

## SIMFLOOR™ 2 IN 1

### ADVANCED TRI-LINKING™ ADHESIVE AND MOISTURE CONTROL MEMBRANE

#### KEY PERFORMANCE PROPERTIES

- 2 in 1: adhesive and moisture control
- Extremely low moisture vapour permeability
- Superior bond strength
- Anti-fracture performance; can bridge cracks up to 3mm - Zero VOC content (as calculated per SCAQMD Rule 1168)
- No restriction on board length or width
- Blockade® Anti-microbial protection
- Isocyanate free formula
- Suitable over radiant heating

#### USES

- Suitable substrates include: concrete, terrazzo, ceramic tiles, well bonded vinyl sheets, timber, plywood and cement backer board
- Adheres parquet, cork, solid strip flooring, hardwood flooring, engineered flooring and bamboo flooring

#### SUPERIOR MOISTURE PROTECTION

Simfloor™ 2 in 1 / Bostik UltraSet® 2 in 1 has extremely low moisture vapour permeability and is not adversely affected by moisture. As a result, costly and time-consuming concrete moisture testing is not required when the slab is properly prepared, fully cured and dry to touch.

#### BLOCKADE®

Simfloor™ 2 in 1 / UltraSet® 2 in 1 includes Bostik's Blockade® antimicrobial protection, which inhibits the growth of bacteria, mould or mildew on the surface of the cured membrane. The cured membrane resists stains and deterioration caused by moulds.

#### ANTI-FRACTURE PERFORMANCE

The elastomeric properties can bridge cracks up to 3mm which can occur in the substrate prior to or after installation. This superior elasticity allows the adhesive to move with the wood as it expands and contracts with changes in humidity and temperature over the life of the floor.

#### ULTIMATE VERSATILITY

The high performance formulation may be used to adhere all engineered, solid, bamboo, cork and parquet. Simfloor™ 2 in 1 / Bostik UltraSet® 2 in 1 has no restrictions on board width or length. It may be used over all properly prepared substrates common to hardwood flooring installations including: concrete, plywood, bonded vinyl, ceramic tile, cement backer board, gypsum underlayment (dry, above grade), cement patch/underlayments, radiant-heat flooring and properly prepared terrazzo. This adhesive can also be used to install plywood as described, as well as ceramic tile, marble and stone inlays for light commercial or residential applications.

#### SUSTAINABILITY

This Zero VOC formulation (as calculated per SCAQMD Rule 1168) may contribute toward Green Star.



#### PRODUCT CHARACTERISTICS

Use Environments	Residential	Yes	
	Offices/Light Commercial	Yes	
	Heavy Commercial	Yes	
	Hospital	Yes	
	Exterior	No	
	Wet Areas	No	
	Substrates	Concrete	Yes
Plywood		Yes	
OSB		Yes	
Well-Bonded Vinyl		Yes	
Terrazzo		Yes	
Ceramic Tile		Yes	
Cement Sheet		Yes	
Gypsum Underlayments <sup>1</sup>		Yes	
Cement Patch/Underlayment		Yes	
Solid Hardwood		Yes	
Engineered Hardwood		Yes	
Flooring Types	Bamboo	Yes	
	Cork	Yes	
	Parquet	Yes	
	Plywood	Yes	
	Ceramic Tile, Marble, Stone Inlays <sup>2</sup>	Yes	
	Cured Physical Properties	<b>Cure Time<sup>3</sup></b>	
		Light foot traffic	8-12 hours
Normal foot traffic		12-24 hours	
Water Vapour Permeability <sup>4</sup>		<0.4	
<b>Concrete moisture vapour limits for subfloor moisture vapour protection:</b>			
ASTM 1869 – CC Method		None, Dry to touch	
Application Properties	ASTM 2170 – RH Test	None, Dry to touch	
	Elongation	>100%	
	Service Temperature	-40°C to 66°C	
	Application Temperature	10°C to 38°C	
	Ease of Troweling	Excellent	
	Odour	Mild	
	Open/Working Time <sup>5</sup>	60 minutes	
Chemical Properties	Colour	Beige	
	Density	1.71kg/L	
	Percentage of Water <sup>6</sup>	0%	
	Chemistry Type	1-Part AXIOS™ Tri-Linking™ Polymer Moisture Cure	
	Adhesive Type		
VOC Compliant (calculated per SCAQMD Rule 1168)	Yes (0 g/L)		
Flash Point	>93°C		

1 Dry, above grade

2 Residential or light commercial only

3 Humidity affects cure to a greater degree than temperature; the higher the humidity, the faster the cure.

Under normal conditions, light foot traffic is acceptable in 6-8 hours; normal traffic after 12-16 hours.

4 Refer to open time chart

5 In accordance to ASTM E-96 Standard Test Method for Water Vapour Transmission of materials.

6 In accordance to ASTM E203-01 Standard Test Method for water using Volumetric Karl Fischer Titration Method. Results rounded to the nearest tenth. Test method has error range of +/- 0.2%

## APPLICATION INSTRUCTIONS

### Direction for use

- Read and understand this Technical Data Sheet and associated Safety Data Sheet. Latest version can be downloaded from [www.simseal.com.au](http://www.simseal.com.au)
- Follow industry standard and flooring manufacturer's recommendation for acclimation, design, layout and application of wood flooring material.
- If using the product for moisture and sound control, apply as directed. Use the appropriate notched trowel.
- Upon opening the container, a translucent milky liquid may be present on the surface. This is from normal settling during shipment. Using a gauging trowel, mix the product until a homogenous consistency is achieved.
- Use protective clothing (gloves and eye protection) when working with the product.

### Substrate and Surface Preparation

- Ensure the substrate has been correctly installed according to relevant standards and manufacturer recommendations.
  - Ensure the substrate is clean and free from oil, grease, sealers, curing compounds, paints, polymer coatings, dust or other foreign (bond breaking) matter. All weak or friable material must be removed.
  - Excess bitumen, adhesive or laitance should be removed by light scabbling or mechanical captive shot blasting or grinding, followed by vacuuming to remove debris and dust.
  - Large cracks or holes may be filled using Bostik UL Rapidset in accordance with the Technical Data Sheet.
  - The subfloor should be flat to 3mm over 3m. That is no gap more than 3mm beneath the straight edge when placed on the slab. If exceeding this, level the area with Bostik Ultra Level C500 in accordance with the Technical Data Sheet.
  - All surfaces must be structurally sound before application. Concrete slabs should be built accordance with AS 2870 (Residential Footings and Slabs)
  - Contact Bostik before commencing application if there is any doubt about required or suitable preparation.
- Important Note: Concrete substrate should NOT be smooth and reflective; it must have a slightly textured/porous surface. It is advisable to test for adequate substrate absorption and texture in several areas throughout the jobsite by sprinkling droplets of water onto the slab. Within 1 minute, the droplets of water should show signs of penetrating the substrate. This is evidenced by a water stain on the concrete without a "domed" droplet. If no signs of water penetration are shown within 1 minute and "domed" droplets remain, the substrate will need to be mechanically textured.

### Application

- Apply full trowel method. Refer to trowel selection chart for guidance.
- 80 - 95% contact coverage when used as an adhesive only; 100% contact coverage when used as adhesive and moisture control.
- Evenly spread the adhesive and begin to install the flooring immediately with enough pressure to ensure full adhesive contact.
- Periodically lift boards immediately after installation to ensure proper slab coverage and transfer to the back of the flooring is achieved.
- For solid strip flooring, the preferred method to maintain pressure is to weight the floor. As per ATFA guidelines, the floor can also be temporary or permanently nailed.
- If a thin skin forms on the adhesive prior to installation, re-trowel 90° to the ridges until no sign of the original trowel mark remains. Adhesives that has cured too much prior to installation of the flooring must be removed and re-apply fresh adhesive.
- When nailing boards over plywood, ensure nail does not pierce membrane between ply and concrete, or else moisture warranty will be void.

### CLEAN UP

- It is recommended to use clean non-abrasive towel as you work prior to cure.
- While Simfloor™ 2 in 1 / Bostik UltraSet® 2 in 1 bonds tenaciously to concrete and flooring, it is designed not to bond with most finishes on pre-finished flooring making it relatively easy to remove even after cure. May be removed using a plastic scraper and dry non-abrasive towel. Be careful not to damage the finish.
- Tools must be cleaned immediately after use.

### COVERAGE

Coverage will vary depending on substrate conditions and trowel size used. Below are estimated coverage per 15.1L pail of Simfloor™ 2 in 1 / Bostik UltraSet® 2 in 1.

ADHESIVE ONLY	
Application	Coverage
<b>Engineered hardwood flooring ≤ 12.7mm thickness</b> (4.7 x 11.9mm V-Notch trowel)	18 - 19m <sup>2</sup>
<b>≤ 12.7mm thickness parquet or cork underlayment</b> (3 x 3mm Square Notch trowel)	29- 30m <sup>2</sup>
<b>Engineered hardwood flooring &gt;15.8mm thickness</b> (6.35 x 6.35 x 3mm Square Notch trowel)	14 - 15m <sup>2</sup>
<b>Solid wood or bamboo flooring &gt;12.7mm thickness</b> (6.35 x 6.35mm Square Notch trowel)	12 - 13m <sup>2</sup>

ADHESIVE & MOISTURE CONTROL	
Application	Coverage
<b>Solid, engineered or bamboo up to 15.8mm thickness</b> (6.35 x 6.35mm V-Notch trowel)	11 - 13m <sup>2</sup>
<b>Solid, engineered or bamboo up to 15.8mm thickness</b> (6.35 x 6.35mm Square Notch trowel)	11 - 13m <sup>2</sup>
<b>Solid, engineered or bamboo &gt;15.8mm thickness</b> (12.7 x 11.9mm V-Notch trowel)	7 - 7.5m <sup>2</sup>
<b>Solid, engineered or bamboo up to 15.8mm thickness</b> (6.35 x 6.35mm V-Notch trowel)	7 - 7.5m <sup>2</sup>

## TROWEL SELECTION

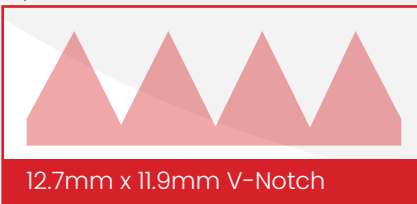
In order to form a membrane that functions properly for moisture vapour protection and/or sound reduction, the right trowel needs to be selected to achieve both 100% coverage of the substrate and 100% transfer to the back of the flooring. Jobsite conditions, profile of the substrate, depth of back channelling in the flooring, and other factors affect the amount of adhesive that must be applied to achieve proper coverage and transfer. Always lift a board at the beginning of and during the installation process to confirm adequate coverage and transfer.

Trowel size may need to be changed to achieve the required coverage and transfer. See trowel suggestions below.

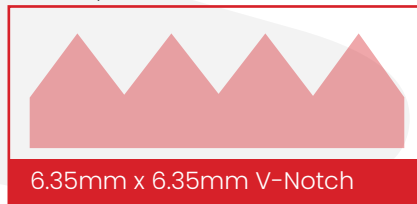
## ADHESIVE & MOISTURE MEMBRANE INSTALLATION METHOD

Suggested Trowel (For use as an adhesive only, refer to adhesive only installation method.)

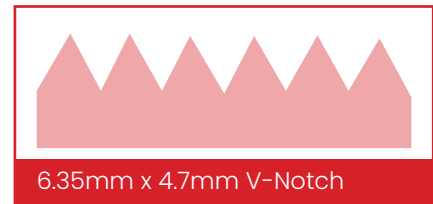
Solid, engineered or bamboo wood flooring >16mm thick. Coverage: 0.5m<sup>2</sup> per Litre



Solid, engineered or bamboo wood flooring up to 16mm thick. Coverage: 0.74m<sup>2</sup> per Litre



Engineered wood flooring up to 10mm thick. Coverage: 0.86m<sup>2</sup> per Litre

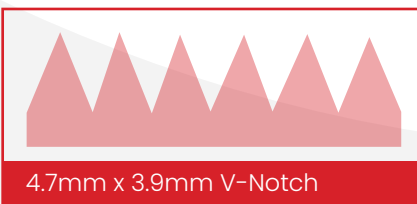


Trowel size is suggested to maximise coverage of adhesive. Periodically lift a board to ensure the following conditions are being met: 100% coverage of concrete substrate and 100% transfer to the back of the flooring product. Uneven subflooring may require the use of either a leveling/patching material, or a larger V-notched trowel for proper coverage of adhesive.

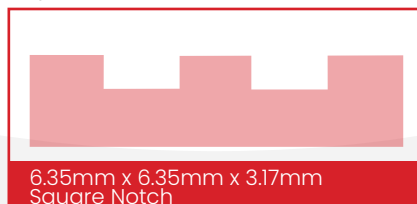
## ADHESIVE & MOISTURE MEMBRANE INSTALLATION METHOD

Suggested Trowel (For use as an adhesive only, refer to adhesive only installation method.)

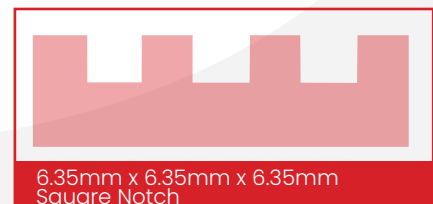
Engineered hardwood flooring ≤13mm thick. Coverage: 1.23m<sup>2</sup> per Litre



Engineered hardwood flooring ≥13mm thick, Solid wood or bamboo flooring ≤13mm, and parquet ≤19mm thick. Coverage: 0.98m<sup>2</sup> per Litre



Solid wood or bamboo flooring >13mm thick, or plywood. Coverage: 0.86m<sup>2</sup> per Litre



Trowel size is suggested to maximise coverage of adhesive. Periodically check coverage of adhesive during installation: >80% coverage is required for all engineered wood flooring; >95% coverage is required for all solid wood flooring or bamboo flooring products.

## IMPORTANT NOTES

- Periodically check coverage of adhesive during installation; 100% substrate coverage and adhesive transfer is required to protect against damages from subfloor moisture.
- Due to limitations with solid and bamboo wood flooring (e.g. lack of dimensional stability), "below-grade" installations are limited to engineered hardwood flooring.
- On or below grade substrates must have appropriate vapour barrier properly installed below slab.
- Do not install solid wood flooring over VCT / vinyl.
- Bamboo installations should follow solid hardwood flooring installation recommendations.
- Recommended slab temperature is 10 – 35°C.
- Requires atmospheric moisture to cure properly. It should not be used in totally confined or air free spaces.
- Do not use on wet, dusty, contaminated, glassy smooth or friable substrates.
- Do not use over substrates treated with sealers or curing compounds.
- Do not use to areas subjected to negative hydrostatic head.
- Completely remove all adhesive residue and other surface contaminants from the slab by diamond grinding, shot blasting or scarifying.
- Do not use over perimeter bonded flooring material.
- Timber flooring may need to be acclimatised to the relevant environment to prevent excessive expansion / shrinkage causing failure of the floor system. Additional expansion allowance may also need to be provided. Refer to timber manufacturer or ATFA installation procedures.
- If uncertain about the quality or moisture condition of the slab, verification of its moisture content using moisture meter is needed. Use of Bostik Ultra Seal may be required for concrete that is wet visually without free water.
- NOTE: It is the user's responsibility to determine the condition and suitability of all surfaces before application
- This product does not eliminate all possible moisture related or installation related issues (e.g. puddles, water leaks, wet mopping, hydrostatic head, etc.)
- Simfloor™ 2 in 1 / UltraSet® 2 in 1 is designed to prevent excessive variance of moisture between top, middle and bottom of flooring that originates from the substrate.
- The product should not be exposed to water and alcohol based cleaners before it has completely cured.
- Simfloor™ 2 in 1 / UltraSet® 2 in 1 must be fully cured prior to sanding. Allow a minimum of 24 hours. Note that industry recommendations indicate that it can be beneficial for a floor to be left for a period of 3 to 14 days prior to sanding.
- Variation in temperature and humidity will affect the curing rates.
- For optimum performance, use the appropriate trowel recommended by Bostik.

## STORAGE & SHELF LIFE

12 months when stored off the ground in a cool, dry weatherproof environment and out of direct sunlight.

- Re-Seal Partially Used Container: Clean all adhesive residues off the lip of the pail and the groove around the perimeter of the lid. Plastic (e.g. PE bag) may be placed into the pail to cover wet adhesive, especially in high humidity environments, but do not allow the plastic to extend outside of the pail and interfere with the seal of the pail. Use rubber mallet to fully seal the lid. Do not turn the pail over.
- Re-open Partially Used Container: Remove the lid. Peel away cured material and discard. Any uncured material may be used.

## BOSTIK CO-OPERATIVE TEST PROGRAM

Bostik offer a service in which a program has been established to eliminate potential field problems by pretesting Bostik adhesives with samples of building materials to which the adhesive will be applied. This service is available on large projects where pre-application testing will aid in determining the proper surface preparation method to achieve optimum adhesion. Consult a Bostik representative for further information.

## LIMITED WARRANTY

Simseal® guarantees the performance of its products when used in accordance with the conditions outlined in this warranty section, provided the products are utilised according to the application guidelines for their intended purposes.

### Valid Warranty Conditions:

**Product Compatibility:** This warranty is valid only if the product specified in this Technical Data Sheet (TDS) is used in conjunction with complementary products exclusively manufactured by Bostik. The use of non-Bostik manufactured complementary products will invalidate this warranty.

**Proper Application:** Compliance with all application instructions and recommendations detailed in this TDS, as well as adherence to relevant Australian Standards and applicable Building Codes during installation and use, is required for the warranty to remain effective.

### Bostik Limited Warranty Access:

The Limited Warranty for this product can be accessed online at [http://www.bostik.com/australia/en\\_AU/customer-support/warranty-information/](http://www.bostik.com/australia/en_AU/customer-support/warranty-information/) or by calling the Bostik Hotline (1800 267 845). or by calling the Bostik Hotline at 1800 267 845.

### Warranty Coverage:

Bostik manufactured products are warranted to meet the performance requirements as set down in their Technical Data Sheets for a period of 10 years from the date of manufacture, provided the products are stored and used within the guidelines set down in the Technical Data Sheet.

### Exclusions:

This warranty does not cover damages resulting from improper application, use of incompatible materials, environmental conditions, improper handling and storage, or conditions beyond the control of Simseal, such as damage by third parties, defective coverings and substrates, construction failure, and distortion or settling of the sub-strata.

### Claims and Limitations:

To initiate a warranty claim, the claimant must provide proof of purchase and evidence of product failure. Claims must be filed within 30 days of discovery of the problem. Simseal and Bostik Australia reserve the right to inspect any alleged product failure and the sole responsibility is to supply replacement product. No warranty claims will be accepted unless a representative of Bostik Australia has the opportunity to inspect the alleged failure.

### General:

The Limited Warranty extends only to the original purchaser and is not transferable or assignable. All other conditions or warranties whether express or implied by any other representation, statement, or correspondence on the part of Simseal or Bostik are hereby excluded.

## SAFETY PRECAUTIONS

SEE THE SAFETY DATA SHEET FOR ADDITIONAL INFORMATION.  
SDS can be downloaded from [www.simseal.com.au](http://www.simseal.com.au)  
EMERGENCY INFORMATION: 1800 033 111 (ALL HOURS).