

KUSTOM TIMBER

**INSTALLATION GUIDE** 

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#### AN OVERVIEW OF KUSTOM TIMBER FLOORS

Kustom Timber provides an end to end service for a range of engineered & solid timber flooring products in both European Oak and Australian natives. Our services touch on every stage of the flooring process to ensure we always meet and service the customers need. Whether it be sanding and polishing, installation or simply care and maintenance. The Kustom Timber team is expertly equipped to handle our clients wants & needs.

Real timber flooring comes from mother nature and, as such, no two boards will be the same. At Kustom Timber, our products are no different and whilst we endeavour to maintain similar colour tones and grain pattern across our boards, they will all be unique and vary in these characteristics, as well as features such as knots. We believe this adds to the charm and allows you to create a space like no other.

Environmental factors such as weather will also have an impact on wood products with small amounts of shrinkage and swelling depending on conditions. With drier internal conditions (including winter heating), wooden floors shrink due to a loss of moisture and during more humid times, wood will expand due to absorption of moisture from the air. Direct sunlight can also affect floors often causing boards to become lighter in colour.

#### PRE-INSTALLATION POINTERS TO REMEMBER

The supplier will not be held responsible for damage that has occurred as a result of poor storage and handling practices nor installation under extreme conditions.

In order to prevent unnecessary damage, here are some points to remember:

Prior to installation, the temperature should be between 10°C and 30°C and the relative humidity between 45% and 65%. These represent normal living environments.

The subfloor is to be assessed to ensure that it is suitable for laying the flooring. Subfloor moisture, flatness, integrity and cleanliness can all affect floor performance and appearance. Subfloors need to meet the requirements set out later in these instructions.

The installer is responsible for assessing the above requirements and ensuring conditions are appropriate for floor installation.

When calculating requirements, you should allow for an extra 10% wastage on average and an extra 25% wastage on all parquetry. This gives you the ability to cater for all wood waste and offcuts.

### OWNER AND/OR INSTALLER RESPONSIBILITY

Kustom Timber's manufacturing processes ensure that care is taken to produce boards to a high quality that are also of similar grain, feature and colour tones. Even so, the owner and/or installer is responsible for checking the flooring on delivery prior to installation. Any defective boards that could affect the appearance or performance of the floor should not be installed. Promptly report such concerns to the supplier.

It is also recommended that a representative sample of boards are loose laid prior to installing to ensure an even distribution of colour, feature and grain throughout the floor area. For timber delivered in two different batches and time periods, variations are to be expected. Previously installed floors will also vary in colour relative to new additions due to time and ageing. It is however possible for colour differences to lessen over time as a result of exposure to light.

It is standard practice to utilise putty, filler, or stain to cover minor imperfections that can be present in boards or occur during laying. Such imperfections may be addressed during installation or afterwards, depending on the preference of the installer.

It is important for both the owner and the installer to remember that incorrect installation will affect the warranty. Once boards have been installed, the material is considered to be inspected and deemed satisfactory by both the owner and installer, irrespective of whether the owner was present at the time. If Kustom Timber is not installing the floor directly, Kustom Timber will not be responsible for problems that may emerge due to incorrect and insufficient site preparation or inappropriate installation methods.

### **JOB SITE & ACCLIMATION**

The flooring products delivered to you should be stored in a dry covered area, where they will be installed and away from direct sunlight or other adverse conditions. It's also important to store the boxes of flooring flat, placed beside or on top of each other and never stored vertically or leaning against a wall.

Where possible you should allow the unopened boxes of flooring to become acclimatised or accustomed to their installation environment at least 48 hours prior to installation. Boxes are therefore only opened just prior to installation. This is especially true when high humidity weather conditions prevail. NEVER open the box ends if installation won't be performed immediately as it may result in tapering at board ends or affect board end-joint tolerances.

All concrete foundations need to have been completed at least 90 days prior to the delivery of flooring. Note that flooring should be installed close to the end of new-build projects to prevent possible unnecessary damage from other trades or conditions not appropriate for floor installation.

### SUBFLOOR PREPARATION

The subfloor, referring to the surface over which flooring will be installed, requires preparation before the actual installation of the flooring. Preparation procedures necessitate that prior to the installation of the flooring, the installer must ensure that the subfloor is sufficiently flat and dry for floated floors and additionally clean and sound with adhesive fixed floors.

Important note: Engineered timber flooring should not be installed over carpet tiles, carpet, and other soft floor coverings.

### Concrete subfloors

Irrespective of the installation method, all concrete subfloors need to be sufficiently dry to accept the flooring system. Also noting that additional moisture vapour protection is to be provided. Slabs should be below 4% moisture content by impedance meter or below 85% in-slab relative humidity prior to considering installation.

With adhesive fixed floors, moisture vapour protection is often achieved by an applied moisture vapour barrier or with floating floors a moisture vapour plastic layer of 200µm (0.2mm) incorporated into the foam underlay. If the underlay moisture vapour barrier is not sufficiently thick or not present, then 200µm polyethylene (black builder's plastic) may be used beneath the underlay. The plastic is overlapped about 200mm, joints taped with a moisture resistant plastic tape and the polyethylene brought up to the height of the floor at the floor perimeter.

When using applied moisture vapour barriers and leveling compounds the manufacturer's instructions for those products need to be followed. Such products along with the adhesive need to be compatible and usually from the same manufacturer to ensure warranties are maintained.

For floors fixed with adhesive directly to the slab, they require a level of flatness which deviates less than 3mm under a 3m straight edge placed anywhere on the slab. The required flatness can be achieved by grinding off high spots and filling low spots with leveling compound. Note that if adhering timber flooring over a leveling compound then the compound must have sufficient tensile strength.

Also, when adhering to a concrete subfloor it must be clean and sound. This is often achieved by lightly grinding the surface to remove any loose or flaky layers as well as cleaning off surface contaminants such as oil, paint, grease, glue, dirt, wax and sealant. When flooring is adhered to the moisture vapour barrier, a full trowel bed of adhesive utilising the trowel recommended by the adhesive manufacturer is to be used. The trowel needs to be at the correct angle to achieve the required spread rate. Contact between the flooring and adhesive is essential to obtain a strong bond and also to minimise any hollow sounds.

For floors laid on battens or on plywood installed over a slab, 200 µm polyethylene is usually installed by the same method as outlined earlier for floating floors. Concrete slabs need to be flat to less than a 3mm deviation under a 1.5m straight edge placed anywhere on the slab (noting that the flooring is directly not fixed to the slab). Slab cleanliness and structure are not as imperative here when compared to directly fixed timber floors to concrete slab with adhesives.

### Wooden subfloors

A wooden subfloor may be timber boards or sheet flooring of particleboard or plywood and can typical be between 9% and 13% moisture content. If the flooring is on the lower level with soil beneath, then greater consideration needs to be given subfloor moisture. Upper level floors with rooms beneath are usually sufficiently dry.

With soil beneath, a site assessment of the subfloor space is necessary as damp soil and inadequate ventilation can lead to moisture related problems in the floor above. If there are concerns with subfloor dampness then ventilation may need to be increased, and provided there is no ponding of water, black 200 µm plastic over the soil can reduce soil evaporation and create a substantially drier subfloor space. If seepage is occurring, then covered drainage is often needed. At times mechanical ventilation is installed if natural ventilation cannot be adequately provided.

A resistance moisture meter can be used to estimate the moisture content (readings corrected for temperature and species) of solid timber subfloor members and these should not exceed 12% - 13%. Moisture meter readings are not reliable in plywood or particleboard, and if there is potential concern that the subfloor may be high in moisture content, then testing by the oven dry method may be needed, where again the moisture content should not be above 12 - 13%.

Furthermore, additional checks are required to ensure the particleboard or plywood subfloor has been secured appropriately and there is no excessive movement or noise before installation begins. Rough sanding is often needed, noting that new particleboard has a wax layer that needs removing when adhering directly to it. Kustom Timber flooring is not to be laid over timber subfloors that do not meet the requirements set out above.

# Ceramic, Marble, Slate, Terrazzo, and other tile subfloors

When the subfloor is tiled, the flooring is often installed as a floated floor, however it is still necessary to ensure that the subfloor is sufficiently flat, or that work is undertaken to achieve the required flatness. The subfloor is to be assessed to ensure that there is no evidence of high moisture even though the flooring is to be installed oven appropriate moisture vapour barrier (as described in the concrete subfloor section.)

When adhesive fixing, it is preferable that the tiles are uplifted but floors can usually be adhesive fixed over tiles provided that they are securely fixed in place. It may also be necessary to grind the tiles to create a smooth surface suitable for bonding. A combination of grinding and levelling compound is used to achieve the required flatness (as indicated for concrete subfloors) and with grout lines and any voids also filled. Again, it is necessary to check that there is no evidence on high moisture prior to applying the moisture vapour barrier to the manufacturer's requirements.

### Subfloors with underfloor heating

Kustom Timber's products can be adhesive fixed to slabs with embedded hydronic, electric and diffuser plate heating systems. Prior to floor installation, newly installed subfloor heating systems need to be used to dry the concrete before the floor can be installed. In order to do this, the heating system is switched on at least 2 weeks before laying the floor and then switched off 48 hours prior to installing the floor. At the surface of the subfloor the temperature can be a maximum of 27°C.

A week after the floor is installed the heating system is turned back on with the temperature gradually increased by no more than 2°C per day. This should be implemented until the subfloor's surface reaches a maximum temperature of 26 degrees Celsius. And then, the same in reverse when turning off each time the heating system is utilised. Floorboards are installed over a full trowel bed of adhesive directly to the slab. Prior to this a moisture barrier is applied across the entire slab. While hydronic heating is in use, whether increasing or decreasing the temperature it should be by only 1- 2°C per day

# **Expansion Joints**

Timber is a natural product that has natural variations in its properties. And just like any natural material, it can be affected by a variety of factors which include relative humidity changes, daily temperature, and windy conditions. As these change, the timber is expected to contract and expand.

Even though our engineered timber floors have less movement in board width when compared to solid timber floors, it is important to note that these floors still expand and contract a little. Accordingly, perimeter expansion allowance and control joints are required. Some wider floors will also require intermediate expansion allowance to be provided. This lets the floor expand and contract as a number of individual rafts.

With floated floors, at the perimeter of the floor and to any other vertical surfaces (e.g. kitchen island bench or meeting another floor type), an allowance for floor movement of at least 10 mm is to be provided. Floors wider than 8m or longer than 10m, also require intermediate expansion joints to be included. Note that floor width is measured across the board width direction and floor length over the board length direction. Compartmentalisation is used to break the floor areas up into individual 'rafts'.

To achieve this, control joints are provided at all doorways, the end of hallways, where floor areas can move in opposing directions, and where one floor area may move laterally past another. Floated floors are not to be installed under very heavy objects such as kitchen island benches. At the perimeter of the floor and around benches, the movement gap is to be covered by skirting/scotia and noting the fixing is not into the floor as this would prevent the free movement of the floor. For the same reason caulking between the floor and any adjoining vertical surface (e.g. skirting) should not be done. If a subfloor has a joint in it, then the joint should be checked for possible moisture and this corrected if need be. A joint is to be provided in the floor above a joint in the subfloor, at the same location.

With adhesive fixed floors there is generally less need for control and expansion joints throughout the floor than with floated floors. This is because the boards are fixed to the subfloor and move individually with seasonal movement rather than as floating rafts. Also, the adhesive provides much greater restraint to board movement. Hence compartmentalisation is not needed, but it must be considered that due to some expansion in the length of a floor with higher humidity conditions, this can cause greater pressure at board ends leading to end-peaking in longer floors.

It is therefore often necessary to provide control joints in locations such as the end of hallways leading into a living area. As such, control joints or intermediate expansion allowance is still required in floor areas that are wider than 8m or longer than 10m, but floors from say hallways to bedrooms leading off that hallway may not need a control joint at the doorway as would be necessary with compartmentalising a floated floor. Similar to floating floors, perimeter expansion allowance needs to be provided and this includes to all vertical surfaces and the same 10mm allowance.

# **FLOOR INSTALLATION**

### Glue-Down Process (For engineered boards)

Prior to starting the process of gluing the engineered flooring directly to the subfloor, the subfloor is to have been prepared in accordance with the 'Subfloor Preparation' section above. This includes aspects relating to the subfloor being sufficiently clean, dry, sound and flat to accept the flooring. It also outlines that compatible products, in terms of levelling compounds, moisture vapour barrier and adhesives, must be used and be suitable for the installation of engineered flooring. Adhesives are to be either polyurethane or polymer timber flooring adhesives.

With adhesive fixed floors, glue ridge height is important and therefore the trowel to be used needs to be that indicated by the adhesive manufacturer for this method of installation, and the adhesive needs to be applied as a full trowel bed in accordance with the adhesive manufacturer instructions. Generally, the trowel is held at a 45-degree angle to the subfloor to obtain the correct ridge height and spread rate.

When the wall from where the installation will start has been chosen, snap a chalk line or use a laser to find out how straight the wall is. Note that the starting point is important to ensure that visual effects of non-parallel and bowed walls are minimised and this also necessitates that boards cut adjacent to walls remain as wide as possible. Floors are usually laid lengthwise down hallways and consideration needs to be given to this, to see

that the floors in installed parallel to hallway walls. The location of the control and expansion joint(s) also needs to be considered.

The appropriate positioning of the first row of boards is therefore essential in the glue-down process as it dictates the installation of the whole floor. When laying this first row, you should always use wedges or blocks, or fix the first row, but also creating an expansion gap of at least 3mm along the wall (and noting that a similar gap is to be provided to the walls at board ends).

Make sure that this first row of boards is completely aligned and tight at end joints and note that the tongue side of the board is away from the starting wall. From the starting wall adhesive is spread in an area that is approximately 300mm (or 2-3 boards) wide along the full length of the wall. It is best to measure out the correct distance and use a chalk line to make sure you don't apply the adhesive too far ahead.

Install the board at a 45-degree angle. Engage the side (edge) tongue and press into the adhesive, sliding lengthwise until the end tongues fully engage. Make use of a hammer and tapping block to tighten the fit and take care not to damage the boards. Continue with this method until all adhesive applied to that area has been covered. For subsequent rows, (making sure not to utilize board offcuts that are less than 450 mm in length so as to avoid clustering of end joints) and to avoid clustering of end joins, unless using for starters and finishing boards.

Be careful to always ensure that there is enough adhesive on the subfloor to cover the whole board and make sure that all boards are straight to avoid improper installation alignment at the end of the job. Boards lengths should be staggered and with use of different length starting boards to produce a more random laying effect.

The Kustom Timber preferred method and look is a random mixed appearance. Continue with this process until all the floor is laid, noting that the boards along the wall opposite the starting wall will most likely need to be cut, and ensuring that expansion gap allowances are provided to the full perimeter of the floor.

While you want to make sure that contact is made between the adhesive and the boards, avoid hammering the boards on the top surface. In some instances, you will need to use weights to properly set the boards into the adhesive on the subfloor. Once the adhesive has cured the weights may be removed. Refer to adhesive manufacturer instructions for appropriate allowances for curing times.

If during laying some adhesive has found its way onto the board surface it is necessary to clean it off as quickly as possible using products provided by or recommended by the adhesive manufacturer. Care is needed so as not to permanently mark the boards and the longer the adhesive is on the board the more difficult it is to remove without trace.

Equipment, traffic, and furniture items should be kept off the flooring for at least 24 hours to make sure that the adhesive is firmly set.

# **Finishing Off**

Once the glue is sufficiently dry and the laying is complete, all spacing wedges are to be removed. At this point, make use of fillers to cover any visible gaps or joints along the board edges or at the ends where two boards meet. Make sure to match the filler colour to the boards. Test the filler on a leftover piece of board to ensure compatibility. Skirting boards and scotia can then be fixed to the wall or cabinets, noting that they are never directly fixed to the installed floor.

### Staple/Nail Down Method (engineered products)

The subfloor is to be prepared in accordance with the 'Subfloor Preparation' section above and when using this method a subfloor fixed to joists will be either plywood (minimum 15mm thick) or particleboard (minimum 19mm thick) or when fixed to a concrete slab either 12mm or 15mm thick plywood.

Plywood fixing to the slab over a 200µm plastic moisture vapour barrier is by spike type fixing as used with solid timber floors. Therefore, 4 rows by 5 with 15mm thick plywood or 4 rows by 7 with 12mm thick plywood. When the wall from where the installation will start has been chosen, snap a chalk line to find out how straight the wall is. Note that the starting point is important to ensure that visual effects of non-parallel and bowed walls

are minimised, and this also necessitates that boards cut adjacent to walls remain as wide as possible. Floors are usually laid lengthwise down hallways and consideration needs to be given to this to see that the floor in installed parallel to hallway walls.

The location of the control and expansion joints also needs to be considered. The appropriate positioning of the first row of boards is therefore important as it dictates the installation of the whole floor. When laying this first row, you should lay it a few rows away from the wall and include a 10mm expansion allowance at the wall, to be covered later by the skirting. A chalk line in this location and made parallel to the chalk line at the wall, can have a holding board (say 80 x19mm) fixed to it to ensure the first row remains straight. The correct shoe for the stapler, based on the thickness of flooring, needs to be used and with a spare board, compressor pressure set and then adjusted to achieve correct fixing.

The boards can then be aligned and fixed to minimise any gaps at board edges and adjoining ends. Fixings are to be no closer than 100mm from board ends and with spacings no greater than 450mm. The rows of boards at the starting wall can be installed at the time of the last rows being installed (after removing the holding board). These outer boards will require face nailing, as secret fixing in not possible close to walls. The final board opposite the starting wall will also need to be cut lengthwise to fit (after taking perimeter expansion allowance into account) and if narrow in width it should be adhesive, as well as face fixed.

Specific site considerations may require specific solutions outside the general guidelines above.

# **Finishing Off**

At this point, make use of fillers to cover any visible nail holes, gaps or joints along the board edges or at the ends where two boards meet. Make sure to match the filler colour to the boards. Test the filler on a leftover piece of board to ensure compatibility. Skirting boards and scotia can then be fixed to the wall or cabinets, noting that they are never directly fixed to the installed floor.

# Over Timber Battens (For 21mm thick engineered boards)

The subfloor is to be prepared in accordance with the 'Subfloor Preparation' section above and when using this method, battens need to be kiln dried, minimum  $60 \times 19$ mm high density hardwood or  $70 \times 35$ mm medium density hardwood. Fixing of the battens to the slab (with a 200  $\mu$ m plastic moisture vapour barrier beneath) is at up to 450mm spacing with hand driven spike type fixings.

A combination of polyurethane or polymer timber flooring adhesive along the top of the battens and secret stapling is used to fix the floorboards.

When the wall from where the installation will start has been chosen, snap a chalk line to find out how straight the wall is. Note that the starting point is important to ensure that visual effects of non-parallel and bowed walls are minimised, and this also necessitates that boards cut adjacent to walls remain as wide as possible. Floors are usually laid lengthwise down hallways and consideration needs to be given to this to see that the floor in installed parallel to hallway walls. The location of the control and expansion joints also needs to be considered.

The appropriate positioning of the first row of boards is therefore important as it dictates the installation of the whole floor. When laying this first row, you should lay it a few rows away from the wall and include a 10mm expansion allowance at the wall to be covered later by the skirting. A chalk line in this location and made parallel to the chalk line at the wall, can have a holding board (say 80 x19mm) fixed to it to ensure the first row remains straight. The correct shoe for the stapler, based on the thickness of flooring, needs to be used and with a spare board, compressor pressure set and then adjusted to achieve correct fixing.

A 6 to 10mm wide bead of adhesive is applied to the top surface of the batten prior to secret stapling the boards in place at each batten crossing, and ensuring boards are tight to minimise any gapping at board edges and ends.

The rows of boards at the starting wall can be installed at the time of the last rows being installed (after removing the holding board). These will require face nailing with two 2.2mm diameter nails at each joist crossing, as secret fixing in not possible close to walls. The final board opposite the starting wall will also need to be cut lengthwise to fit (after taking perimeter expansion allowance into account) and if narrow in width it should be adhesive fixed to the previous board before face fixing.

Specific site considerations may require specific solutions outside the general guidelines above.

# **Finishing Off**

At this point, make use of fillers to cover any visible nail holes, gaps or joints along the board edges (engineered only) or at the ends where two boards meet. Make sure to match the filler colour to the boards. Test the filler on a leftover piece of board to ensure compatibility. Skirting boards and scotia can then be fixed to the wall or cabinets, noting that they are never directly fixed to the installed floor.

# Floating Floor Method Installation (For engineered boards)

Before installation, it is important to understand that the groove side of the board will face the wall from where the installation will start. In addition, you should also avoid tapping the groove side to seat boards – only tap the tongue side of the board and use a tapping block. Use spacing wedges regularly along the length of the starting wall to make sure that there is an expansion gap of approximately 10mm between the first row of boards and the wall.

The subfloor is to be prepared in accordance with the 'Subfloor Preparation' section above. Check that the underlay has an integral plastic moisture vapour barrier of 200µm, and if not, slab moisture vapour protection as outlined above for slabs or timber subfloors (as applicable) is to be provided.

The underlay is rolled out and often has a lapped joint with adhesive tape to maintain moisture vapour protection. Instructions provided by the underlay manufacturer are to be followed. Note that the maximum underlay thickness to be used is 10mm.

When the wall from where the installation will start has been chosen, snap a chalk line to find out how straight the wall is. Note that the starting point is important to ensure that visual effects of non-parallel and bowed walls are minimised, and this also necessitates that boards cut adjacent to walls remain as wide as possible. Floors are usually laid lengthwise down hallways and consideration needs to be given to this to see that the floor in installed parallel to hallway walls. The location of the control and expansion joints also needs to be considered.

You should begin the laying of the flooring by starting at a corner of the starting wall. Start the next row with a piece left over from the previous row or with a board that is at least 450mm shorter or longer than the first board in the previous row. The end joints of the adjoining boards should be staggered by at least 450mm. Do not install the boards in a brick like pattern as random end joints is considered to provide a more pleasing appearance.

As boards are laid, apply cross-linked D3 PVA wood adhesive along all board joints (including end joints). The adhesive is applied in a continuous bead to the top horizontal face in the groove. Note that the bead must be continuous, because if broken, it can lead to squeaks and weakness in the jointing system that can cause board joints to separate. The adhesive also provides some moisture protection to board joints. Hence, it is important to apply the adhesive correctly for a number of reasons. Any excess adhesive is to be immediately wiped off with a damp cloth. If you notice that the boards are not fitting well, open a gap between boards as excess adhesive can hinder the boards from joining properly (vacuum effect).

Use a rubber mallet and a tapping block to press the first board of the next row into position. Avoid hitting the board directly with a mallet as this will increase the possibility of damaging the board and the possibility of edge splintering after completion.

The laying continues row by row until the opposite wall is reached. In most cases, the final row will not be a full board width, so the boards will need to be trimmed along their length and noting that the 10mm expansion gap to the wall needs to be maintained (tongues removed if present). When laying the last row, apply the glue in the groove before putting the boards into place with wedges and suing a spacing bar. With this method, use protective blocks or flooring offcuts to protect the wall and boards from spacing bar damage. Place the floorboards as low to the wall as possible and use the spacing bar to force the boards into position. Once all the boards are fitted and the adhesive is adequately dry remove all wedges

# **Finishing Off**

At this point, make use of fillers to cover any visible gaps or joints along the board edges (engineered only) or at the ends where two boards meet. Make sure to match the filler colour to the boards. Test the filler on a leftover piece of board to ensure compatibility. Skirting boards and scotia can then be fixed to the wall or cabinets, noting that they are never directly fixed to the installed floor.

# Essential things to remember when laying floors

- It is crucial that all adhesive residue is immediately removed the moment you lay each board. Use a solvent that is suitable to the adhesive (as indicated by the adhesive manufacturer) or flooring wipes. To avoid any discrepancies in the colour/finish, it is always important to test the solvents first on an off cut to make sure that the solvent won't affect the appearance of the board.
- If further works are to be undertaken after the floor is installed, then the floor should be protected using a foam underlay with a thickness of 2mm, and 3 to 4mm thick MDF sheeting, appropriately taped at all joints and noting that all the floor to the walls is to be covered (this protects the whole floor and ensures not colour variation occurs between covered and uncovered).
- Avoid applying tape to the floor or getting plaster dust on the finished floor. Moisture can cause the plaster dust to set in the lower grains of the timber, making it very difficult to remove. In addition, it is also in your best interest to not mop any dust. If dust is present on the surface floor, use a vacuum cleaner to remove it.
- With some engineered flooring, an additional coat of Neutral Oil Care, Hard Wax Oil, or Lacquer is highly recommended to be applied upon the completion of the installation. This is an excellent way of not only providing your floor with an exquisite finish but also prolonging the need for maintenance of the floor. A sales representative can provide you with advice as to which product is best for your chosen floor.
- As per instructions, clean your floor with a lacquer soap, LOBA floor cleaner or a WOCA Natural Soap on a monthly basis. For further information, please head on over to our 'Maintenance and Cleaning Guide'.

### SOLID TIMBER FLOORING INSTALLATION

Before Installation check

- Transportation has not compromised or damaged the boards
- The subfloor is at the correct moisture content
- The subfloor is ready and suitable for adhesive bonding
- Additional expansion has been allowed for in any floors greater than 4 meters wide
- Appropriate acclimatisation has been allowed for in dry or humid climates
- The internal environment of the dwelling is suitable for installation

Installation on Plywood Over a Concrete Slab

- The slab moisture content is below 5.5% and within the flatness tolerance
- A moisture barrier has been applied followed by black plastic (joints taped) and brought up behind the skirtings.
- Structural 15mm plywood has been installed with 6mm gaps and 28 concrete pins (50mm) per sheet
- Full bed of polyurethane adhesive to be trowelled across the plywood before laying solid timber flooring.
- 25mm long fixings to be used to secret nail the hardwood flooring every 250mm

Installation on plywood or particleboard on joists

- The subfloor space must be adequately dry with vents evenly spaced with 7500mm2 free area per meter of wall
- The joists must be flat and level.
- 15mm structural plywood or 19mm particleboard must be screwed and glued to joists. Flooring to be installed perpendicular to joists.
- Full bed of flexible polyurethane adhesive to be trowelled out before laying planks of hardwood flooring.
- Fixings must be 25mm long and spaced every 250mm

For more expansive explanations on the pre installation requirements and the installation requirements of solid timber flooring please consult the ATFA rules and guidelines. Specifically, chapter 2 of the pre installation guidelines & chapter 3 of the solid timber flooring installation guidelines.

#### CARING FOR YOUR NEW ENGINEERED TIMBER FLOOR

If you want your timber floors to stay looking their best, you will need to carry out some regular maintenance.

# Regular sweeping and vacuuming

The most regular maintenance you need to carry out is a simple sweep or vacuum to get rid of accumulated dust and debris. Ensure the brushes on the vacuum cleaner are in good condition.

# Specialist hardwood floor cleaner

On a monthly or fortnightly basis, mop your floors using a specialist hardwood floor cleaner. Squeeze your mop out well before starting, so as to use minimal water and make sure that you use a specialist hardwood floor cleaner, as many products will be too harsh. Please visit your local Kustom Timber outlet for recommended hardwood floor cleaning products.

### Clean up spills

Wood and water don't mix and over time, water damage can occur. To avoid unnecessary damage, clean up spills as soon as they happen so they don't have a chance to get into the wood and cause problems.

# Use rugs to prevent debris

Although hardwood timber is tough, shoes tracking dirt and debris through the house can act like sandpaper. To avoid scratches, use a doormat outside and a rug inside the front door. This will collect dirt from shoes and prevent damage from occurring.

### Felt the furniture

To stop your furniture causing damage to your floorboards, take the time to add felt pads to the bottom of the feet. This is particularly important for furniture that moves a lot, such as dining chairs. This practice also makes it much easier when you want to shift furniture around.

# Professional sanding and polishing

Over the course of a few years, even if vigilant with your maintenance, there may come a time where your floors are showing wear and tear. A professional sand and polish may be required to rejuvenate your floor.

# **PRODUCT WARRANTY**

Our products come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. What constitutes a major failure is set out in the Australian Consumer Law.

While we offer a quality product it is important that you ensure you follow the proper installation and maintenance instructions to ensure the warranty remains valid.

Over time, natural colour change may also occur on your hardwood flooring, especially when exposed to direct sunlight, which is not considered a defect. Timber flooring is also a natural product and although engineered timber is designed to limit the expansion and contraction of the floor this still may occur. If some gapping does appear at board edges due to dry conditions, this is not considered a fault and will not be covered by warranty.

The limited warranties contained in this document are all conditional. They are subject to the limitations, disclaimers. All warranties run from the date of retail purchase for the applicable period described below. The benefits under these Warranties are in addition to other rights and remedies under a law in relation to the goods.

For the avoidance of any doubt, any and all undertakings which are not guaranteed under the Australian Competition and Consumer Act or the Australian Competition and Consumer Regulations 2010 and which are not expressly included in this Warranty are excluded to the extent possible under that legislation.

This defects warranty is for the benefit of the property owner for whom the flooring product is installed. It is not transferable.

To be covered under our warranties you need to retain your sales receipt and make sure that the flooring is properly installed in accordance with our installation instructions. If you were not the direct purchaser then you will need to obtain evidence of purchase (e.g. receipts) from the contractor who purchased the products for you, and of correct installation, as explained further below.

You must also properly care for your new floor using our easy maintenance instructions which can be found on our website. The use of floor care products other than those we have specially formulated for use on our flooring products may damage your floor.

### **DEFECTS WARRANTY**

Subject to the conditions stated below and elsewhere in this Warranty, including correct installation and maintenance in accordance with our recommended guidelines, and under normal household use, we warrant that for 25 years:

The Kustom Timber flooring, in their original manufactured condition, will be free from manufacturing defects in lamination, assembly, milling and dimension. Note that features filled at the time of manufacture are not considered defects.

The Kustom Timber flooring may be professionally sanded and refinished.

The Kustom Timber flooring, when properly installed according to our installation instructions over radiant-heated subfloors that are engineered for the R-rating of the wood flooring product, will not buckle or delaminate as long as the subfloor temperature does not exceed 27°C during the life of the floor and the dwelling relative humidity levels are maintained between 30% and 60%.

# **Pre-Installation Defects Warranty**

We warrant that our flooring products will not have any obvious milling, dimension or visual defects. You or your installer should carefully inspect the products before installation for such defects.

Any uncut pieces that appear to have defects should be returned to the original place of purchase; those pieces that do not meet our specifications will be replaced.

Since wood is a natural product, there will be natural variations in colour tone and grain that are not covered by this warranty. This pre- installation defects warranty expires upon installation.

