PARKSIDE Spotted Gum Overlay

Technical and Installation Guide

1. PRODUCT DESCRIPTION AND SPECIFICATIONS

PARKSIDE TIMBER produces four different overlay products all of the Queensland Spotted Gum Species. Two of the overlay products are prefinished with Treffert Sapphire finish, while the other two are raw boards. Board sizes are 80 x 14mm and 130 x 14mm and have a 3 lamella construction of solid Spotted Gum, with the centre lamella running at right angles to the top and bottom lamellas. This construction style significantly improves stability under a wide range of environmental conditions.

Queensland Spotted Gum has a high Janka (hardness) rating of 11.0 making it a sort after flooring species and also making it ideal for both domestic and heavy traffic installations. The PARKSIDE OVERLAY comes in select grade which is a lightly featured product as explained later. Queensland Spotted Gum is known for its unique blend of colours and this variation is a natural aspect of this beautiful species.

2. 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 three lamella construction designed to withstand much of the movement from environmental changes when compared to a solid board, there are still 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.

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 (downpipes, 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 boxes 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.
- Due to the construction of the product acclimatisation is not usually necessary as humidity variations result in significantly less shrinkage or swelling. However, if 9 am 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.

3. SUBFLOOR OPTIONS

PARKSIDE does not recommend the installation method of directly sticking overlay flooring to concrete subfloors.

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 particleboard 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 meters 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 the slab should be at least 4 to 6 months old (depending on drying conditions). Moisture meter 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 relate 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 7500mm2/meter length of wall.

  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 seepage is a problem.

TEMPERATURE	Moisture content at various realative humidities																	
°C	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%
0	1.4	2.6	3.7	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.4	11.3	12.4	13.5	14.9	16.5	18.5	21.0	24.3
10	1.4	2.6	3.6	4.6	5.5	6.3	7.1	7.9	8.7	9.5	10.3	11.2	12.3	13.4	14.8	16.4	18.4	20.9	24.3
20	1.3	2.5	3.6	4.5	5.4	6.2	7.0	7.7	8.5	9.3	10.1	11.0	12.9	13.1	14.5	16.0	18.0	20.5	23.9
30	1.2	2.4	3.4	4.3	5.2	6.0	6.7	7.5	8.2	9.0	9.8	10.6	11.6	12.7	14.0	15.5	17.5	20.0	23.4
40	1.1	2.2	3.2	4.1	5.0	5.7	6.4	7.1	7.9	8.6	9.4	10.2	11.1	12.2	13.4	15.0	16.8	19.3	22.7

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4. INSTALLATION

PARKSIDE OVERLAY FLOORING regardless of whether it is prefinished or raw, 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 in each lamella of a sample of 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 OVERLY 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 over a concrete slab, 15mm structural grade is recommended with a type "A bond". 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 need to be made for expansion, even though less movement will be experienced than with solid timber. 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 adhesive fixed and supplementary mechanical fixing may be used to ensure good bonding of the adhesive. Fixing should be no more than 450mm apart but depending on subfloor flatness closer spacing may be required.
- With prefinished PARKSIDE OVERLAY it may be desirable not to mechanically fix due to possible damage to the board surface during fixing. If supplementary mechanical fixing is not used then the boards need to be weighted until the adhesive cures. Note also that with this method of installation glue manufacturers often require flatter subfloors and their instructions need to be followed.

  Curing periods are available from the adhesive manufacturer's information sheet. With weighting, some adhesive manufacturers require it to be sufficient to ensure at least 80% bond area per board. Weighting will therefore depend on the flatness of the subfloor and adhesive used and comply with the glue manufacturer's instructions.
- 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.
- Any adhesive on the board surface needs to be cleaned up before the adhesive cures. Some adhesives are more easily cleaned off than others. Failure to remove residual adhesive quickly enough can affect the appearance.

SANDING AND COATING

- For raw boards sanding and coating can commence once the adhesive has cured and adhesive manufacturers often indicate a minimum of 3 days. Floors are often left for at least two weeks to enable boards to adjust to their new environment. Sanding and coating practices are the same as for solid timber floors.

FIXING TO A PLYWOOD SUBFLOOR OVER A CONCRETE SLAB