                                 |  | <b>Foam Backing Rod</b><br>A 10mm diameter backing rod is to be fixed into all 5mm butt/movement joints.                                                                                                      |
|  | <b>Dust-reducing saw with M class or higher vacuum extraction</b><br>Dust reducing saw with a Hardie™ Blade saw blade. Makita 5057KB / Hitachi C7YA.                                          |  | <b>Site Applied Primer</b><br>A single coat of Ardex WPM 300 or equivalent is recommended over installed Hardie™ Secura™ flooring sheets in a water resistant deck. This is not considered a waterproof deck. |
|  | <b>Epoxy Primer</b><br>Use a suitable epoxy primer to seal all cut sheet edges and small damaged sheet areas that may have been damaged. eg Watty® Kill Rust Heavy Duty Primer or equivalent. |                                                                                     |                                                                                                                                                                                                               |

# 2 Safe Working Practices

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

Fibre cement products manufactured by James Hardie 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 Hardie™ instructions and best practices to reduce or limit the release of dust, warn others in the area and consider rotating personnel across the cutting task to further limit respirable silica exposure. If using a dust mask or respirator, use an AS/ NZS1716 P2 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.com.au](http://www.jameshardie.com.au). FAILURE TO ADHERE TO OUR WARNINGS, SAFETY DATA SHEETS, AND INSTALLATION INSTRUCTIONS MAY LEAD TO SERIOUS PERSONAL INJURY OR DEATH.

### James Hardie Recommended Safe Working Practices

#### CUTTING OUTDOORS

- Position cutting station so wind will blow dust away from the user or others in working area.
- Warn others in the area to avoid dust.
- Consider rotating personnel across cutting tasks to further limit respirable silica exposures.
- Use one of the following methods based on the required cutting rate:
  - Best ▪ Hardie™ Knife ▪ Hand guillotine ▪ Fibreshear
  - Better ▪ Position the cutting station in a well-ventilated area. Use a dust reducing circular saw equipped with Hardie™ Blade Saw Blade or comparable fibre cement blade and well maintained M-class vacuum or higher with appropriate filter for capturing fine (respirable) dust. Wear a properly-fitted, approved dust mask or respirator (minimum P2).

#### CUTTING INDOORS

- Cut only using Hardie™ Knife, hand guillotine or fibreshears (manual, electric or pneumatic).
- Position cutting station in a well-ventilated area.

#### DRILLING/OTHER MACHINING

When drilling or machining you should always wear a P2 dust mask and warn others in the immediate area.

#### IMPORTANT NOTES

- For maximum protection (lowest respirable dust production) James Hardie recommends always using best practice cutting methods where feasible.
- NEVER use a power saw indoors or in a poorly ventilated area.
- 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 Hardie™ Blade logo or one with at least equivalent performance - connected to a M class or higher vacuum.
- NEVER dry sweep - Use wet suppression, or an M class vacuum or higher with appropriate filter.
- NEVER use grinders.
- ALWAYS follow tool manufacturers' safety recommendations.
- ALWAYS wear a properly fitted, approved dust mask, P2 or higher

#### DUST MASKS AND RESPIRATORS

As a minimum, an AS/NZS1716 P2 respirator must be used when doing any activity that may create dust. For more extensive guidance and options for selecting respirators for workplaces please refer to Australian/ New Zealand Standard 1715:2009 "Selection, Use and Maintenance of Respiratory Protective Equipment". P2 respirators should be used in conjunction with the above cutting practices to minimise dust exposure. For further information, refer to Safety Data Sheet (SDS) available at [www.jameshardie.com.au](http://www.jameshardie.com.au). If concern still exists about exposure levels or you do not comply with the above practices, you should always consult a qualified industrial hygienist or contact James Hardie for further information.

## STORAGE AND HANDLING

To avoid damage, all James Hardie™ building products should be stored with edges and corners of the product protected from chipping. James Hardie™ building products must be installed in a dry state and protected from weather during transport and storage. The product must be laid flat under cover on a smooth level surface clear of the ground to avoid exposure to water, moisture, etc.

# 3 Design Considerations

## SCOPE AND OVERVIEW

This installation guide covers the use of Hardie™ Secura™ Flooring sheets in a vinyl/carpet and tiled applications in an internal application over timber or light gauge steel frames or in a tiled residential deck application. It does not contain all information relevant for constructing a deck.

## DESIGN

### General

All design and construction must comply with the appropriate requirements of the current National Construction Code (NCC) and other applicable regulations and standards.

### Responsibility

The specifier or other party responsible for the project must ensure that the details in this guide are appropriate for the intended application and that additional detailing is performed for specific design or any areas that fall outside the scope of this guide.

James Hardie is not a waterproofing expert and therefore the specifier is responsible for carrying out the necessary design and detailing to ensure the correct waterproofing and finish are in accordance with waterproofing manufacturer's standard warranted specifications and relevant codes and regulations.

### Loading

Hardie™ Secura™ Flooring sheets are structurally designed to withstand the domestic and residential activities for self-contained dwellings (Category A1) of Table 3.1 of AS/NZS 1170.1 - 'Structural design actions - Permanent, imposed, and other actions' of 1.8kN concentrated load and a UDL (Uniformly Distributed Load) capacity of 2kPa at the floor joist spacing, outlined in Table 1. For commercial applications, the maximum floor joists centres are outlined on Table 2 and, if requiring greater loadings, refer to the James Hardie™ technical team for specific advice on 13 11 03.

**Table 1. Maximum Floor Joist centres in residential applications**

| Sheet Thickness | Maximum Joist Centre |
|-----------------|----------------------|
| 19mm            | 450mm                |
| 22mm            | 600mm                |

For commercial applications, 22mm Hardie™ Secura™ Flooring sheets are structurally designed to withstand various loads categories in Table 3.1 of AS/NZS 1170.1 – Structural design actions – Permanent, imposed and other actions' for unfactored working stress loads stated in Table 2.

**Table 2. Maximum Floor Joist centres in commercial applications**

| Sheet Thickness | Maximum Joist Centre         | Point Load (0.01m² size) | UDL Allowable |
|-----------------|------------------------------|--------------------------|---------------|
| 22mm            | 450mm without edge support   | 3.6 kN                   | 5kPa          |
| 22mm            | 450mm with full edge support | 4.5kN                    | 7.5kPa        |
| 22mm            | 600mm                        | 2.7kN                    | 5kPa          |

## FRAMING

### General

Hardie™ Secura™ Flooring may be fixed to either durable timber or corrosion resistant light gauge steel frame joist centres. Floor joist must be a nominal of 45mm wide (except for Narrow Timber I Joists and LVL solid joist).

Framing must have the appropriate level of durability required to prevent corrosion or deterioration.

All sheet square edges which include movement joints, must be continuously supported by framing.

## Timber Framing

Use of timber framing must be in accordance with AS 1684 - 'Residential timber-framed construction', treated dry kiln timber or durable hardwood, the building code of Australia and the framing manufacturer's specifications.

- Narrow Timber I Joists (min. 40mm wide): Refer to table 3 for specific fastener requirements. The flange of the joist profile must have an adequate depth to ensure full fastener embedment.
- LVL solid joist (min. 42mm wide): Refer to table 3 for specific fastener requirements.

NOTE: To help protect against moisture ingress and rot, always prime the end grain of timber members, together with surfaces which are permanently concealed and may be in contact with other building materials.

## Steel Framing

Use of steel framing must be in accordance with NASH standard for residential and low-rise steel framing Part 1 and the framing manufacturer's specifications. Framing members must be in the range 0.75mm to 1.9mm BMT (base metal thickness). The steel framing must have the appropriate level of durability required to prevent corrosion.

## Tolerances

In order to achieve an acceptable finish, it is imperative that framing is straight and true. A suggested tolerance is 3-4mm over 3 meters in all directions.

## Fastener Durability

Fasteners must have the appropriate level of durability importance in coastal areas and areas subject to salt spray and other corrosive environments.

Fasteners must be fully compatible with all other materials that they are in contact with to ensure the durability and integrity of the assembly.

James Hardie recommends a minimum Class 3 fastener. Contact fastener manufacturers for more information.

# 4 Exterior Applications

## RESIDENTIAL DECK APPLICATION

### Step Down

There must be a step down (at least 50mm but preferably 150mm) from the door sill level to the finished surface of the deck to adequately weatherproof the entry door, particularly if it is subject to rain and wind. Refer to relevant building regulations and codes which may specify a larger step down.

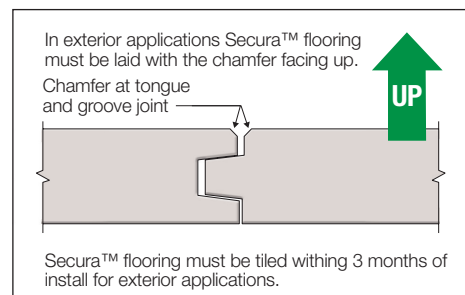


FIGURE 1 SHEET ORIENTATION - EXTERNAL USE

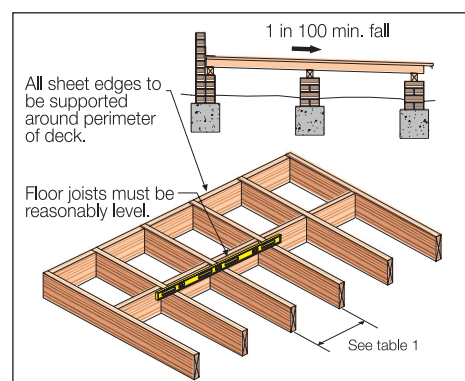


FIGURE 2 FRAME PREPARATION

### Balustrade

The balustrade upright supports must be fixed to the structural frame and not to the Hardie™ Secura™ Flooring. The balustrade and its supports must not compromise the waterproofing and durability of the deck.

The specifier is responsible for any water issues that could occur due to the penetration of the balustrade uprights including fixings, flashing, waterproofing and sheet support.

### Fall

Decks must have a fall to facilitate drainage. Decks must have a fall of at least 1 in 100 away from the building. Floor joists must run in the direction of the fall.

Do not provide fall by packing sheets. The fall can be created by trimming or sloping the joists.

### Ventilation & Ground Clearance

Low set decks must have enough crossflow ventilation to prevent the accumulation of moisture. It is recommended to have a minimum clearance from the bottom of the joists of 50mm to paved surfaces, or 150mm to the ground.

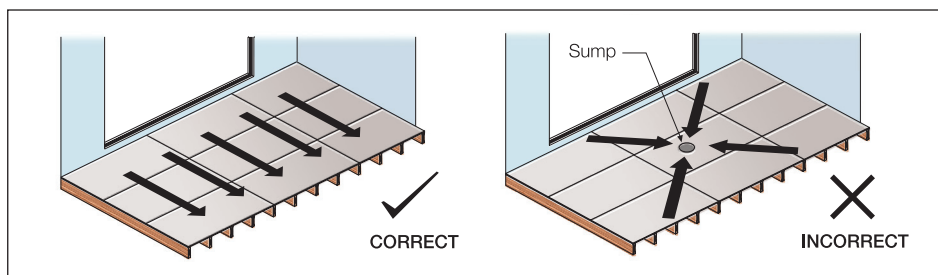


FIGURE 3 DRAINAGE

## SHEET LAYOUT & FASTENERS

All square sheet edges including movement joints, must be fully supported by framing.

Using the sheet layout selection table below, the specifier can select the recommended sheet layout based on the deck type and finished system:

| Table 3. Sheet Layout Selection Table |              |                                                                               |                                                                     |
|---------------------------------------|--------------|-------------------------------------------------------------------------------|---------------------------------------------------------------------|
| DECK TYPE                             | SHEET LAYOUT | FINISH                                                                        | SHEET CONTROL JOINTS                                                |
| Water Resistant                       | Squared      | Prime and Tile Direct, see page 4                                             | 2.7m<br>In direction of sheet only, see Figure 3. (At end of sheet) |
| Waterproofed                          | Squared      | Option 1: Waterproof system and tiling direct, Page 4.                        |                                                                     |
| Waterproofed                          | Staggered    | Option 2: Waterproof system, slip sheet, reinforced mortar bed & tile, Page 5 | 4.1m<br>In direction of sheet only, see Figure 9. (At end of sheet) |

| Table 4. Fastener Selection         |               |                                  |                                  |
|-------------------------------------|---------------|----------------------------------|----------------------------------|
| PRODUCT                             | TIMBER JOISTS | STEEL JOISTS<br>0.75 - 1.6MM BMT | STEEL JOISTS<br>1.7 TO 1.9MM BMT |
| 2.8 x 50mm FC nails                 | ✓             |                                  |                                  |
| 50mm D Head gun nails               | ✓             |                                  |                                  |
| No.8 x 40mm CSK self drilling screw | ✓             |                                  | ✓*                               |
| 40mm Hardie™ Drive screw            |               | ✓                                |                                  |
| 40mm Hardie™ Drive screw            |               | ✓                                |                                  |

NOTE: All fasteners must have a minimum Class 3 finish.

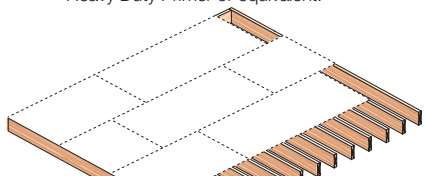
\* Refer to manufacturer's specifications for suitability and correct installation including minimum and maximum steel joist thickness.

# 4 Exterior Applications

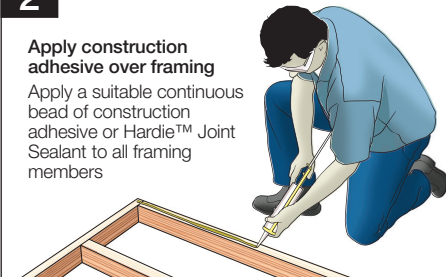
## INSTALLATION STEPS

The following illustrations show how to install the Hardie™ Secura™ Flooring sheets in a squared pattern. When installing the sheets in a staggered pattern the sheet offset must be taken into consideration. You must ensure that the product is of acceptable quality prior to installation.

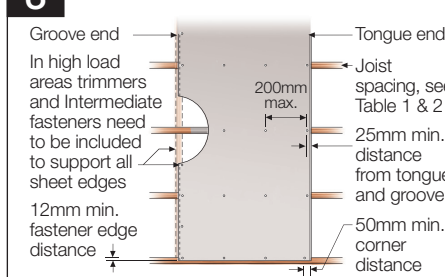
**STEP 1** **Sheet Layout**  
Determine sheet layout and expansion joint placement, see sheet layout section. Cut desired sheets and seal cut and exposed sheet edges with two coats of Wattyl Killrust Heavy Duty Primer or equivalent.



**STEP 2** **Apply construction adhesive over framing**  
Apply a suitable continuous bead of construction adhesive or Hardie™ Joint Sealant to all framing members

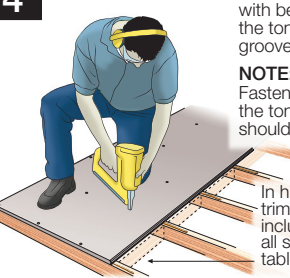


**STEP 3** **Fastener Layout**



Groove end  
Tongue end  
Joist spacing, see Table 1 & 2  
200mm max.  
25mm min. distance from tongue and groove  
12mm min. fastener edge distance  
50mm min. corner distance

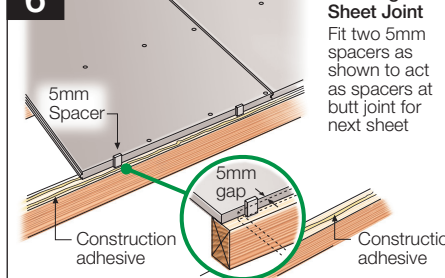
**STEP 4** **Install First Sheet**  
Install the first sheet with bevelled edge of the tongue and groove facing up  
**NOTE:** Fasteners adjacent to the tongue and groove should be installed later  
In high load areas trimmers need to be included to support all sheet edges. See table 2 for details.



**STEP 5** **Install Second Sheet**  
Fasten the second sheet in place and fix the fasteners into previous sheet adjacent to the tongue and groove facing up

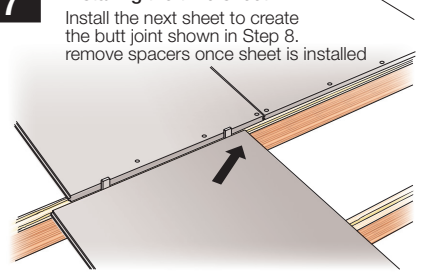


**STEP 6** **Creating 5mm Sheet Joint**  
Fit two 5mm spacers as shown to act as spacers at butt joint for next sheet

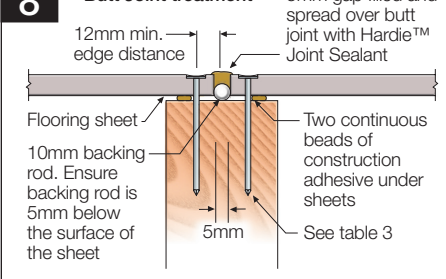


5mm Spacer  
5mm gap  
Construction adhesive

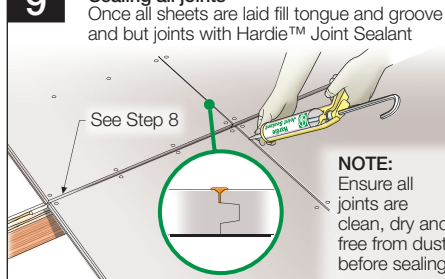
**STEP 7** **Installing the third sheet**  
Install the next sheet to create the butt joint shown in Step 8. remove spacers once sheet is installed



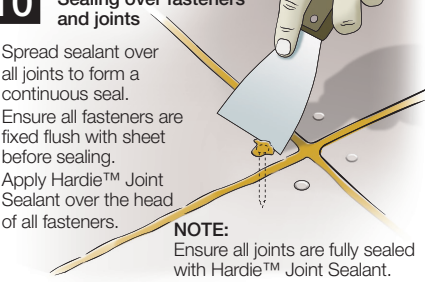
**STEP 8** **Butt Joint treatment**  
5mm gap filled and spread over butt joint with Hardie™ Joint Sealant  
12mm min. edge distance  
Flooring sheet  
10mm backing rod. Ensure backing rod is 5mm below the surface of the sheet  
Two continuous beads of construction adhesive under sheets  
See table 3



**STEP 9** **Sealing all joints**  
Once all sheets are laid fill tongue and groove and butt joints with Hardie™ Joint Sealant  
See Step 8  
**NOTE:** Ensure all joints are clean, dry and free from dust before sealing.



**STEP 10** **Sealing over fasteners and joints**  
Spread sealant over all joints to form a continuous seal. Ensure all fasteners are fixed flush with sheet before sealing. Apply Hardie™ Joint Sealant over the head of all fasteners.  
**NOTE:** Ensure all joints are fully sealed with Hardie™ Joint Sealant.



- NOTES:**
1. The sheets are installed with the bevelled groove edge facing up.
  2. 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. Once sealant has fully dried, the sheets should be protected from damage and the likelihood of excessive water until the final finishes are applied.
  3. Secura™ flooring must be tiled within 3 months of install for exterior applications.



# 4 Exterior Applications

## Waterproofing and Finishes (Supplied by third party)

Third party supplied and warranted waterproofing and tiling system which is installed over the installed Hardie™ Secura™ Flooring.

The two types of decks discussed in this section include:

1. Water resistant decks, and
2. Waterproof decks with a:
  - a) **OPTION 1:** Liquid applied membrane; or
  - b) **OPTION 2:** Flexible sheet membrane and mortar bed

The following table outlines the main differences between a water resistant and waterproofed deck.

| Requirement                                                              | Waterproof Deck | Water Resistant Deck |
|--------------------------------------------------------------------------|-----------------|----------------------|
| Floor Waterproofing to meet AS4654.1*                                    | ✓               |                      |
| External Floor over outdoor area                                         | ✓               | ✓                    |
| External Floor over habitable area or area that needs to be water tight. | ✓               |                      |

\* and installed to manufacturer's specifications.

### WATER RESISTANT DECKS

It is recommended that the deck be made as water tight as possible (i.e that water penetration be minimised) as it can lead to damage such as timber dry rot or building damage. This includes all sheet joints, junctions and fasteners.

During the installation of the Hardie™ Secura™ Flooring sheets, the factory applied sealer is subject to damage from tools, material and traffic. It is therefore recommended, that a single priming coat of Ardex WPM 300 or equivalent is applied with a roller over water resistant decks before tiles are installed.

When tiling direct to sheets with no mortar bed, the 5mm butt joints between all adjacent sheets act as control joints. These control joints must be carried up through the tiled finish, see Figure 4.

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

### WATERPROOF DECKS System selection

To achieve a, warranted, fully waterproof deck, requires a compatible and correctly installed third party waterproofing system on top of the Hardie™ Secura™ Flooring.

At the time of writing, the following third party waterproofing companies have warranted and tested waterproofing systems and technical specifications for use over Hardie™ Secura™ Flooring.

- Ardex Australia Pty Ltd
- Crommelin
- Drizoro® Waterproofing
- Sika Australia Pty Ltd
- Bostik Australia Pty Ltd

### OPTION 1: Waterproof System - Liquid Membrane Method and tile direct

This method relies on a suitable liquid applied membrane being installed on top of the sheets and tiling direct. Installation of the selected membrane system and its components must be by a licensed accredited applicator able to offer a waterproofing guarantee for tiling direct.

#### Squared Sheet Layout: Tiled Direct

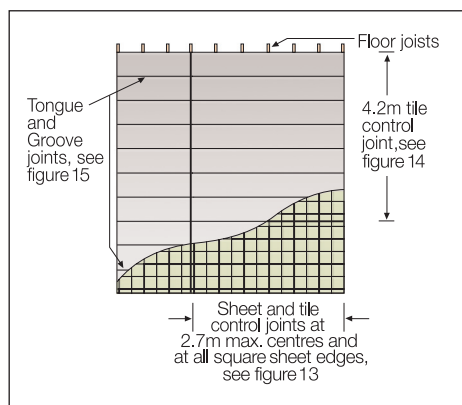


FIGURE 4 SQUARED SHEET LAYOUT

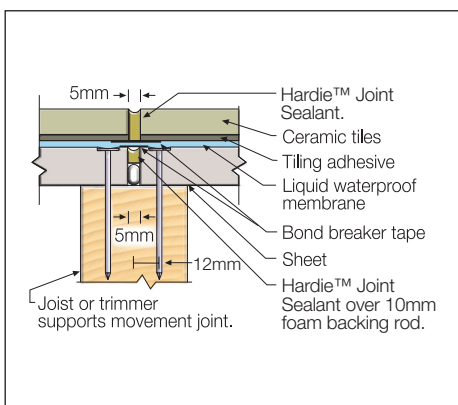


FIGURE 5 DIRECT TILE - TILE MOVEMENT JOINT OVER SHEET MOVEMENT JOINT

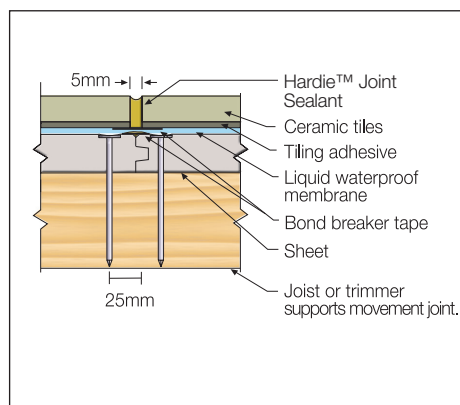


FIGURE 6 DIRECT TILE - TILE MOVEMENT JOINTS OVER TONGUE AND GROOVE JOINT

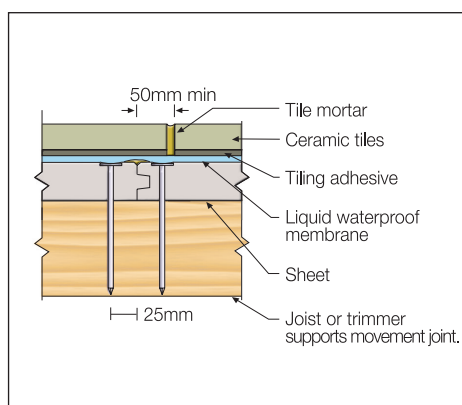


FIGURE 7 DIRECT TILE - TONGUE AND GROOVE JOINTS

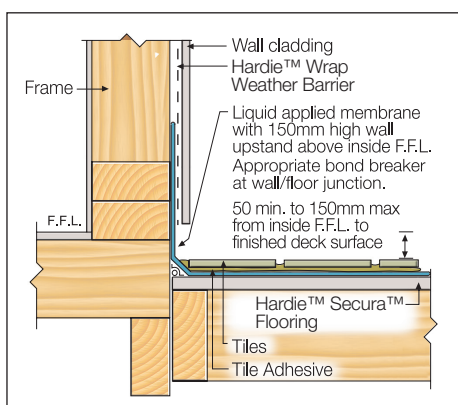


FIGURE 8 METHOD 1: WALL TO DECK FLASHING

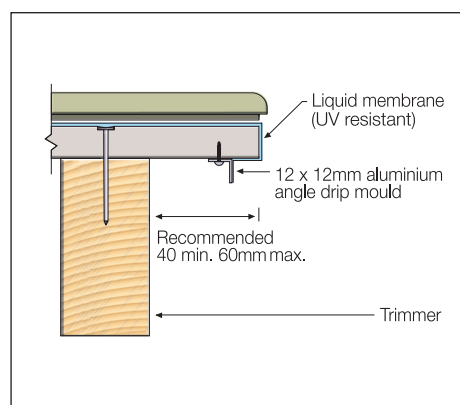


FIGURE 9 METHOD 1 DECK EDGE DETAIL USING DRIP ANGLE

#### NOTES ON FIGURE 3

- All sheet control joints must carry up through the tiles, see Figure 4.
- If additional tile control joints are required, these should coincide with sheet edges. See Figures 4 and 5. Refer to relevant tile codes for recommended tile control joint spacing.

## OPTION 2: Waterproof System, Slip Sheet and reinforced mortar bed

This method relies on applying a waterproof system, dual layer of slip sheet, 40mm minimum reinforced mortar bed, additional waterproof system and tiles.

### Staggered Sheet Layout: Mortar Bed

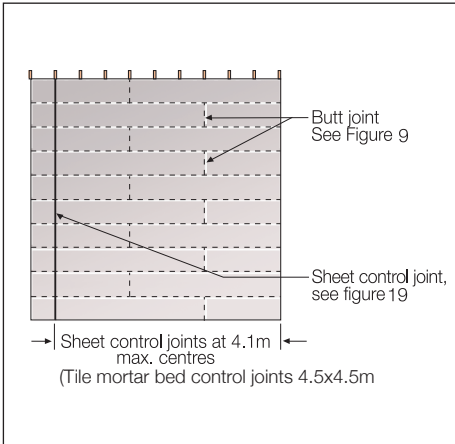


FIGURE 10 STAGGERED SHEET LAYOUT

#### NOTES ON FIGURE 10

- Control joints in floating mortar bed and tiling at maximum 4.5 x 4.5m. Sheet edges and movement joints do not need to coincide with mortar bed control joints.
- Tiling direct to a staggered sheet layout without a floating mortar bed is not recommended. Not following this advice will lead to an increased risk of tile cracking and system performance issues.

NOTE: To reduce efflorescence stains we suggest applying an additional waterproof membrane over the mortar bed and speaking with your concrete and tile grout supplier on reducing the risk of efflorescence.

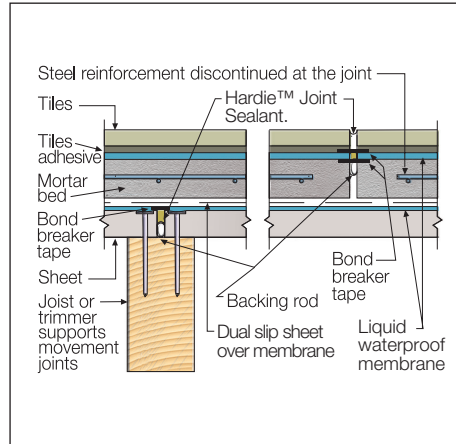


FIGURE 11 MORTAR BED - MOVEMENT DETAIL

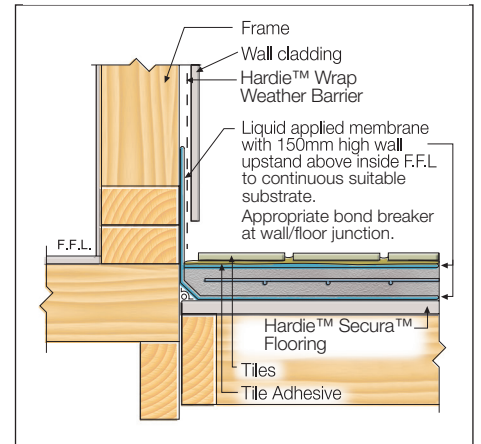


FIGURE 12 WALL TO DECK FLASHING

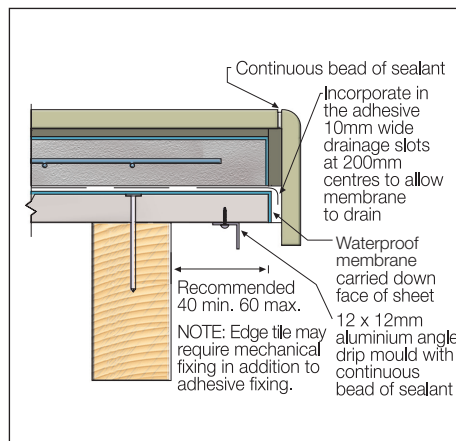


FIGURE 13 METHOD 2 - DECK EDGE DETAIL USING TILE

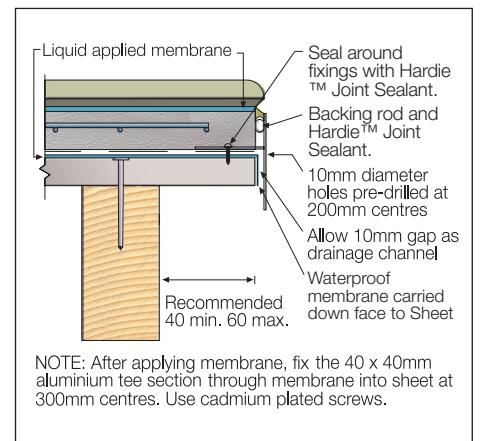


FIGURE 14 METHOD 2 - DECK EDGE DETAIL USING ALUMINIUM TEE SECTION

# 5 Interior Applications

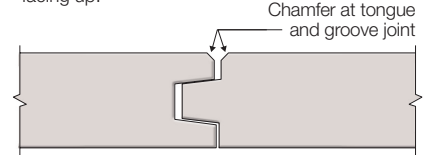
## FASTENERS

| Table 5. Fastener Selection          |                               |                |                 |                               |                              |
|--------------------------------------|-------------------------------|----------------|-----------------|-------------------------------|------------------------------|
| Product                              | Timber Joists (min. 4mm wide) | Narrow I-Joist | LVL Solid Joist | Steel Joists 0.75 - 1.6mm BMT | Steel Joists 1.6 - 1.9mm BMT |
| 2.8 x 50mm FC nails                  | ✓                             |                |                 |                               |                              |
| 50mm D Head gun nails                | ✓                             |                |                 |                               |                              |
| No.8 x 40mm CSK self drilling screw  | ✓                             | ✓              | ✓               |                               |                              |
| 40mm Hardie™ Drive screw             |                               |                |                 | ✓                             |                              |
| 40mm CSK self drilling screw         |                               |                |                 |                               | ✓ *                          |
| 50 x 2.87mm DekFast Ring D Head nail | ✓                             | ✓              | ✓               |                               |                              |

## SHEET LAYOUT AND SIDE UP

Install sheets across the floor joists with the short sheet edges fully supported on joists in a staggered pattern. For internal tiled applications, install sheet with label 'This side DOWN for TILES' facing down. For internal vinyl/carpet applications, install sheet with label 'This side UP for VINYL' facing up. In high loading applications, all the sheet edges must be supported and fixed to the frame using the recommended fastener spacing.

If the board is to be tiled in interior applications Secura™ flooring must be laid with the chamfer facing up.



For vinyl or carpet coverings in interior applications Secura™ flooring must be laid with the chamfer facing down.

**See the notations on the board:**  
"This side UP for INTERNAL VINYL APPLICATIONS ONLY" and  
"This side DOWN for TILES"

FIGURE 15 SHEET ORIENTATION - INTERNAL USE

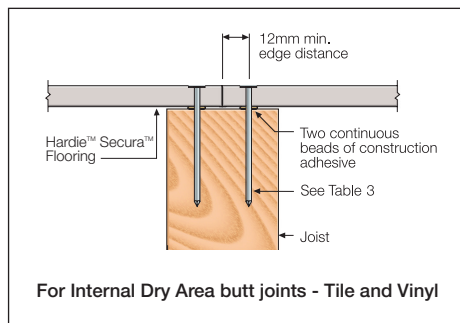


FIGURE 16 BUTT JOINING - INTERNAL DRY AREAS

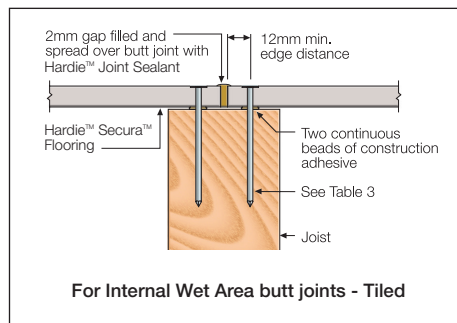


FIGURE 17 BUTT JOINING - INTERNAL TILED WET AREAS

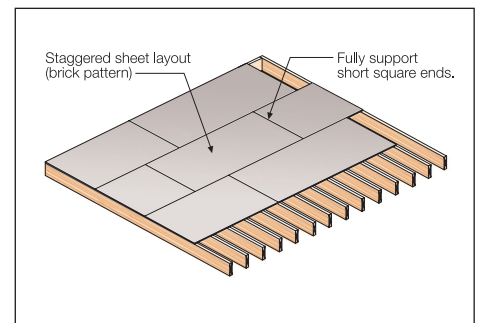
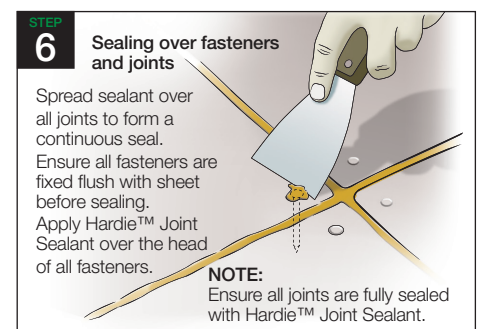
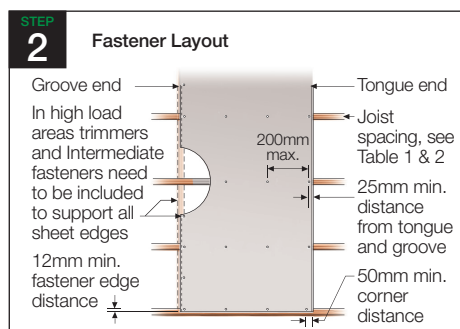
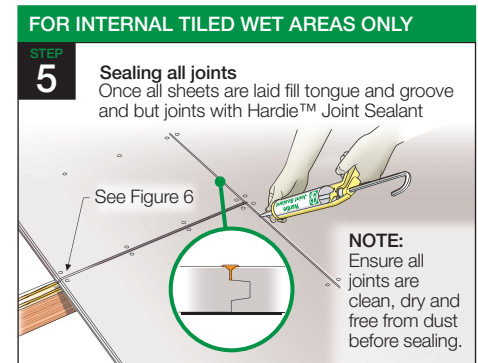
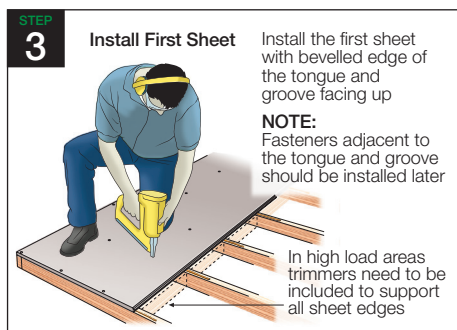
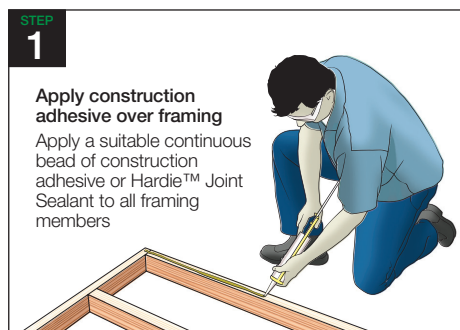


FIGURE 18 SHEET LAYOUT - TILING AND VINYL

## INSTALLATION STEPS



## NOTES

1. Ensure the product meets aesthetic and product size specifications before installation. James Hardie will not be responsible for rectifying aesthetic surface variations following installation.
2. The sheet is multi purpose and depending on the finish, the short sheet ends may or may not need a gap. As a result, creep at the short sheet ends will occur and over many sheets additional floor joists may be required.

**NOTE:** Avoid excessive foot traffic on the floor for at least 24-48 hours to allow sealant to set and dry out. Protect the surface of the sheets from damage until final finish is applied.



## CONTROL JOINTS

### Tiled dry and wet areas only

Control joints in the floor sheets and thus through the tiles are required in dry and wet areas where floor dimensions exceed 5.4m in the long sheet direction and where existing structural joints are located, see below. For 22mm Secura™ flooring, it may be more practical to have control joints every 4.8 metres along the length of the sheets to coincide with sheet size.

Additional control joints in the tiles are required in both directions, refer to AS3958.1 and Figure 3 for more information.

NOTE: No control joints are required in the flooring sheets when finishing with vinyl and carpet unless there is an existing structural joint or otherwise specified by relevant code and regulation.

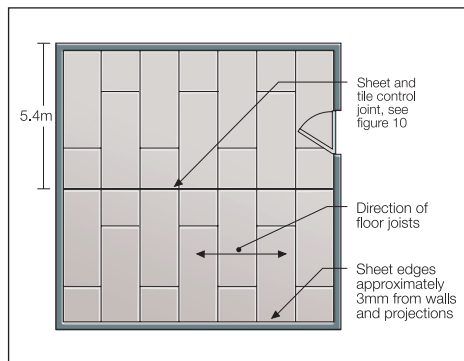


FIGURE 19 SHEET CONTROL JOINT LAYOUT

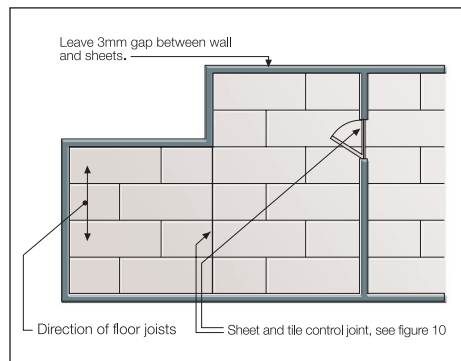


FIGURE 20 L-SHAPED ROOM

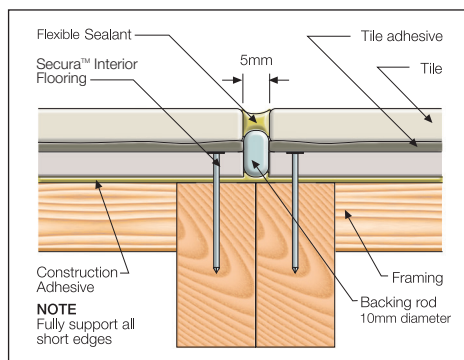


FIGURE 21 CONTROL JOINTS - SHEET & TILE JOINT

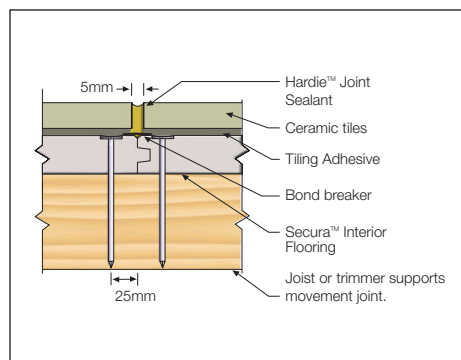


FIGURE 22 CONTROL JOINTS - TILE

# 7 Finishes and Maintenance

## FINISHES - INTERNAL APPLICATION

Ensure all components are fully compatible with one another and warranted for the intended application with Hardie™ Secura™ flooring including tiles, vinyl, and waterproofing system and tile and vinyl adhesive.

### Preparation

Where minor height variations (3mm or less) occur at sheet butt joints, these may be levelled out by filling with Ardex's Feather Finish. Sanding of the Hardie™ Secura™ flooring is not recommended. Ensure sheets are fully dry and clean before applying finishes.

### Wet Areas

This guide must be read in conjunction with James Hardie's Wet Area Construction application guide, AS 3740, AS 3958.1 and the National Construction Code (NCC). Install floor tiles in accordance with tile manufacturer's specifications within 3 months of installation.

## FINISHES - EXTERNAL APPLICATION

Ensure all components are fully compatible with one another and warranted for the intended application with Hardie™ Secura™ flooring including tiles, vinyl, and waterproofing system and tile and vinyl adhesive.

In decking applications this section is to be read in conjunction with pages 4 and 5.

Only use recommended, warranted and tested water based waterproofing systems by companies outlined on page 4 suitable for use on Hardie™ Secura™ Flooring sheets and complying with AS 4654.1.

Any damage to the surface coating must be repaired immediately to ensure that the deck maintains its integrity.

A warranted third party waterproof system and finish must be applied to the sheets within 3 months of installing the sheets. Keep sheets dry during this period.

Any waterproof membrane must be appropriately treated at both the joints, junctions and deck edge to maintain the integrity of the waterproofed deck.

Refer to the third party waterproofing companies on their waterproofing systems recommendations at sheet joints, junctions, deck edge to maintain the decks waterproofing integrity.

All waterproofing systems must be sufficiently flexible across sheet joints to accommodate differential thermal and moisture movement of all the covering materials. The waterproofing system must be installed by a licensed/accredited applicator who will provide a waterproofing guarantee.

All components of the deck must be fully compatible with one another.

For information on suitable waterproofing, tile adhesive and tiles including installation instructions and warranty, refer to a previously mentioned waterproof, tile adhesive and tile manufacturers on page 4 and AS 4654.2.

### Tiling

Tiles should be applied with proprietary adhesive that conforms to ISO 13007.1 for Ceramic Tiles and

Adhesives, installed in accordance with AS3958.1 and to tile and adhesive manufacturer recommendations. Use a flexible tile adhesive recommended for exposed exterior applications and compatible with all other materials.

When tiling direct to sheets with no mortar bed, the 5mm butt joints between all adjacent sheets act as control joints. These control joints must be carried up through the tiled finish, see Figure 4.

When tiling to a mortar bed, the sheet control joints do not need to align with mortar bed and tile control joints, see Figure 10.

It is recommended that tiles are laid from the control joint out. This will ensure that the cut tiles are located around the perimeter of the decking.

Ensure the tile adhesive used is suitable and compatible with adjoining surfaces for the intended application with Hardie™ Secura™ Flooring and other components.

Refer to the waterproofing and tile manufacture and relevant tiling codes for maximum tile control joint spacing, product suitability and compatibility including grout, tile adhesive, tile and waterproofing warranty and maintenance requirements with Hardie™ Secura™ Flooring.

### Maintenance

Regular cleaning and maintenance of the finished surface, joints, junctions, seats, penetrations etc must be carried out at regular intervals. The finished surface must be kept free of organic matter.

Remove any solvent spills immediately with absorbent material.

Ensure adequate protection is provided to all exposed waterproofed areas.

NOTE: Any damage to the surface or waterproofing must be repaired immediately to ensure that the system maintains its integrity.

## ADDITIONAL INFORMATION

The above brief notes do not cover all aspects of deck construction and tiling. Further advice must be sought from specialists in that area. The following publications are also recommended:

- CSIRO Notes of Science of Building NSB124.
- Australian Standard AS 3958.1 'Part 1 Guide to the Installation of Ceramic Tiles'.
- ISO 13007.1 for Ceramic tiles and adhesives
- BRANZ - 'Good Tiling Practice.'
- BRANZ - 'Waterproofing Decks' - Bulletin 472

## PRODUCT INFORMATION General

The basic composition of Hardie™ building products is Portland cement, ground sand, cellulose fibre, water and proprietary additives.

Hardie™ building products are manufactured AS/NZS 2908.2 'Cellulose-Cement Products-Flat Sheet'. These are also compliant with equivalent standard ISO 8336 'Fibre-cement flat sheets - Product specification and test methods'. For product classification refer to the relevant Physical Properties Data Sheet.

### Product mass

Based on equilibrium moisture content the approximate mass of 19mm Hardie™ Secura™ Flooring is 24.5kg/m² and 22mm Hardie™ Secura™ Flooring is 28.4kg/m².

### Durability

#### Resistance to moisture/rotting

Hardie™ Secura™ Flooring has demonstrated resistance to permanent moisture induced deterioration (rotting) by passing the following tests in accordance with AS/NZS2908.2:

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

#### Resistance to fire

Hardie™ flooring products have been tested to AS/ISO 9239, and exceed the requirements stipulated in the Building Code of Australia -

Specification C1.10a Fire Hazard Properties – Floors, Walls & Ceilings. All Hardie™ flooring products have a critical radiant flux values greater than the minimum requirement of 4.5 kW/m² (highest value in accordance with Table 1), and a smoke development rate well below the maximum allowable smoke development rate of 750 percentage-minutes.

#### Resistance to termite attack

Based on testing completed by CSIRO Division of Forest Products and Ensis Australia, Hardie™ building products have demonstrated resistance to termite attack.







**For information and advice  
call 13 11 03 | [jameshardie.com.au](https://jameshardie.com.au)**

**Australia** June 2025



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