PRIME
OAK FLOORING

COMPASS
MATERIALS

Installation Guide

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COMPASS MATERIALS

contents

Pre-Installation Instructions

❖ Professional Installation
❖ Product Natural Imperfections

We recommend all Compass Materials flooring be installed by a professional flooring contractor. Subfloor preparation and the installation method should be discussed with your contractor in advance to ensure the installation is best suited to what you are looking for.

It is expected that the installer will read through the entire set of installation instructions for the chosen method, so the installer fully understands each step and has all the required materials and equipment to hand before starting.

The manufacturer declines any responsibility for job failure resulting from or associated with inappropriate or improperly prepared subfloors or job site environment deficiencies. The installer must document all site tests (as indicated below), and the records must be available if a claim is filed.

We suggest ordering at least an extra 5%-10% of the flooring to account for loss due to wastage in the fitting of the boards and any board with a significant imperfection or not of desirable appearance.

Because real engineered timber flooring is a product from nature, it contains distinctive natural variations in colour and grain, which are natural wood features, some of which may not be as desirable to some owner. Regardless of the installation method chosen, the flooring should be installed from several cartons at the same time to ensure proper colour, grain, and shade mix. Compass Materials engineered timber flooring is manufactured in accordance with applicable industry standards.

You will likely notice a change in colour over time when the wood flooring is exposed to the UV light from sunlight over time. This is also normal, and it is usual not to place floor rugs for a few months while much of this colour change occurs.

It is the homeowner and/or the flooring contractor's responsibility to inspect all flooring for colour, finish, grade and quality prior to installation. We cannot offer a warranty on flooring with imperfections of surface appearance or what some would consider an undesirable visual appearance. Installation implies acceptance of the product. Therefore, do not install any flooring with glaring defects, whatever the cause. If the product is not considered acceptable, contact your retailer immediately, and do not any lay any boards that you have concerns with.

Using stain, filler, or putty stick for the touch-up of the flooring during installation is normal and not a cause for concern.

Engineered timber flooring naturally contracts and expands slightly due to seasonal changes. Allowance for this movement is included for in the instructions for the different installation methods below. You will find you need a smaller expansion gap in more stable climates, whilst a wider gap is necessary in more warm humid locations.

For more information concerning how your engineered timber flooring may react to the environment, please contact your retailer.

❖ Site and Subfloor Assessment

Excessive moisture can damage natural engineered timber flooring. Ensure that the site and subfloors are suitable for the installation of the flooring and in particular that the rooms where the flooring is to be laid is not affected by moisture, This includes assessing for building leaks and also noting that slabs below grade are of higher risk. Also consider the adequacy of external drainage and that ponding of water against the building has caused undesirable moisture ingress through slabs. Garden sprinklers along the edge of a house can have a similar effect,

If there is a crawl space, check it to ensure it is dry and well ventilated. The soil in crawl spaces must be covered with not a minimum of 200 µ m of black polyethylene plastic as a vapour retarder on the ground surface.

The moisture content of both the subfloor and the flooring is to be checked and recorded before any work begins. For timber-based subfloors, solid timber joists should be below 14% moisture content by resistance meter and for conceret below 4% by impedance meter or below 85% in-slab relative humidity (to ASTM 2170). It is also necessary to assess that plywood and particleboard subfloors are also sufficiently dry.

The subfloor must remain consistently dry and protected against moisture. If this requirement is not met, the flooring can swell, shrink and warp, this will not be covered by our warranty.

All subfloor materials must be of good quality and fit for their intended purpose. If installing subfloor materials, follow the manufacturer's instructions regarding application or installation.

All subfloors need to be sufficiently flat to accept the flooring system (floated or direct stick installation). This must not exceed 3 mm beneath a 2m long straight edge, in any direction.

Check with your retailer about which products can be installed over radiant heat (Instructions below)

Compass Materials engineered flooring is to be installed over a continuous rigid structural subfloor. Do not install direct to battens or joist. Do not install over carpet. Perimeter glued resilient vinyl and rubber tiles are also unacceptable underlayment and must be removed.

❖ Acclimatisation

Engineered timber flooring should be acclimatised to the installation environment. Prior to installation. Keep engineered timber flooring in its cartons, stored at the job site for at least 48 hours prior to installation.

Do not stand flooring on ends, directly on concrete, or next to outside walls. Try to maintain at least 10 cm of air space around the cartons. Elevate flooring 10 cm off any concrete subfloor.

With new construction or major renovations, engineered timber flooring should be one of the last elements installed. Complete all work involving water and debris, such as plumbing and drywall, prior to installing wood flooring. Make sure all cement work, plastering, and painting are totally dry before theflooring is delivered.

If tradespeople need to complete work once the flooring has been installed, we recommend covering the flooring with an appropriate breathable floor protection. Do not use non-breathable plastic or foam underlay.

Subfloor and Levelling Requirements

❖ Installation on Concrete Slabs -Subfloor Preparation

Following the site assessment and the evaluation of slab moisture (as outlined above), the slab subfloor also needs to be sufficiently clean and flat for floated installations and additionally must be sufficiently sound with adhesive fixed installations. The requirements covering these aspects are:

•Clean: This may be achieved through grinding, sanding, sweeping and vacuum cleaning as well as ensuring the surface is free of wax, grease, paint, oil, previous or existing glues or adhesives, and other debris. If adhesive fixing, do not use cleaning products that could impair the bonding of flooring adhesives.

•Flat: No more than 3 mm deviation beneath a 2m straight edge for floated installations and no more than 3 mm deviation beneath a 3m straight edge for adhesive fixed installations. This is generally achieved through grinding and the use of levelling compounds.

•Structurally sound: When adhesive fixing, if the slab surface can be scored with a coin or similar then the surface layer is unsound and will need to be removed by grinding.

•Dry: Concrete subfloors when there is a moisture vapour barrier provided (applied or sheet plastic) are suitable up to 4% moisture content by impedance meter or below 85% in-slab relative humidity. Applied liquid-based barriers need to be compatible with the flooring adhesive to be used. Follow the manufacturer's guidelines and recommendations.

❖ Installation on Wood-based Subfloors — Subfloor Preparation

Following the site assessment including the evaluation of the crawl space and moisture contents (as outlined above), the wood-based subfloor also needs to be sufficiently clean and flat for floated installations and additionally, must be sufficiently sound with adhesive fixed installations. The requirements covering these four aspects are:

•Clean: This may be achieved through sanding, sweeping and vacuum cleaning. When adhesive fixing the flooring ensure the surface is free of wax, grease, paint,oil, previous or existing glues or adhesives, and other debris. Note that

particleboard can have a wax surface layer that needs to be removed by sanding.

•Flat: No more than 3 mm deviation beneath a 2m straight edge for floate or nail down installations and no more than 3 mm deviation beneath a 3m straight edge for adhesive fixed installations. Raised joints in particleboard subfloors will often need sanding to achieve the required flatness and an even transition between sheets.

•Structurally sound: Ensure that subfloor is soundly fixed and as such no squeaking is present. This may require re-punching nails and board replacement in old timber floors.
A plywood underlayment over a solid timber subfloor can be used if there is doubt regarding seasonal movement effects or minor integrity concerns. Sheets approximately 6mm thick are glued with adhesive beads at 100mm intervals and stapled 12mm in from the perimeter and spaced at 75mm. Through the body of the sheet stapling is at 100mm spacing.
With older particleboard ensure that the surface is not flaking and with plywood ensure there is no delamination.
•Dry: Solid timber within the crawl space should be no more than 14% moisture content. The surface of the timber-based subfloor should also be assessed that there are no areas of localised high moisture that could be associated with leaks or spills etc.

❖ Installation on Subfloors Other Than Wood or Concrete — Subfloor Preparation

As outline above the flooring is not suitable to be installed over carpet, perimeter-glued resilient vinyl and rubber tiles, which are to be removed.Terrazzo, marble, ceramic tile, and any other hard surfaces that are well onded to the subfloor, dry, structurally sound, and flat to the provisions provided above, are suitable subfloors for this engineered timber flooring.

Clean and prepare, generally as described above.

Terrazzo, marble, and ceramic tile must be ground to assure flatness over joints and to achieve adequate adhesion (refer to your chosen adhesive manufacturer for further guidance.)

The flooring can be glued or floated directly over a full trowel spread bed of adhesive bonded acoustic underlays. Underlay density needs to be sufficient to support engineered timber flooring and installed according to the acoustic underlay manufacturer's recommendations. Do not use foam underlays when floating over an acoustic underlay but provide a 200µm plastic sheet so that the underlay does not impede seasonal floor movement.

ASBESTOS WARNING!: Existing resilient tile, sheet vinyl flooring, backing, or felt linings may contain asbestos that is not readily identifiable. Inhalation of asbestos dust can cause asbestosis or other serious bodily harm. If suspected, advice and testing is needed from contractors licenced in asbestos removal and appropriate steps taken before considering floor installation.

❖ Installation on Heated Subfloors

Prior to installing Prime Oak Flooring, the in-slab underfloor heating system must be turned on and kept at the desired temperature for at least two weeks.

NOTE: For all times, the slab surface temperature must not exceed 26 degrees Celsius.

2. After 14 days, turn off slab heating and allow 4 days to pass in order to allow subfloor to cool down and reach room temperature before installation.

3. Please keep in mind that the total thickness of the timber floorboards must not exceed 20mm.

4. After floor installation is complete, your Prime Oak flooring requires gradual climatisation in conjunction with the heating

system.

The temperature of your heating system should be increased by 2 degrees increments each day until the desired temperature is reached (not exceeding 26 degrees Celsius), and then decreased by 2 degrees increments each day until it is turned off..

5. when installing over radiated floor heating, shrinking between boards, cracking and minor cupping can be expected and does not constitute as a product defect.

6. The moisture content of concrete subfloor should be <3% when underfloor heating is to be used. To achieve this you may need to have your floor heating turned on prior to installation.

❖ Floating Method

1. Install a 200UM plastic board, overlapping the joins by 200mm and duct-taping the joins together tightly. Plastic sheeting must extend 100mm up the walls before being cut off at floor level (after installation).

2. Installation of a 3mm moisture barrier underlayment of reliable quality.

3. Boards must be glued at the joins. A bead of glue needs to be applied to the top and bottom edge of the groove.

4. Leave expansion gap (10-12mm)

❖ Glue-down Method

1. Glue adhesive must be applied to subfloor using method of trowelling. A bead of glue needs to be applied to the top and bottom edge of the groove join.

2. Consult the glue adhesive manufacturer to insure that the proper adhesive is used in conjunction with a heated slab installation.

❖ Instructions for Floating Floor Installation

REQUIRED TOOLS AND ACCESSORIES FOLLOWING FLOOR PREPARATION:

- Tape measure
- Moisture metre (wood/concrete)
- Underlayment and vapour retarder (if needed)
- Mallet (light coloured)
- Circular or hand saw
- Mitre or table saw
- Pull bar
- Tapping block
- Chalk line and chalk
- Hammer
- Safety equipment (goggles, gloves, and mask)
- Utility knife
- Spacers (9.5 mm or 12.7 mm)
- Engineered timber flooring cleaner
- Tongue and groove flooring adhesive (PVAC)
- Broom

IMPORTANT: DO NOT INSTALL CABINETS OR WALLS ON TOP OF THE FLOORING WHEN USING THE FLOATING INSTALLATION METHOD.

If installing below grade: The concrete slab should be sealed with an applied moisture vapour barrier used with timber flooring.

A combination foam/plastic underlay with double sided joining tape and a moisture vapour barrier plastic thickness of a minimum 150 µm can then be used. Alternatively, 200 µm polyethylene sheet can be used if the underlay does not have fixed plastic layer. The polyethylene sheet should be installed with edges overlapped at least 200mm and taped with a moisture resistant plastic tape to prevent possible moisture vapour from coming up through the joins. The combination underlay or 200 µm poly film should be brought up the wall to at least the finished floor level.

If using a combination underlay, floor installation can begin.

If using a 200 µm polyethylene plastic, roll out on top of the polyethylene plastic a 3-mm thick closed-cell foam underlay, butting the edges but not overlapping them.

Consult the underlay manufacturer to insure that the proper underlay is used.

Step 1: POSITION THE FIRST ROW

•Before starting, measure the width of the room, and then divide the room's width by the board width. If this means that the last row of boards will be narrower than 50 mm, then you will need to cut the first row of boards to ensure board width at both walls, is wider than 50mm (the first and last to be installed in the room) will have the same approximate width for an overall continuous look. You will also need to consider hallways leading into larger rooms with this. (See installing the last row, below.)

•Cut the boards with the saw teeth cutting down into the face or top of the board to minimise the surface damage.

•Begin the installation of the boards in the left-hand corner of the room with the long direction parallel to the incoming sunlight source or to the longest wall of the room if possible. Be sure to install the first row of boards with the groove side facing the wall.

•Use expansion spacers to provide a gap for seasonal expansion along the walls of the entire room. (The spacing required will depend on the location. Generally, a minimum of 10mm but 15mm in warm humid locations) To maintain a square, always place expansion spacers against the wall where the two board ends join. Remember to undercut door jambs prior to installation. Remove any existing skirting boards or perimeter beading. Wall board can also be undercut to increase the expansion allowance along walls.

•If the starting wall is out of square, it will be necessary to scribe the first row of boards to match the wall, allowing the opposite side of the row to present a true square base for the rest of the floor. When the first row is complete, you must have a straight, even base established.

Step 2: GLUING THE BOARDS TOGETHER

•The boards must be side- and end-glued using a cross linked PVA tongue and groove adhesive.

•Always apply the adhesive into the bottom of the groove on each board. ***Do not fill the groove.*** Apply a continuous bead, at the bottom of the groove no higher than halfway.

•Start and stop the adhesive 50 mm from the ends on the long side of the board and 25 mm from the ends on the buttom end.

Note: Any excess adhesive on the finished surface should be wiped off immediately using a water-dampened cloth or adhesive remover. Then, dry the surface and buff it with a dry cloth. If the adhesive has dried, use a soft white cloth moistened with adhesive remover, taking care not to abrade the wood surface.

Step 3:INSTALLING THE REST OF THE FLOOR

•After installing the first row of boards, apply the adhesive to the first board on the second row using the above gluing instructions.

•Connect that board to the first row, making sure that there is at least a 15cm stagger between the end joint of the board on the first row.

•Distribute lengths, avoiding "H" patterns and other regular patterns (e.g. a stepped pattern) in adjacent runs. Stagger end joints of boards row to row at a minimum of 15 cm for narrower boards, 20-25 cm for medium width boards, and 25 cm for boards wider than 12 cm.

•Tap the boards together with a hammer and a tapping block. Be sure that the tapping block is against the tongue only. Use a gentle tapping motion, and do not tap on the groove side of the boards to avoid damage. Once tapped into place, check the boards for a tight fit on the sides and ends.

•To install the rest of the flooring, continue placing the boards from left to right, board by board and row by row.

Note: When installing around fixed objects, small areas, or even in general installation areas, the use of installation straps may be helpful for securing boards together as they can help ensure a tight fit.

Step4:INSTALLING THE LAST ROW

Usually, the last row of boards will need to be cut lengthwise to fit the space remaining. With this, use the following procedure:

•Lay a row of boards, unglued, with the tongue toward the wall, directly on top of the last row installed.

•Take a full-width scrap piece of the product that is being installed with the face down and the tongue side against the wall. Use expansion spacers against the wall to ensure the proper expansion space.

•Draw a line along the row moving down the wall. The resulting line gives the proper width for the last row, which when cut can then be wedged into place using a pull bar.

Note: The floor should remain free of foot traffic for a minimum of 12 hours while the adhesive sets.

Step5:FINISHING THE FLOOR

•Allow the floor to dry for 24 hours before cleaning it or placing heavy objects on it, like furniture.

•Fill any small cracks with putty or a non-silicone based filler. Test filler on spare pieces first to ensure it blends with the floor.

•Remove expansion spacers and ensure the expansion space is adequately covered by mouldings or skirting boards. Always nail mouldings to the wall, never to the floor.

•Clean and Vacuum the floor, then use a quality engineered timber flooring cleaner to finish the floor. We recommend products like Bona Swedish Formula Engineered Timber Cleaner.

❖ Instructions for Glue-Down Installation Method

REQUIRED TOOLS AND ACCESSORIES

- •Use the trowel size recommended in the adhesive manufacturer's Guidelines for use with engineered flooring.
- •Quality flooring adhesive. (follow the adhesive manufacturer's recommendations)
- •Broom
- •Tape measure
- •Moisture metre (wood and concrete)
- •Mallet (light coloured)
- •Circular or hand saw
- •Mitre or table saw
- •Pull bar
- •50mm-65mm long gun driven finishing nails or bradsand
- •Chalk line and chalk
- •Hammer
- •Safety equipment (goggles, gloves, and mask)
- •Utility knife
- •Nail punch
- •Engineered timber flooring cleaner

Step1: tǋŜπʎyγãűl·ffl·űʎƻy /KŜŏʅ

Following the assessment of subfloor above.

•Flatness (refer above)

•Moisture content

The recommended standard for Australian conditions is 4.8 percent for concrete/screed subfloors and 12 percent for wood subfloors.

•On a wood subfloor, your new boards should be laid in a direction that is 90 degrees (perpendicular) to the direction of the boards below. If this is not practical, plywood sheets (minimum depth 6mm) should be nailed, stapled or screwed to cover the current board, leaving a 15mm perimeter gap (against walls) for expansion. After that, the new floor can then be installed directly onto the plywood sheet.

•For a glue down installation onto a conventional strip timber, you will first have to lay a Masonite, particle board or yellow tongue 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 underlay onto the Masonite.

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•Hold the trowel at a 45°-60° angle, and spread the adhesive onto an area no larger than 3-4 m² at one time.

•Glue the boards down with Bostik Ultraset SF to the slab over the moisture barrier membrane, using a 3-6mm notch trowel. Spot weight across the floor plus weight any hollow or drummy areas to ensure floorboard and subfloor contact.

Step 4: INSTALLING THE FLOOR

•After the adhesive has been spread as above, start with the first piece of flooring. Install the flooring with the groove towards you and the tongue facing the opposite wall. Line up the groove of the flooring with the chalk line, and then press the flooring into the adhesive.

•Working from left to right, lay the next board and continue working towards the right until you need to cut a piece to complete the first row. Measure the size you need to complete the first row and cut to length.

•Distribute lengths, avoiding "H" patterns and other discernible patterns in adjacent runs.

•If the leftover piece is less than 15 cm long, cut another piece at a random spot, and start the second row with it.

•A soft rubber mallet can be used to tap the boards on the face until they are in the proper position.

•Always saw boards with the saw teeth cutting down into the face or top of the board to protect the surface.

•During installation, the transfer of adhesive can be checked by removing smaller floor boards after laying and checking the back of the board. If adhesive skins or application is inadequate the bonding will be compromised.

•Any adhesive on the board surface needs to be cleaned off during the laying with the recommended cleaner for the adhesive and cleaning cloths need to be frequently changed to prevent adhesive haze on the board surface.

•During laying, joints should be continually checked to ensure that they are tight, that the floor is aligned and that board lengths are chosen to achieve a staggered appearance with a minimum of 100mm but preferably with board ends 100mm to 300mm apart.

•For wood subfloors: use small finishing nails to hold the first row in place. Fill nail holes with filler designed to blend with your flooring.

•For concrete subfloors: take a piece of pine board, and using concrete nails, nail the board onto the dry side of your chalk line. This will hold your first row of starter boards in place.

•Complete the rest of the installation in your working area by following the same installation procedures that are stated earlier in this section.

Step 5: Post Installation

• Heavy foot traffic should be avoided for at least 24 hours, and it is important to remember that the adhesive would not be completely cured at this time. Even so, heavy items of furniture or benches may be lifted back into place after this time.

• Use putty or a non-silicone-based filler to cover small cracks or face nail holes. Test filler on spare pieces first to ensure it blends with the floor.

• When the installation is complete, make sure that the expansion spacers are removed and the expansion space is covered with the appropriate moulding such as baseboard, quarter round, or shoe moulding. Nail mouldings into the wall, never into the floor.

• Vacuum the floor thoroughly using the soft brush attachment or dust mop to remove any dirt and debris.

• When the installation is completed and PRIOR to any protection being laid over the top the timber floor should be cleaned thoroughly using appropriate cleaning products (e.g. Bona).

❖ Mouldings

Installation Tips

•Mouldings must be pre-drilled to avoid splitting whenever they are to be secured with nails or fasteners. Use a mitre saw with preset adjustments for the basic mitre cuts at 22.5°, 45°, and 90° angles. A carbide-tipped blade makes the best cuts.

•Skirting board or beading should always be nailed into the wall. Do not nail into the floor.

•Always use mitre cuts rather than butt cuts when splicing. Decide the direction of the mitre by cutting the moulding with the long point oriented in the same direction as your natural line of vision when you enter the room.

Moulding Types and Defintions

- **T-Moulding**

frequently used in interior doorways to join two wood floors in adjoining rooms. It is also recommended when making transitions from a wood floor to another floor that is approximately the same height, such as ceramic tile or laminate flooring (not carpet). T-mouldings are also used to provide expansion joints when a floor dimension exceeds the length of 12 m or width of 9 m.

- **Stair nose**

provides the proper transition for stairways or steps where engineered timber floors have been installed by either the nail-down or glue-down installation method. A stair nose also provides the proper overhang for a transition from one floor level to the next, such as the step into a sunken living room.

- **Skirting Board**

borders the wood floor at the base of the wall to give the room a finished look. This moulding conceals the required expansion space between the wall and the engineered timber flooring. It is also sometimes used under cabinets and toe kicks.

- **Beading**

conceals the required expansion space between the wall and the engineered timber flooring. It is also sometimes used under cabinets and toe kicks where a wall base won't fit or at the base of the stairs to provide a subtle blend between the floor and the wall or vertical surface.

- **Threshold**

typically used at exterior doorways as a transition between flooring and the doorway threshold. It is also used to transition a wood floor to different floors to make them fit together perfectly, such as where wood flooring meets carpeting or tile. Another common use for a threshold is to conceal the expansion space between the flooring and a vertical surface, such as fireplace hearths and sliding glass doors.