



Certificate No: BRANZ-CM-1003
Date of Issue: 20 February 2019
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CERTIFICATE HOLDER



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CERTIFICATION BODY



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Chelydra Percy
Chief Executive Officer
BRANZ Limited

PRODUCT CERTIFICATE

THIS IS TO CERTIFY STRANDFLOOR® FLOORING

DESCRIPTION OF PRODUCT

Strandfloor® is an engineered wood-based panel flooring material available as Strandfloor® Square-Edge and Strandfloor® Tongue & Groove, which has white polypropylene tongues. The panel flooring is suitable for up to 8 weeks exposure. All panels are ink marked on the underside with the product code, Strandfloor and a five digit traceability code.

USE OF PRODUCT

- Strandfloor® 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.
- Strandfloor® 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 Strandfloor® flooring before the building is closed-in [protected from moisture] is 8 weeks.
- The moisture content of the Strandfloor® flooring must be controlled in accordance with the provisions of NZBC Acceptable Solutions E2/AS1 and E3/AS1, NZS 3604, and the Technical Literature.
- Strandfloor® flooring in-service surface temperatures must not exceed 50°C adjacent to heating appliances or 35°C where floor heating is used.
- Where Strandfloor® flooring is used as a structural diaphragm only nail fixing must be used.
- Strandfloor® must not be used in wet areas where maintenance of an impervious coating cannot be assured. Refer to NZS 3602, Table 1.

REFERENCE DOCUMENTS

This Product Certificate must be read in conjunction with:

- BRANZ Appraisal No 676 [2016] Strandfloor® Flooring.
- Technical Literature: Strandfloor® Technical Manual, Edition 5, 03/19.



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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.

This Certificate is issued by BRANZ Limited, an independent certification body accredited by the product certification body appointed by the Chief Executive of the Ministry of Business, Innovation and Employment [MBIE] under the Building Act 2004. MBIE does not in any way warrant, guarantee or represent that the building method or product the subject of this certificate conforms with the New Zealand Building Code, nor accept any liability arising out of the use of the building method or product. MBIE disclaims, to the extent permitted by law, all liability [including negligence] for claims of losses, expenses, damages and costs arising as a result of the use of the building method[s] or products[s] referred to in this certificate.

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APPENDIX A - PRODUCT TECHNICAL DATA

A1: TYPE AND INTENDED USE OF PRODUCT

Strandfloor® 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

Strandfloor® 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.

Strandfloor® flooring is manufactured from strands of radiata pine. The wood strands are 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%.

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

Strandfloor® 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 white 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 Strandfloor® 20 mm panels should be taken as 0.17 m²K/W. This has been determined through testing by BRANZ.

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

Table 1: Strandfloor® Square Edge

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

Table 2: Strandfloor® Tongue & Groove

| Sizes [mm] | Approximate Weight per [kg] |
|------------------|-----------------------------|
| 3600 x 1200 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 flooring material to timber or concrete.

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CODEMARK[®]

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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 676 [2016] Strandfloor[®] Flooring.

APPENDIX B - OTHER RELEVANT TECHNICAL DATA

B1: GENERAL

The design of Strandfloor[®] in wet areas must be undertaken in conjunction with the Technical Literature, NZS 3604, Paragraph 4.3.4 and NZS 3602, Table 1. Strandfloor[®] in wet areas must be protected by an impervious floor covering in accordance with NZBC Acceptable Solution E3/AS1.

B2: STRUCTURE

General

Each panel of Strandfloor[®] 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. Strandfloor[®] Square Edge panels must be supported at all edges and ends with solid blocking. Strandfloor[®] 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

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

Diaphragms

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

The maximum joist spacing for Strandfloor[®] 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 Strandfloor[®] 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 Strandfloor[®] is installed.

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

When Strandfloor[®] 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.

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APPENDIX C - BASIS OF CODEMARK CERTIFICATION

The following tests have been carried out on Strandfloor®:

- 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 Strandfloor®, 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 Strandfloor® have been determined by BRANZ.
- Strength capacity and deflection under concentrated load [stiffness] of Strandfloor® exposed to the weather for 8 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 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 Strandfloor® 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.

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. 676 [2016] Strandfloor® 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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