

## INSTALLATION INSTRUCTIONS

Kayuna beautiful hardwood floors are a product of nature and therefore not entirely free of special features. All flooring in the Kayuna collection is manufactured according to accepted industry standards which permit tolerances in dimensions by no more than 5% generally.

### Installer / Owner Responsibility

- The installer has responsibility for the final inspection of the boards and has to check the quality prior to installation. Examine for: color, finish and quality. If the material is not acceptable, do not install and contact the seller immediately.
- The installer must determine prior to installing the floor whether the site environment and sub floor involved meet or exceed all applicable standards and recommendations involved (see further). The moisture content of sub floor and the climatic conditions of the job-site should be verified and should confirm with the applicable standards and manufacturer's recommendations.
- Use of stain, filler or putty for defect correction during or after installation should be accepted as normal.
- Any piece of timber that is doubtful as to grade, manufacturing quality or factory finish should not be used by the installer.
- Please note that a "non-correct" installation will affect the warranty.

### Natural characteristics of timber and wood in general:

- Timber is a natural product. Under the influence of moisture in the air and the daily temperature and humidity variations, the timber floor planks will expand and contract. This phenomenon is normal. Although plywood based engineered timber floating floors are generally more stable than solid timber floors and lumber core based engineered floors, it is recommended to take into account a sufficient expansion gap on either side of the width of the room. This will allow the floor to expand and contract as a whole evenly and will avoid (but not entirely prevent) to a great extent gapping.
- Good care has been taken during the manufacturing process of the timber floor boards, to compose boards of the same colour and grain variation. However no two boards are the same: colour, grain and gloss variation can happen from batch to batch due to the nature of the product and the manufacturing process. We recommend that you lay out the boards before installation and judge the colour and grain variation throughout your entire floor. Make a floor plan, and only then start the installation.
- Note that different batches of timber floors can have colour and grain variation and that due to the aging process, newly installed additions to the floor will have substantial colour variation. This variation should disappear over time depending on the exposure to the intensity of the UV component in light.
- For grading of timbers, we refer to the NHLA and American Hardwood Export Council grading rules and tolerances.

### Pre-installation procedure:

- Read this installation advice and if you have any questions contact your reseller.
- Do not install timber floors wet areas such as bathrooms, showers, washrooms, saunas, etc.
- Check the condition of the sub floor (see further).
- Stack the timber boxes in the area to be installed and let it acclimatize.
- Put the boxes flat on a smooth surface and do not put too much on top of each other.
- Leave enough room between the boxes for natural ventilation (approx. 5-10 cm).
- Permanent air conditioning and heating systems should be in place and operational.
- Allow approx. 5% extra material above the surface area to make your installation look professional and cater for waste and short pieces.

### Tools & accessories needed:

- Broom
- Necessary quantity of timber
- Tools: hammer –tape measure – saw (hand or power) – lead pencil – square – moisture meter

- Cross linked D3 PVA glue
- Tapping block & spacing bar
- Wedges
- Chalk line & chalk
- Underlay
- Plastic sheeting (min 0.2mm thick -builders plastic)
- Water resistant tape (Ducttape)
- Trims
- Safety gear
- Installation instructions

### **Installation Conditions:**

- The boxes of timber floor boards should be stored in a dry place protected from wind, rain, sun and other adverse weather conditions and the packaging should only be opened just before the start of the installation.
- Particularly during winter time and high humidity periods, the timber floor boards in their original unopened packaging should be acclimatised to the room temperature for at least 48 hours.
- The surface temperature of the sub floor, at the time of installation, should be at least 17° C, with the ideal relative humidity of 55%.
- Open the boxes as work progresses to minimise their exposure to humidity. Check that the boards are sound before fitting them.
- Each board should be carefully checked prior to installation; never install any damaged board or board of sub standard quality.
- Always take the boards out of several different boxes alternately during installation.
- Should any obvious mistake, damage etc. to the boards be found when opening the package, a claim must be raised immediately, before any installation is started.

### **Sub Floor Preparation:**

- Please consult appropriate available Standards or enquire with appropriate Authorities (e.g. NWFA and others).
- All sub-floors (concrete, existing floorboards, plywood, particleboard etc.) must be level, clean, pressure resistant and dry.
- Deviations in any sub-floor level must not exceed 3 mm under a 1.5 m straight edge. Unevenness greater than 3 mm must be filled with a suitable filling compound or lumps removed by grinding or other methods.
- Place straight floor board on its edge to see if there are any gaps greater than indicated above.
- Note that timber engineered floors cannot be installed over carpet or carpet tiles or any other soft tissue.

- **Concrete / Cement floors**

(with or without existing floor covering such as vinyl, linoleum, asphalt, cork, etc.)

Check all existing floor coverings to ensure they are securely fixed to the sub-floor. Where poor adhesion exists, secure if possible, otherwise remove the floor covering completely.

It is essential that the moisture content of the sub floor complies with the relevant standard. For Australian conditions we recommend 3% in all cases.

- **Existing timber / particleboard / plywood based floors**

(with or without existing floor covering such as vinyl, linoleum, asphalt, cork, etc.)

The moisture content of the sub floor should not exceed 10%.

Boards, which are not level, must be sanded, patched up or re-installed within the level tolerance indicated above. All existing boards should be fully fixed. No nails or screws can stick out above the top of the boards.

All boards must be properly fixed to the battens every 30-40 cm. Loose boards must be securely fixed and it is essential that all protruding nails are nailed below the level of the sub floor surface. Loose or creaking floor boards will lead to a squeaking floor after installation.

Existing carpet and underlay must always, be removed before installing the timber floor.

- **Ceramic, Terrazzo, slate, marble and other tiled floors**

The moisture content of the sub floor should not exceed 3%.

The tiles must be checked to ensure they are securely fixed to the sub floor and addressed where necessary.

All grout joints and broken corners that exceed 1" must be filled with a cementitious levelling compound.

- **Sub floors with under floor heating**

The moisture content of concrete sub floors should be less than 1% when underfloor heating is to be used. Always consult with your floor retailer about the suitability of sub floor heating.

Ensure that the instructions of heating procedures are followed before laying the floor boards. The temperature on the surface of the subfloor can be maximum 26° C. If the sub floor heating system is newly installed, the system has to be switched on at least 3 weeks before laying the floor. Switch off the heating system 48 hours prior to installation. Turn the heating system on again 1 week after the floor installation is completed, with a gradual increase of temperature in accordance with the heating system regulations (approx. 1 - 2° C per 24 hours time period).

The floor boards have to be glued down directly onto the sub floor as well as in the conventional way i.e. at the tongue and groove of the long side and the head-joint.

### **Installation - Expansion Gaps:**

- In order to cater for a normal expansion and contraction, you should leave a gap of 15 mm between the edge of the floor and the wall or any other solid surface it meets. This gap should be covered by an appropriate trim after the timber floor is installed. A similar gap should also be left around other permanent fixtures such as kitchen cabinets, doorframes etc, and where the flooring meets tiles, carpet or any other floor covering. Large or very long rooms will need bigger allowances for expansion joints.
- The formula to calculate the expansion gap across the width of the installed floor is 2mm expansion for every 1 metre of floor width with a minimum of 15 mm.
- An expansion gap over the entire width or length of the floor is always necessary for any length/width of installation greater than 8 meters.
- When laying the timber floor through several adjoining rooms, expansion joints must also be provided at every doorway.
- An expansion joint in the sub floor has to be provided with a matching expansion joint at the same location on the timber floor installed above it.

### **Installation Procedure:**

The sub floor should be clean and free from dust. Use a broom or vacuum cleaner.

The sub floor should not be washed or exposed to water prior to installation always make sure the floor is fully dry prior to installation.

Use only PU (Poly Urethane) based glues to glue the boards to the subfloor. Never use waterbased glues! Use of any other type of glue will make warranty claims nil and void.

Always use a proper moisture seal between the subfloor and the timber floor to be installed. Ask your retailer or distributor for full advice.

- Lay a moisture barrier such as polyethylene (builder's plastic) film of at least 0.02 mm thickness as a moisture protection between the sub floor and the underlay. Overlap different parallel sheets by at least 200 mm and tape with waterproof tape. Run the moisture barrier around the perimeter of the floor area up the wall by 50 mm. Cut excess material to the height of the top of the boards and remove after the flooring has been laid.
- Next spread out the underlay over the moisture barrier (see sub floor preparation) or in case of an appropriate and approved combination product.
- Always begin the installation with the groove –side of the board facing the wall. This to avoid that you will tap on the groove side. Tapping is always at the tongue side!
- Cater for the expansion gap of approx.15mm (see for exact dimensions above) between the first row of boards and the wall by using spacing wedges regularly along the length of the wall.
- When laying over existing wooden floor, the to be installed floor boards should be laid crosswise.
- Commence laying the flooring at the corner of the starting wall with the tongue of the first row of boards facing away from the wall. Begin the next row with the piece left from the previous row or a board with a length that is at least 50 cm shorter or longer than the first board in the first row. The end joints of adjoining boards should be staggered by at least 50 cm. Do not install according to the "brick-laying" method.
- Glue the boards at the end joints together. Use only a cross linked D3 PVA wood adhesive. Never use regular wood glue since this glue will avoid normal expansion and contraction and will lead to cracks and other defects.
- Apply the glue to the top inside edge of the groove of the board (including the groove at the head joint) in a continuous line. Never apply the adhesive in a broken line as this will cause your floor to squeak and will lead to a deficient performance of your floor and avoid normal protection against moisture penetration via the joints. Any excess of adhesive should be immediately wiped-off with a clean damp cloth. Wipe dry with a dry cloth to avoid "smearing".

- The first board of the next row is pressed into position and tapped into the other board by using a rubber mallet and a tapping block. Never hit the board directly with the mallet. This will increase the risk of damaging the board. If you notice that the boards do not go together entirely (open gap between boards) check whether you have used the right amount of glue. Too much glue will prevent your boards from closing due to a vacuum effect.
- Saw door frames to the right height so that the planks can be laid underneath (generally thickness of board + thickness of plastic and underlay + 3 mm).
- Chances are that the last row will be less than the width of the boards – so you will have to cut it along the length of the board. Take the expansion gap into account when installing the last row of boards and thus cut the timber to the width of the gap of the last row minus the expansion gap (min. 15 mm – see above for exact width of the expansion joint) (don't include the tongue in this width).
- Apply the adhesive in the groove and put the boards into place with the spacing bar and wedges using a protective piece between wall and tool and between spacing bar and boards. Place the timber as low on the wall as possible and with the spacing bar force the board into position. Do this as many times as necessary to close the gap.
- Remove all the spacing wedges once all boards are glued and fitted and the glue is sufficiently dry (see advice on glue bottle),
- Install the trims by nailing or gluing directly to the perimeter walls or existing skirting. Never attach them directly on the installed floor.