



# 0655 Timber Flooring

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## Table of contents

<b>0655 Timber Flooring</b>	<b>0</b>
Table of contents	1
List of tables	1
List of figures	1
00 Design Principles	2
0.01 Main considerations	2
0.02 Timber floor performance requirements	2
Timber Parquetry Unsprung	2
Timber Parquetry Sprung	2
Specification	2
01 General	2
02 Products	2
2.4 Cushion Parquet Flooring	2
03 Execution	3
3.5 Floor Fixing	3
3.6 Completion	7
3.7 Security Enhancement	8
04 Selections	8

## List of tables

Version history.....**Error! Bookmark not defined.**

## List of figures

**No table of figures entries found.**

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# 00 Design Principles

## 0.01 Main considerations

It is a requirement to undertake the [PLANNING AND DESIGN/ 0001R - DESIGN REFERENCE](#) and [GLOSSARY OF TERMS](#) information into all aspects of design, detailing and delivery when developing the content here within. Clear demonstration of adherence to these requirements is part of the services and will be called upon at key points in the project and during at the discretion of the Department of Education (DoE).

## 0.02 Timber floor performance requirements

### Timber Parquetry Unsprung

- Resilient, hard
- Finish: Tung oil plus acrylic polymer sealer

### Timber Parquetry Sprung

- Resilient, to allow for basketball, badminton, gymnastics, dancing, creative movement, school socials, seating movement, and wet weather shelter.

## Specification

### 01 General

As per current NATSPEC.

### 02 Products

As per current NATSPEC except as follows:

#### 2.4 Cushion Parquet Flooring

GUIDE NOTE: Insert project specific locations. Refer to the Educational Facilities Standards and Guidelines (EFSG).

#### Description

- Type: Cushion parquet (or wood mosaic)
- Grade: Select

- Block size:
  - Length x breadth: 530 x 530 mm
  - Thickness: 9 mm
- Block type: Square dressed
- Timber species: Spotted Gum or Blackbutt

### **Termite resistance**

Requirement: Timber and plywood must be treated to prevent attack by termites.

## **03 Execution**

As per current NATSPEC except as follows:

### **3.5 Floor Fixing**

GUIDE NOTE: Add the following subclauses to the NATSPEC Building Template/Worksection.

#### **General**

One of the following alternative termite resistant timber species or preservative treatments against termite attack is to be used for framing of floors:

- Naturally termite resistant hardwood timbers to Australian Standard (AS) 3660.1 Appendix C

#### **Timber floor on slab**

GUIDE NOTES: Where timber or sprung floor system Finish Floor Level (FFL) is below Ground Level (GL), within a 1 in 200 year flood zone and/or is informed as a “Possible” rating by a climate change risk assessment for water ingress; provide a 1:200 fall to floor wastes in concrete slabs under timber floors (e.g. sprung floor in school halls) to drain water.

Provide sufficient ventilation to allow the drying out of moisture between top of slab and underside of timber floor.

NOTE: Masonite does not comply with BCA requirements

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## Sprung timber flooring system

GUIDE NOTE: Insert project specific locations. Refer to the EFSG.

Location:

### Battens

- Timber Species or Group: Termite resistant hardwood Australian
- Stress Grade (min): F17
- Seasoning: Seasoned or kiln dried to AS 2082
- Size (w x d min.): 75 x 35mm
- Spacing: 300mm max. centres.

GUIDE NOTE: Delete subclause "Vapour Barrier" nominated in NATSPEC, Building Worksection and include the following.

### Vapour barrier

- Provide a full vapour barrier on top of slab (between slab and resilient pads).
- Vapour barrier to be of 0.15mm high impact resistant polythene.
- Lap 150 mm and seal the laps with pressure sensitive tape.
- Do not commence fixing until the moisture content of the concrete slab is less than 6% when tested to AS 1884.
- Turn up vapour barrier at the perimeter of the flooring system.
- Cut and tape to drainage outlets.

### Joists installation

- Laying: Lay on flat.
- 900 to length of the main playing area
- Join end to end with 6mm spacings
- Stagger joints
- Tolerance: 10mm minimum clearance between ends of joists and any walls or upstands.
- Joist packing: Corrosion and termite-resistant non-compressible material.

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## Neoprene Pads

- Proprietary neoprene pads with Durometer reading 60 +/- 5% and double staple fix pads to underside of joists.
- Centres: 300mm maximum.
- Size: 40 x 20mm (nominal) x 17mm (minimum) thick.

## Plywood

- Install plywood on top of joists (underside of strip flooring) and at 900 to joists.
- Treated to prevent the attack of termites, insect, & fungal attack in accordance with AS/NZS 1604.3
- To AS 2269
- Bond: Type A
- Grade: DD exterior grade
- Stress grade: F11
- Size: 2400 x 1200mm minimum
- Thickness: 12mm
- Stagger joints (masonry stretcher bond pattern). Allow a 5mm spacing between sheets (all edges).
- 20mm clearance between walls or upstands
- Fixing: 300mm centres

## Strip flooring

GUIDE NOTE: Spotted gum or Blackbutt species are the only timber species acceptable for use in schools where strip flooring is required. These species have natural termite resistance (to AS 3660.1).

GUIDE NOTE: Insert project specific locations. Refer to the EFSG.

Location:

Timber species or group:

### Grade

- Medium Feature Grade to AS 2796.2

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## Dimensions (nominal)

- 75 x 25mm (w x th)

## Expansion Joints

- Minimum 10mm clear of walls or any upstands.
- Consult with the installer/supplier of the strip flooring to determine the number of expansion joints required. The number of expansion joints depends on the variations in the Equilibrium Moisture Content (EMC) of the floor in relationship to local humidity conditions.

## Profile

- Tongue and grooved, secret nailed or proprietary joining tongue, secret nailed

## Evaporative cooler installations

GUIDE NOTE: In locations where evaporative cooling systems are to be installed or is installed timber flooring is not recommended. The increased humidity levels and the fluctuations of the humidity may have an adverse effect on the timber. Alternative ventilation, cooling or flooring materials should be considered.

If timber flooring must be used when an evaporative cooling system is going to be installed or is installed include the following floor schedule.

Requirement: Strip flooring installation in locations where an evaporative cooler is or is to be installed.

GUIDE NOTE: Spotted Gum or Blackbutt species are the only timber species acceptable for use in schools where strip flooring is required. These species have natural termite resistance (to AS 3660.1).

GUIDE NOTE: Insert project specific locations. Refer to the EFSG.

GUIDE NOTE: Generally additional expansion joints are required to allow for any unforeseen movement due to increased fluctuations in humidity.

GUIDE NOTE: 14% to 19% - Average 16.5% humidity level generally created by evaporative cooling systems. The timber flooring supplier/installer can arrange for the timber flooring to be kiln dried to the required moisture content.

Notify the timber-flooring supplier that an evaporative cooling system is or is going to be installed and that there will be an increased humidity level.

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The timber must be certified on delivery by the supplier verifying the moisture content of the timber.

Immediately after the timber is delivered it must be strip stacked in its final environment for a minimum of several weeks with the evaporative cooling left on to allow the timber to achieve the desired EMC and stabilise prior to fixing.

## **Installation**

- To AS 1684.
- Lay in long lengths with accurate end matched joints, all joints on adjoining boards to be staggered.

## **Stage floor**

Edge board to have at least 30% contrast in colour to stage floor colour.

GUIDE NOTE: Applies to the edge of stage or raised platform and their steps.

## **Skirting**

Nominal 100 x 32mm thick (finished size) with splay top fixed all perimeter.

- Fix skirting 12mm clear of floor for ventilation.
- Same timber species as the selected flooring material.
- Screw fix skirting to enable removal for service maintenance.

## **3.6 Completion**

GUIDE NOTE: Add the following subclause to the NATSPEC Building Template / Worksection.

## **Maintenance manual**

- Size (written instructions): A4 (minimum)
- Instructions: Brief precise text with corresponding graphics.
- Finish: Laminated.
- Location/Distribution:
  - Cleaning Supervisor/Supplies.
  - Cleaning Distributed Stores.
  - Hand one copy to Principal's Authorised Person / Principal's Representative.



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## 3.7 Security Enhancement

GUIDE NOTE: Only required for security "D" spaces with timber floors in existing buildings

### Requirement

- Screw fix 3mm steel sheet to existing floor structure.

## 04 Selections

As per current NATSPEC.