

Solid Tongue & Groove Bamboo Glue Down Only

Full Installation Instructions

General Guidelines

All instructions and recommendations are based on the most recent information available. They should be followed for an ideal installation. They should also be read in conjunction with the relevant sections of the current British Standards BS 8201, and any referenced standards within this standard.

1. NEVER install outdoor, or in areas subject to water and high humidity.

2. Stable temperature and humidity within acceptable limits.

- A stable atmosphere prevents stress to the Bamboo. Stable means keeping the temperature steady within $\pm 3^{\circ}\text{C}$ and the air relative humidity within $\pm 5\%$ RH but above 45% RH and below 65% RH. An ideal atmosphere is ambient temperature between 17°C (62.6°F) to 22°C (71.6°F) and relative humidity 45% RH to 65% RH. Quick and large changes of temperature should be avoided, as this will negatively affect the Bamboo.
- The sub-floor temperature is also important and should be at a minimum 15°C (59°F) maximum 27°C (81°F).
- The Bamboo and room should be kept at a steady temperature 48 hours before, during and 48 hours after installation, including overnight.

3. Acclimatisation

Acclimatise the Bamboo in the climate-controlled location(s) (as described above) for a minimum of 48 (ideally 72) hours, before starting the installation. Keep in the packaging and store flat at no more than 6 packs high, away from direct sunlight and not against radiators or tight against walls. If underfloor heating is present, store the packages off the floor (on battens, providing the packs are fully supported) this will reduce the bottom packs from heating up to a higher degree, than those at the top of the pile. The acclimatising period will depend on the pre-delivery storage conditions. The cooler the storage prior to delivery to site or during delivery, will increase the acclimatising time.

4. Preparation

- Only deliver and install after the jobsite has been cleaned and cleared of debris, that could potentially damage the Bamboo prior to or the finished installation. The site conditions must also be within acceptable tolerances, see above.
- Bamboo is a natural product that has a variation of shade. It is advised to mix the boards from several different cartons to blend their natural shade characteristics. The installer is responsible for the final selection, and should select carefully to give a good overall appearance. If you have any questions, please contact your supplier. We will not accept a claim for poor appearance based on the selection and distribution of boards in the installation.
- Bamboo is manufactured to high quality standards, and is carefully inspected prior to

leaving the manufacturer. Occasionally however, defects are not detected. If you notice a visible defect with the Bamboo you are installing, discard the affected board or use for a cut, removing the offending fault. An extra 5% allowance to cover these points and any errors created during fitting when calculating is a normal procedure. If you find a number of defects, stop the installation and contact your supplier. Visually obvious defects that could be seen during installation will not be accepted as a complaint.

7. Areas over 10m in length and 8m in width should incorporate an intermediate expansion. This can be achieved by leaving a small gap between the long joins. Please consult your supplier for advice on large areas.

8. Do not fix furniture (kitchens etc) through floating floors as this will eliminate the expansion and natural movement.

5. Check the suitability of the area to be installed

Prior inspection of the areas is vital to the performance and longevity of the product! Main points to consider during the inspection which are not exhaustive: -

Flatness of the sub-floor

Uneven sub-floors will affect the stability of the Bamboo. British Standards and manufacturers state the sub-floor should be measured using a 2m straight edge placed in contact with the sub-floor, and measuring any gaps underneath which should be less than 3mm. Isolated ridges or dips should also be considered. Any undulations should be smoothed out using an appropriate compound, and ridges should be ground off on solid sub-floors. Always consult the smoothing compound manufacturer for a specification. See section 12 for wood sub-floors. As an extra check you can dry lay a few boards and walk over them in different positions checking for any bounce. Do not level a floor with the adhesive!

Cracks in the sub-floor

There are many reasons for cracks, including stress and settlement. All cracks must be attended to prior to applying a smoothing compound and they must be investigated to ensure the movement has not fractured the membrane under the screed. Just filling the cracks could lead to longer-term problems with movement and moisture. If in doubt seek professional advice.

Dry sub-floor

Sub-floors solid or wood need to be dry. British Standards state a screed should be tested using Hygrometry as described in annex A in the standards. For floors which are to be directly stuck down with full-spread adhesive without a vapour check membrane 65% RH. There are many manufacturers of moisture testing equipment such as Tramex and Protimeter, who's instruments can be used to identify areas for further testing with a hygrometer. These instruments can also be used to check the relative humidity to British Standards. The duration of the test will depend on the sub-straight. Sand and cement will normally require 2 to 3 days, power floated screeds will require at least 7 days. Never test floors with underfloor heating or artificial drying aids (de-humidifiers) switched on. Switch off for at least 4 days prior to setting the hygrometer, and they should remain off during the test period. Any test should be logged and preferably witnessed so that if there is a problem this evidence can be produced to help to resolve potential issues.

- As a guide a new sand and cement screed will dry at a rate of 1mm per day for the first 75mm, and 0.5mm per day up to 100mm. Thickness greater than 100mm can take considerably longer (150mm up to and over 1 year) given ideal drying conditions 20°C and 65% RH. Calcium Sulphate (Anhydrite) screeds dry at a similar rate providing the surface laitance has been sanded off to allow evaporation, or treat as power floated.

- Some types of (not all) sub-floors can be coated with a liquid damp proof membrane to prevent excess moisture affecting the Bamboo. Always consult the DPM manufacturer for suitability. DPM's are not always compatible with underfloor heating, so please contact the DPM manufacturer for suitability.

- Rooms below ground level are particularly vulnerable to high moisture and humidity levels see section 9 below.

- Wood sub-floor moisture also needs to be checked. This can be done using the equipment described above, with a spike attachment. These work by pressing the spikes into the wood with the spikes (2) in line with the grain. The maximum moisture level is 15%, although ideally as stated in British Standard 8201 the maximum moisture content of existing boards should be within $\pm 2\%$ MC of the Bamboo being installed. Moisture levels above 17% need to be investigated. High levels could be caused by poor or no ventilation under the suspended sub-floor. If in doubt seek expert advice.

6. Contaminated sub-floors for example, oil, wax, varnish, adhesive, paint etc.

All contamination should be removed prior to applying damp proof membranes, smoothing compounds and adhesive, (do not apply a DPM on wood based sub-floors). Some preparation manufacturers have products that will adhere to small amounts of adhesive residues, but please check with them for suitability.

7. Building movement join(s)

Movement joins are required to be left clear and should be bridged over with a suitable cover strip (not the Bamboo floor!). These can affect the aesthetics of the Bamboo floor, but with prior consideration they can be designed into the installation.

8. Underfloor heating suitability

Unfortunately this bamboo is not suitable for use with underfloor heating. If you would like further information regarding our range of bamboo flooring that is suitable, then please call 0116 2741050.

9. Structurally sound sub-floor i.e. minimal vertical movement and firm screed

- Excess vertical movement can cause stress to the Bamboo. Measuring this is not easy, but as a guide place a straight edge across the floor and walk next to the straight edge. If the sub-floor dips by more than 5mm you should consider strengthening. Also if you walk with one foot either side of a join in the sub-floor and the joins move independently this will affect the stability of the Bamboo flooring. Wood sub-floors can be over-laid with plywood with at least a 6mm thickness, and should be laid at right angles to the run of the board long joins. We recommend applying a primer to the plywood when fully bonding Bamboo to the sub-floor, to give a better bond (follow primer manufacturers instructions). Solid sub-floors such as sand and cement with day joins or cracks could be stitch bonded to stabilize the movement. If in doubt seek expert advice.

- Laitance can be present on new screeds particularly Anhydrite screeds, and should be removed by sanding or grinding. To check for laitance or a friable surface of a screed, scratch the surface with a hard sharp object such as a nail, awl, knife or similar (a “tear” device guarantees a constant pressure when scratching the screed). Scratch two lines approximately 10mm apart horizontally and vertically crossing each other. The appearance of the edges (for example, jagged or clean) provides a hint about the surface firmness of the screed, as does the de-lamination of the surface between the lines. Be careful with Anhydrite screeds as laitance can form to a hard finish if not sanded within two to four weeks of laying the screed. This surface may appear firm but may de-laminate with time and usage.

10. Below ground level areas

- These are not recommended or ideal areas for Bamboo installations! If you proceed we cannot give a guarantee. If proceeding, ensure these areas are suitably ventilated to prevent a build up of humidity and to reduce the risk of condensation. These areas should be constantly monitored for humidity levels that should be between 45%RH to 65% RH. Always consider installing a humidity controlled re / de-humidifier.

- Moisture can penetrate the walls as well as the sub-floor, and could affect the stability of the Bamboo. Always check the moisture level using a suitable instrument or seek expert help.

11. Existing floorcoverings

- Ceramic tiles should be checked for full bond to the sub-floor and made smooth / level by applying a suitable smoothing compound or repair mortar. If gluing over ceramic tiles, scarifying and or priming is normally required. Always follow the manufacturers instructions.

- Do not install Bamboo by full adhesion above old resilient (vinyl) flooring, as the adhesive could be affected by plasticiser migration that will de-grade the adhesive.

- Do not fit wood on top of old textile (carpet) floorcoverings and do not use the old or new carpet underlay.

- Do not fit wood over wood block floors.

- Do not fit wood over floating wood or laminate.

WARNING:

Do not sand, dry scrape, bead blast or mechanically pulverize existing resilient flooring, backing or lining felt. These products may contain asbestos fibres that are not readily identifiable. The procedures described above can create asbestos dust. The inhalation of asbestos dust may cause asbestoses or other serious bodily harm.

12. Wood based sub-floors

Floorboards, chipboard and OSB need to be flat. Ideally overlay with plywood of at least 6mm in thickness which should conform to a suitable standard and should include the following.

- Exterior quality complying with BS EN 314-1:2004 Class 3 (commonly referred to as WBP).

- Be resistant to both static and impact indentation.
- Be of uniform density and thickness.
- Have a written warranty for suitability and performance from the panel manufacturer or have a history of proven performance.
- Plywood should be securely fixed to the sub-floor by either mechanically fixing using a suitable fixing such as ring shank nails, screws, serrated staples, divergent staples all of which need to be of a suitable gauge (not small electric staples even though they are divergent) set at minimum 100mm intervals 12mm in from the edge and 150mm centres in the main area of the panel or by full adhesion using a suitable adhesive. All joints should be sanded to smooth out any variation in the panel thickness. Note: Always acclimatise the plywood prior to installation. Priming plywood when fully bonding Bamboo to the sub-floor to give a better bond (follow primer manufacturers instructions).

Installation

Setting out / planning the area

- Determine how you want the flooring to run. Typically planks run the length of the room. There may be exceptions since it is all a matter of preference. Running planks across small width areas (less than 1.25 meters), can sometimes give the impression that the area is smaller than it is, and can affect the bond strength of the flooring.
- Plan the area, ensure you have at least half a width of plank against the wall opposite the start wall and or against focal points such as fireplaces. The length is not so critical, but try to avoid small cuts of less than 200mm in length. Rooms that are not square should be set off the main focal point, but with full discussion with the end user.
- Expansion gap. All Bamboo products regardless of method of installation, require an unfilled expansion gap. A minimum 12mm gaps should be allowed for nailed and fully bonded installations, and a minimum 12mm gap for floating floors up to 8m wide (board width). This includes doorways and each room should be fitted individually. Areas above this size should be calculated at 1.5mm per meter width for nailed and glued and 2mm per meter width for floating installations. Large areas (above 80 sq m) may require intermediate expansion between the boards, please contact your supplier for advise.

Installation fully bonded

- Undercut the architraves to allow the Bamboo to slide underneath, leaving an expansion gap. Never undercut the newel post, as this is a structural part of the stairs. There are a number of electric and manual undercut saws to carry out this task. The thickness of the cut is important, so as not to leave a gap between the board and architrave. Tip: measure the thickness of the Bamboo and either set the saw to the correct depth, or use a spacer for manual cutting to achieve the correct height.
- Open at least three packs and spread out the boards to check for natural shade compatibility, with the adjoining board. Bamboo is a natural product and will show variations in shade detail that is not a manufacturing fault! The installer assumes all responsibility for the final selection that may require input from the customer. If you find lighter or darker boards that do not blend easily, use these for cuts or in an area of minimal view. You should allow a 5% wastage factor into your planning so that any obvious variations or accidents

when cutting can be discarded.

- Dry lay out the first row of boards with the grooves facing the wall, cutting the last board to size allowing for the expansion gap. Check the boards are in line using a straight edge or string line. Scribe the boards into the long wall ensuring there is at least half a board width at the opposite side of the room. Tip: always check the width of the boards in front a fireplace or other visually obvious walls. Cut the boards using a suitable instrument such as a jigsaw. Continue to dry lay the first three rows using the off cut the previous row to start the next row, proving the length is at least 200mm. Stagger the header joins by at least 200mm for the best aesthetics.

SAFETY:

Always work on a suitable bench and clamp the Bamboo prior to cutting. Ensure the cutting equipment has been electrically tested (P.A.T.) and wear suitable work wear that does not have loose tags etc that could catch in the saw blade or any other moving part. Remove or secure all jewellery.

Safety is your responsibility!

- Mark a line on the sub-floor along the edge of the third row (adhesive line). Remove the boards and place in order away from the adhesive line. Apply adhesive up to the marked line using a suitable adhesive and notch trowel, check adhesive manufacturers instructions for suitability and trowel to use. Once applied, lay the boards into the wet adhesive placing wedges to keep the expansion gap. When placing the boards, apply a little lateral movement and downward hand pressure to ensure good transfer of adhesive. Tip: lift an occasional board to see if there is good transfer of adhesive (minimum 80%). If the transfer is not good, change the size of trowel and re-check. If the boards do not fit together easily, use a knocking block and knocking bar for the ends. It is not usual to need tension straps, but if required use them. Ideally leave the first three rows for at least 1 hour to allow the adhesive to grab the boards, that will reduce the possibility of moving them when fitting the rest of the flooring. Continue installing the rest of the floor marking a line for the adhesive. This line should be slightly less than the width you can easily reach when placing the boards, and the size of area is small enough so that you do not leave the adhesive open for too long (the adhesive could skin over giving minimal or no transfer to the back of the board). Always work off the boards never on top, unless you distribute your weight using plywood or similar (protect the Bamboo from scratching). If the installation is over more than one day, clamp the boards in place overnight using either tension straps, blocks screwed to the floor or wedge a few pieces of wood off the opposite wall and do not walk on the flooring. Continue with fitting the rest of the floor, placing wedges at the ends of all boards to keep an expansion gap. Remember to keep the header joins random and at least 200mm apart. Check that you are not creating a stair case effect with the joins. Aesthetics are an important part of the installation. Leave the wedges in place for at least 24 hour allowing the adhesive to dry / cure.

- Keep foot traffic off the floor for 24 hours. If foot traffic is required due to location, place plywood or similar over the Bamboo to distribute the weight. Check the plywood is smooth with no debris underneath, possibly lay some underlay underneath to prevent scratching. Never cover Bamboo flooring with plastic. This will make the floor sweat affecting the adhesive curing and stability of the Bamboo.

Radiator pipes (all methods of installation)

- Mark their location and cut a hole 16mm larger than the pipe (15mm pipe = 31mm hole) to allow for expansion. Once drilled cut from the wall to the hole using a hacksaw (thin blade). Cut through the board leaving a gap of at least the width of the pipe at an angle of 45° both vertically and horizontally so that the cut off piece will rest on the angle and not fall away, and can be pushed towards the pipe to close up the cut gap. When the board is installed glue the cut off piece and use masking tape to hold in position until the adhesive dries.
- Always leave an expansion gap of at least 12mm between all rooms. This expansion gap should not be filled with the base of the profile.

Finishing the job

- Glued installation: after 24 hours remove the wedges, and then either fit skirting boards or quadrants / scoria's. Also fit radiator pipe covers over the expansion around pipes.
- Glued installation: Keep the room temperature constant for 48 hours after completing the installation, that includes through the night. Allowing the temperature to drop overnight could and in many cases does cause the Bamboo to move and lift off the adhesive. Any void under the Bamboo will prevent a bond causing longer-term problems. Do not wash the floor for a minimum of 48 hours after installation. When cleaning only used special purpose mops and cleaners, and ensure any mop or cloth is well rung out.
- Glued installations: Check and remove any excess adhesive immediately with a wet wipe. Dried adhesive should be removed with a suitable non-flammable cleaner. Do not use solvents as these can affect the surface finish. Always try a test area on a spare piece of Bamboo or in an inconspicuous place. Dried adhesive may be difficult to remove, take care when removing the adhesive. Do not use a scouring pad, use a natural cloth with no dye as this could transfer to the Bamboo. If using a liquid, read the instructions carefully as some may be too aggressive and damage the surface of the Bamboo.
- Always sweep or vacuum prior to wiping with a cloth to reduce the risk of scratching. Tip: Although a well rung out cloth / mop can be used, wet wipes are a good idea as these do not leave excess water on the surface. Wipe the floor inline with length of the board to reduce leaving dirt deposits in the joins.

Bamboo floors are durable, but eventually the surface will require maintenance. There are a number of products that can be used as a regular treatment (follow manufacturers instructions) or when the time comes, the Bamboo can be sanded and re-lacquered. A professional should carry out this task. The time scale will vary depending on usage but as a guide if the surface start to look dull (sad) consider re-treating.

Care & Maintenance

Preventative and regular maintenance

1. Use protective mats in front of external doors to remove dirt and water from your shoes. Ideally place a grill plate / matt outside which will help to remove grit, that can damage the surface of the Bamboo. Always clean these mats regularly! Rubber backed mats can create staining on the Bamboo, always check for suitability with the mat manufacturer.

2. Fit felt pads to the bottom of the legs of chairs and tables to reduce the risk of damage from scratching. Clean the felt pads regularly to remove any grit or build up of dirt that may have become embedded. Care must always be taken when moving furniture to avoid scratching and damage to the surface of the Bamboo. Always lift and not drag these items. Safety! Care must be taken with heavy and or awkward shaped items.

TIP: Use a wheeled trolley, a piece of carpet upside down or there are special Teflon type skids that will move over the surface reducing the risk of damage. In addition place a piece of board over the Bamboo and slide the furniture over this (check the board is free of debris or other items that could damage the surface of the Bamboo).

3. Do not place heavy items on newly installed glued or floating Bamboo floors, for at least 24 hours after completion to allow the adhesive to cure. Do not fix furniture (kitchens etc) through floating floors as this will eliminate the expansion and natural movement. Furniture with small castors could indent into the Bamboo which will leave a permanent mark. Use special cups to distribute the weight.

4. To keep your floor looking its best, dust mop or vacuum your floor at least twice per week. Do it more often on floors with heavy traffic. Do not use a household dust treatment chemical of any kind, as this may cause the floor to become slippery or dull the finish. Simply sweep the floor as required.

5. Do not pour water on your floor to clean. Excessive water can cause damage to your Bamboo floor and possibly the sub-floor. Use a bucket, and ring out the mop to remove excess water. There are special purpose mops for cleaning Bamboo floors. If a liquid cleaner is to be used, spray the liquid onto the mop head and not the floor which will reduce localised wetting.

6. Do not allow pets with unclipped or sharp nails to scurry across the floor. It could cause severe scratching to the surface.

7. Clean up food spills by removing any excess food, and then clean as described above. We do not recommend powdered cleaners, oil soaps, dishwashing detergents, or other dusting products. Some products leave residues that could affect the performance of the Bamboo floor.

8. Shoe marks and scuffs can be removed by using a wet wipe or cleaner as described above.

9. If your floor has been exposed to excessive water, for example by accident or flooding, remove the water as soon as possible, by mopping and ventilate the room. A dehumidifier should be promptly turned on in the room to reduce the moisture level to normal. Do not dry the room below the normal moisture level that existed previously. Once the excess water is removed monitor the Bamboo to see if there is any distortion (cupping, crowning or lifting). We would recommend advising your insurance company of a potential problem so they can log the incident which could save time and problems afterwards, as any problems could take a few weeks to manifest themselves.

10. If accidental deep scratches or damage occurs, repairs can sometime be undertaken by either using filler or replacing a board. Always keep spare boards but keep them dry and lay flat. Suggestion, under a bed or on top of a wardrobe, never in a garage or shed as these can be damp areas. Consult The Bamboo Co for advice on how to carry out repairs.

11. Bamboo flooring subjected to excessive heat will dry out the natural moisture level of the Bamboo, and cause distortion such as cupping or crowing. Use precautions to minimize, reduce or eliminate the potential effects on the Bamboo from strong sunlight. Windows can be coated with film to reflect UV rays from the sunlight or with new windows they can be designed with built in protection. Windows can be coated with film to reflect UV rays from the sunlight or with new windows they can be designed with built in protection.