

Another **trade essential**  
from Laminex New Zealand®

**strandfloor**®



## Product description

Trade Essentials® Strandfloor® is a high density reconstituted wood panel bonded with moisture resistant resin and wax, specifically formulated for use as residential and commercial interior floor platforms. When installed and maintained in accordance with the Strandfloor® technical manual, it will comply with the sheet flooring requirements of the New Zealand Building Code.

Strandfloor consists of strands of pinus radiata randomly layered to form an aesthetically attractive wood based panel. Using a pMDI resin (formaldehyde free resin) system plus heat and pressure, wood strands are bonded together to form high density panels. A wax emulsion is added at this stage to impart additional moisture resistance to the strands.

StrandfloorH3.1 has a water based insecticide and fungicide added to provide superior performance when exposed to moisture.

The long edges of the Tongue & Groove sheets are machined to accommodate a plastic tongue which is inserted into one of the grooves. Strandfloor Tongue & Groove has a white tongue while StrandfloorH3.1 has a green tongue.

**There are four product options all 20mm thick to cover your building requirements.**

**Strandfloor Square Edge** is an all-purpose wood based high density flooring material.

**Strandfloor Tongue & Groove** is identical to Strandfloor Square Edge in its manufacture but has the enhancement of a polypropylene tongue that gives the required sheer strength and eliminates the need for solid timber nogs to the long edge.

**StrandfloorH3.1 Square Edge** is the premium flooring material. Improved resin composition provides increased weathering performance with the added benefit of meeting New Zealand building requirements for use in wet areas.

**StrandfloorH3.1 Tongue & Groove** is identical to StrandfloorH3.1 Square Edge in its manufacture but has the enhancement of a polypropylene tongue that gives the required sheer strength and eliminates the need for solid timber nogs to the long edges.

Table 1

Product range	Panel sizes	Weight (kg) per m <sup>2</sup>	Weight (kg) per panel	Panels per pack	Weight (kg) per pack
Square Edge	3600 x 2400	13.6	117.5	10	1180
	3600 x 1200	13.6	58.8	20	1181
	2400 x 1200	13.6	39.2	45	1770
Tongue & Groove	3600 x 1200	13.6	58.8	20	1181
	3600 x 800	13.6	39.2	25	985
	2400 x 1200	13.6	39.2	45	1770
H3.1 Square Edge	3600 x 2400	13.6	117.5	10	1180
	3600 x 1200	13.6	58.8	20	1181
	2400 x 1200	13.6	39.2	45	1770
H3.1 Tongue & Groove	3600 x 1200	13.6	58.8	20	1181
	3600 x 800	13.6	39.2	25	985
	2400 x 1200	13.6	39.2	45	1770

## Which Strandfloor product to use?

Figure 1



# Installation

## Panel layup

### Strandfloor Tongue & Groove and StrandfloorH3.1

#### Tongue & Groove:

- Place face with ink marked brand name downwards.
- Use a string line when laying the first row of panels (see figure 2).
- To allow for linear expansion, a minimum 8mm clearance must be provided between panel edges and fixed objects such as bottom plates, columns, abutting concrete etc.
- Provide continuous edge support at building perimeter.
- Panels must be laid across the joists (see figure 3).
- It is recommended to stagger the end joints when laying panels (see figure 3).
- Lay first row before introducing second row (see figure 3).
- Edges must be close butted – do not cramp.
- Cut panels must span a minimum of three joists.
- Provide continuous support to tongue and groove edge in wet areas where rigid floor finishes are used – ceramic tiles laid on appropriate<sup>(1)</sup> wet area membrane etc.

(1) An appropriate wet area membrane is one that complies with AS/NZS 4858 or which carries a current BRANZ appraisal.

Figure 2

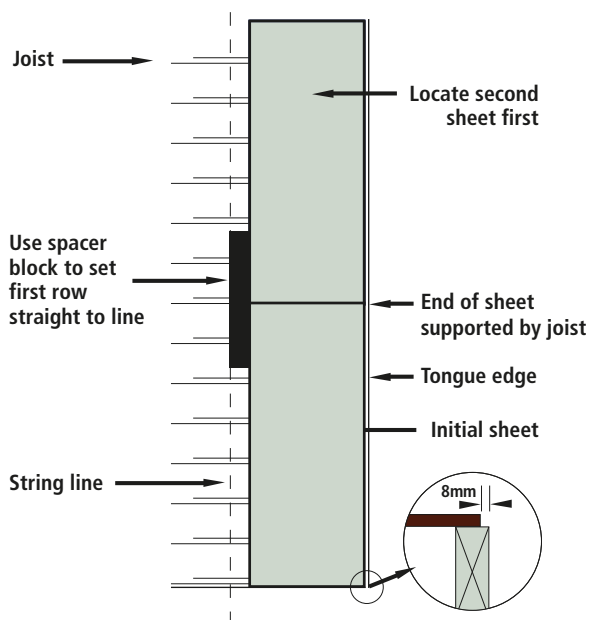
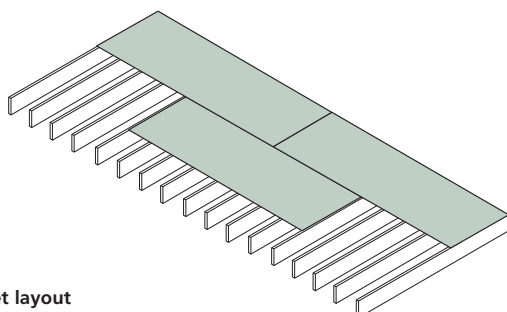


Figure 3



Sheet layout

### Strandfloor Square Edge and StrandfloorH3.1 Square Edge:

- Panel layup consistent with Tongue & Groove panels except the long edge can be laid parallel with the joist where the joist spacing is a multiple of 1200mm. Timber in the form of joists and nogs/dwangs must provide support to all edges of each sheet.

## Fixing

- All nails must have a minimum protection of hot dip galvanised.
- All nails must be driven flush at time of installation and punched below the surface just prior to sanding.
- All screws must have a minimum protective coating of zinc chromate.
- The need to use stainless fastenings will be determined by the treatment in the support timber (joists/nogs etc.). There is no requirement to use stainless fastenings when fixing StrandfloorH3.1.

Table 2

	Fastener types		
	Minimum size	Fixing centres mm	
		(edges)	(intermediate)
<b>Timber joists</b>			
Annular grooved particle board flooring nails	60mm	150	200
Galvanised jolt head nails	60mm	150	200
Self drilling screws (corrosion resistant)	45mm x 8 gauge	150	200
<b>Steel joists</b>			
Tek self drilling screw (corrosion resistant)	50mm x 12 gauge	150	200
<b>Adhesive options</b>			
HB Fuller - Sturdi Bond	5mm continuous beads to the top of each joist and between sheets at ends and edges 2mm bead to the top of tongue		
Bostik - Alpha Grip			
Holdfast - Gorilla Grip			
Sika - Nailbond Premium			

#### Note:

When laying Strandfloor onto steel joists ensure the adhesive you choose is suitable for bonding wood to steel.

- For Tongue & Groove panels, all fastenings are to be 15mm from the edge of the panel to clear tongue and groove profile and 10mm in from ends supported by joists.
- For Square Edge panels all fastenings are to be placed 10mm from the edge and ends of the panel.

#### For diaphragms

- Screw fixings are not acceptable
- Joist at max 450mm centres when using Tongue & Groove panels

For more information on diaphragms, please refer to the Strandfloor technical manual or contact your Laminex New Zealand representative.

# Installation

## Nail fastenings

### Hand-driven nails

- Initially be driven flush with the surface.
- Punch nails just prior to sanding. This allows for moisture content of joists to dry during building construction. Punching the nail will close up any gaps between the flooring panel and the joist.
- To improve lateral holding, nails shall be slightly angled and driven parallel to the sheet edge.

### Power-driven nails

- Use a depth adjuster on the power tool to control depth of nail.
- Initial nailing flush with the surface.
- Ensure punching takes place just prior to sanding and finishing.

#### Note:

- Avoid nailing too close to the edge of the panel.
- Hand-driven nail fastening generally provides a better finish as greater control of the process is possible.

## Screw fastenings

Screws shall be driven no more than 2mm below the surface at time of installation.

## Wet area floors

A wet area floor is any area which is supplied with water from a water supply system e.g. kitchens, bathrooms, toilets, shower rooms, laundries, changing rooms, en-suites etc.

The Strandfloor in these areas must be protected by an integrally waterproof sheet material (e.g. polyvinylchloride) with sealed joints; or an appropriate<sup>(1)</sup> wet area membrane which is then protected with a floor covering of your choice.

An impervious coating such as polyurethane or paint is not an acceptable finish in these areas.

All Tongue & Groove joins must be supported by solid timber or the floor area overlaid with a tile underlay sheet material where ceramic tiles are to be laid.

(1) An appropriate wet area membrane is one that complies with AS/NZS 4858 or which carries a current BRANZ appraisal.

## Finishing

Strandfloor provides an ideal substrate for most types of floor finishes.

- Strandfloor surfaces facing the habitable space must be covered or coated prior to occupation of the structure.
- All floors will require sanding prior to covering or coating.
- The moisture content of the flooring must be checked prior to the application of any covering or coating. The maximum moisture content must not exceed 16% especially at panel edges. Failure to comply may result in an unsatisfactory visual appearance due to panel movement as drying occurs.
- All Tongue & Groove joins must be supported by solid timber or the floor area overlaid with a tile underlay sheet material where ceramic tiles are to be laid.
- Prior to the installation of vinyl floor coverings (sheet, tiles, strip etc.) the Strandfloor surface shall be covered with a floor levelling compound or rigid sheet (hardboard or MDF).

#### Note:

Excessive sanding or using very coarse sandpaper aggressively will reduce the thickness of the panels thereby affecting the strength.

## Clear finishing (polyurethane)

Square Edge panels must be used where clear finish is intended.

Post laying the Strandfloor will result in a superior finish.

Batches of Strandfloor must not be mixed – check underside of sheets for batch numbers.

Hand driven nailing will result in a better finished appearance than power driven nails or screws.

Coatings must be maintained to ensure they continue to provide the necessary protection.

Polyurethane or paint coatings are not acceptable finishes in wet areas.



## Uses

Strandfloor products are suitable for use as a sheet flooring material on suspended timber framed floors, in domestic housing and other buildings, which are built within the scope of NZS 3604 paragraph 1.1.2 and constructed in accordance with section 7 of that document. Any other use may require specific design.

Strandfloor can be used for all of the following applications:

- As pre-laid or post-laid flooring over timber and engineered beams or steel joists in single or double layer applications.
- As an overlay to concrete or wooden floors.
- As floor diaphragms for wind and earthquake loads.
- For general staircase construction.
- For industrial shelving and packaging.

## Features and benefits

### Strandfloor products:

- Can be laid in all weathers.
- Can be walked on immediately.

### Strandfloor Tongue & Groove:

- No nogs are required, therefore less nailing.
- Optimum sizes to suit most situations.
- Fast continuous installation.

### StrandfloorH3.1 Square Edge and StrandfloorH3.1 Tongue & Groove are the premium products:

- Designed specifically for wet areas.
- Close-in period has been extended by an additional 50% to twelve weeks.

## Exposure

Strandfloor Square Edge and Strandfloor Tongue & Groove must not be exposed to weathering for more than eight weeks.

StrandfloorH3.1 Square Edge and StrandfloorH3.1 Tongue & Groove must not be exposed to weathering for more than twelve weeks.

The products must be left to weather in their manufactured state. Application of protective coatings or coverings to the surface of Strandfloor during weathering must not occur.

## Identification

All panels are ink marked on the underside with the product identification and a 5 digit manufacturing traceability number. StrandfloorH3.1 panels also have the NZ Timber Preservation Council registration number, the type of treatment and the Hazard Class included.

Tongue & Groove panels will have a label on the upper face.

Strandfloor Tongue & Groove has a white polypropylene tongue.

StrandfloorH3.1 Tongue & Groove has a green polypropylene tongue.

## Storage

Strandfloor must be stacked clear of the ground, on evenly spaced, full width timber bearers, at centres that will not allow sheets to sag. Storage on site must be under a well ventilated cover, to protect from moisture and sunlight.

## Design considerations

Strandfloor panels are suitable to form platform floors constructed in accordance with NZS 3604 section 7. Maximum joist spacings for all floors shall be 600mm centres. Assessment must be made as to whether desired deflection limits will be met where specific concentrated loads (point loads) are likely. E.g. all floors other than 'domestic' as categorised by NZS 3604 1.1.2. Please refer to section 5 – Floor design of the Strandfloor technical manual for deflection performance information.

After the initial exposure period, Strandfloor products must not get wet (*see wet area floors for protection of the product*).

Sufficient sub-floor ventilation must be provided under all platform floors suspended above the ground to ensure the ongoing moisture content of the flooring panels remains at or below 16% over the life of the product. Sub-floor ventilation requirements as set out in NZS 3604 6.14 shall be regarded as the minimum levels required.

### Strandfloor products must not be used:

- In an exterior location, or where intermittent wetting might occur.
- In a permanently raw unfinished condition – (prior to occupation of the building, Strandfloor must be sealed or covered with an appropriate floor covering).

Once installed and in use, panels must not be subjected to conditions that will allow the continuing moisture content to be above 16%.

All design considerations cannot be provided in this brochure. Please refer to the Strandfloor technical manual for a more comprehensive list of considerations. This manual gives full details of Strandfloor products' physical properties, commercial and industrial applications, installation, large floor areas and finishing and maintenance.

## Appraisal and testing

Strandfloor has two BRANZ appraisals. Strandfloor – No. 676 (2016) and StrandfloorH3.1 – No. 677 (2016).

Both appraisals cover the use of the products within the scope of the New Zealand Building Code.

StrandfloorH3.1 carries the New Zealand Timber Preservation Council treatment designation number 64.

## NZ Building Code

Strandfloor meets the requirements of NZS 3604 for sheet flooring. NZS 3604 being an acceptable solution referred to in the New Zealand Building Code – Clause B1 Structure.

When stored, handled, installed and maintained in accordance with instruction set out in the Strandfloor technical manual, Strandfloor panels will meet the durability performance requirements of NZBC B2.3.1(a) for 50 years.

Both Strandfloor and StrandfloorH3.1 products have been appraised by BRANZ for use under NZBC B2.3.1 (a) – not less than 50 years and B2.3.1 (b) 15 years.

## Red List Free

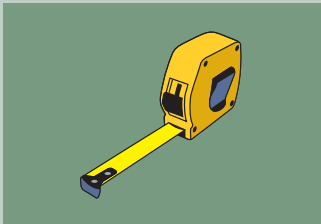
Strandfloor and StrandfloorH3.1 are declared as Red List Free in the Declare Products Database. This is a globally recognised nutrition label for the building products industry, formed as part of the Living Building Challenge. Red List Free products have all ingredients disclosed in the Declare database and none of those ingredients appear on the Living Building Challenge Red List.



## Health and safety

### Health and safety precautions must be taken when working with wood products.

- Exposure to wood dust and/or to formaldehyde may cause irritation to the eyes, respiratory system and skin, and may cause sensitisation resulting in asthma, and by skin contact resulting in dermatitis.
- Wood dust is classified as a known carcinogen. Repeated inhalation of wood dust over many years may cause nasal cancer. Formaldehyde is classified as a known carcinogen.
- Storage areas containing large quantities of Strandfloor must be adequately ventilated.
- Work areas must be well ventilated and kept clean. Sawing, sanding and machining equipment must be fitted with dust extractors to ensure that dust levels are kept within standards laid down by Worksafe Australia, Occupational Health and Safety New Zealand, or the specific country of use. If not, a dust mask conforming with AS/NZS 1715 and AS/NZS 1716 and eye protection conforming with AS/NZS 1337 must be worn.
- Offcuts, shavings and dust must be disposed of in a manner which avoids the generation of dust and in accordance with the requirements of local waste authorities.
- In end use applications all product surfaces exposed to occupied space must be sealed. For further information and material safety data sheets, please phone Laminex New Zealand customer services department.



## Technical support

As not all product use options can be described in this brochure, additional end use and specifying information is available as a complimentary service. The information contained in this brochure must not be reproduced or published in whole or in part without the prior consent of Laminex New Zealand. Laminex New Zealand reserves the right to revise without notice any information contained in this brochure. Please contact Laminex New Zealand customer services department to check the currency of information contained in this brochure.

### This brochure must be read in conjunction with the current Strandfloor technical manual.

Laminex New Zealand will not be liable to any person if the instructions as to storage, use and installation of Strandfloor as outlined in this brochure or referenced literature are not complied with. It is the obligation of the installer of Strandfloor to communicate the information conveyed in this brochure to the relevant owner/occupier.

Any proprietary products referred to in this brochure must be used in accordance with the relevant manufacturer's instructions.

Laminex New Zealand accepts no liability for these proprietary products. Nothing contained in this paragraph or elsewhere in this brochure affects any rights a person may have under the Consumer Guarantees Act 1993.

This brochure supersedes all previous issues. All Acts, Codes and Standards referred to in this brochure are the current editions at the date of brochure publication.

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