

**Parkside Timber produces some of the most loved solid overlay flooring products in a wide variety of species. All Parkside flooring products are produced to the Australian Standard AS2796. Parkside offer narrow and wide overlay sizes to help suit any flooring application.**

## 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 humidities and temperature, therefore the below chart demonstrates the effects of 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 in pre-installation and installation is required for best results, with the following to be considered:

- Building site conditions need to be assessed with all draining systems in place before laying a floor. This includes both building drainage systems (downpipes, gutters, etc) and slab and footings are well regulated to ensure no ponding or building up of moisture is possible.
- Correct storage and handling is necessary to ensure best performance of the product. The use of dry conditions when storing unopened packs is important and the product must be kept 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 stability of the product, acclimatisation is not usually necessary as humidity variations result in significantly less shrinkage or swelling. 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.
- Sub-floor moisture content The moisture content of a concrete sub-floor should not exceed the maximum of 70% relative humidity (hygrometer) or 5.5% (electrical resistance meter). The moisture content of a timber sub-floor should not exceed 70% relative humidity (hygrometer) or 15% (electrical resistance meter). If the moisture content exceeds Parkside's recommendations, a suitable physical or chemical moisture or vapour barrier system from a reputable manufacturer must be used. Follow the manufacturer's instructions at all times.

Note that if acclimatising, those higher humidity conditions need to be prevailing at the time.

## Subfloor options

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

TEMPERATURE - Moisture content at various relative humidities	C°	0°	10°	20°	30°	40°
	5%	1.4	1.4	1.3	1.2	1.1
	10%	2.6	2.6	2.5	2.4	2.2
	15%	3.7	3.6	3.6	3.4	3.2
	20%	4.6	4.6	4.5	4.3	4.1
	25%	5.5	5.5	5.4	5.2	5.0
	30%	6.3	6.3	6.2	6.0	5.7
	35%	7.1	7.1	7.0	6.7	6.4
	40%	7.9	7.9	7.7	7.5	7.1
	45%	9.7	9.7	8.5	8.2	7.9
	50%	9.5	9.5	9.3	9.0	8.6
	55%	10.4	10.3	10.1	9.8	9.4
	60%	11.3	11.2	11.0	10.6	10.2
	65%	12.4	12.3	12.0	11.6	11.1
	70%	13.5	13.4	13.1	12.7	12.2
	75%	14.9	14.8	14.5	14.0	13.4
80%	16.5	16.4	16.0	15.5	15.0	
85%	18.5	18.4	18.0	17.5	16.8	
90%	21.0	20.9	20.5	20.0	19.3	
95%	24.3	24.3	23.9	23.4	22.7	

The preferred subfloor for Parkside Overlay is plywood over a concrete slab or either plywood or particleboard over joists. This method provides a stable subfloor compared to directly sticking to concrete, hence leading to a 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 be 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. Note that moisture meters are unreliable in sheet flooring and it may be necessary to test samples by the oven dry method.
- The concrete slab below the subfloor must also be assessed for moisture and it is preferred the slab be at least 4 to 6 months old (depending on drying conditions). Moisture meter readings should be below 4% and in slab RH below 80%. However, even with these levels, a moisture retarding barrier (builder's polyethylene plastic) must still be used as a safeguard to prevent possible effects of slab moisture. This relates to all slabs no matter the age.



**Subfloor options**

Ventilation is necessary for all raised subfloors 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<sup>2</sup>/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 regularly replaces the air in this space and prevents the formation of any 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.

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

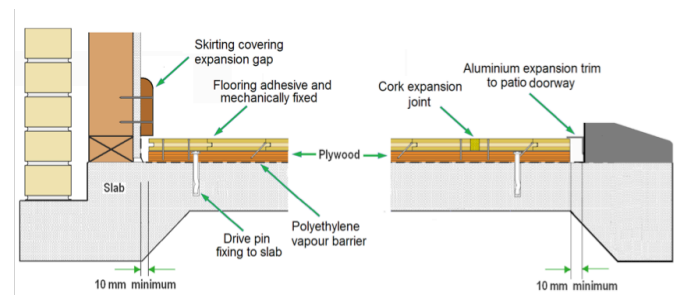
In addition to preparation aspects outlined above, the following is also recommended:

- When using a plywood subfloor over a 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 at roughly 900mm each to ensure the fixings do not line up. The sheets should be fixed with hand driven 50mm by 6.5mm drive pin (e.g. Powers Spike) to manufacturer recommendations.

The pins should always be 75 to 100mm from the sheet’s edges and 20 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, provision needs to be made for a minimum of 10mm expansion around all walls and fixed objects. 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 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. The 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.