

# SUMMIT FLOORING

## **ENGINEERED WOOD FLOORING**

### **INSTALLATION INSTRUCTIONS**

#### **Planning**

Measure the width of the room so as to establish how many boards are necessary. If it is necessary to saw off a large part of the last board along the wall then saw the first and last boards equally. A board that is narrower than 5cm is very difficult to get into place.

#### **Taking Receipt of Your Flooring**

When your flooring is delivered, it will be packaged in boxes, each holding 2.16m<sup>2</sup> of boards. It is important that these are immediately placed in an area similar to the environment in which they will be laid to acclimatise. They should be allowed to acclimatise for 2 weeks prior to the boxes being opened.

Oak engineered boards contain a plywood substrate and an Oak top layer. They are a natural product. As such, when the boxes are opened, it is perfectly normal to expect slight vertical bowing of the boards. This is not detrimental to the finished floor but just the natural movement differential between the different types of timber. Once the boards are laid with the 4 sided tongue and groove installation and direct stuck to the substrate, any bowing disappears. To assist with weighing the boards down it can be useful to use unopened boxes of flooring or adhesive buckets.

#### **Subfloor Preparation**

Timber can be installed on dry concrete, plywood, particleboard or hardboard. The subfloor surface must be completely level, dry, clean and firmly fixed.

The subfloor must be level to 5mm over 2 metres, with no abrupt deviations greater than 1mm over 200mm. If necessary use self-levelling compound to correct any unacceptable levels. It is essential to remove all dust and dirt before installation to ensure an adequate bond is established.

A proper moisture test using a hygrometer must always be performed to determine that the moisture content does not exceed 70% RH (relative humidity) before installation can take place.

#### **Concrete Floors**

The installation of a moisture barrier is mandatory for all direct-stick installations, on concrete or timber.

Any substrates with a moisture content RH above 70% require further investigation to determine the reason for the high moisture level and consultation with the moisture barrier supplier to determine the correct solution.

Always use the vapour barrier prior to board install. i.e. Handleys Vaporstop.

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## **Timber Floors**

Old, uneven tongue and groove wood floors must be overlaid with Plywood, or Thinline sheet. Particle board and plywood must be sanded flush and clean.

Always use the vapour barrier prior to board install. i.e. Handleys Vaporstop

## **Underfloor Heating**

Refer Separate Underfloor Heating Section below.

## **Expansion Gaps**

Wood is a living material that will move, expand and shrink with the different humidity levels in the air. The maximum length of a single installation is 12m and 8m in width. Individual rooms must be separated by a control joint. It is vital to always leave an expansion gap between the floor and the walls, which can later be hidden with skirting boards or matching beading. Never trap the floor's natural movement. The expansion gap must always be at least 10mm at each wall, pillar, threshold, etc. around the room.

## **Installation**

We highly recommend our product is installed with the 'Direct stick' method – This is where the substrate is sealed to prevent further moisture penetrating through and into the boards. Adhesive is applied to the substrate using a 6mm V grooved trowel and the boards are laid onto this adhesive. This laying method provides a very solid feel for the finished flooring.

The following installation process should be followed:

### **Installation Process**

- 1 Lay out the first row of boards with their tongue edge against the wall, and work to your right. It is very important that the first board is laid straight. The tongues will need to be removed to provide the correct expansion joint.
- 2 Turn the last board so that the tongue end is tight up against the end wall. Using a set square, mark the board 8-10 mm from the end of the last board (must correspond to the expansion gap). Cut the board, put it in place and push in a wedge at the short end. When using a handsaw, cut from the underside.
- 3 If the last board is less than 5 cm or the wall is crooked, the first board should be cut. Measure up and mark the cutting position. Check with a guideline that the board is square.
- 4 Lay the boards up against the wall. Create the necessary expansion gap by pressing down the wedge between the board and the wall. Press the board in against the wall and check that it is lying straight.

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- 5 Start the next row with the leftover piece from the row before. Any adjacent end joints should be staggered at least 50 cm.
- 6 Use a tapping block when tapping boards together. Never use a leftover piece from a board for this purpose, as this and/or hitting the boards too hard can cause damaged edges. Begin tapping lightly at one end until a joint is made. Then repeat at 30cm intervals until the entire length is in place.
- 7 When the final row is to be laid, it will rarely fit exactly. Lay the last row of boards with their grooved side up against the wall over the last row already laid. Use a full-width cut-off to mark the distance, and slide the cut-off together with a pencil along the wall, marking the line to be cut on the board beneath.
- 8 The line will include an expansion gap corresponding to the width of the tongue. If the expansion gap required is 10 mm, the cut line must be 5 mm within the marked line (towards the groove). It is recommended that a new line be drawn before sawing.
- 9 Lay the boards up against the wall. Tap in the cut-to-measure board. Position wedges and leave them in overnight while the glue dries. Finish off with skirtings.
- 10 Door frames can be removed and raised, but it is easier to undercut them. Use a leftover piece of board to mark the bottom of the frame, and cut with a fine-toothed saw. Slide the board in under the frame. Do not trap the board between the sub-floor and the frame.

## **Installation Requirements**

- Always check the moisture content of subfloors with an accurate hygrometer (check its calibration regularly) and use a moisture barrier whenever installing over all concrete and wooden subfloors.
- Wooden subfloors can be prone to excessive moisture content within the subfloor space and should therefore be properly sealed prior to engineered board install.
- Never install wood flooring over an uneven subfloor or over a subfloor with a moisture content exceeding 70% RH.
- Do not open the packs of flooring until immediately prior to installation. We recommend that boards are taken from varying packs to ensure an even spread of different shades of flooring. Wood is a natural product so will vary.
- Store unopened packs on site indoors for minimum 2 weeks before installation. Protect packs from direct contact with sunlight, moisture and concrete floors.
- Check the colour match before installation; minor imperfections and variations in colour and grain are considered to be a feature of wood floors, not a defect; no claims are allowable once the product is installed.
- Ensure even coverage of adhesive under all boards. We recommend using a 6mm V-groove stainless steel trowel for spreading the adhesive.

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- All boards newly laid should be weighted to ensure good adhesion to the substrate for at least 12 hours.
- Inspect the boards carefully in daylight for any flaws; whatever the cause, cut out any imperfections and use the shorter lengths elsewhere.
- Always allow a generous 8-10mm at each wall, pillar, threshold, etc. around the room; if necessary cut off the tongue to achieve the proper gap between the last board and the wall.
- Always use the correct adhesive and apply the recommended amount.
- All cuts (sides and ends) must be sealed, especially near bathroom or laundry doors, windows and entranceways where moisture is more prevalent.
- Controlled expansion gaps provided as per the guidelines above.
- Protect the installed floor properly during construction.
- Underfloor heating – refer separate instructions below.
- The floor should not be walked on, cleaned or treated with any cleaning products or covered with mats until at least 24 hours after installation.
- A slight colour change/fade immediately after installation is usual. This will be more noticeable if the flooring is installed adjacent to full height glazing and is to be expected.
- Always keep a spare pack or two of wood for inevitable accidents and repairs; individual boards can be cut out and easily replaced if necessary.

It is important to ensure all installations comply with the guidelines set out here. Failure to do so would void any warranty.

## **Products Available**

There are a number of concrete sealing and adhesive products available on the market and readily available from your local builders merchants or specialist suppliers.

The following brands are recommended:

- Bostik <http://www.bostik.co.nz/>
- Selleys <http://www.selleys.co.nz/adhesives/>
- Handleys <http://www.handleyind.co.nz/products-services/index.htm>

## INSTALLATIONS WITH UNDERFLOOR HEATING

Electric under floor heating is able to supply a heat that warms up the flooring over a short period of time. This can cause tension in the wood with the risk of splits appearing in the top layer.

A hot water pipe system, by nature of its operation, tends to have a slower heating time frame but the following should be adhered to. Engineered flooring is the more stable option for such installations.

The guidelines below are offered as additional pointers to successful installation:

- As with any direct stick floor you should be checking and recording your slab moisture levels. Obviously only installing over the acceptable levels identified in the Installation Instructions.
- The radiant heat should be turned on for a lengthy period prior to the install to chase out any moisture from the slab. 28 days is recommended.
- The floor must be coated with a moisture barrier/retarder.
- Moisture levels should be checked and recorded again once the barrier / retarder has been applied and cured as per the instructions.
- As far as is possible, acclimatisation of the timber within the environment for as long as possible should be carried out. True acclimatisation of solid timber takes approx 3 months in the final enclosed environment enabling the flooring to reach the rooms EMC (Equilibrium Moisture content ). The aim is to replicate as close as possible the atmosphere of the final living environment. Boards to gain optimally from this process should be fillet stacked with clean dry fillets. Engineered flooring is inherently more stable. The room temperature should not vary more than 9 degrees C between seasons and humidity should be maintained between 45 and 60% throughout the year.
- The boards should be run at right angles to the heating pipes / elements below the substrate to give even heating across the boards.
- Sufficient glue should be trowelled to ensure good adhesion for direct stick floors. Only glues recommended for use over under floor heating should be used.
- Before installation, reduce the temperature gradually by 5 degrees C per day. At the time of installation, the sub floor temperature should be between 16-18 degrees C. After installation the temperature of 16-18 degrees C should be maintained for a further 3-4 days before returning to the recommended subfloor temperature of 24-26 degrees C.
- Thermostats should be in the floor and not wall mounted.
- Any increase in temperature should be made slowly, only 2-3 degrees at a time and left for a period of at least 12 hours to stabilize before increasing further. Maximum subfloor temperature is 26 degrees Celsius.

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- Once a desired temperature is reached, it should be maintained for the duration of the winter months.
- Avoid rapid changes in heating temperatures.
- Decrease temperature in a similar way, avoiding rapid changes.
- Rugs etc should not be used on timber floor where there is underfloor heating. This causes differential temperatures above and below the flooring, potentially causing movement of the boards.