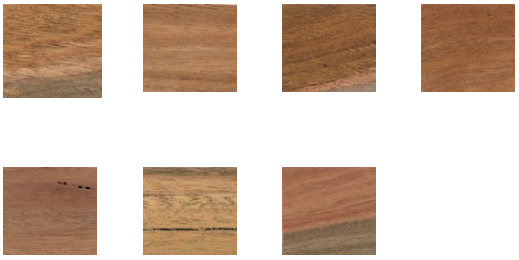
SPOTTED GUM OVERLAY INSTALLATION GUIDE

Parkside Timber produces Queensland Spotted Gum solid overlay flooring to the Australian Standard AS2796. Parkside overlay flooring comes in two different sized boards – 125 x 14mm and 75 x 14mm. Of these sizes, Parkside produces two different grades of overlay - Feature grade and a Standard and Better grade.

Parkside Spotted Gum has a very high Janka or hardness rating (11.0), meaning the product is very dense and perfect for both domestic and commercial uses. Because of this hardness, Parkside requires strict adherence to the below installation methods to help ensure the integrity and longevity of the overlay product.

Please note Parkside Spotted Gum is known for and often chosen for, its natural colour variation. Below are just a few examples of colour variation seen in Parkside Overlay.



PARKSIDE TIMBER

Pre Installation Recommendations

Timber is naturally hygroscopic, meaning the product reacts to the relevant moisture within its installation environment and can absorb or release moisture accordingly. While PARKSIDE OVERLAY is a solid board, there are a number of steps PARKSIDE recommend for the best performance. Moisture content varies depending on the relevant humidity's and temperature, therefore the below chart demonstrates the effects of the air moisture and temperature on the moisture content of timber.

- Slabs need to be flat, and if not within the adhesive manufacturer's tolerance corrective action needs to be undertaken which is conducive to the adhesive manufacturers guidelines.
- The slab (including any levelling compound) must be dry to the point where concrete moisture meter readings do not exceed 5.0% or the humidity within the slab does not exceed 85%.

PARKSIDE OVERLAY is dried to an average moisture content of approximately 10% with some boards a few percent above and below this. In higher humidity climates greater care of pre-installation and installation is required for best results with the following to be considered:-

- Building site conditions need to assessed with all draining systems in place before laying a floor. This includes both building drainage systems (down pipes, gutters…) and slab and footings are well regulated to ensure no ponding or building up of moisture is possible.
- Correct storage and handing is necessary to ensure the performance of the product. The use of dry conditions when storing unopened packs is important, while keeping the product at least 100mm off ground floor slabs. It is important to replicate the normal in-service conditions of the building as closely as possible, therefore where possible during installation, air-conditioning or heating units should be installed and run to mimic the expected internal conditions at that time of the year. That is, if air-conditioning would only be run during the heat of the day then this should occur during installation.

TEMPERATURE - Moisture content at various relative humidities										
°C	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%
0	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5
10	1.4	2.6	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5
20	1.3	2.5	3.6	4.5	5.4	6.2	7.0	7.7	8.5	9.3
30	1.2	2.4	3.4	4.3	5.2	6.0	6.7	7.5	8.2	9.0
40	1.1	2.2	3.2	4.1	5.0	5.7	6.4	7.1	7.9	8.6

TEMPERATURE - Moisture content at various relative humidities									
°C	55%	60%	65%	70%	75%	80%	85%	90%	95%
0	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3
10	10.3	11.2	12.3	13.4	14.8	16.4	18.4	20.9	24.3
20	10.1	11.0	12.9	13.1	14.5	16.0	18.0	20.5	23.9
30	9.8	10.6	11.6	12.7	14.0	15.5	17.5	20.0	23.4
40	9.4	10.2	11.1	12.2	13.4	15.0	16.8	19.3	22.7

- Due to the stability of the product acclimatisation is not usually necessary. However, if 9am relative humidity is frequently above 75% in humid climates or localities then acclimatisation as undertaken with traditional solid timber flooring may be carried out or additional expansion allowance provided to reduce pressure in the floor after laying.
- Note that if acclimatising, those higher humidity conditions need to be prevailing at the time. Advice on acclimatisation is available in ATFA publications.

Subfloor Options

The preferred subfloors for PARKSIDE OVERLAY is the use of plywood over a concrete slab or either plywood or particleboard over joists. This method provides a more stable subfloor compared to directly sticking to concrete, hence leading to a more stable end product.

When using either of the recommended subfloors it is important to assess; the flatness of the subfloor; the moisture content of the timber or sheet subfloor; the concrete below the sheet; and the ventilation of the subfloor area.

- The flatness of the concrete slab is crucial to the success of the installation. It is recommended that there is no more than 3mm variation beneath a 1.5m long straight edge.
- The moisture content of the plywood or particle board subfloor needs to be similar to the timber overlay moisture content to ensure the subfloor accepts the new floor. Therefore if the subfloor has become wet with insufficient time to dry it needs to be checked.

  Note that moisture metres are unreliable in sheet flooring and it may necessitate testing samples by the oven dry method.
- The concrete slab below the subfloor must also be assessed for moisture and it is preferred the slab is at least 4 to 6 months old (depending on drying conditions). Moisture metre readings (e.g. Tramex) should be below 4% and inslab RH below 80%. However even with these levels it is still required that a moisture retarding barrier (builder's polyethylene plastic) be used as a safeguard to prevent possible effects of slab moisture. This relates to all slabs as old slabs are not necessarily dry slabs.
- Ventilation for all raised subfloors is necessary to provide the appropriate environment beneath the floor. The drainage system provided to the site needs to ensure run-off water drains from the building perimeter not towards it. The subfloor space also needs to be free from building debris. Landscaping, vegetation and any other objects around the external perimeter cannot impede cross flow ventilation through the subfloor space.

  Where the subfloor is enclosed, ventilation to the subfloor space is a requirement of the Building Code of Australia (BCA) and for timber floors industry recommendations exceed this indicating a level of 7500mm^2/metre length of wall.
- While PARKSIDE does not recommend installation using direct stick to concrete slab method, the warranty covering the construction of the product is still valid provided a professional layer has installed the product, and all the procedures outlined by the adhesive producer have been correctly followed.

Refer to ATFA publications for more information. If recommended levels of natural ventilation cannot be achieved a mechanical ventilation system should be installed which replaces the air in this space regularly and prevents any formation of dead-air pockets.

A polyethylene membrane laid over the soil can also be considered if the subfloor soil is damp and a potential concern. Enclosed surface drains may also be needed if see page is a problem.

Subfloor Options

Installation direct to slabs with the highest of quality of the floor in mind, PARKSIDE TIMBER does not recommend its products for installation by direct adhesive fix to concrete slabs.

When floors are laid by direct adhesive fix to slabs there are many aspects that need greater consideration.

Only experienced installers should attempt direct adhesive fix to concrete slab, and there are a number of factors to be considered when installing using this method, some of which are mentioned below -

- Slabs need to remain dry which can be difficult to check. Applied moisture vapour barriers need consideration and need to be that of the adhesive manufacturer or accepted by the adhesive manufacturer to maintain warranties.
- The slab needs to be clean. Paint, products that may have been spilt previously by others and products applied to slabs that are no longer visible can cause adhesive failures.
- Overlay flooring is thin and will flex with ease under foot pressure which can result in the adhesive bond being compromised resulting in numerous dummy patches.

Contact between the board and adhesive must be maintained while the adhesive cures necessitating weights or pinning. Levelling compound may be used where this tolerance is exceeded.

Installation

PARKSIDE OVERLAY FLOORING needs to be checked at the time of laying for manufacturing imperfections and its moisture content.

It is recommended that a resistance moisture meter be used on a few sample boards from each pack and that measurements of top cover widths are recorded.

Any imperfections likely to be of concern (e.g. water staining, features exceeding grade limits, warping) or where unexpected moisture meter readings occur then the product is not to be installed and your supplier or PARKSIDE is to be contacted.

Concerning aspects relating to how boards are placed in the floor with regard to grade, colour, spacing of end joints and length distribution, the onus is on the floor layer to meet industry expectations as outlined by the ATFA.

Fixing to Sheet Subfloors

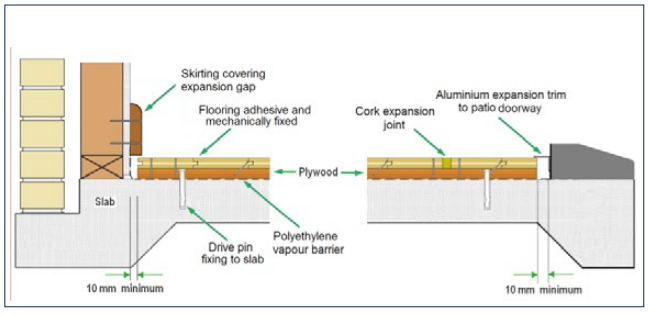
PARKSIDE OVERLAY has a T&G joint and boards need to be correctly installed to ensure excessive adhesive does not prevent boards from coming up tight.

In addition to preparation aspects outlined above the following is also recommended –

- When using a plywood subfloor overa concrete slab, Parkside recommends the use of a 15mm or 12mm structural grade, with a type “A” bond, with 20 pins used to hold the ply to the slab. If a non-structural ply is used, 28 pins must be used to hold the ply to the slab The sheets should be installed with a 6mm gap between each plywood sheet and a 10mm gap from the internal and/or external walls. Sheets should also be staggered roughly each 900mm to ensure the fixings do not line up. The sheets should be fixed with hand driven 50mm long by 6.5mm drive pin (e.g. Powers SPIKE’s) to manufacturer recommendations. The pins should always be 75 to 100mm from the sheets edges and twenty are required per 2.4m by 1.2m sheet.

  The head of the Spike should be driven below the plywood surface to help create a flat surface. Alternatively, 12mm thick plywood sheets can be used. The primary change is 28 fixings per sheet.
- When installing over plywood or particleboard to joists it is necessary to ensure that these subfloors, often installed by others have been adequately fixed. These subfloors are also laid as platform floors and exposed to the weather during construction. As such rough sanding is recommended to provide a flat surface and to remove contaminants that may affect the adhesive bond. If squeaks are apparent in these subfloors they need to be corrected prior to laying the PARKSIDE OVERLAY.
- When installing the floor the provision needs to be made for expansion around all walls and fixed objects a minimum of 10 mm is to be provided. For floor widths wider than 4 metres (measured across the face width of the boards), intermediate expansion allowance is to be incorporated. For raw boards 12mm cork expansion joints may be used and for prefinished floors expansion trims are needed.
- The flooring is to be both adhesive and mechanically fixed to ensure good bonding of the adhesive. Fixing should be no more than 300mm apart. Fixing should be no more than 450mm apart but depending on subfloor flatness closer spacing may be required.
- The use of a full bed of flexible polyurethane flooring adhesive is recommended. Note that trowels differ between adhesive manufacturers and both the correct trowel size and correct use of the trowel are necessary to obtain the correct spread rate. Adhesive manufacturer instructions need to be followed.

Fixing to a Plywood Subfloor over a Concrete Slab



Sanding and Coating

Sanding and coating can commence once the adhesive has cured and adhesive manufacturers often indicate a minimum of 3 days. The preferred wait time before sanding and coating the floor is 2 weeks. This allows the timber to react and adjust to its after installation environment. Sanding and coating practices are the same as for solid timber floors.

Feel free to contact Parkside Timber

FreeCall 1800 257 099

email timber@parkside.biz

parksidetimber.com.au

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