



SOLID AND ENGINEERED WOOD FLOORING

GLUE DOWN INSTALLATION

These guidelines are designed to complement the current British Standard BS8201 and any other relevant standards.

NOTE: The final responsibility for the installation lies with the installer who should be suitably trained and knowledgeable with wood installations and safety!

Safety must be paramount on every installation. All electrical equipment must be PAT tested and labeled and all cutting tools such as jigsaws, circular and bench saws must have guards fitted and cutting must be carried out on a suitable bench. You must also wear suitable work wear and remove or make safe any loose items such as jewelry. Safety is your responsibility!

SUBFLOOR

The sub-floor must be clean, dry and flat to British Standard tolerance; maximum 3mm gap under a 2m long straight edge, at any point across the subfloor.

PREPARATION

Cementitious (sand and cement) / Calcium Sulphate (Anhydrite):

The subfloor must be sound with no friable areas, free of laitance and dry. The moisture content of solid sub-floors must be checked in accordance with British Standards Annex A.

This is carried out using a Hygrometer set on top of the screed or by inserting a sleeve into the screed, (the sleeve method is not recommended with underfloor heating to avoid the risk of damage to the pipes).

The moisture reading must be less than 65% Relative Humidity (RH). If the reading is above 65% RH and below 97% RH, we recommend using the **Marldon MXS 140** two- part epoxy DPM. These DPM's must be applied in accordance with the manufacturer's instructions.

NOTE: DO NOT use DPMs over anhydrite (calcium sulphate) screeds. On this type of screed please use Marldon MXS120 Primer before adding Marldon MXA200 adhesive.

Note: DO NOT install solid wood over underfloor heating!

TIMBER

The timber sub-floors must be sound, test for vertical movement which should be less than 5mm and dry, tested using a spike type meter. The moisture content of the subfloor should be less than 14% and within $\pm 2\%$ of the wood floor being installed.



SOLID AND ENGINEERED WOOD FLOORING

GLUE DOWN INSTALLATION

All suspended wood floors must have suitable through ventilation normally delivered by air bricks in the outside walls. Any wood sub-floor that has a higher moisture level than 14% should be investigated. They must also be free of infestations such as wood-rotting fungi and wood boring insects. We recommend installing plywood of at least 6mm in thickness complying with BS EN 314-1:2004 Class 3 (formerly referred to as WBP) over all wood sub-floors and laid at right angles to the run of floorboards or sheet boarding including chipboard and OSB.

NOTE: Kingley bitumen paper can be sandwiched between the plywood and the wood sub-floor to reduce/prevent residual moisture affecting the wood flooring or adhesive.

Always check the ambient room temperature and humidity which should be maintained at a constant level, ideally between 18°C (64.4°F) and 22°C (71.6°F) with a relative humidity, between 45% - 65% prior to, during and for the whole life of the wood flooring. Try to avoid extremes of low or high temperatures as this will negatively affect the stability of the wood flooring.

Low humidity can cause the wood to shrink and high level to cause expansion. Common causes of low humidity are using the heating at too high a temperature, open fires and wood burners. High humidity is commonly caused by poor ventilation.

We recommend using a **Techno Digital Gauge** which can be purchased through Havwoods to monitor the humidity and temperature level that can be easily adjusted by either placing moisture in the room (plants that are watered regularly or receptacles of water) or ventilating the room to reduce high levels of humidity.

A re/de-humidifier can also be used to control the atmosphere.

The most critical time for the wood flooring is during and for 48 hours after the installation. Allowing the temperature or humidity to alter particularly overnight when temperatures can drop can cause the wood to slightly lift off the adhesive affecting the adhesive bond.

We recommend using the heating set at a minimum 15°C (59°F) to achieve optimum conditions prior to, during and for at least 48 hours after the installation. After at least 48 hours increasing the temperature by maximum 2°C (35.6°F) each 24 hour period until the normal room temperature is reached.

This also applies when using the UFH after periods of not being used.

We would also recommend a cool down period using the same formula 2°C (35.6°F) each 24 hour period until switched off. Always set the heating to a frost temperature of minimum 12°C (53.6°F) when not in full usage.

As above keep the room temperature constant by using the heating set at minimum 15°C (59°F) or if there are problems with the permanent heating other forms of heating such as convector heaters can be used.

SOLID AND ENGINEERED WOOD FLOORING

3 of 4

GLUE DOWN INSTALLATION

Do not use gas type heaters as these will generate extra moisture in the air. Infra-red type heaters do not generally warm the fabric of the room or the wood, they tend to only warm the person or item close to the heater.

As a general rule rooms / areas should be adequately ventilated to prevent a build of moisture in the atmosphere. Wood will naturally change its size during seasonal changes! In the summer the humidity is generally at its highest level hence the wood joints should be reasonably tight together.

During the winter when heating is commonly used the humidity levels are generally lower and will produce small gaps between the joints.

This occurrence is not a manufacturing or installation fault!

Care must also be given to rooms that are only heating when in use with the heating switched fully off at other times.

This can cause a build-up of humidity if the room is closed and not ventilated immediately after usage.

The build of humidity / moisture will generally increase the moisture level of the wood flooring.

The next time the room used the heating can dry out the moisture in the surface of the wood causing cupping.

Acclimatise the wood flooring for at least 72 hours prior to the installation in the room where the wood is to be fitted. The wood should be stored out of direct sunlight, away from walls and radiators and on battens fully supporting the wood to prevent a build of heat on the bottom boards. Acclimatising is used to balance the wood flooring with the environment it is going to be used in.

If the temperature of the wood is at an equilibrium balance (the same as the room) and the moisture level of the wood is within $\pm 2\%$ of the wood sub-floor or around 9% for heating other than underfloor heating and around 7% for underfloor heated sub-floors you can assume the wood does not require any further acclimatising.

NOTE: Some manufacturers do not require the wood to be acclimatised and recommend installation immediately after delivery.

The application of a liquid damp proof membrane onto sand and cement sub-floors is advised as a secondary precaution, once the relevant % RH as described above are achieved. We recommend the use of our **Marldon MXS 140** two part epoxy DPM in this instance (follow the technical data sheet for this product).

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SOLID AND ENGINEERED WOOD FLOORING

4 of 4

GLUE DOWN INSTALLATION

INSTALLATION

Always create an unfilled expansion gap of a minimum 12mm on areas of less than 25 m² and a minimum of 15mm on larger areas.

Areas in excess of 10 linear meters x 8m width of the boards may require extra expansion between the boards and intermediate expansion in the length. Expansion gaps can be covered using a skirting board or beading / Scotia.

In cases where these products cannot be used such as in front of a stone fireplace an alternative is placing a low density foam strip (low density meaning it can easily be crushed between your fingers) leaving it approximately 2mm below the height of the wood floor and then use a colour fill or similar to bridge over the foam.

This will allow any movement of the wood flooring to push up the filler without restricting the movement.

Threshold profiles should be installed in all doorways, arches or narrow sections that lead from one room/area to the next. These thresholds must allow for the required expansion and contraction. Door frames and architraves can be undercut to allow the wood to slide underneath, still allowing for the expansion.

NOTE: We advise not to undercut newel posts as these are structural sections of the stairs.

The wood should be fully bonded to the prepared sub-floor using a suitable flexible adhesive.

This should be applied using a notched trowel (please see adhesive manufacturer's instructions for trowel notch size). In any event, always lift an occasional board to see if there is at least an 80% coverage to the back of the board, if not increase the notch size.

NOTE: DO NOT use adhesive to level a sub-floor!

When planning the area try to balance the board width against the two most prominent walls taking into account focal points such as fireplaces. On small areas this is more critical than on larger areas where you cannot visualize both sides at the same time.

You must always try to have at least half a board at each side as smaller width boards are difficult to fit and do not look good particular if the wall is not straight.

We recommend dry laying the first two or three rows adjusting the first row to the wall contours and adjusting for the width you have planned. Make sure you have at least a 300mm distance between header joins, ideally 500mm. Once done mark a glue line on the sub-floor and move the boards whilst applying the adhesive. Immediately place the boards into the adhesive which must be prior to the adhesive skinning over. Place spacers between the boards and the wall to keep the expansion gap whilst the adhesive is curing.



SOLID AND ENGINEERED WOOD FLOORING

GLUE DOWN INSTALLATION

If the installation is over more than one day strap or wedge the last row to prevent movement overnight. Weight (you will have packs of boards at this stage) down the last few rows to prevent lifting off the adhesive. If the boards do not close easily you may need to use a knocking block or lever bar to assist in the placement.

If you are installing a click system board fully bonded locate the header join first at an angle lowering the long join so that the short join is over the groove (longer protrusion). Once laid use a knocking block or lever bar to knocked the join in place. During the process do not apply downward pressure on the board to make positioning easier.