

ENDURANCE BAMBOO COLLECTION

Bamboo

Endurance Bamboo *Installation Guideline*

Bamboo flooring is a natural and environmentally friendly product. The information in this guideline will help you install the flooring correctly.

Please note that it is always best to have your floor installed by a professional, even though it is possible to install it yourself.

This is only guideline and cannot supply all the details you may encounter regarding the installation of the flooring.

CONTROL MOISTURE

An appropriate moisture barrier.

ACCLIMATISE FLOORING

As a general rule, the ideal humidity range for bamboo flooring is 40-60% relative humidity. In some climates or households, the average humidity range may be higher or lower. Internal environments that exceed tolerances of 35%-65% relative humidity will damage the floor and are not covered by the warranty. In this case, simply extend the acclimatization period, and maintain humidity levels at normal living conditions (normal in-service environment) set during acclimatization.

PREPARE THE SUBFLOOR

New concrete must be cured for at least 60 days prior to installation. Clean Free of Debris Make Sure Subfloor is Level

IMPORTANT PRE-INSTALLATION NOTES

The following information provided by Endurance Bamboo is intended to serve as a reference guide only. Please carefully read the Endurance installation, maintenance and warranty documentation prior to installation. For more information follow the Australian Timber Floor Association (ATFA) installation guidelines installing your floor.

Endurance Bamboo floors should be installed as a 'Floating Floor' (not secured to the subfloor).

VERIFY PRODUCT ORDERED

Upon ordering of floor material consider adding an additional 8% to allow for cutting waste (5%) and grading allowance (3%). Endurance Bamboo flooring is manufactured in accordance with accepted industry standards, which permit manufacturing, grading and natural deficiencies not to exceed 5%. If more than 5% of the material is unusable, do not install the flooring. Immediately contact the distributor/retailer from which the flooring was purchased. No claim will be accepted for materials with visible defects once they are installed. Installation of any material serves as acceptance of the material delivered. Installer/Owner assumes all responsibility to inspect all flooring before installation. Boards deemed unacceptable in appearance can be placed in closets, near walls or simply not be used. Pieces with glaring defects that can be seen from a standing position should be cut off or not be used as use constitutes acceptance. The use of putty, filler sticks or markers to touch-up flooring during installation is considered normal practice. It is the responsibility of the installer/homeowner to determine if the job site conditions, environmental conditions and sub-floor are acceptable for the installation of Endurance Bamboo flooring.

PRIOR TO INSTALLATION OF ENDURANCE BAMBOO FLOORING

The installer/owner must determine that the jobsite meets or exceeds all applicable Australian Timber Flooring Association's Installation Guidelines. Endurance Bamboo does NOT warrant against failure resulting from or connected with subfloor, job site damage, or environmental deficiencies after installation. Endurance Bamboo makes no warranty or guarantee of the quality of the chosen installer's work or of a particular installation performed by them. Endurance Bamboo disclaims all liability for any errors or improprieties in the installation of its products by an installer. As bamboo is a natural product, natural variations in color may occur within and between individual flooring planks. During installation, work from several cartons at a time to achieve a uniform appearance across the entire floor. Mix and mingle

planks when dry-laying the floor for maximum aesthetic appearance. Blend moldings' to planks that have similar color. Natural variations in color are not covered under warranty. Proper installation and maintenance are key elements in achieving best flooring results. It is the responsibility of the installer/ owner to follow all guidelines provided by Endurance Bamboo for success. Controlling flooring moisture content is important for success. Bamboo, like all timber flooring species, is hygroscopic; its size and shape changes naturally with the absorption or release of moisture. The amount of movement varies depending on the preventative steps taken at the time of installation (i.e. acclimatization, moisture barrier application, etc.) and the stability of the home environment thereafter. Care should be taken to control fluctuating levels of moisture indoors, and to maintain humidity levels within the recommended 40-60% relative humidity range. Floor noise is normal and will vary from one installation type to the next. Occasional noise is due to structural movement and may relate to sub-floor type, flatness, deflection, and/or related to the fasteners, changes in environmental conditions, relative humidity and the amount of topside pressure applied to the flooring. For these reasons floor noise is not considered a product or manufacturer defect. **Job Site assessment is essential**, it is the installer's responsibility to determine that the jobsite, environment and subfloor conditions all meet the requirements of the Australian Timber Flooring Association. Do not deliver flooring to jobsite until the building has been enclosed with windows and doors, all cement, plastering, and other "wet" work has been completed, and a consistent in-service room temperature has been reached about 21°C. Confirm proper drainage exists around the structure. Lack of moisture protection can allow excessive water or moisture to penetrate basement walls, flow beneath concrete slabs, basement floors, and into crawl spaces. In crawl spaces, exposed earth must be fully covered with polyethylene sheeting. Heating units or non-insulated ductwork close to the flooring or subfloor may cause "hot spots" which must be eliminated prior to installation. During installation, it is the installer's responsibility to document all jobsite conditions and measurements including the installation date, flooring moisture content, site relative humidity, temperature, and subfloor moisture content. This information must be retained by the installer and left with the property owner as a permanent record. For a complete list of points to address prior to installation, refer to the AFTA's Jobsite Checklist.

SUBFLOOR REQUIREMENTS GENERAL

Subfloor must be structurally sound and meet all AFTA guidelines. All subfloors must be flat to a tolerance of 4mm in a 2m radius. Use appropriate levelling products for correcting subfloor deficiencies. Subfloor surfaces must be smooth, clean, dry and free of contaminants. All subfloors should be tested for moisture content (see "Subfloor Moisture Testing"). If high moisture readings are found, identify the moisture source and correct the problem before installation. Do not install flooring directly over floor joist without proper subflooring. For timber subfloors, high spots may be sanded down. Low spots should be cut out and repaired. Subfloor must be square with the gap and run perpendicular to the joists, or additional subfloor thickness is required. Test subfloor moisture content. Flooring moisture content should be within 3% of subfloor moisture content. In no case should any wood moisture reading exceed 9%. Concrete Subfloors: Subfloor must meet all above requirements. Concrete must be fully cured and at least 60 days old. Concrete must be free of dirt, oil, paint, old adhesive, wax, sealers and curing agents. Concrete that is not properly levelled can cause improper adhesive transfer, hollow spots, and squeaks. Sand or grind down high spots. Level low spots with appropriate levelling material; allow extra drying time for the levelling compounds. Test subfloor moisture content.

MOISTURE TESTING SUBFLOOR GENERAL

Test the subfloor for moisture content before installation. If high moisture readings are found, identify the moisture source and correct the problem. Extend acclimatization time and increase ventilation until the proper conditions have been met. Apply a moisture barrier. Please note that test results are only applicable the day of testing and will not ensure that moisture will not fluctuate with seasonal changes. Regardless of subfloor moisture content, the use of a moisture barrier is required for all installations. Endurance Bamboo does not warrant against moisture related problems. If results show subfloor moisture content at or exceeding 9%, determine its source and correct problem before installation. Use a moisture meter to test wood subfloor moisture content. If results show moisture vapor at or exceeding 9%, determine its source and correct problem. Do not install the floor without a moisture barrier.

The flooring moisture content should vary less than 3% from the subfloor moisture content prior to installation.

MOISTURE TESTING BAMBOO FLOOR

Use a reliable moisture meter that is acceptable for bamboo flooring. Take into account that some moisture readings must be converted to achieve accurate results. Contact the Moisture Meter manufacture to verify substitute settings for bamboo. Meters that have adjustable species settings and conversion tables for strand-woven bamboo are most accurate. Endurance Bamboo dispatched should have a MC reading of 9.5-11.5% depending on the weather.

ACCLIMATISATION & CONDITIONING OF ENDURANCE BAMBOO FLOORING

The goal of acclimatization is to allow the moisture content (MC) of the flooring to fully adjust to its new surroundings before installation. Determine normal in-service living conditions - Ideal interior environmental conditions vary from region to region and jobsite to jobsite. It is the installer's responsibility to know what the "ideal" climate conditions are and customize the acclimatization of the floor around those conditions. Acclimatization should occur at normal living conditions. Before opening the cartons, the indoor environment should reflect the room temperature and relative humidity levels expected to be present before, during, and most importantly, after installation. Operate temperature / humidity control systems as normal. Allow normal ventilation through rooms. Acceptable Areas for Acclimatization - ACCLIMATISE the flooring as close to the center of the installation area as possible. Do not store flooring

next to outside walls, in direct sunlight, near air vents or under conditions that don't reflect the normal home environment.

Garages, and exterior patios, for example, are not acceptable areas to store bamboo flooring during acclimatization.

Determine appropriate acclimatization Time-Frame - Endurance Bamboo flooring should be allowed to ACCLIMATE on the job site. Extended conditioning may be necessary depending on the climate. For regions or conditions that are extremely dry, humid or highly-fluctuating, 2 or more weeks may be necessary for acclimatization. To better understand the specific acclimatization requirements for your home, refer to AFTA website for correlations between relative humidity (RH), temperature, and flooring moisture content (%).

Referencing the weather conditions in your area, find the combination of temperature and RH. This value represents the flooring moisture content to achieve during acclimatization for best results. Depending on your local in-home conditions, the use of humidification / dehumidification equipment may be recommended to maintain proper in-home environment. These are optimum conditions for maximum flooring stability. For environments outside of this range, allow more time for acclimatization. Not properly acclimating bamboo flooring may cause excessive expansion, shrinkage, dimensional distortion or structural damage. The worst-case scenario is one in which flooring is stored outside of the area in which the flooring is to be installed. Acclimatization is the responsibility of the installer/homeowner. Take moisture content readings of the flooring, subfloor and relative humidity to be sure.

Radiant Heat Systems are not advised.

ENDURANCE FLOORING GENERAL GUIDELINES

Follow Endurance Bamboo Maintenance & Care Guidelines to keep your floor looking its best after installation

- Save extra flooring for future repairs.
- Do not install flooring under permanent or fixed cabinetry.
- Floor should be installed from several cartons at the same time to ensure good colour, shade and appearance.
- Most installation failures result from jobsite moisture. Do not deliver flooring to the jobsite until problems are corrected.
- Endurance Bamboo flooring is intended for installation on or above grade subfloors only. Flooring installed below grade subfloors is not covered under warranty.
- Since bamboo expands with any increase in moisture content, we recommend leaving at least 8-10mm expansion gap between flooring and all walls and vertical objects, such as walls, cabinets, pipes, etc. If the installation flows into other rooms and continuous runs in excess of 9 metres, a greater expansion is required, approximately 1mm for every 3 metres. Length runs over 11m will require increased expansion provisions or an intermediate transition trim. (e.g., H Trim) NEVER install any floating floors against any vertical fixed object such as fireplace, columns, floor outlets, etc. Failure to follow this guideline may result in tenting or buckled floors.
- During installation, it is the installer's responsibility to document all jobsite conditions and measurements including the installation date, flooring moisture content, site relative humidity, temperature, and subfloor moisture content. This information must be retained by the installer and left with the property owner as a permanent record.
- Endurance Bamboo flooring can be installed over an approved underlayment to provide greater thermal insulation and sound isolation qualities. Endurance Bamboo recommends using our TDF Acoustic underlayment, which offers several benefits that include step noise reduction, increased walking comfort, and long-lasting durability.
- Bamboo floors must be able to expand/contract without interference, we recommend leaving at least 8-10mm expansion gap between flooring and all vertical objects (walls, cabinets, pipes, etc.). Note that proper expansion gap depends not only on the size and flow of the installation, but also on expected seasonal changes in temperature and humidity that may cause the flooring to gain or lose moisture content over time. For example, if an installation takes place when humidity conditions are low, it's likely that the flooring will gain moisture and expand later during humid seasons. In those cases, incorporate additional expansion gaps. If the installation area exceeds 9 metres in width, a greater expansion gap is required; approximately 1mm for every additional 3 metres. If the floating installation flows into other rooms, a T or H -moulding should be used in doorways and openings between rooms (halls, archways, etc.) to allow separate areas to move without interference. NEVER install flooring against any vertical or fixed object such as fireplace, columns, islands, door jambs, floor outlets, etc. Failure to follow this guideline may result in tenting, separation or buckled floors. Do not install cabinets or other permanent fixtures on top of the floor. Never nail or screw anything through a FLOATED floor.
- Remove any existing skirting boards, which can be replaced after installation or use scotia. Undercut door jambs and or doorway thresholds. The floor must have 1mm clearance under the door jambs to be able to float freely.
- To cover your expansion gap, skirting boards, scotia, t-h mouldings thresholds and C channels can be used. Matching stair nosing are also available. The installer should ensure that the plank can move freely under the door jamb.

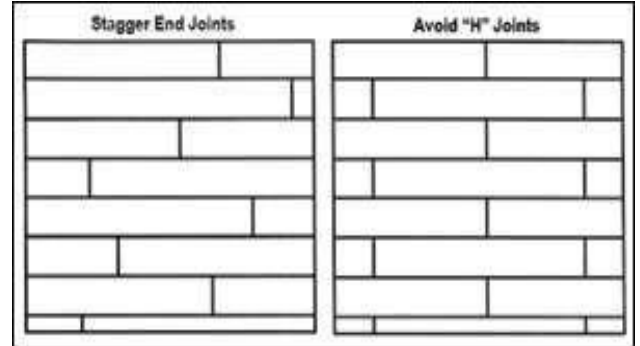
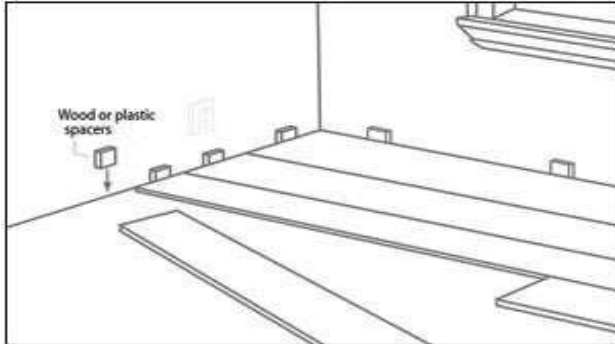
RECOMMENDED FLOATING CLICK-LOCK FLOOR TOOLS

Personal Protection Equipment : ear protection, eye protection, Respiratory Protection & knee protection.

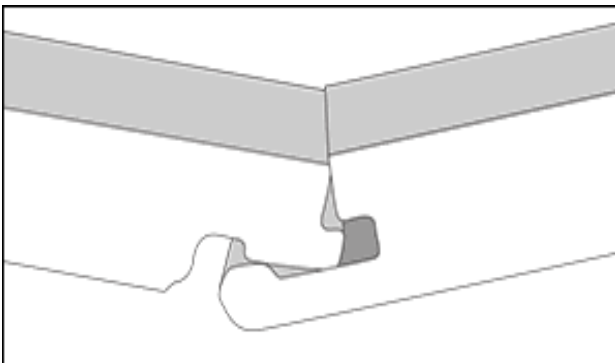
- Underlayment • Tapping block • Wood or plastic spacers 8-10mm • Tape measure • Flat bar or pull bar
- Compound Drop Saw • Plunge Saw with Guide Rail or Table saw • Rubber Hammer • Pencil & Chalk line



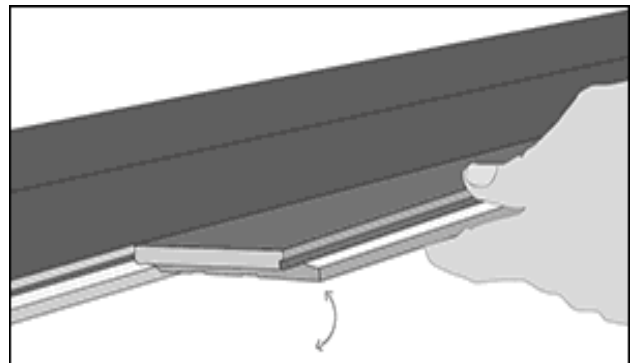
INTSALLATION STEPS



1. Before you start, ensure that the job site, subfloor and environmental conditions are acceptable for installation of Endurance Bamboo flooring. All requirements specified in Endurance Bamboo's Installation Guidelines must be met.
2. Underlayment must be installed prior to installation.
3. Allow at least a 8-10mm gap for expansion around the perimeter of the room.
4. It is recommended to install the planks parallel to the longest wall.



CLICK LOCK SYTEM



5. Click a few rows together before full installation to confirm your layout plan.
6. Begin by laying the first plank in a corner with the longer grooved click side away from the wall.
7. Connect short side of second plank together with mating side of the first plank.
8. Cut the last plank and complete the row. Use the remaining plank to start the second row.
9. Make sure to offset the end joints of consecutive rows by a minimum of 300mm inches for best appearance.
10. Begin the second row by clicking the long edge of the planks together.
11. Begin at an angle and press the plank downward to fully engage the click lock system.
12. Repeat this process for the second plank with the short end of the plank covering the mating end of the previous plank. Use a hammer and tapping block to ensure proper engagement.
13. Repeat this process for remaining rows keeping 6 inches between joints and maintaining a 8-10mm expansion gap around fixed objects.
14. The last row may require rip cutting the planks to size, be sure to cut enough to maintain proper expansion gap.
15. As with the other rows, complete the last row by connecting the long edges.

After Installation: The newly installed floor is complete and can be walked on immediately.

Protecting the floor after installation

When moving furniture, it is best to cover the floor with temporary floor protection.

ENDURANCE recommends to use a temporary cardboard floor protection product such as:

The Endurance Bamboo packaging boxes
if taped together or

Ram Board® - Cardboard Temporary Floor Protection

Can be purchased from your local hardware store. This will allow some air circulation and will not damage the floor.

DO NOT USE PLASTIC SHEETING, AS THIS WILL DAMAGED THE FLOOR BY RESTRICTING AIR CIRCULATION.



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