strandfloor®



INZ STRUCTURAL FLOORING

LNZ Structural Flooring Options

Laminex New Zealand has a range of structural flooring options to suit various building applications including:

StrandfloorH3.1® | Strandfloor®

- A high-density reconstituted wood panel made from renewably sourced strands of Pinus Radiata bonded with moisture resistant resin and wax, specifically formulated for use as residential & commercial interior flooring platforms within the scope of NZS 3604 and Specific Engineer Design applications.
- StrandfloorH3.1® has the addition of a water based insecticide and fungicide added to provide superior performance when exposed to moisture.

SuperPine®

 A high-density board made from renewably sourced Pinus Radiata wood particles which are bonded together with melamine urea formaldehyde resin and a wax emulsion to aid moisture resistance through out the panel. Designed for use as residential & commercial interior platforms within the scope of NZS 3604.





Use | Applications

strandfloorH3.1° strandfloor°

 Pre-laid or post-laid flooring over timber and engineered beams or steel joists in single or double layer applications



 An overlay to concrete or wooden floors



 As floor diaphragms for wind and earthquake loads.



• For general staircase construction



• As carcass members for cabinetry.



• For industrial shelving and packaging



NOTE:

- 1. StrandfloorH3.1® meets the New Zealand building requirements for use in wet areas.
- Strandfloor® and SuperPine® is also suitable for use in open and closed kitchen and laundries.
 However, strict criteria must be met to satisfy the Building Code.



 Pre-laid or post-laid flooring over traditional timber floor joists, engineered timber joists, such as "I" Joists, LVL and PosiSTRUT, or steel joists supports in single or double layer



 An overlay to concrete floor slabs or wooden floors



• As floor diaphragms for the transfer of wind and earthquake loads.



• For general staircase construction.



For shelving and packaging.



As carcass members for cabinetry.



StrandfloorH3.1® Range & Specifications

strandfloorH31°

Туре	Exposure Time	Panel Sizes	Weight (kg) Per m2	Weight (kg) Per Panel	Pack Size
Tongue & Groove	12	3600x1200x20mm	13.6	60kg	20
strandfloorH31*	weeks	2400x1200x20mm	13.6	40kg	45
Square Edge		3600x2400x20mm*	13.6	118kg	10
_3.3	12 Weeks	3600x1200x20mm	13.6	60kg	20
strandfloorH3.1° square edge		2400x1200x20mm	13.6	40kg	45

^{*}Product Made To Order (MTO) Only. MOQ & T&Cs apply.

Strandfloor® Range & Specifications

strandfloor

Туре	Exposure Time	Panel Sizes	Weight (kg) Per m2	Weight (kg) Per Panel	Pack Size
Tongue & Groove	8 weeks	3600x1200x20mm	13.6	60kg	20
strandfloor*	o weeks	2400x1200x20mm	13.6	40kg	45
Square Edge		3600x2400x20mm*	13.6	118kg	10
J	8 Weeks	3600x1200x20mm	13.6	60kg	20
strandfloor®		2400x1200x20mm	13.6	40kg	45

^{*}Product Made To Order (MTO) Only. MOQ & T&Cs apply.

SuperPine® Range & Specifications



Туре	Exposure Time	Panel Sizes	Weight (kg) Per m2	Weight (kg) Per Panel	Pack Size
Tongue & Groove	9 wooks	3600x1200x20mm	13.8	60kg	20
SUPERPINE* tongue & groove		2400x1200x20mm	13.8	40kg	45
Square Edge	8 Weeks	3600x1200x20mm	13.8	60kg	20
SUPERPINE*	o weeks	2400x1200x20mm	13.8	40kg	45

StrandfloorH3.1® & Strandfloor® Flooring Selector



SuperPine® Flooring Selector



StrandfloorH3.1® | Strandfloor® - Physical Properties

StrandfloorH3.1® Square Edge & StrandfloorH3.1® Tongue & Groove

Property	Units	Manufacturing Mean*	AS/NZS min/max
Bending Strength (MoR)	MPa	25.5	19 min
Modulus of Elasticity (MoE)	MPa	3681	2750 min
Internal Bond Strength (IB)	MPa	0.927	0.55 min
24-hour Thickness Swell	%	5.0	8 max

Strandfloor® Square Edge & Strandfloor® Tongue & Groove

Property	Units	Manufacturing Mean*	AS/NZS min/max
Bending Strength (MoR)	MPa	23.1	17 min
Modulus of Elasticity (MoE)	MPa	3525	2650 min
Internal Bond Strength (IB)	MPa	0.681	0.50 min
24-hour Thickness Swell	%	6.9	14 max

^{*}Based on Juken 2018 manufacturing mean data.

Other Properties

Strand Acoustic Properties*

Product	Thickness	STC Value (dB)	IIC Value (dB)
Strandfloor [®]	20mm	24	13
Strandsarking®	16.3mm	27	N/A
Strandboard®	12mm	25	N/A

^{*}Tested by UoA Acoustic Lab – not accessed by BRANZ.

Flooring Characteristic Properties**

Product	Property	Parallel	Perpendicular
Strandfloor®	Shear strength	7.2 MPa	6.45 MPa

^{**}Tested in accordance with AS/NZS 2269.1 using log normal method of AS/NZS 4063.2

SuperPine® Physical Properties



Property	Units	AS/NZS min/max
Bending Strength (MoR)	MPa	17 min
Modulus of Elasticity (MoE)	MPa	2650 min
Internal Bond Strength (IB)	MPa	0.50 min
24-hour Thickness Swell	%	14 max
Thickness Stability	%	25 max
Glue Bond Quality	MPa	2.9 min
Surface Water Absorption	g/m²	210 max

• SuperPine® meets the requirements of a class 2 particle board flooring and can be used for any application within NZS 3604.

Certifications

strandfloorH3.1°

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Compliance

strandfloorH31

- StrandfloorH3.1® has CodeMark Certificates CM-1004.
- StrandfloorH3.1® also has a BRANZ appraisal, No. 677 (2021).
- The CodeMark Certificates and BRANZ Appraisals cover the use of this product within the scope of the New Zealand Building Code.
- Current CodeMark & BRANZ Certificates can be viewed at www.BRANZ.co.nz
- These Certificates can also be found at Laminex.co.nz

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- Strandfloor® has CodeMark Certificates CM-1003.
- Strandfloor® also has a BRANZ appraisal, No. 676 (2021).
- The CodeMark Certificates and BRANZ Appraisals cover the use of this product within the scope of the New Zealand Building Code.
- Current CodeMark & BRANZ Certificates can be viewed at www.BRANZ.co.nz
- These Certificates can also be found at Laminex.co.nz



- SuperPine[®] Structural Flooring has a BRANZ appraisal, No. 1217 (2022) covering use within the New Zealand Building Code.
- Current BRANZ Certificate can be viewed at www.BRANZ.co.nz
- BRANZ Appraisal can also be found at Laminex.co.nz
- BRANZ test products to confirm they comply where they state performance to the NZBC – this is a scientific based approach.

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Compliance

- StrandfloorH3.1[®], Strandfloor[®] and SuperPine[®] Structural Flooring has been BRANZ appraised.
- Appraisal numbers are as follows:
 - StrandfloorH3.1[®] | No. 677 (2021)
 - o Strandfloor® | No. 676 (2021)
 - SuperPine[®] | No. 1217 (2022)
- All Appraisals cover use within the New Zealand Building Code. The current certificate can be viewed on their website www.BRANZ.co.nz.
- BRANZ test products to confirm they comply where they state performance to the NZBC – this is a scientific based approach.
- BRANZ Appraisal can also be found at laminex.co.nz







Compliance | New Zealand Building Code

StrandfloorH3.1®, Strandfloor® & SuperPine® meet the following requirements of the NZBC:

 Clause B2 Durability: Performance B2.3.1 (a) not less than 50 years,

B2.3.1 (b) 15 years

• NZS 3604 – Timber frame buildings – doesn't require specific engineer design

• AS/NZS 4266.1 -Reconstituted woodbased panels – methods of testing

Building Act 2004

Building Regulations Schedule 1 (Building Code)

Acceptable Solutions

end Verification Methods

Functional requirement

Clause B1 Structure: Performance B1.3.1, B1.3.2 & B1.3.4 – loads arising from self weight, imposed gravity loads arriving from use, earthquake and wind impact. (i.e. B1.3.3 (a), (b), (f), (h) and (j)

Alternative Solutions

· Product certification [CodeMark]

- Determinations
- · Cited documents

Other methods to demonstrate compliance: In-service history

- Expert opinion e.g. producer
- Comparison to Acceptable Solutions, Verification Methods and other documents
- · Comparison to previously approved Alternative Solutions

 Clause Hazardous **Building Materials:** Performance F2.3.1

> • AS/NZS 1860.1 particleboard flooring specifications

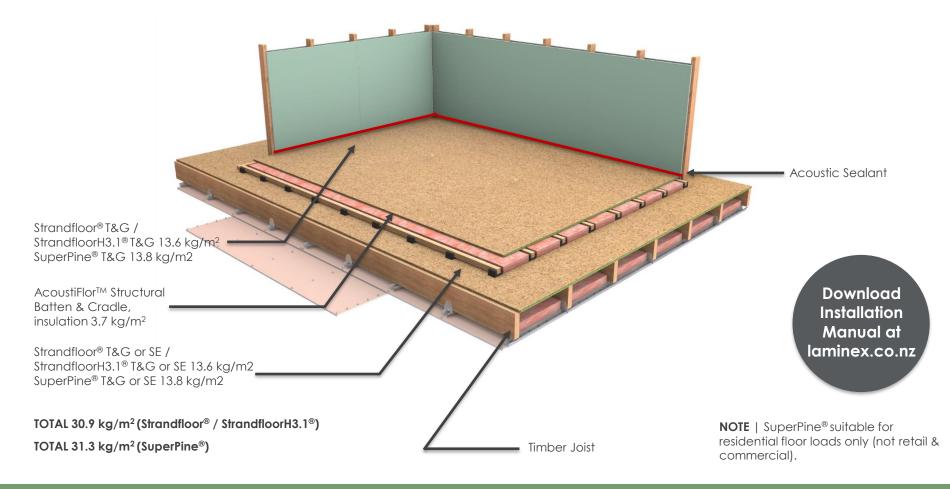
Cited standards

Standards

LNZ Fire & Acoustic Floor System

- Laminex New Zealand[™] has developed a lightweight floor system (above joist weight of 30.9kg/m² (Strandfloor®/StrandfloorH3.1®) or 31.3kg/M² (SuperPine®)) that is suitable for use as intertenancy floor.
- As per Clause G6 'Airborne and Impact sound' to the New Zealand Building Code (NZBC), the Sound Transmission Class (STC) and the Impact Insulation Class (IIC) for intertenancy floors shall be no less than 55.
- The Laminex New Zealand™ Fire & Acoustic Floor System has been tested and verified to achieve the fire ratings up to 60/60/60 FRR and STC 65/IIC-56. The acoustic performance exceeds the minimum requirements of Clause-G6 of the NZBC.
- The acoustic performance of the system has been verified by Marshall Day Acoustics & independently tested at Auckland University and the fire performance has been tested/assessed by BRANZ 394.
- StrandfloorH3.1®, Strandfloor® and SuperPine® has been tested and approved to be used in the Laminex New Zealand™ Fire & Acoustic Floor System. See next page for more details.

LNZ Fire & Acoustic Floor System



Production Process Overview

strandfloorH3.1° strandfloor°





- Renewably sourced Pinus Radiata is chipped into strands (Strandfloor®) or small particles (SuperPine®).
- 2
- Resin is added to the wood particles as follows:
 - StrandfloorH3.1® & Strandfloor® | A polymer resin
 - SuperPine® | A formaldehyde resin
- 3 44
- The wood particles are then pressed under heat and pressure to form a 20mm thick flooring panel.
- 4 0
- Panels sanded, cut (tongue inserted) then and packaged ready for distribution.

StrandfloorH3.1® | Strandfloor® Technical Tools Available







Technical Manual (Digital & Offline)

Design Guide (Digital)

Warranty



Declare Label (Digital)



Safety Data Sheet (SDS) (Digital)



Formaldehyde Emissions Certificate (Digital)



Design Guide

VOC Emissions Certificate (Digital)

All documents can be downloaded at laminex.co.nz

SuperPine® Technical Tools Available



Technical Manual (Digital & Offline)



Design Guide (Digital)



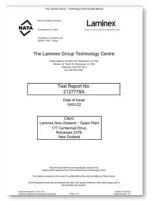
Updated Care & Maint. Guide (Digital)



Warranty



Safety Data Sheet (SDS) (Digital)



Formaldehyde Emissions Certificate (Digital)



VOC Emissions Certificate (Digital)

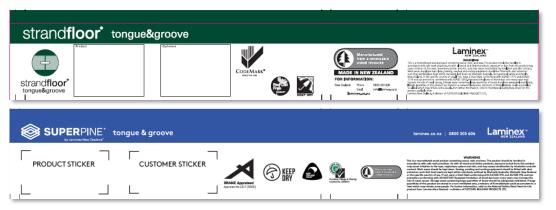
All documents can be downloaded at laminex.co.nz

StrandfloorH3.1® | Strandfloor® | SuperPine® - Product ID

- All panels come with a label on the top face & printing on the reverse face.
- Packs identified using a cardboard banner.
- Panels to be installed label face up.

T 17:44 14/12/230 ARTICEDIAN FLORING CLASS LET; NEALS 1920 1:300; 234 NW, SHA HOme; This face down Ast made LF, Another trade essential from the Lauriex Group

Ink Jet Mark | Julian Printing – Showing Product ID & Manufacturing Traceability No.



Cardboard Pack Banners | Tongue & Groove and Square Edge



Top Face Label













strandfloor



STTRUCTURAL FLOORING INSTALLATION

Installation Tools & Materials



StrandfloorH3.1® | Strandfloor® | SuperPine® Installation & Jargon



I-Beam



Pozi Strut



LVL (J-Frame)



Solid timber

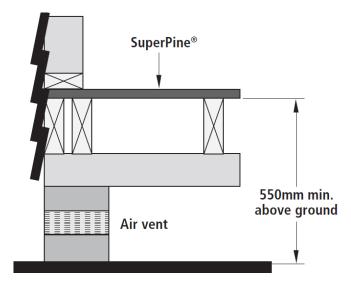
- Maximum Joist span is 600mm centres 450mm span would be most common
- Building code allows for joists minimum 100mm in width, this would be rare now and 150mm would be most likely the minimum.

StrandfloorH3.1® | Strandfloor® | SuperPine® - Installation & Jargon

Subfloor Terminology | Minimum ground clearance for StrandfloorH3.1®, Strandfloor® and SuperPine®

NZS 3604 / NZBC states:

- 550mm to underside of floor panel.
- Minimum crawl space in a sub-floor area is 450mm, and the minimum joist thickness is 100mm = 550mm



StrandfloorH3.1® | Strandfloor® | SuperPine® - Fasteners & Adhesives

Adhesive Options						
	Sika Nailbond [®] Premium					
Timber Joists	Bostik Alpha Grip					
	Gorilla Grip	5mm continuous bead to the top of each joist and				
	HB Fuller Sturdi Bond™	between sheets at ends and edges, 2mm bead to the				
	Sikaflex® 123 Bond	top of the tongue.				
Steel Joists	Gorilla 940FC					
	Gorilla MS Sealant					

Note: Check with adhesive supplier to ensure adhesives not listed are suitable.

Fastener Types					
Timber Joists (incl. SG8, LVL8 & I-Beams)	Minimum Size	Fixing Cent Perimeter	res mm Inter.	Diaphragm Sq. Edge	n (NZS3604) T&G
Annular Grooved Particleboard Flooring Nails	60 x 3.1	150	200	✓	
Galvanised Jolt Head Nails	60 x 2.8 / 3.1	150	200	✓	
Self Drilling Screws Corrosion Resistant	45mm x 8 gauge	150	200		
Simpson Strongtie SS Screw	50mm X 10 gauge (SSWSC2BSA10)	150	200		
Simpson Strongtie Zinc Screw	50mm x 10 gauge (WSV50SA)	150	200	✓	✓
Beck Scrail SubLok Pro	57mm x 2.8 gauge	150	200		
Delfast Round Head Coil Nail	50mm x 2.8 gauge	150	200		
Steel Joists					
Self Drilling Corrosion Resistant Tek Screws	45mm X 10g Tek	150	200		

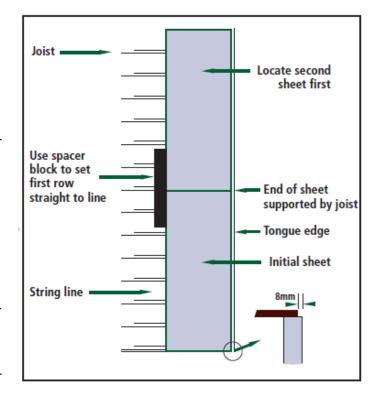
- While gluing is not mandatory in NZ, Laminex strongly recommend gluing panels to joists and nogs.
- Gluing keeps the flooring panels in contact with the joists if they shrink or twist, which helps prevent floor squeak.
- For steel joists, 10 gauge x 40-45mm tek screws are suitable.

NOTE

Nails cannot be used for Tongue & Groove diaphragm floors

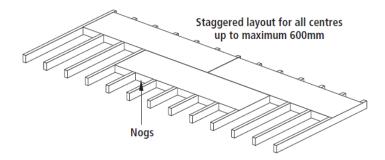
Flooring Installation | Tongue & Groove

- Panels shall always be laid across the joists. Lay with brand name / printing down. (Refer figure to right for panel orientation).
- Ends of sheets should be close butted and centred over joists. Check the grooved edge for straightness with a string line.
- Fix panels with only sufficient fastenings to avoid movement this will stop any distortion of the grooved edge prior to further installation.
- Lay a blocking piece (an off-cut of minimum ex 150 x 50 timber 1.4m long) across the joists, in the centre of the panel, on the grooved edge.
- Stand on the blocking piece and strike with a heavy hammer to drive the panel tongue into the groove of the first row.
- Stand on the blocking piece and strike with a heavy hammer to drive the panel tongue into the groove of the first row.



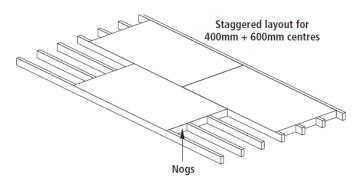
Flooring Installation | Square Edge

Staggered Layout | Centres Up to Max. 600mm



- Apply 5-7mm continuous bead of adhesive along joists and perimeter joist / blocking.
- Install first sheet starting from one corner, fix off along sheet edge working from one end, then along joists.

Staggered Layout | Centres 400mm + 600mm



- Repeat with following sheets along the first row.
- When first row is installed, start installing second row, sheet end joins must be staggered.

StrandfloorH3.1® | Strandfloor® | SuperPine® - Floor Finishing

- StrandfloorH3.1®, Strandfloor® & SuperPine® panels provide the ideal substrate for most types of floor finishes
- All floors require sanding prior to covering or coating
- After the building is finished and before occupation panels shall be finished with floor covering such as carpet, vinyl, ceramic tiles or a coating
- Prior to applying floor finishes nail shall be punched & screws tightened
- Laminex do not recommend laying vinyl direct to StrandfloorH3.1®, Strandfloor® or SuperPine®

SuperPine is NOT suitable for use in wet areas such as bathrooms and shower zones. In these applications, Laminex recommends StrandfloorH31[®].

Floor Sanding						
Surface Finish	Cut	Sander Type	Paper Grit			
Clear Coating	First	Drum	60 - 80			
	Second	Disc	100			
	Third	Disc, Sander	120 - 150			
Other Finishes Single Drum / Belt 60 - 100						
(Carpet, vinyl, wet area membranes etc.)						

StrandfloorH3.1® | Strandfloor® | SuperPine® - Storage & Weathering

- Store inside in dry conditions.
- Onsite allow to weather as per exposure times up to 8 weeks for Strandfloor® / SuperPine® and up to 12 weeks for StrandfloorH3.1®.
- After rain sweep any ponding water of the surface (may have to do this daily if rain continues).
- Leave in a raw condition to weather and keep panels clear to allow the release of absorbed moisture.
- Storage & onsite Breathable type covers can be used but must be kept clear of the panels to allow air to circulate under the cover.
- **DO NOT** use a liquid sealer to protect the flooring, this seals in moisture and can accelerate panel deterioration.

strandfloor®



For full details on handling, storage and installation of either StrandfloorH3.1[®], Strandfloor[®] or SuperPine[®] - please refer to the respective Technical Manual for these products. These manuals can be downloaded at **laminex.co.nz**

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