



PRODUCT CERTIFICATE

THIS IS TO CERTIFY

STRANDFLOORH3.1® FLOORING

Certificate No: BRANZ-CM-1004
Date of Issue: 20 February 2019
Revision Date: 20 February 2022

CERTIFICATE HOLDER



Laminex New Zealand

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CERTIFICATION BODY



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Cheyldra Percy
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DESCRIPTION OF PRODUCT

StrandfloorH3.1® is an engineered wood-based panel flooring material available as StrandfloorH3.1® Square-Edge and StrandfloorH3.1® Tongue & Groove which has green polypropylene tongues. StrandfloorH3.1® is intended for use in wet areas. StrandfloorH3.1® is suitable for up to 12 weeks exposure. The strands of StrandfloorH3.1® are treated to hazard class H3.1. All panels are ink marked on the underside with the New Zealand Timber Preservation Council registration number and treatment type, StrandfloorH3.1 and a five digit traceability code.

USE OF PRODUCT

- StrandfloorH3.1® is for use as panel flooring material on suspended timber-framed floors that have been designed and constructed in accordance with NZS 3604, Section 7.
- StrandfloorH3.1® is also for use as a non-structural overlay on concrete slab-on-ground floors, suspended concrete floors and suspended timber floors.

COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2, B1.3.3 [a], [b], [f], [h], and [j], and B1.3.4.

Clause B2 DURABILITY: Performance B2.3.1 [a] not less than 50 years [when used as a diaphragm floor or installed under bottom plates], B2.3.1 [b] 15 years [when installed as flooring between bottom plates], and B2.3.1 [c] 5 years [when used as a non-structural overlay].

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.

SUBJECT TO THE FOLLOWING CONDITIONS AND LIMITATIONS

- The maximum exposure period for StrandfloorH3.1® flooring before the building is closed-in [protected from moisture] is 12 weeks.
- The moisture content of the StrandfloorH3.1® flooring must be controlled in accordance with the provisions of NZBC Acceptable Solutions E2/AS1 and E3/AS1, NZS 3604, and the Technical Literature.
- StrandfloorH3.1® flooring in-service surface temperatures must not exceed 50°C adjacent to heating appliances or 35°C where floor heating is used.
- Where StrandfloorH3.1® flooring is used as a structural diaphragm only nail fixing must be used.



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The Certificate Holder must maintain compliance with the conditions set out in Regulation 15 of the Building [Product Certification] Regulations 2008.

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REFERENCE DOCUMENTS

This Product Certificate must be read in conjunction with:

- BRANZ Appraisal No 677 [2016] StrandfloorH3.1® Flooring.
- Technical Literature: Strandfloor® Technical Manual, Edition 5, 03/19.

APPENDIX A - PRODUCT TECHNICAL DATA

A1: TYPE AND INTENDED USE OF PRODUCT

StrandfloorH3.1® is for use as pre-laid or post-laid flooring for suspended timber floors designed in accordance with NZS 3604, Section 7, and as a flooring overlay to concrete slab-on-ground floors and suspended concrete or timber floors.

A2: PRODUCT SPECIFICATION

StrandfloorH3.1® is in accordance with the performance requirements of AS/NZS 1860.1 [before and after exposure] as required by NZS 3604, Paragraph 2.3.7.

StrandfloorH3.1® flooring is manufactured from strands of radiata pine. The wood strands are treated with a water-based organic preservative and insecticide, bonded with a pMDI resin and contain a mineral wax-based water repellent throughout the thickness of the panel. At manufacture, the panels have an average density of 680 kg/m³ and average moisture content of 10%.

StrandfloorH3.1® Square Edge is square edged and has a nominal thickness of 20 mm.

StrandfloorH3.1® Tongue & Groove is 20 mm nominal thick, with the long edges factory grooved with a 4.5 mm wide and 9.5 mm deep slot, and fitted on one side with a rigid, opaque green polypropylene tongue. This forms a tongue and groove [shear key] joint between adjacent panels.

For the purposes of calculating the building performance index of the building envelope the R-value of StrandfloorH3.1® 20.0 mm panels should be taken as 0.17 m² K/W. This has been determined through testing by BRANZ.

The product is available as set out in Table 1 and Table 2.

TABLE 1: StrandfloorH3.1® Square Edge

Panel Sizes [mm]	Approximate Weight per Panel [kg]
3600 x 2400 x 20	118
3600 x 1200 x 20	59
2400 x 1200 x 20	39



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TABLE 2: StrandfloorH3.1® Tongue & Groove

Panel Sizes (mm)	Approximate Weight per Panel (kg)
3600 x 2400 x 20	59
3600 x 800 x 20	39
2400 x 1200 x 20	39

Fixings - hot dip galvanised or stainless steel 60 mm x 2.8 mm annular grooved flooring nails or 50 mm x 8 g screws that comply with AS 3566.1.

Adhesive - BRANZ Appraised adhesive suitable for adhering wood-based panel flooring material to timber or concrete

A3: INSTALLATION REQUIREMENTS

Installation must be carried out in accordance with the following:

- Technical Literature: Strandfloor® Technical Manual, Edition 5, 03/19.
- NZS 3604, Section 7.
- BRANZ Appraisal No 677 [2016] StrandfloorH3.1® Flooring.

APPENDIX B - OTHER RELEVANT TECHNICAL DATA

B1: GENERAL

The design of StrandfloorH3.1® in wet areas must be undertaken in conjunction with the Technical Literature, NZS 3604, Paragraph 4.3.4 and NZS 3602, Table 1. Laminex New Zealand recommend the use of StrandfloorH3.1® in wet areas.

StrandfloorH3.1® in wet areas shall be protected by an impervious floor covering in accordance with E3/AS1.

B2: STRUCTURE

General

Each panel of StrandfloorH3.1® must span at least two floor joist spans [i.e. be continuous over three joists], except at floor edges where infill part panels are required.

StrandfloorH3.1® Square Edge panels must be supported at all edges and ends with solid blocking. StrandfloorH3.1® Tongue & Groove does not require blocking under the tongue and groove joint. In wet areas, where a waterproofing membrane is being used, refer to the membrane suppliers information for support requirements.

Loading

StrandfloorH3.1® will support loads of up to 3 kPa with joists at 600 mm centres as given in NZS 3604 Table 1.2.



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Diaphragms

The maximum joist spacing for StrandfloorH3.1® Square Edge diaphragm floors is 600 mm. The diaphragm is as specified by NZS 3604, Section 7.3.

The maximum joist spacing for StrandfloorH3.1® Tongue & Groove diaphragm floors is 450 mm. Refer to the Technical Literature for design and installation information.

B3: PREVENTION OF FIRE OCCURRING

Separation or protection must be provided to StrandfloorH3.1® from heat sources such as fire places, heating appliances, flues and chimneys. Part 7 of NZBC Acceptable Solutions C/AS1 – C/AS6 and NZBC Verification Method C/VM1 provide methods for separation and protection of combustible materials from heat sources.

B4: INSTALLATION

The moisture content of the floor framing timber must not exceed 18% when StrandfloorH3.1® is installed.

When StrandfloorH3.1® is used as an overlay to timber substrates, the moisture content of the substrate must not exceed 15%.

When StrandfloorH3.1® is used as an overlay to concrete the relative humidity of air at the concrete surface must not exceed 75% prior to installation of the Strandfloor®, as per the requirements of NZBC Acceptable Solution E2/AS1 Paragraph 10.2[d]. Slabs on ground must be constructed in accordance with NZS 3604, Section 7.5.

APPENDIX C - BASIS OF CODEMARK CERTIFICATION

The following tests have been carried out on StrandfloorH3.1®:

- Testing in accordance with the requirements of AS/NZS 1860.1 and BRANZ criteria to demonstrate structural and durability performance.
- The change in the physical properties of StrandfloorH3.1®, including modulus of rupture, modulus of elasticity, internal bond strength, thickness swell and surface water absorption after natural weathering have been determined by BRANZ.
- The density, modulus of rupture, modulus of elasticity, internal bond, and deflection under concentrated load [stiffness] of StrandfloorH3.1® have been determined by BRANZ.
- Strength capacity and deflection under concentrated load [stiffness] of StrandfloorH3.1® exposed to the weather for 12 weeks, have been determined by BRANZ.
- Formaldehyde emission levels have been determined by testing to AS/NZS 4266.16. The results of these tests have been reviewed by BRANZ and found to be satisfactory.
- BRANZ testing and monitoring of wood-based sheet flooring products through BRANZ Appraisals since 1977.

The referenced Technical Literature has been examined by BRANZ and found to be satisfactory.

The quality of supply to the market is the responsibility of Laminex New Zealand.

Building designers are responsible for the design of the building, and for the incorporation of the StrandfloorH3.1® into their design in accordance with the instructions of Laminex New Zealand.

Quality of installation is the responsibility of the installer in accordance with the instructions of Laminex New Zealand.



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SOURCES OF INFORMATION

- AS 3566.1: 2002 Self-drilling screws for the building and construction industries.
- AS/NZS 1860.1: 2002 Particleboard flooring – Part 1: Specifications.
- AS/NZS 4266.16:2004 Reconstituted wood based panels - Methods of test. Method 16: Formaldehyde emission - Desiccator method.
- BRANZ Appraisal No. 677 [2016] StrandfloorH3.1® Flooring.
- NZS 3602:2003 Timber and wood-based products for use in building.
- NZS 3604: 2011 Timber-framed buildings.
- Acceptable Solutions and Verification Methods for New Zealand Building Code Protection from Fire Clauses C1-C6, Ministry of Business, Innovation and Employment, First Edition April 2002 [Amendment 4, 1 January 2017].
- Acceptable Solutions and Verification Methods for New Zealand Building Code External Moisture Clause E2, Ministry of Business, Innovation and Employment, Third Edition July 2005 [Amendment 8, 30 November 2018].
- Acceptable Solutions and Verification Methods for New Zealand Building Code Internal Moisture Clause E3, Ministry of Business, Innovation and Employment, Second Edition February 1998 [Amendment 6, 01 January 2017].
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.



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