

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

**strandboard®**



# Product description

Trade Essentials® Strandboard® is a versatile reconstituted wood panel manufactured entirely from renewable plantation pine timber. It is designed specifically for a range of building and furniture & joinery applications.

Strandboard® is identified by its characteristic wood strand surface. The resin used has been developed to resist the effects of moisture in areas of high humidity and reduce the emission of formaldehyde.

## Product details

### Durability

When stored, handled, installed and maintained in accordance with this document, Strandboard will meet the provisions of NZBC B2.3.1(c) for five years (dependent on end use).

### Limitations

#### Strandboard:

- Is recommended for dry interior use only and must not be used in an external situation.
- Must not be used for a flush plaster stopped jointing system, to be subsequently wallpapered or painted (exceptions to this may apply to proprietary glued drywall partition systems).
- Ceiling lining installations exposed on the upper face to elevated temperatures and low humidity conditions in roof spaces, must have insulation placed directly on the upper surface and have adequate provision for air change within the roof space.
- All panels laid over exposed rafters/purlins, must be paint sealed on all edges and both faces after conditioning and prior to installation to reduce moisture and humidity uptake during construction and building occupation.
- Surfaces facing the habitable space must be coated or covered prior to occupation of the building (refer to finishing section for more information).
- The application of water based spray-on textured coatings must not be used.

#### Strandboard MUST NOT be used for:

- Exterior applications
- Areas subjected to repeated water spill or constant dampness
- Marine use
- Shower lining
- Saunas
- Window reveals
- Exterior door panels

Strandboard panels are **not waterproof** and therefore **must not** be allowed to come in direct or prolonged contact with water. The panels must be finished with a protective coating prior to occupation of the building.

#### Product care and handling

Adequate pre-conditioning prior to installation and precise following of installation instructions are essential for satisfactory results, especially during wet seasons and high humidity.

- Due to the uptake of airborne moisture, permanent board distortion may occur if Strandboard is placed in close proximity to framework with moisture content exceeding 18%.
- Attention to storage, regular stock rotation, preconditioning at the installation point and provision of adequate joint clearances will help accommodate any board movement.

#### Uses:

- Wall and ceiling linings
- Partitions – in general areas including changing rooms and toilets
- Flooring overlays
- General cabinet carcass work
- Wall bracing

#### Storage

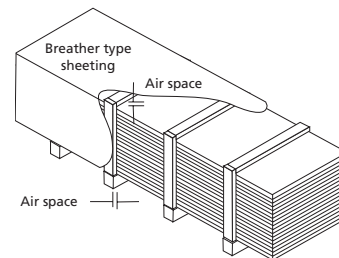
Correct storage procedure will eliminate sagging and permanent distortion of sheets.

- Store away from heat and direct sunlight.
- The panels must be flat stacked on evenly placed level bearers clear of dry ground, or on a dry concrete floor.
- Bearers must be of uniform thickness and must extend across the full width of the pack (refer figure 1).
- Strandboard panels must be protected from the weather. A breather type cover must be supported clear of the top and sides of the panels using battens to allow air to circulate freely (refer figure 1).

#### Stock rotation

The uptake of atmospheric moisture into board edges which causes edge peaking will be minimised by regular stock turn. Cut plastic strapping as soon as practicable to avoid edge indentations. Avoid storing close to doorways adjacent to external atmosphere.

Figure 1



Stack panels using equally spaced bearers and, if necessary, a breather-type cover for weather protection (note: provision for air circulation).

### Composition

Strandboard is composed of engineered wood strands bonded under heat and pressure.

#### Bonding adhesives

Strandboard is bonded with a pMDI resin system. The resulting Strandboard sheets are sanded and ready for use.

#### Moisture

Strandboard must not be exposed to water or high humidity situations such as shower enclosures, steam rooms and saunas (refer limitations).

As with most wood based products, Strandboard is subject to minor dimensional variations due to changes in relative humidity resulting in expansion and shrinkage.

#### Identification

Board size, classification and production batch number are denoted on the packaging banner.

Table 1

Physical properties (value ex-press)		
	9mm	12mm
Density (kg/m <sup>3</sup> ) (nominal)	660	660
MoR (Mpa) (minimum)	18	18
MoE (Mpa) (minimum)	2900	2900
Internal bond (kPa) (minimum)	500	500
24 hour thickness swell (%) (maximum)	20	20

Table 2

Product range (nominal)					
	9mm		12mm		
Panel sizes (mm)	3600 x 1200	2400 x 1200	3600 x 1200	2400 x 1200	3600 x 2400
Weight (kg) per m <sup>2</sup>	6.13	6.13	8.19	8.19	8.19
Weight (kg) per panel	26.5	17.7	35.4	23.6	70.8
Panels per pack	50	50	50	50	20
Weight (kg) per pack	1330	890	1775	1185	1421

Table 3

Tolerances (ex factory)	
Dimensions	Target
Length	+/- 2mm per metre with a 5mm maximum
Width	+/- 2mm per metre with a 5mm maximum
Thickness	+/- 0.2mm
Squareness	≤ 2mm per metre difference in the diagonals

**Heat**

Precautions must be taken to ensure that Strandboard is kept well clear of nearby heat sources, such as free standing fireplaces, space heaters, ovens, cooking elements, etc.

The structural life of Strandboard may be impaired if surface temperatures exceed 50°C. Manufacturers of heat appliances must be consulted to ascertain the clearances or protection required to ensure 50°C is not exceeded.

**Formaldehyde**

Strandboard complies with the E0 category of AS/NZS 1859.1:2004 when tested to AS/NZS 4266.16. During construction and after close-in formaldehyde emission levels can be best controlled by room ventilation and sealing or covering the surface facing the habitable space.

Table 4

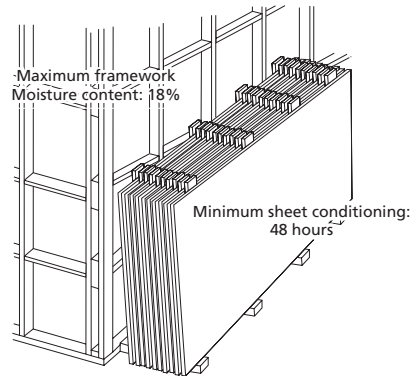
Thermal resistance of Strandboard		
	9mm	12mm
Thermal conductivity (w/m °C)	0.11	0.11
Thermal resistance (m <sup>2</sup> °C/w)	0.08	0.11

**Design considerations**

Attention to site storage, pre-conditioning at the point of installation and provision of specified edge clearances will reduce the effects of moisture uptake after installation and minimise panel movement.

Panel conditioning of raw board prior to installation is of utmost importance, especially during periods of high rainfall and accompanying high humidity (refer figure 2).

Figure 2



**Wall and ceiling lining**

Strandboard must not be placed in close proximity to framework with moisture contents in excess of 18% (refer figure 2).

**Framework setout**

Allow for the stud, purlin, rafter, beams etc, to accommodate a 2mm expansion gap at Strandboard panel joints especially where large areas or long walls are to be covered (refer figure 3a). For negative detailing, allow an 8mm gap on a pre-painted stud (refer figure 3b).

**Note:**  
Ensure sheets are pre-conditioned prior to being sealed.

Figure 3a

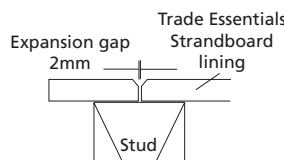


Figure 3b

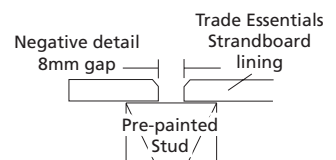


Table 5

Framework support centres			
Panel thickness 9 and 12mm (maximum spacing)			
Wall lining (mm)		Ceiling lining (mm)	
Stud centres	Dwang centres	Joist/truss/battens	Dwang centres
400	1200	400/450	1200
450	1200	600	1200
600	800	900	600
		1200	600

## Exposed beam ceilings

- Pre-condition all sheets, and then prime all surfaces and edges prior to fixing ceiling sheets.
- Weather protection is essential to avoid exposure to inclement conditions during the construction period.
- Where practicable, install exposed interior ceiling lining progressively with the exterior roof covering. The preferred method of installation is to fix after the roof is in place.
- Skillion roofs require special care. Maintain an air gap between the top of the insulation and underside of the roofing underlay, from the soffit to the ridge. This gap allows air circulation to regulate humidity and temperature.

## Flooring overlays

When upgrading existing wooden floors, Strandboard may be used as a substrate for other floor finishes.

Preparation guidelines are:

- The existing floor should be sanded level.
- Using a staggered sheet layout pattern, preconditioned Strandboard boards must be fixed combining a nail and full spread adhesive application.
- For full instructions refer to the flooring overlays section of the Strandfloor® technical manual.

Table 6

Nailing schedule		
	9mm	12mm
Nail size* (mm)	40 x 2.5	40 x 2.5
Fixing centres (mm) edges	150	150
Fixing centres (mm) intermediate	200	200
From sheet edge (mm)	10	10

\*All fastenings must be corrosive resistant.

## Wall bracing values

Wall bracing tests have been carried out for 9mm and 12mm Strandboard. Please refer table 7 bracing values.

Table 7

Wall bracing information		
Bracing units (BU) per metre	9mm	12mm
Wind	105	110
Earthquake	115	125

### Notes:

- Nails to be 40 x 2.8mm galvanised flathead at 150mm centres around the perimeter and at 300mm centre up any intermediate stud.
- Tested panel on one side of framing only – no consideration given to other lining material.
- Minimum braced wall length to be 600mm.
- End tie downs to be 6kN.
- At least one row of dwangs (nogs) are required.
- The bracing units shown are for a 2.4m high wall. For walls greater than 2.4, the bracing units shall be reduced on a pro-rata basis as per NZS 3604.

## Working characteristics

Strandboard can be easily machined, grooved and routed in any direction. To avoid break-outs use a fine toothed hand saw or circular saw adjusted to protrude just through the board surface and apply only nominal pressure when using power drills. Tungsten-tipped machine tools are recommended for volume production.

### Note:

For best results ensure hand and machine tools are sharp, and always use approved eye protection when machining Strandboard.

## Fixing

- The installation of linings must not begin until the building is closed in and waterproof.
- A 3mm sheet edge clearance is advisable for all sheet sizes during wet winter months or in extremely humid conditions.
- Board surfaces should be primed or clear sealed immediately after fixing, to minimise the effects of atmospheric moisture, or direct sunlight and to resist marking during construction activities.

## Finishing

All surfaces will require sanding prior to finishing.

## Stopping

Fill fastening holes with a solvent-based wood dough tinted as required for the specific coating applications.

## Clear finishing

Best results are achieved by employing a professional painter who should follow the coating manufacturers instructions. Sound advice about clear coatings and colour washing is available from Handley Industries – 09 444 4558 or your local Resene Paints store.

## Painting

Acrylic primer coatings will provide a more textured surface than solvent based paint systems. Strandboard is a good substrate for most paint applications.

## Red List Free

Strandboard is 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.



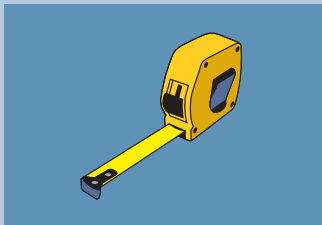


## Health and safety

### 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.
- Formaldehyde is classified as a known carcinogen.
- Storage areas containing large quantities of Strandboard 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 safety data information, 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, or visit [www.laminexnewzealand.co.nz](http://www.laminexnewzealand.co.nz).

### Liability

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