



FRENCH OAK

Specialty timber by Hurford's

French Oak Installation Guide

11mm Solid French Oak Overlay



 **HURFORD'S**

Application

This recommendation covers the installation of **Hurford's 133 x 11 mm Solid French Oak overlay flooring**.

Section 1: Installation on plywood over concrete

Section 2: Direct adhesive fix to a concrete slab

Section 3: Sanding and finishing

Section 4: Caring for the completed floor

Note that due to the reduced thickness, these recommendations differ in some important areas to general recommendations associated with overlay flooring. All aspects of these recommendations are considered important.

Section 1: Installation to plywood over concrete

1.1 Slab Preparation

- The slab flatness tolerance to be met is no more than 3mm beneath a 1.5m long straight edge placed at any position on the slab. Levelling compound may be used where this tolerance is exceeded.
- The slab (including any levelling compound) must be dry to the point where concrete moisture meter readings do not exceed 4.5% or in-slab relative humidity does not exceed 90%. Tests to be carried out in accordance with the equipment manufacturer's instructions.

1.2 Pre-Installation

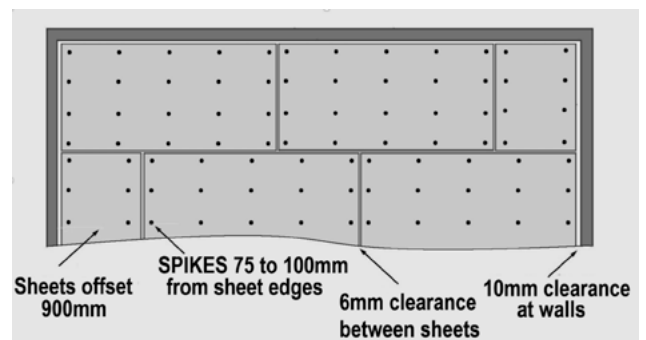
- The product has been provided with wrapping to the top, sides and ends to minimise external influences. The protective wrap cannot be relied upon for protection from rain or other wetting. The product must remain out of the weather and intense sunlight during all phases of transport and storage. It should also not be stored where there are extremes in temperature and humidity, such as an uninsulated metal garage or a moist basement.
- The site environment needs to be assessed, as does the expected internal conditions after the floor has been installed. In high humidity environments, natural swelling can be expected after installation and in dry climates, shrinkage generally occurs. The effects of heating and cooling systems must also be considered, and particularly so if not is use when the floor is installed. The ATFA industry standard *Solid Timber Flooring* provides more detailed information, and this should be used when assessing the installation environment.

The product is more suited to moderately dry to normal in-service environments. Thinner flooring is more responsive to moisture content changes, and due to this, it is recommended that the flooring is **not acclimatised** before installation. If used in very dry or very humid climates, then Hurford's should be contacted for advice.

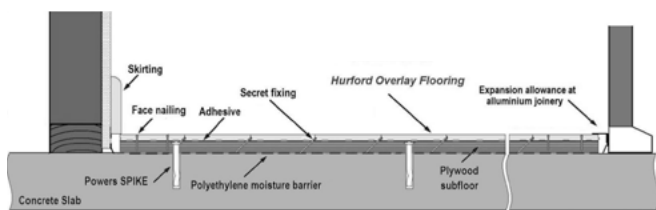
- The plywood subfloor must be dry at the time of floor installation (below 13% moisture content) and be no more than 3% higher than the overlay flooring. Note that as plywood is manufactured at lower moisture contents, the installation environment may result in some moisture uptake from the air and consequently higher moisture contents. The target manufactured moisture content range of Hurford's overlay flooring is 9% to 12%, with an average of approximately 10% to 11%. Note that if there are doubts as to the moisture content of the plywood due to wetting (by weather or other trades, etc.) or conditions of very high humidity, then the sheet flooring will require moisture content testing by the oven dry method. Moisture meters are inaccurate.

1.3 Installation

- A polyethylene moisture barrier, at least 0.2 mm thick, is required to be placed over the slab, lapped 200 mm at joints and joints taped. The barrier is also required to go up the edge of the overlay floor at least as high as its upper surface.
- The recommended plywood subfloor is non-structural, 15 mm thick, with a type A bond. Sheets are to be installed in a 'brick' pattern with a 6 mm gap between sheets and a 10mm gap to internal and external walls. Sheets are to be staggered 900 mm so that from sheet to sheet, fixings do not line up.
- Plywood sheets are to be fixed to the slab with hand-driven 50 mm long by 6.5 mm 'Powers SPIKES' (or equivalent) to the manufacturer's recommendations. Twenty are required per 2400 x 1200 x 15mm sheet, equally spaced and with the outer spikes 50 mm from the sheet edge. The head of the SPIKE is to be driven below the surface of the plywood.



- If 12 mm thick non-structural plywood, with a type A bond, is to be used for the subfloor, then the fixings to the slab are to be increased to 28 per sheet. Following installation, of the plywood, it is to be ensured that the surface is flat from sheet to sheet and that there are no contaminants or coatings that could affect the bonding of the adhesive. If this is not the case, rough sanding is necessary to provide the required surface.
- With the flooring, mechanical fixing combined with adhesive is necessary to achieve the required fixing performance.
- It is usual to lay boards parallel with the longest wall in a larger room, and for boards to run parallel to walls in hallways. Although the flooring has been manufactured to maximise its straightness, it is still necessary to ensure that the installation remains parallel throughout.
- The adhesive used is to be a flexible polyurethane flooring adhesive, and a full trowel bed of adhesive is to be applied, with the trowel size and procedures as outlined by the adhesive manufacturer.
- Mechanical fixing is best provided with Powernail cleats – 25 mm long at 225 mm spacing and not within 75 mm of board ends. Note that staples are more prone to splitting the board and are not recommended.
- A starter board is required when beginning to lay the floor, and this will require face nailing. A gap of at least 10 mm, to the perimeter of the floor and around other fixed vertical surfaces, provides the necessary expansion allowance. In wider floors (greater than 6m), intermediate expansion is also needed. Regular gaps, 1 to 2mm wide, every ten boards can be used to facilitate this, and this is particularly important in warm, higher humidity locations.



Section 2: Direct adhesive fix to a concrete slab

2.1 Slab Preparation

- The slab must be clean and free from substances that may compromise the adhesive bond. The surface is to be in a sound condition and

suitable for the purpose, that is cohesive in structure and able to withstand the forces resulting from possible floor expansion above.

- It is essential that all contamination, such as paint, plaster, old adhesive or sealers, be removed completely. To achieve a clean slab, grinding is often necessary.
- The slab flatness tolerance to be met is no more than 3mm beneath a 3m long straight edge placed at any position on the slab. To achieve this, high spots may be ground, and a levelling compound, suitable for direct adhesive fixing timber floors, can be used in low spots. Products are to be applied to the manufacturer's instructions, and compatible systems are to be used.
- Slab moisture is to be tested to determine what level of moisture vapour protection is needed. Moisture vapour protection is needed with impedance moisture meter readings above 3.5% or in-slab relative humidity readings above 80%. Tests to be carried out in accordance with the equipment manufacturer's instructions
- It is advisable to use a slab moisture vapour barrier on all ground floor slabs (irrespective of age). An applied moisture vapour barrier compatible with the proposed adhesive is to be used to the manufacturer's instructions.

2.2 Pre-Installation

- The product has been provided with wrapping to top, sides and ends to minimise external influences. The protective wrap cannot be relied upon for protection from rain or other wetting. The product must remain out of the weather and intense sunlight during all phases of transport and storage. It should also not be stored where there are extremes in temperature and humidity such as an uninsulated metal garage or moist basement.
- The site environment needs to be assessed, as does the expected internal conditions after the floor has been installed. In high humidity environments, natural swelling can be expected after installation and in dry climates, shrinkage generally occurs. The effects of heating and cooling systems must also be considered, and particularly so if not in use when the floor is installed. The ATFA industry standard *Solid Timber Flooring* provides more detailed information, and this should be used when assessing the installation environment. The product is more suited to moderately dry to normal in-service environments. Thinner flooring

is more responsive to moisture content changes, and due to this, it is recommended that the flooring is **not acclimatised** before installation. If used in very dry or very humid climates, then Hurford's should be contacted for advice.

2.3 Installation

- It is usual to lay boards parallel with the longest wall in a larger room and for boards to run parallel to walls in hallways. Although the flooring has been manufactured to maximise its straightness, it is still necessary to ensure that the installation remains parallel throughout.
- A flexible polyurethane flooring adhesive is to be applied using the notched trowel as recommended by the adhesive manufacturer. The flooring needs to be well-adhered to the sub-floor, achieving a solid bond throughout. Care is needed during laying so as not to disperse the adhesive under foot pressure and create hollow spots. Weighting of the floor is usually necessary due to minor flatness variations in the subfloor.
- A gap of at least 10 mm, to the perimeter of the floor and around other fixed vertical surfaces, provides the necessary expansion allowance. In wider floors (greater than 6m), intermediate expansion is also needed. Regular gaps, 1 to 2mm wide, every ten boards can be used to facilitate this, and this is particularly important in warm, higher humidity locations. A directly adhered floor to a slab may have hollow spots, and when limited in size and number, they would be considered acceptable. However, once the adhesive has cured, and prior to sanding, the floor should be checked for hollow spots, particularly in main traffic areas, with this usually addressed by adhesive injection. If there is a hollow area over a number of boards, then those boards may need to be replaced.

Section 3: Sanding and Finishing

After installation is complete, it is important that the flooring is not sanded for 3 days to provide time for the adhesive to fully cure and boards to adjust to in-service conditions. Equally, if the floor is to be left more than 7 days before sanding and finishing, then additional protection may be necessary to prevent possible damage by trades or adverse conditions. Therefore, the floor is not to be exposed to extreme conditions of high or low humidity, and in particular, it is important to protect the flooring from intense direct sunlight.

There are many aspects that need to be considered when choosing an appropriate finish. Not only is gloss level and wear resistance of importance, but also the expected changes in appearance of the coating with time. A professional floor sander and finisher who is aware of and understands such aspects should be employed to sand and finish the floor.

Section 4: The Completed Floor

It is important to realise that this is a solid timber floor that will be subject to the same conditions that result in movement in other timber floors. It can therefore be expected to swell and shrink with seasonal changes in humidity, however the product and installation methods outlined have been developed to reduce this movement. Even so, it can be expected that the floor will show gaps and that these are likely to be more prevalent with dry conditions within the dwelling. Recommendations for all timber floors indicate that to reduce the effects of shrinkage and cupping near windows, window coverings, tinted glass or floor mats are effective. This is also the case with Hurford's Oak overlay flooring. It must be realised that even with such measures, wider gapping can be expected in these areas than in other areas of the floor, and a small amount of cupping (raised board edges) may also occur. Floors should be cleaned regularly in accordance with the advice from the floor finish manufacturer, which usually consists of dry mopping or vacuuming, and less frequent damp mopping. Note that excess water can damage the floor.

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