

# 14mm ENGINEERED OAK FLOORING

## PREPARATION

### BEFORE DELIVERY

The conditions must be ideal before any flooring is fitted. Wet trades like screeds, plastering and decorating need to be complete and the building must be thoroughly dried out. Windows and doors should be fitted and watertight.

*EXPERT TIP: A rule of thumb for the drying time of a sand and cement-based screed is one day per millimetre for the first 50mm, and 2.5 days for each millimetre thereafter. So, a 50mm screed should take about two months to dry out, and a 100mm screed will take six months. Plaster takes up to six weeks to dry completely.*

### PREPARING THE SUBFLOOR

The surface immediately beneath a natural wood floor must be in good structural condition, free from damp rot, fungal or insect infestation, and contaminating residues. It must be flat with uneven areas not exceeding 3mm over a 2m area. Naturally, the surface should be vacuumed and totally free of debris before fitting begins. Hot pipes should be well insulated to prevent localised hotspots, which can cause wood flooring to warp or shrink.

If installing over floorboards, ensure the voids beneath have a height of 600mm from the ground to the bottom side of the joists. We recommend using a suitable damp proof membrane to protect the floor from moisture. Check that the voids are vented around the perimeter and that these vents are positioned to allow air flow under the entire floor. As a rule of thumb, all venting should equal a minimum of 1.5% of the total m<sup>2</sup> of the installation. Keep the vents open throughout the year too.

*N.b. The subfloor should be prepared for installation in accordance with the industry standards outlined in BS-8201-2011.*

### HEATING AND AIR CONDITIONING

The room temperature and humidity levels need to be stable before the flooring is delivered to site. Heating and/or air conditioning systems should be on and working for at least two weeks before the floor is fitted. Make sure underfloor heating is turned off for at least 48 hours prior to fitting.

Once the floor has been fitted, the underfloor heating should not be switched on for another two to three days. Then the temperature should be raised gradually at no more than 1°C per day. The temperature of the floor should never exceed 27°C.

### ATMOSPHERIC CONDITIONS

The room temperature shouldn't be lower than 18°C, or the floor temperature lower than 15°C. The Atmospheric Relative Humidity should be between 40 and 60%.

*NOTE: Wood floors are not suitable for wet rooms, or in areas where there is a regular flow of water.*

### ACCLIMATISATION

Nature is in no hurry when it produces trees, and likewise, an impressive wood floor installation is never rushed. The sealed, unopened boxes should be laid flat, in the centre of the room for three to four days beforehand. DO NOT store the flooring outdoors, in an outbuilding, or anywhere with damp or condensation problems. The conditions where the flooring is acclimatised should be as close as possible to the typical living conditions.

### INSPECTION

We have the highest quality control procedures in place, however our products are made from natural materials so it's essential that every plank is carefully checked before installation. If there are any problems, please notify the store you purchased the product from. We are unable to consider any defects after the floor has been installed.

### MOISTURE TESTING

Moisture is the enemy of natural wood, and can cause damage. Even when a subfloor looks dry, it may contain excess moisture in the substrate. Using a professional moisture meter such as the Protimeter MMS will tell you whether or not it's safe to go ahead with installation. If it is not possible to obtain accurate moisture readings in the sub-floor, it is advisable to provide a suitable moisture control barrier that is compatible with the installation method to prevent any residual moisture from penetrating the wood flooring. However, it is important to note that such barriers cannot replace the requirement for a low moisture content in the subfloor as excessively high moisture levels could cause the moisture barrier to fail.

Readings shouldn't exceed:

- 70% Relative Humidity (RH) for cement-based concrete.
- 11% Wood Moisture Equivalent (WME) for wooden subfloors or joists.

### EXPANSION GAPS

As wood is a natural substance, it will expand and contract with changes in temperature and humidity. That's why when a wood floor is fitted, expansion gaps need to be left wherever the boards meet a wall, structural support, stairs, breakfast bar, fireplace, central heating pipe...etc. Gaps must also be considered at doorways to allow for the differing expansion between rooms. Place spacers at regular intervals when fitting and then remove them before skirting boards, beading or trims are put in place. Allow a 2mm gap for every metre span of the floor with a minimum of 10-15mm gap regardless. For areas over 5m in width, extra provisions should be made for expansion.

## SOME EXTRA TIPS BEFORE YOU BEGIN

### LAYING THE FLOOR

All our floors feature beautiful colour variations which naturally occur in real wood. To ensure the overall effect has a good balance of colour and details, take care to blend planks from several packs.

The natural texture of the flooring will really come to the fore if the planks are laid in the same direction as the light entering the room. However, if the floor is being fitted over existing parquet, it should be positioned at right angles to the previous flooring planks.

### THE FIRST ROW

Before installation can begin a few calculations need to be made, and you might have to do some cutting before you can start laying. When you've chosen your starting wall, measure the width of the room from there and divide that by the width of the flooring panels. This will give you the number of rows of boards you'll lay and the width of the last row. If your last row is going to be under 60mm wide, cut the boards in your first row lengthwise accordingly so that your last row isn't too narrow.

### FLOOR PROTECTION DURING CONSTRUCTION

Always protect the surface of the flooring during installation. Use paper or cardboard that will allow the floor to breathe and tape this to the boards. Never use plastic or polyethylene sheeting to cover the flooring as this will trap moisture and could cause damage.

## PIPES

Measure the position of any central heating pipes and mark them on the relevant plank, considering your expansion gap. Drill a hole 16mm larger than the pipe's diameter. Saw at a 45° angle to the pipe hole. When you've fitted the board around the pipe, apply glue to the sawn out piece of wood and fit it back into the gap, again taking into account the expansion gap spacers.

## DOOR JAMBS

If there is a wooden door jamb, we recommend undercutting it according to the thickness of the flooring, plus the possible underlay. Install the flooring underneath the door jamb but leave the necessary expansion gaps.

## TRIMS

When fitting trims, always fix them to the walls. Never fix them to the floor itself as this will prevent the natural expansion and contraction of the flooring into the expansion space.

# INSTALLATION

## FLOATING

This product can be installed over concrete, anhydrite, existing wood floor chipboard, ceramic tiles, terrazzo, metal, PVC, linoleum, slate, marble, particleboard, OSB and plywood – but not carpet. Old parquet block floors can also be problematic.

The type of underlay you need will depend on the subfloor condition. However, for most installations we recommend using an underlay with a builtin damp proof membrane, such as Floormate or Aquastop.

Underlay should be laid edge-to-edge perpendicular to the direction of floorboards. Stick it together with tape. If the underlay does include a damp proof membrane, use vapour tape to prevent moisture from rising between the seams. We do not recommend overlapping the underlay.

## FOLLOW THESE STEPS TO INSTALL

1. Check all planks for possible damage or defects. We can't be held responsible for imperfect boards once they've been fitted.
2. Start installing along the longest wall or an outside wall which is likely to be straight and square with the room. Using one of the longest boards, install your first plank with the tongue facing away from the wall. Take great care with the alignment as misaligned starter rows can cause side and end gaps.
3. Use the remainder of the last plank in the first row to start the second row. If the off-cut is less than 200mm in length, cut a longer piece for the first board in your second row. As you continue to install, make sure that all boards are staggered so there's no less than a 300mm gap between joins in adjacent rows. This makes for a more appealing floor and reduces waste.
4. We recommend locking the header joints of each row together first so the floor can be installed row by row. If you need to install the planks separately, connect the long side of the board then use a block and mallet to tap the header joint into the next plank. Alternatively, you can connect the header joint with the previously installed plank, lift both to an angle of 30 degrees then slide into the long joint before locking into position. Our naturally inspired flooring has been precision engineered for stability but it's still important to check for a close fit at all end and side joints, and tap or pull them into place where necessary.

**NOTE:** Never use a rubber mallet or hammer directly on the flooring to fit the locking system. This can damage the flooring and/or finish.

## WHAT IF

### SHRINKAGE/GAPS/SPLITS/ DELAMINATION



Wood flooring is a hygroscopic material, meaning it will expand or contract according to its moisture content. Where significant shrinkage, gapping, or splitting appears, this is due to a corresponding reduction in moisture level in the flooring. Here are some reasons why this might happen.

1. If the site moisture levels is too high when the floor is installed, it will dry out as the property adjusts to its normal living conditions.
2. Insufficient acclimatisation time can also result in moisture reduction after installation.
3. Air conditioning systems can also have a drying effect.
4. High temperatures on the surface of the floor from underfloor heating or direct sunlight will dry it out, often leading to the top layer coming away or delaminating (note, solid wood floors are not recommended with underfloor heating.)

In situations 1-3 above, introduction of some natural humidification may help to close up the shrinkage gaps, although where the issue results from incorrect procedure in the installation process, it may be necessary to have some parts of the floor re-fitted.

High surface temperatures need to be addressed through re-calibration of the underfloor heating system temperature or solar shading, whichever is applicable.

Minor splitting within the grain of the wood can normally be repaired with coloured wood filler.

In the case of a solid wood floor, an incorrect installation method can sometimes result in shrinkage and splitting. Solid floors are more prone to moisture movement than engineered floors, and should always be nailed or glued down to the substrate.

### EXPANSION/BRIDGING/TENTING



The direct reverse of shrinkage, wood flooring expands as its moisture content increases. Correct expansion gaps around the perimeter will absorb any normal changes, but where exceptional expansion takes place and there is no further room around the perimeter, the floor will sometimes start to push upwards over an area (bridging), or as a pair of boards (tenting). There are many reasons why this can happen:-

1. Lack of correct acclimatisation.
2. Failure to provide correct perimeter expansion gaps.
3. A pinch point where expansion gaps were overlooked/filled.

4. A fixture or solid obstruction preventing normal movement.
5. High subfloor moisture levels.
6. Increased air humidity.

In all cases, it is important to establish whether there is a high level of humidity or subfloor moisture, and take corrective action if needed. In extreme cases this may involve taking up the wood floor first to allow for further subfloor preparation and drying out. The most important point is to ensure that the room or site has reached equilibrium as close as possible to its final living conditions.

Once the cause of any further abnormal expansion or shrinkage has been removed, then the flooring can be refitted, and/or expansion joints recut.

### CUPPING



Sometimes the edges of wood flooring boards appear to be rising up to form a ridge between each board. This is known as cupping and is invariably caused by the moisture level below the floor being higher than the top surface. The underside therefore expands more than the top surface causing the edges to push upwards.

Where the extent of the cupping is minor and the source of the subfloor moisture is likely to dissipate, it is worth allowing a few weeks for the moisture condition to settle, as minor cupping will often correct itself. More extreme cupping may not self-correct even once dried out, and it may be necessary to replace the affected flooring.

Sanding down and re-finishing the flooring is another option, but should only be attempted once it has been established that all moisture has dissipated and no further distortion is likely to take place.

### BOUNCING/SQUEAKING



This is usually caused by one of the following problems.

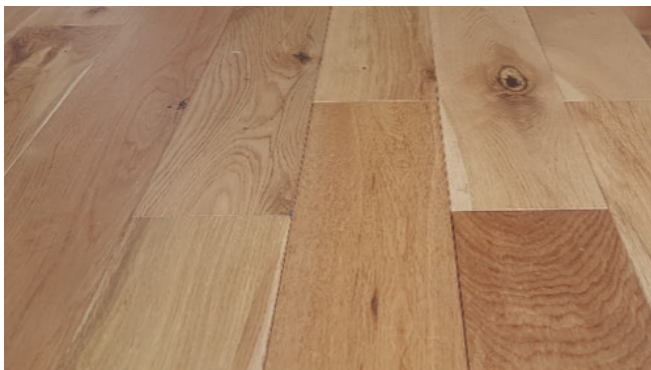
1. Increased moisture levels causing expansion can put pressure on the board joints or cause the boards to rise slightly (bridging) which resulting in movement and squeaking. See earlier section on EXPANSION/BRIDGING/TENTING for corrective action.
2. These symptoms can also occur where the subfloor is not flat enough and the floor is straddling a low spot, so that foot traffic causes movement. Correct subfloor levelling should be carried out.
3. In the case of a solid wood floor, an incorrect installation method can

allow excessive movement. Solid floors are more prone to moisture movement than engineered floors, and should normally be nailed or glued down to the substrate.

## BOWING

A certain amount of bowing - where the ends of a board are higher or lower than the middle - is fairly common in engineered wood flooring and does not affect the performance of the floor. Normally up to 30mm of bowing will settle down over time provided not all the boards are bowing the same way. Bowed boards can often be cut and used as row ends. Bowing can sometimes be caused by a sudden change in moisture, for instance if the boards are removed from the packaging without correct acclimatisation, but again this will usually settle down in time. A further period of acclimatisation with the bowed boards weighted down flat will often help.

## COLOUR VARIATION/KNOTS/FILLER



These are all normal features of rustic grade wood flooring and should be regarded as part of its character. Boards should be selected and mixed sympathetically to provide an aesthetically pleasing appearance. Strong colour contrasts between adjacent boards should usually be avoided, and any boards that are less visually pleasing can often be used around the edges of a room, where they are less obvious, or where they are likely to be covered by furniture.

Where a less rustic appearance is required, it is often possible by purchasing some extra material to select out unwanted features.

## COLOUR CHANGE/FADING



Real wood, like most other natural materials, will change colour over time, mostly as a result of exposure to Ultraviolet rays from natural light. The speed of change is largely dependent on the amount and intensity of exposure. This is not a product defect and can be reduced/slowed down by use of window shading and regular moving around of furniture/mats/rugs etc.

## LENGTH VARIATIONS

Length variation is quite normal as this allows the maximum use of valuable raw material with least wastage. Shorter boards can either be used as row starters and cut ends, or in the main field of the floor to break up the regularity of the pattern. There are generally a few short lengths in each pack of engineered wood flooring, and solid wood flooring comes in random lengths as standard.

## WIDTH VARIATION

With solid wood floors, boards widths can sometimes vary slightly as a result of normal machining tolerances and variations in the hardness of the wood. This may appear as gaps between isolated boards. Minor variation can usually be absorbed during installation by adjusting the board position to split the gap equally between both sides of the board. Where larger width variation is found between boards, it is common practice to simply set aside the last board and pick another that better suits the previous one. If a number of similar boards are found, these can be stacked together until there are enough to complete a full row.

## HARDNESS/DAMAGE



Although Oak is technically a "hardwood", and will last for years if treated properly, it is still susceptible to damage from small, sharp objects, and heavy point loads. Over time, a certain amount of normal wear will actually add to the character of the floor, but good cleaning and maintenance practices, absorbent external door mats, and protective furniture feet pads are all advisable to avoid unwanted damage. Likewise castor cups can prevent dents from heavy furniture with small feet (eg Pianos) and stiletto heeled shoes are best left at the door.

## DULL DRY SURFACE/STAINING



Using the right cleaning products is vital to maintain the surface finish in good condition. Pre-finished wood floors should only be cleaned with a gentle pH neutral formulation that includes a residual refreshing action, using a spray and/or a lightly damp mop. Use of inappropriate chemicals, and even some supermarket "wood floor cleaners", can have an adverse effect on the finish, even to the extent of causing it to fail. This can result in a dull dry look and spilled fluids can penetrate the wood grain causing staining. Steam cleaning is also not recommended. Areas of high traffic may need more frequent cleaning or refreshing, and if they have deteriorated to the extent of allowing staining, then it may be necessary to have the flooring re-finished by a specialist.