

INSTALLATION INSTRUCTIONS

ENGINEERED HARDWOOD

Wood flooring is a natural product, which will mature with age, and every board is unique in design. The planks may change shade over time as a reaction to exposure to sunlight and this is perfectly normal. It is recommended that you occasionally relocate rugs and furniture once installed to ensure even shading. This product is not to be installed in wet areas that have a potential for flooding, such as bathrooms, laundries, saunas or outdoor areas. Engineered hardwood floors are suitable for all rooms other than those that are subject to excessive moisture and high levels of humidity. All wood is hygroscopic, meaning it will react to moisture in its environment, and expand or contract as a result.

BEFORE YOU START

- All sources of moisture must be rectified prior to the installation of the floor, and moisture levels in rooms fitted with hardwood flooring should be maintained at a stable level; in line with normal living conditions. Any construction dampness (such as recently laid concrete slab, or wet paint) must be completely dry.
- If using an underlay, choose a recommended product from the *Dunlop Flooring Timber Range*.
- Calculate the total square meters of the space you are laying the floor and add 7% for cutting and waste.
- Measure the area to be installed. For a floating installation, the board width of the last row across the installation should not be less than 150mm in width. If possible, adjust the width of the first row to be installed, to avoid having to adjust the width of the final row later on. For other installation methods, the final row should be no less than 100mm.
- The cartons of boards should be stored in a protected, dry place.
- The hardwood boards should be placed in the room in which they are to be fitted to acclimatise for 48 hours and should be carefully stacked, in their packaging, to allow air to circulate. Only open the packaging immediately prior to commencing installation.
- The boards should be stored and laid in a **relative humidity between 50%-65%** and at a **room temperature of between 17°C – 23°C**. The **surface temperature of the subfloor** at time of installation should be at least **10°C**.
- Check each plank for any manufacturing defects prior to installation. Any faults must be reported back to the store of purchase for an immediate refund or replacement prior to the flooring being installed.
- The boards in this pack are of random lengths and should be laid randomly across the floor to create the best effect. We recommend opening a few cartons at a time to mix boards from each carton as they are installed.
- The boards should be fitted lengthways towards the main incoming light source and, where possible, down the length of the room. In narrow hallways, install the floor parallel to the length of the hallways.

IMPORTANT NOTICE REGARDING WARRANTY: This product is covered for a very competitive warranty period. In order to enjoy the peace of mind that this warranty affords, this product must be installed to the specifications detailed in this document. To ensure the optimum performance of your floor and full coverage of our warranty, please adhere to all instructions relating to subfloor, installation environment and method, and ongoing care and maintenance. Any faults that occur as a result of incorrect installation, inappropriate environment or lack of appropriate care and maintenance procedures, will not be covered by the warranty.

SUBFLOORS

ALL SUBFLOORS

The below requirements apply to all subfloor options detailed throughout this document, and must be paid careful attention in order to minimise the risk of problems occurring with your flooring post-installation.

All substrates must be: structurally sound, flat/even, clean and dry:

- **Structurally sound:** Engineered hardwood flooring can be installed onto concrete/screed subfloors and existing wood, vinyl or tile floors provided they are dimensionally stable.
- **Flat/Even:** Deviations in any subfloor level must not exceed 3mm under a 2 lineal metre straight edge. Raised points must be sanded/ground down and depressions filled using a good quality cementitious levelling compound. Please engage a professional installer's services for these matters.
- **Clean:** Ensure the subfloor is clean and free from all contaminants and loose material by vacuuming prior to installation. Do not wash subfloor or expose it to water prior to installation.
- **Dry:** It is essential that the moisture content of any subfloor complies with the relevant standard. For Australian conditions the recommended standard is a maximum of **5% for concrete/screed subfloors** and **12% for wood subfloors**. All potential sources of moisture (e.g. walls, drains, damp proof courses, plumbing, fridges, washing machines etc.) must be thoroughly checked and rectified if found to be an issue. The final responsibility for determining if the subfloor is dry enough for installation of the flooring lies with the floor covering installer.

MOISTURE BARRIERS

In almost all flooring installations, a moisture barrier will be required. What form of moisture barrier you should use will be dependent on the installation method and the subfloor. The respective recommendations are detailed in the *Installation Methods* section. Your options are:

- **DPM (Damp Proof Membrane).** The levelled subfloor must be allowed to dry out completely before applying a suitable liquid DPM. Comply with all instructions provided by the manufacturer.
- **MPU (Moisture Proof Underlay).** The levelled subfloor must be allowed to dry out completely before installing a suitable MPU. We recommend *Dunlop Aquacoustic* underlay, as this product will provide both the foam underlay required and a 200 micron polyethylene vapour barrier. When installing, ensure you overlap any seams by 200mm and securely tape them with waterproof tape to provide a suitable seal. Around the perimeter of the floor, the polyethylene sheeting should be turned up the wall by 50mm. The excess material will be cut and removed after the flooring has been laid (see *Finishing Off* section). Comply with all instructions provided by the manufacturer.

IF INSTALLING ON CONCRETE OR SCREED SUBFLOOR

- The moisture vapour content of a concrete/screed subfloor must not exceed 5%.
- Freshly laid concrete/screed bases require adequate curing time in order to avoid moisture related problems with your floorcovering. In good drying conditions allow one day per 1mm of the depth of the concrete/screed to ensure it is dry. Further curing time may be necessary depending on site conditions.
- Existing concrete/screed bases' moisture content can be checked using a moisture meter, or alternatively sheets of polyethylene approximately 1m x 1m squared, taped onto the screed with a heavy weight placed on top for 24 hours. Presence of moisture in the screed will be confirmed if the screed is discoloured, or moisture is apparent on the underside of the polyethylene sheet. Your floor must not be fitted until the problem has been rectified.

IF INSTALLING ON WOOD, VINYL OR TILE SUBFLOOR

- The moisture vapour content of a wood subfloor must not exceed 12%.
- Engineered hardwood flooring can be fixed directly onto pre-installed wood (particle board, yellowtongue, or conventional hardwood), vinyl or tile subfloors, provided this subfloor meets all of the requirements detailed at the beginning of the *Subfloors* section. If the subfloor is not flat and even then you will need to overlay it with structural grade plywood (min 20mm thick). All existing floorcoverings must be securely fixed to the subfloor, to minimise the risk of squeaking. Where poor adhesion between the subfloor and existing boards, planks or tiles exist, secure if possible, otherwise remove the existing floorcovering completely.
- On a wood subfloor, your new hardwood boards should be laid in a direction that is 90 degrees (perpendicular) to the direction of the boards below. If this is not possible, then plywood sheets (minimum depth 6mm) should be nailed, stapled or screwed to cover the existing floor, allowing a 15mm perimeter gap (against walls) for expansion. The new floor can then be laid directly onto the plywood sheet.
- If nails, staples or screws are being used, care must be taken not to damage pipes or electrical cables beneath.
- For a glue down installation onto a conventional strip timber, vinyl or tile subfloor (provided all boards/tiles are securely fixed) you will first have to lay a Masonite, particle board or yellowtongue underlay before the product. Once you have ensured that the subfloor is flat/even, and provided the moisture content of the subfloor does not exceed the specified 12%, you may glue down a rubber underlay onto the Masonite. We recommend the use of *Dunlop Advantage 3*. Your hardwood floor is then glued to the rubber underlay.
- For a floating installation, follow the same process as above, but in lieu of a rubber underlay, you will have to use a MPU. We recommend *Dunlop Aquacoustic* underlay. Your hardwood floor will be floated on top of this underlay.

IF INSTALLING ON SUBFLOORS WITH RADIANT HEAT

Due to the speed of sudden temperature change, which has the potential to negatively affect your floor, **it is not recommended to install over an electrical radiant heating system**. This will not be covered by the manufacturer's warranty. The instructions below are for radiant heating systems using water. Ensure the radiant heat surface temperature never exceeds 27°C. Before installing over newly constructed radiant heat systems, operate the system at maximum capacity to force any residual moisture from the cementitious topping of the radiant heat system. Once this has been completed, set the thermostat to a comfortable room temperature for the installation. It is recommended that the radiant heat be applied in a gradual manner after installing the flooring. Refer to the radiant heat system's manufacturer recommendations for additional guidance.

INSTALLATION METHODS

1 NAIL DOWN INSTALLATION

Suitable Subfloors: Concrete/screed base or pre-installed wood, vinyl or tile subfloor (see *Subfloors* section for further detail on suitability and preparation of subfloors). **Please Note:** For this installation method, product should not be fixed over battens or directly over joists. 15mm engineered wood should not be fixed over battens or directly over joists.

PREPARATION

Ensure you have undertaken all necessary steps as detailed in the *Before You Start* section. Ensure your subfloor is structurally sound, flat/even, clean and dry as detailed in the *Subfloor* section. For a nail down installation on both a concrete/screed subfloor or an existing wood, vinyl or tile subfloor, you will need to apply a DPM moisture barrier (see *Subfloors – Moisture Barriers – DPM* section for details and instructions). Should an underlay be required for acoustic reasons or improved comfort underfoot, we recommend *Dunlop Advantage 3*. For a nail down installation, this underlay **MUST** be glued down though.

1.1 Once you have laid your moisture barrier (as per the instructions provided by the manufacturer) you will need to lay a structural grade plywood (see adhesive manufacturer's recommendations for appropriate plywood to use) across the floor, in the opposite direction to the length that your new hardwood boards will be installed. The plywood sheets should be butted together and fitted to the perimeter of the installation area. Ensure that all under floor pipe work is lagged before the floor is laid. This will prevent localised shrinkage in the floor from hot adjacent pipes. Apply a recommended one component, solvent-free, moisture curing polyurethane timber flooring adhesive for gluing the plywood boards down. Comply with all instructions provided by the adhesive manufacturer.

1.2 Once your plywood layer has been glued down, mark out a straight line parallel to the chosen wall. It may be necessary to scribe the first row of boards to achieve correct alignment. Always begin the installation with the groove side of the plank facing the wall.

1.3 Square the first row of boards to the pre-marked line with the tongue facing into the room. Top nail at 250-300mm intervals or onto every joist, and where possible within 75mm of the end of each board and countersink through the boards as near to the wall as possible. (Figure 1)

1.4 Using the same spacing, of 250-300mm secret nail at a 45 degree angle, ensuring a countersink through the tongue. For ease, a mechanical floor nailer can be used for this job. (Figure 2)

1.5 Fit the next run of boards, groove to tongue, and secret nail. (Figure 3)

1.6 Continue to fit the boards from left to right. Always stagger the end joins by a minimum of 250mm and a maximum of 300mm. Measure and trim the last board to fit. Where possible, use off-cuts to start the next row. (Figure 4)

1.7 For the last row of boards you can use the **sandwich technique** to measure the width of board required, ensuring that the row is not less than 100mm in width. Place the board for the last row on top of the previous row. Using a full width off-cut board and spacer wedges placed up against the wall, scribe the last row to mark the correct cutting line.

1.8 Top nail and countersink the last run of boards to finish. (Figure 5)

1.9 See *Finishing Off* section. (Figure 6)

2 STAPLE DOWN INSTALLATION

Tools Required: (not supplied) Knee pads, goggles, square, tape measure, pencil, saw, utility knife, hammer or air pressure stapler (70-75 PSI), staples (10mm crown width, 20mm leg length), a one component solvent-free moisture curing polyurethane timber flooring adhesive (please refer to adhesive manufacturer's instructions in relation to further materials required)

Suitable Subfloors: Concrete/screed base or pre-installed wood, vinyl or tile subfloor (see *Subfloors* section for further detail on suitability and preparation of subfloors). **Please note:** for this installation method, product should not be fixed over battens or directly over joists

Follow the instructions for the Nail Down Installation, replacing the use of the hammer/nail gun with the air pressure stapler. Set pressure of stapler to 70-75 PSI. Begin and adjust proper fastener settings on the stapler. Apply one staple every 300mm on the long side of each board.

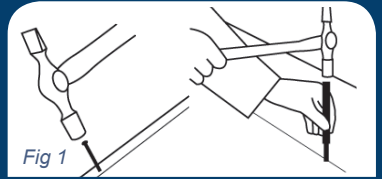


Fig 1

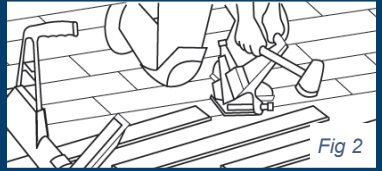


Fig 2

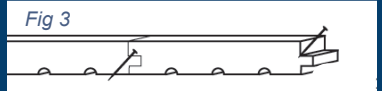


Fig 3



Fig 4

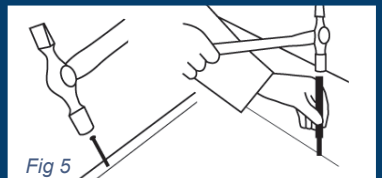


Fig 5

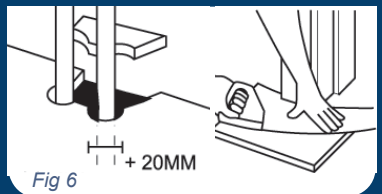


Fig 6

TOOLS REQUIRED: (not supplied)
Knee pads, goggles, square, tape measure, pencil, saw, utility knife, hammer (or nail gun), a one component solvent-free moisture curing polyurethane timber flooring adhesive (please refer to adhesive manufacturer's instructions in relation to further materials required)

PLEASE NOTE: There are a number of methods for installing hardwood floors; nail down, staple down, glue down and floating. It is extremely important that no matter which installation method you employ, you follow the guidelines laid out in the previous section; *Subfloors*.

INSTALLATION METHODS

3 GLUE DOWN INSTALLATION

Suitable Subfloors: Concrete/screed base or pre-installed wood, vinyl or tile subfloor (see *Subfloors* section for further detail on suitability and preparation of subfloors).

PREPARATION:

Ensure you have undertaken all necessary steps as detailed in the *Before You Start* section. Ensure your subfloor is structurally sound, flat/even, clean and dry as detailed in the *Subfloor* section. For a glue down installation on a concrete/screed subfloor or an existing wood, vinyl or tile subfloor, you will need to apply a DPM or a MPU moisture barrier (see *Moisture Barriers* section). Please note that if you opt for a MPU, you will need to glue it to the subfloor, and your hardwood will in turn be glued to your MPU. Should an underlay be required for acoustic reasons or improved comfort underfoot, we recommend *Dunlop Advantage 3*. For a nail down installation, this underlay **MUST** be glued down though.

3.1 Begin your installation against a sound, straight wall, starting in the left corner and working right. It may be necessary to scribe the first row of boards to achieve correct alignment. Always begin the installation with the groove side of the plank facing the wall. (*Figure 1*)

3.2 With this system use a one component, solvent-free, moisture curing polyurethane timber flooring adhesive for gluing your hardwood boards to the subfloor. When applying, comply with all instructions provided by the adhesive manufacturer. (*Figure 2*)

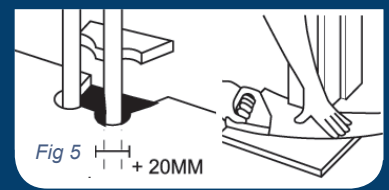
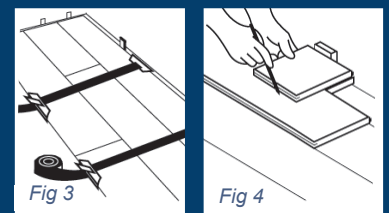
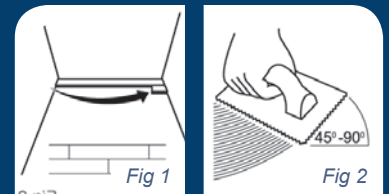
3.3 Once the first row of boards is correctly aligned and glued in place, weigh them down while the glue sets (or use wedges against the wall). Any surplus glue that may seep out onto the surface of the wood must be removed immediately with a damp cloth. The glue should not be applied in the groove or the tongue of the flooring.

3.4 Continue to fit the boards from left to the right. Always stagger the end joins by a minimum of 150mm and a maximum of 300mm. Measure and trim the last board to fit. Where possible, use cut offs to start the next row.

3.5 Flooring straps can be used to pull boards together and hold them in place whilst the glue dries. (*Figure 3*)

3.6 For the last row of boards, you can use the sandwich technique (as described in the *Nail Down Installation* method) to measure the width of board required, ensuring that the row is not less than 100mm in width. (*Figure 4*)

3.7 See *Finishing Off* section. (*Figure 5*)



TOOLS REQUIRED: (not supplied)
knee pads, goggles, square, tape measure, pencil, saw, utility knife, one component solvent-free moisture curing polyurethane timber flooring adhesive, PVA wood glue, fitting straps.

INSTALLATION METHODS

4 FLOATING INSTALLATION

Tools Required: (not supplied) Knee pads, goggles, square, tape measure, pencil, saw, utility knife, hammer or air pressure stapler (70-75 PSI), staples (10mm crown width, 20mm leg length), a one component solvent-free moisture curing polyurethane timber flooring adhesive (please refer to adhesive manufacturer's instructions in relation to further materials required)

Suitable Subfloors: Concrete/screed base or pre-installed wood, vinyl or tile subfloor (see *Subfloors* section for further detail on suitability and preparation of subfloors).

PREPARATION:

Ensure you have undertaken all necessary steps as detailed in the *Before You Start* section. Ensure your subfloor is structurally sound, flat/even, clean and dry as per the *Subfloor* section.

If laying the floor in several adjoining rooms or in a space in excess of 50m², expansion joints must be installed. It is recommended that installations over 10 lineal meters in length, and 9 lineal meters in width, utilise expansion joints. For your moisture barrier and underlay needs, we recommend *Dunlop Aquacoustic*, as this product will provide both a foam underlay and a 200 micron polyethylene vapour barrier.

For a floating installation, an expansion gap of 15mm around the entire perimeter of the floor needs to be maintained. This also applies around pipes, pillars, frames and fixtures. The 15mm between the first row of boards and the wall should be maintained using spacer wedges regularly along the length of the wall. When measuring for the layout (above point), remember to factor in the 15mm gap.

4.1 Begin your installation against a sound, straight wall, starting in the left corner and working right. It may be necessary to scribe the first row of boards to achieve correct alignment. Always begin the installation with the groove side of the plank facing the wall. Be mindful of the 15mm expansion gap during this step.

4.2 Undercut door frame so that the planks can be installed underneath, being mindful of the requirement for a 15mm gap. Ensure that any underlay being used in the installation is underneath the product when you perform this step, so that cut is at the correct height.

4.3 Use a hard wood block to knock the board joins together but never force them. Never hit the floor board directly with the hammer as this will slow down the work and will increase the risk of damaging the board (with a hard wood core or not).

4.4 Begin the next row with the piece left over from the previous row (not from the first row of shaped boards). The end joints of the joining boards should be staggered or stepped by at least 500mm (avoid installing according to the brick laying method)

4.5 Use only a PVA D3 cross linked wood adhesive with a pointed tubular applicator to apply the glue to the top inside edge of the groove of the board (including the groove of the head joint) in a 5mm continuous line. Never apply the adhesive in a broken line as this can cause your floor boards to squeak. Any excess of adhesive should be immediately wiped off with a damp cloth and then a dry cloth. (See *Glue Down Instructions*)

4.6 When installing the hardwood, use a hammer and tapping block to tap the joins together. Take great care not to use more force than is required to help the boards join together as this can damage the board edge, and compromise the installation or appearance of your floor.

4.7 The last row of boards should be sawn to a suitable width of no less than 150mm. Apply the adhesive in the groove and lever the boards into place with the tightening bar and wedges. Using a protective piece between the wall and the tool. Be mindful of the 15mm expansion gap when installing the last row of boards.

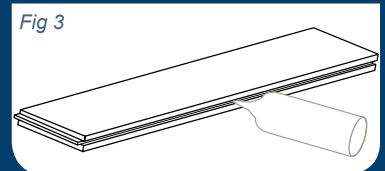
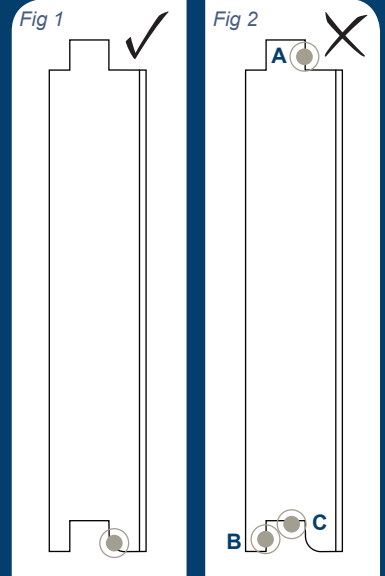
4.8 See *Finishing Off* section.

FINISHING OFF:

Once installation is complete, any spacing wedges used can be removed. If a plastic moisture barrier has been used, the edges that have been turned up the wall can now be cut off; it is recommended to leave approximately 20mm extra to put behind the scotia or skirting to prevent moisture penetrating the material through the wall.

The expansion gap around the perimeter of the floor can be covered by re-fitting the skirting boards, either by nailing, screwing or gluing directly to the perimeter walls. Never fix them directly to the installed floor. If the skirting boards were not removed for installation, you can cover the expansion gap using moulding trims that attach to the skirting with glue or panel pins. At doorways, a door threshold strip should be used to protect the edges of the floor and provide a decorative transition from one floor type to another.

Any visible joints or gaps should be filled with a non-silicon based filler (e.g. *Fuller Caulk In Colours*) to match the colour of the timber.



INSTRUCTIONS FOR GLUING JOINS

Correct Glue Placement: (Figure 1)

Use only the approved adhesive (Crosslink PVA Adhesive) Do not use ordinary PVA. This is the correct place to apply the adhesive glue to gain a strong, tight & secure bond between the tongue & groove as well as assisting to water proof the join, yet at the same time allowing the boards to be installed easily.

Incorrect Glue Placement: (Figure 2)

A) Do not apply glue to the tongue. This will cause glue to be squeezed out of the join onto the surface of the board & make your installation messy, it will not give a strong tight secure bond.

B) Most of the adhesive will be squeezed out under the join & will not be of any use at all resulting in a poor join & virtually no bond between the tongue and groove.

C) Too much adhesive causes poor joins as the excess glue will not allow the tongue to fit into the groove properly.

Correct Glue Placement Technique: (Figure 3)

Hold the board with the bottom of the board facing upwards, apply a continuous bead of glue to the top edge of the groove, along the length & end of the board.

CARE AND MAINTENANCE

It is recommended that you use felt pads under chairs and furniture, and plastic mats under office style chairs with wheels. When shifting furniture, never drag heavy items across the surface of your floor.

- Rubber based castor cups should be placed underneath heavy load furniture such as armchairs, fridges, pianos, etc.
- Doormats should be used inside and outside of all external doorways to prevent grit from being carried across the floor that can result in wear and tear of the floor's surface. Mats or rugs are recommended in any area that is highly trafficked. Be sure that the backing of mats used are not rubber, as this can react with your hardwood floor.
- Protect your hardwood floor from wear and tear resulting from pet's nails by keeping them trimmed, and placing mats in areas frequented by the animal(s).
- Do not walk on your hardwood floor in spiked heel or stiletto shoes.
- Maintain a relative humidity level between 50%-65% and a room temperature between 17°C – 23°C.
- Long term exposure to direct sunlight will cause your hardwood floor to change shade. This is a natural occurrence in hardwood products. If this is a concern, these effects should be mitigated through the rearranging of furniture and rugs to allow the floor to age evenly, or the use of curtains, blinds or UV resistant film on windows.
- We advise using a dry or damp cloth, rung out until no more drops are present, for regular cleaning of the floor. **Do not use steam mops** or mop the floor in a manner that leaves excess moisture on the surface of your hardwood floor. Wipe up any moisture spills immediately with a damp cloth.
- Use only approved timber or laminate floor cleaning products. Do not use abrasive cleaners, steel wool or scouring powder as this may damage the surface of your floor.
- Sweep or vacuum regularly, using soft bristle attachments.
- Lacquered floors have a surface layer protecting the wood from damage, which is durable and easily maintained. Should this coating become damaged it is advisable to sand and refinish the entire floor to maintain an even finish rather than spot finishing. This is a procedure, which is best carried out by a professional. Please note that repeated sanding will remove some of the textured finish.
- Individual boards that have been damaged can be replaced. Please contact a professional flooring installer to carry this out.



For more information contact Dunlop Flooring on
1800 622 293 or visit hearridge.com.au