

Laminate Floors

Installation & Maintenance Guideline

IMPORTANT INFORMATION: DO NOT INSTALL LAMINATE FLOORING IN ANY COMMERCIAL APPLICATION.

1. General

Riverhill Laminate Flooring (**Laminate Flooring**) is designed to be installed as a floating floor. Please inspect each board in optimal lighting for visual defects before installation. We also recommend ensuring that the locking system is functioning properly when installing. If you identify any issues before, during or after installation please contact us immediately.

Heavy and bulky objects, such as island benches, should not be placed on floating floors. Laminate Flooring must be cut in and installed around such objects.

Colour, shade, tone, markings, texture and veining may vary between samples of what is supplied. Laminate Flooring supplied may (as further detailed in this Guideline):

- exhibit variations in shade, colour, texture, surface, finish, markings and may contain natural fissures, occlusions, lines, indentations and may fade or change colour over time;
- expand, contract or distort as a result of exposure to heat, cold, and weather;
- mark or stain if exposed to certain substances; and
- be damaged or disfigured by impact or scratching.

Subject to any non-excludable rights under Australian Consumer Law, Riverhill accepts no liability where the Laminate Flooring it supplies differs to samples of the Laminate Flooring. For the purpose of this clause, 'samples' includes actual product samples as well as items on

display online, on the website or in any other printed material.

A failure to follow this Guideline may void the Riverhill Laminate Flooring warranty.

2. Preparation

2.1 Locality and Installation Environment

Seasonal relative temperature, humidity levels and variations in the installation area, as well as the projected average floor moisture content in that area, must be evaluated before installation. While Laminate Flooring is a stable product, it may still shrink and expand in the event of extreme climatic conditions. Product distortion is to be expected under such circumstance.

The condition of the Laminate Flooring may be impacted by the internal environment of the building, such as the heating and cooling systems and the prospective effect of large, glassed windows (if any), must be evaluated.

The following should be considered for optimal condition of Laminate Flooring before, during and after the installation:

- Floor surface temperature min. 15°C
- Ambient air temperature in between 18-24°C
- Relative humidity 40-60%

2.2 Handling & Storage and Inspection of Boards

Please ensure the condition of the products before and during . Despite strict quality control, floorings may have been damaged, for example, during transportation. Do not install any damaged flooring.

Laminate Floorings must be stored in a cool, shaded, and dry location. The product must never be stored outside under direct sunlight or rain, on a cement floor, in an open car port or in any damp conditions. Always store the packs flat and never lay the packs upright against a wall. Generally, Laminate Flooring does not need to acclimate, unless the temperature and humidity conditions exceed the conditions mentioned above, then

allow the Laminate Flooring to acclimate for at least 48 hours in their original, unopened packaging in the installation area. To avoid moisture accumulation on the laminate flooring, never open the packs until the day of installation.

2.3 Subfloors

A subfloor is the structural element that the flooring is attached to which includes concrete subfloor or timber and sheet subfloor. All subfloors must be evaluated for factors that may have an impact on the installation, ongoing performance, and appearance of the floor. All subfloors must be even, dry, clean and solid. Ventilation requirements must be in accordance with the National Construction Code (NCC) of enclosed subfloor spaces. Before proceeding, any areas of concern must be addressed by the installer.

2.4 Subfloor Flatness

The subfloor must be levelled in accordance with the standard set out below before installation of the Laminate Flooring. An uneven subfloor may cause the locking system to fail and, induce a hollow and drummy sound after installation which may result in early deterioration and failure of the floor.

- Laminate Flooring subfloor flatness standard: Not to exceed 2mm in any 1m² in all direction.
- ATFA Laminate Flooring subfloor flatness standard: Not to exceed 2mm under a 1.0-metre straight edge.
- ATFA levelness of floor in the new buildings provided to a flooring contractor: Not to exceed 4mm in 2 metres.

Timber and sheet subfloor, particleboard and plywood subfloor should be sanded (gently and thinly) on all sides and surface to ensure flatness.

Carpet, carpet staples and underlay, glue residue and existing floating floor must be removed to ensure proper installation.

2.5 Subfloor Moisture Content

Please ensure the subfloor is clean and dry before installation and remains dry after installation. A moisture meter is required to read the moisture level. Moisture content level requirements are listed below.

- Concrete – Concrete subfloors must be dry, clean and crack free. A dry concrete

subfloor index indicates on the moisture meter reading is up to 2% and in concrete relative humidity (RH) of up to 75%, as if the concrete subfloor had been previously covered, acceptable value of moisture meter reading is up to 3.5% and in concrete relative humidity (RH) of up to 80%. (Index figured refer to ATFA)

- Timber and Sheet - Timber and sheet subfloors must be dry, clean, and free of loose or grinding planks or joists, nails, and screws. A dry timber and sheet subfloor index indicates on the moisture meter reading is up to 8% and if the timber and sheet subfloor has been previously covered, acceptable value or moisture meter reading is up to 10%. Relative humidity (RH) is not exceeded 95%.

Any reading higher than the figures above requires further investigation into possible moisture sources and may require more moisture protection or further actions to meet the requirement prior to installation.

2.6 Moisture Barrier; Underlay & Acoustic Underlay

To provide moisture protection from Laminate Flooring, moisture barriers and underlay with acoustic sound absorbing/acoustic underlay (particularly important for multilevel apartments) is required to be installed prior any installation of laminate flooring.

A recognised acoustic underlay must be installed with a polyethylene moisture vapor barrier underneath, or use a 2 in 1 foam underlay that comes with a moisture vapor barrier built in. Both should be installed on a dry subfloor with moisture proof tape. Joins and seams between plastic sheets must be sufficiently overlapped and taped to prevent moisture vapor leakage from underneath. A moisture barrier should be at least 200mm and run at least 100mm vertically up the skirting boards on perimeter walls and trim back after installation to avoid moisture ingress.

2.7 Expansion Allowance

The standard calculation formula of expansion across the width is 1.5mm expansion for every 1m floor width and length.

For Laminate Flooring, allow at least 10-15mm expansion gaps on each edge or fixed vertical

perimeter surface. The expansion gap allowance is also determined by the temperature variations in the installation building. The climatic conditions of the installation area will as well give an impact about the expansion gap allowance. In areas with low or average humidity, the gap allowance might be 10-12mm; and in areas with high humidity, the gap allowance might need to be 12-15mm.

Extra expansion gap allowance will be required to compartmentalise a larger room area. Room to room expansion breaks at doorways or room areas exceeding 8m x 8m is recommended.

We recommend well undercutting any door jam, frame or threshold/sill at doorways or transitions, remove any spacers or wedges from the room and install Riverhill skirting boards, scotia, or other finishing trims for covering the perimeter expansion gap. Never fix finishing trims directly to the floor or compromise the expansion gap. Fixing should be done only to the wall. Silicone or caulking compound must not be used as it restricts movement and prevents the floor from floating.

Inadequate expansion gaps (including but not only in doorways) and under trims, can cause a floor to buckle, peak, cup or separate, which may result in floor failure.

2.8 Floor Heating System

Riverhill Laminate Flooring is not compatible for any floor heating system.

3. Installation

The subfloor or underfloor must be completely even, dry, clean, and solid. To ensure proper installation, carpet staples or glue residue must be removed, and the floor must be clean.

Check for evenness before proceeding with any installation: Hammer a nail into the centre of the floor. Tie a string to the nail and press it against the floor. Pull the string all the way to the farthest corner of the room and examine the floor at eye level for any gaps between the string and the floor. Move the string around the perimeter of the room, noting any gaps larger than 2mm. Any floor unevenness greater than 2mm per 1m² must be sanded down or filled in with an appropriate filler.

Moisture problems of the floor must be thoroughly checked. Any moisture issues must be resolved before installation.

THIS PRODUCT IS NOT SUITABLE FOR DAMP ROOMS SUCH AS BATHROOMS, SAUNAS, ROOMS WITH DAMP CONCRETE, ROOMS WITH FLOOR DRAINS OR ROOMS THAT COULD POTENTIALLY FLOOD.

New concrete subflooring must cure for at least 60 days before installation. For installation on concrete floors or any floors over a crawl space, a moisture vapor barrier must be laid down first. A recognised 4 mil polyethylene should be used. Run the polyethylene 10cm up the walls and overlap at the seams. Tape seams.

Foam underlay is required for all Riverhill Laminate Flooring installation. The foam underlay should be applied in the same direction as the laminate panels. The underlay should be butted together with no overlap. Tape seams together.

The tongue on the long side of the panels facing the wall needs to be removed from the appropriate number of panels for the first row. Cut the tongue and ensure that the decorative surface of the laminate is well fit when installing the finished trim. Score the tongue several times with a utility knife until it snaps off easily.

Begin with a corner by placing the first panel with its trimmed side facing the wall. Use spacers along each wall to maintain a 10-15mm expansion space between the wall and the flooring.

Use a rubber mallet and a tapping block to attach the ends of the panels. Carefully align the edges.

Continue along the wall until the last panel. To fit the last panel, mark off the excess and saw off with a handsaw cut when the decorative side is up. When using a jig or circular saw cut, please make sure the decorative side is down to avoid chipping. Tap the last panel into place with a pull bar.

Start the next row with the offcut piece from the previous row to stagger the pattern. The piece should be at least 20cm long with a joint offset of at least 40cm. To attach the panels, tilt the panel slightly upwards to about 15-25°, when lowering the plank, it will click into place with light pressure. Ensure that any gaps are as small as possible. Continue locking each panel into place, ensuring a straight and tight fit beginning with the long side first and then tapping the short side into place. Always use a rubber mallet and tapping block instead of striking the floor directly, which could damage the locking system.

To fit the last row, place a panel on top of the previous row. With the tongue to the wall, place another panel upside down on the one to be measured and use it as a ruler. Do not forget to allow room for spacers.

Cut the panel and tap it into place with the pull bar.

Expansion space is always needed for areas, such as door frames and heating vents. First, trim the panel to the proper length. Then place the cut panel next to the actual position and use a ruler to measure and mark the areas to be cut out. Cut out the marked points and allow the necessary expansion distance on each side.

Trim door frames by turning a panel upside down as a height measurement and using a handsaw to cut away the necessary height so that the panels slide easily underneath the frame.

After removing spacers from all expansion gaps, install finishing molding around the room.

Please select Riverhill finishing molding based on the situation and the instruction below.

Reducer Molding/Carpet Reducer: When the adjoining surface is lower than the laminate flooring or when the flooring meets carpet. Place the U-track 7mm between the edge of the flooring. Screw, nail or glue down the track directly to the subfloor, then insert the reducing strip into the track.

T-molding: When two level surfaces meet in doorways or for expansion joints. If the area is wider than 8m, an expansion joint is needed. Expansion joints with T-molding can be placed in any inconspicuous place. Place the U-track 7mm between the edge of the flooring. Screw, nail or glue down the track directly to the subfloor, then insert the T-molding into the track.

Landing/stair molding: To finish flooring on landings or stair edges. For safety and stability, moldings must be glued and screwed to the subfloor. Countersunk screws should be covered with color fill.

Quarter round molding/Scotia: To finish the perimeter of the room. Quarter round molding or scotia must be nailed directly into the baseboard.

Never attach finishing molding/trims directly to the floor and make sure any attachment does not compromise or affect any expansion gaps.

Care & Maintenance

The maintenance routine for proper care of this product is as follows:

3.1 Routine Maintenance

- Place a mat in front of all entrances/kitchen sinks to keep dirt, sand, grit, and water off the floor.
- Vacuum, mop or sweep Laminate Flooring to remove dirt, dust, adhesive after installation, grit, water, etc. that can scratch or harm the product.
- The mop must be a cloth-covered, damp mop used with a pH neutral floor cleaner. Do not spray or pour any amount of water or floor cleaner on the Laminate Flooring or at any time leave any excess amount of water or floor cleaner on the Laminate Flooring as this may damage the product.
- Do not use soap based, oil based, ammonia based, wax based or abrasive floor cleaner, acrylic finishes, bleach, or acidic material (e.g., vinegar) on the Laminate Flooring which can leave a slippery and dull finish that is extremely hard to remove or damage
- Never use a steam mop, steel wool or wax and polish on the Laminate Flooring.
- The vacuum must have a brushed head, dust filter or floor head attached. Do not use a vacuum with a hard head attachment or with a beater bar on the brush roll.
- Always soak or wipe up any spills (water, wine, pet urine, etc.) on the floor with a dry or clean cloth promptly; most spills can be easily wiped up with the immediate action. However, some liquids or materials containing strong pigments/dyes may still leave permanent stains to the Laminate Flooring, such as grease, oil, dyes material, waxes, ball point pens, marker pens, pet accidents, some renovation or construction products (e.g., tar), or foods and beverages such as mustard, curry, wine, coffee, or tea, etc. Do not leave spills unattended for an extended period.
- Stubborn stains can be removed by spot cleaning using a damp cloth or sponge

with a pH neutral floor cleaner (e.g., pH neutral Bona Wood Floor Cleaner) or stain remover designed specifically for Laminate Flooring.

- Place drip pans beneath indoor plants to prevent water leakage.
- Maintain the indoor temperature above 5°C (preferably between 18°C – 30°C).
- Ensure the subfloor temperature is always within the temperature range specified in this Guideline.
- Do not install heating system under Laminate Flooring.

4. Preventative (Prevention) Maintenance

4.1 Prevent scratches and dents

- We recommend using a rug or mat in any heavy traffic areas or underneath any large furniture/appliances/item (avoid using rugs or mats with rubber backs/vinyl backs and non-breathable rugs or mats as these may induce moisture absorption).
- Pet's nails may cause scratches and scuffs.
- Always stick soft pads, floor protectors or furniture sliders to the base of all furniture in contact with the Laminate Flooring and replace them as necessary periodically.
- Move rugs/mats or large furniture/appliances/items periodically to allow the natural aging of the Laminate Flooring.
- Pick up heavy furniture or appliances when moving across the Laminate Flooring instead of sliding.
- Avoid walking on Laminate Flooring while wearing shoes with heel taps, sport cleats, stiletto heels or in need of repair as the sole may cause significant damage to the Laminate Flooring.
- Avoid any sharp objects protruding across the floor such as rocks, nails, or gravel.
- Never allow extremely hot material contaminate on the Laminate Flooring, such as cigarettes, matches or ashes which contact may result in permanent damage.

4.2 Prevent discoloration

- Avoid direct sunlight on the Laminate Flooring as exposure to sunlight/UV stimulates oxidation and aging and may lead to colour shade variation.
- Curtains and UV resistant film are recommended (particularly for buildings with large, glassed windows).
- Avoid using any rubber products on the Laminate Flooring, such as rugs/mats with rubber/vinyl backs, soft pads/furniture sliders with rubber/vinyl backs, rubber soles shoes/slippers, furniture/cabinet with rubber wheels, etc. Contact with rubber may discolour the Laminate Flooring.
- Avoid using any rugs/mats that are made with non-breathable material that may induce moisture trapping/accumulation as this may discolour the floor.

4.3 Prevent expansion and shrinkage

- Never steam mop or wet mop the floor with water or any other liquid floor cleaner. Excessive amounts of water or liquid may lead to expansion of the floor.
- Always wipe up spills promptly with a damp cloth.
- We recommend keeping the indoor humidity level between 35%-55%. Please use a humidifier in a dry climate or a dehumidifier in a humid and wet climate to maintain the ideal humidity level.
- Direct sunlight (especially buildings with large glassed windows) can raise and drop the temperature, of the floor surface dramatically. Any rapid and extreme temperature change may cause floor gapping with expansion and shrinkage. We recommend Laminate Flooring is protected using indoor temperature control.

5. Fix dings and scratches

- Minor scratches, marks or dents on Laminate Flooring surfaces may be repaired/removed by using a staining pen of the matching colour.

- Slightly deeper scratches or marks can be diminished by using a combination of matching coloured putty and stains.
- Replacement planks are recommended for severe or very deep scratches or dents.
- Laminate Flooring cannot be sanded.

6. Common Characteristics of Laminate Floors

Whilst Laminate Flooring is a stable product, due to its nature, planks can still expand and shrink due to extreme or rapid changes in climatic conditions, resulting in small gaps between planks. Gaps should not be greater than 0.15% of the floor's length/width. This is a normal characteristic of laminate floors and not considered as a manufacturing defect.