

Structural Engineered Board

Conditions

Structural Engineered flooring does not need to acclimatise; it can be used as soon as it is delivered to site. If not used immediately, planks should be stored indoors. The moisture levels of the subfloor must be between 10-15% if wooden (ie chipboard, plywood or softwood) and 4% or less if concrete or screed.

Floating Installation Over Wood or Concrete

Check the level of the floor: if there is a gap of more than 3mm showing under a 3m straight edge, then use a self-levelling compound to take out the unevenness.

Cover the floor with a layer of 3mm combined foam/DPM such as Timbermate Excel – making sure the joints are taped and the DPM runs about 35mm up the four walls in order to “tank” the flooring.

Where the first plank is to be laid, insert a strip of cork or low-density fibreboard 8-10mm thick along the walls. This acts as an insulator against sound transmission from the floor into the wall. It will also chock the floor in place and dampen whatever negligible expansion there may be.

Lay the floor with randomly staggered joints; this is normally achieved by using the offcut from the first row as the starting piece for the second row, and so on. Subsequent rows should be knocked up against the previous one, using a mallet and wood block. The tongue and groove profile of the flooring will hold adjacent boards in place, but does not lock them.

Header joints between boards in adjacent rows must be at least 450mm apart and should not fall in line with each other any closer than 3 rows apart. Small pieces of under 450mm length at the end of a run should be glued into place in order to prevent them being kicked out of position. Run some PVA adhesive under the tongues where they join the next pieces all round. You can glue all the header joints and eliminate any potential opening up.

Laying sheets of 7-8mm low density fibreboard under the planks will improve the feel of the floor and reduce the transmission of impact noise to the floor below, if the space and budget allow.

Structural

Structural Engineered flooring is strong enough to be used structurally. It can therefore be secret or face-nailed straight on to joists. There will be more flexing with a structural engineered board and it may be beneficial to reduce the joist centres from the standard 450mm to 350mm.

Larger Areas

In order to ensure stability in larger areas – over 10m wide – we recommend fixing each tenth row in place. However, this is not a hard and fast rule; each installation needs to be judged on its own merits, so please refer to us for specific advice.

Guarantee

With the exception of use with underfloor heating our structural engineered flooring is guaranteed for 12 months against delamination and plank defects when installed indoors in accordance with the above instructions. This guarantee will be void if the floor is at any time exposed to water spillages, relative humidity levels outside the range 25%-80% or temperatures outside the range 15C-30C. Floating installations of structural engineered floor are also guaranteed for 12 months against excessive cupping, gapping and movement as long as the installation and maintenance instructions are followed.

Installation With Under-floor Heating

General

Structural engineered flooring is among the most stable wooden floor products available and is therefore ideal for use with under-floor heating (UFH).

However, to obtain the best performance of your floor in the long term it is important to follow these guidelines. As there is no reliable way of recording or monitoring the heating-system settings and room

conditions over time, it would be impossible to prove or disprove whether all the guidelines had been followed: therefore, we cannot give a guarantee. We are however working in conjunction with a couple of underfloor heating manufacturers who are testing the product vigorously with a view to putting a guarantee in place in the future.

Make sure the UFH system is installed, fully working and tested **before** installing your floor; you risk causing irreversible damage if you cannot fully control the system and do not restrict the operating temperature according to the guidelines below.

In practise the flooring is almost certain to shrink when used with UFH, and there will be some movement of the floor. This is due to the relatively high moisture content; the solid-wood wearlayer is about 10% and the ply core about 14% when the planks come out of the factory, and these levels cannot be reduced in advance through re-kilning, for example, without affecting the integrity of the plywood.

After a months use with UFH, these levels can drop to 6-7%; this loss of moisture manifests itself as shrinkage. If the moisture loss is severe, there can be a breakdown in the cellular structure of the wood, leading to splits in the wear-layer.

For maximum satisfaction, these effects need to be minimised and we recommend:

The manufacturers preferred method of UFH is water/piped systems rather than electric mats or film.

Manufacturers recommend using the 189mm board rather than the 220mm for UFH and where possible, each plank should be fixed in place, either stuck or secret-nailed/screwed. If planks are loose-laid there will be an accumulation of shrinkage in one place, which may mean a gap of 1cm or more somewhere in the floor. Instead, the effect of shrinkage will be limited to about 0.5mm on each plank.

If floated as a raft – boards stuck together, but not fixed down – the whole floor may move in an unpredictable way, especially if the room is irregularly shaped.

Some species are more suitable for use with UFH than others – merbau, walnut and oak are particularly stable. On the other hand, the more “lively” species – hard, brittle woods, such as maple, jatoba and larch – tend to react by splitting and moving more readily. We recommend these species are not used with UHF.

Wood should be sealed as soon as possible after laying. Oiled floors should be fed and maintained more often than conventional, non-UHF oiled floors.

The use of standard, micro-bevelled planks will minimise the visual impact of shrinkage. A square-edged board will show up the shrinkage much more through slight gapping.

Installation on a screed based system.

The screed must dry naturally to below 4% moisture content – the UFH should not be turned on before the correct moisture level is achieved. The screed must be level to +/-3mm over 3m.

An MS Polymer adhesive such as Rewmar, should be used, this will act as both adhesive and moisture barrier. For increased peace of mind 2 coats of Creom could be applied to the screed before gluing.

After fitting the flooring adhesive should be allowed to cure for 2 days before the heating system is turned back on.

For all types –

The maximum temperature at the underside of the wood should be 26C and Relative atmospheric humidity should be maintained between 40-60% - using climate control or a de-humidifier.

The heating system should initially be turned on at the ambient temperature. It should then be raised at no more than 1C per day until the desired temperature is reached.

The room temperature should be maintained between 20-23C

The heating system should be run in strict accordance with the manufacturers' instructions.

Beware of leaving slid furniture and/or heavy rugs in one position for any length of time. If the floor is "capped" in this way, the wood may be affected by excessive heat, which cannot escape normally. This will lead to cupping or gapping, from which the floor may not be able to recover.

Electric mats or film

When used with an electric mat or film system, there may be no way of fixing the individual planks. In this case the loose laid floor can be cramped up after a month or so, in order to take out any shrinkage. Care must be taken, however, to prevent the sudden ingress of humidity, which may cause re-expansion of the floor, when, for example, windows are thrown open on a warm spring day.

Finishing & Maintenance

Preparation

Our floors are available pre-finished and unfinished. In both cases, planks are filled & sanded before being despatched from the factory.

If the chosen product is unfinished and bevelled we still recommend a light sand before the finish is applied. Simply prepare the floor using a 100-120 grit screening abrasive or mesh pad on a rotary polishing machine then apply the finish of your choice.

Hardwax Oil

The manufacturers recommend Treatex or Osmo hardwax oils although other oils can be used. Follow the manufacturers instructions for application, maintenance and cleaning.

The advantages of hardwax oils are that they tend to enhance the natural aesthetic qualities of the wood better than other finishes, giving a deep lustre as well as a longlasting and effective protection to the wood. Also, small areas of staining and damage can be repaired without having to re-do the whole floor. Small scratches can simply be rubbed away by applying some more hardwax oil. The main disadvantage is a commitment to a regular maintenance regime.

Lacquer

Modern polyurethane lacquers are quick and easy to apply and give long-lasting and hardwearing protection to any wooden floor. They are available in matt finishes, making them much more natural looking than the oldfashioned gloss finishes of the past. Again the manufacturers instructions should be followed with regard to application, maintenance and cleaning.

The disadvantages of these finishes is that any damage may require a complete re-sand and re-application.

Maintenance

This floor should be maintained as any solid wood floor. Everyday use will result in scratches and dents in any wooden floor.

In general terms, day-to-day cleaning should be with anti-static mops, brushes and vacuum cleaners with a soft nozzle adaptor. A damp cloth can be used to remove spillages or stains, but large amounts of liquids should be avoided – no swilling out!

Sand & grit are the enemies of wood floors, so, in all cases, some sort of barrier system, such as heavy entrance matting, should be used to prevent excess dirt being brought onto the floor from outside.

Protective felt pads or plastic cups should be placed under furniture to prevent scuffing and scratching.

Heavy wear or damage may involve sanding down the affected area and re-finishing it. This floor has a substantial wear layer so will stand up to heavy traffic and several re-sands.