# Floating Installation

MILTONLANE®

## PREPARATION

Ensure you have read the terms & conditions page before purchase & installation.

**1. ORDER ADVICE**

Order 5 - 10% more than is required for your space.

This will ensure you have excess to allow for cutting wastage when installing.

This excess quantity will also allow you to be selective, excluding any boards that you do not desire (due to natural variation in the timber).

When measuring your space prior to order, please ensure you measure for trim/transition requirements (T-Molding, Reducer, Quarter Round).

* If your room is over 10m in any direction, ensure you use an appropriate trim to allow for expansion.

* Apply T-Mold trims between rooms (at doorways) to allow the flooring ‘rafts’ to move independently.

**2. FLAT SUB-FLOOR**

Ensure your cement / wood sub-floor is flat.

'Flat' is determined by it being level within 3mm over a 3 metre span.

If it is not, you will need to grind away peaks and/or fill valleys with the appropriate leveling compound.

Failure to ensure a flat surface may result in a 'trampoline' effect, movement/'squeak' and potential separation of boards due to excessive movement.

**3. SUB-FLOOR MOISTURE**

Moisture in the sub-floor must be tested prior to installation.

Ensure test locations are near plumbing fixtures and exterior walls.

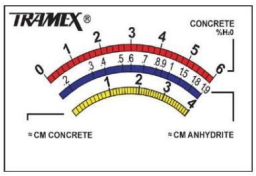
Test moisture in 4 locations within a room and ensure to test moisture on any leveling compounds used.

Ensure to photograph the result and keep on file for warranty purposes.

NOTE: You will want to ensure a flat floor early in the renovation / build to allow enough time for the leveling compound to sufficiently dry before installation.

# PREPARATION (CONT.)

***Cement Screeds:***




Moisture must not exceed 3% (on a 'Tramex Concrete Encounter' Meter - Red Scale).

If too high, please wait for it to dry OR apply a DPM (Damp Proof Membrane) prior to rolling out underlay.

***Anhydrite / Pump Screeds:***

Moisture must not exceed 0.3% (on a 'Tramex Concrete Encounter' Meter - Yellow Scale).

***Wood Sub-Floor:***

Select appropriate material to ensure moisture content less than 12%. Construction plywood or rough timber battens will not be suitable as they contain moisture levels higher than 12%.

If using battens, space no wider than 300mm apart.

**4. CLEAN UP**

Ensure the surface is dry, clean & free of any loose material.

Do not mop floors when there is plaster dust, use a vacuum.

**5. ACCLIMATISATION**

Ensure flooring is the last item to go into your home after a new build / renovation. This is to protect the flooring from other trades and ensure you can achieve the below environmental conditions for acclimatisation…

Ensure the environment is constant, at least 18°C, between 40 - 60% relative humidity for at least 14 days before installation, as well as 14 days after installation.

A low-cost relative humidity/temp gauge can be purchased at our website engineeredflooring.com.au

If outside these ranges. You may need a humidifier / dehumidifier (or air-conditioner with 'Dry' mode).

# PREPARATION (CONT.)

**5. ACCLIMATISATION (cont.)**

Place the appropriate number of boxes in each room (i.e. 20sqm room = 20sqm of flooring).

Lay boxes horizontally (flat surface) and **do not open** the boxes.

Do not stack more than 2 boxes high.

If the timber moisture is drier than the environment, it will slowly absorb moisture from the air (expand) and equalise to the inside environment.

Conversely, flooring will shrink when at a higher moisture level to the environment.

To measure the moisture of the boards.

Purchase a…

'***AccuMASTER XT Moisture Meter***' (~$60)

OR

'***Crommelin***' Moisture Meter, (~$50 Online or at your local hardware store)

The ideal acclimatisation time will vary, however allow at least 3 days before installing.

If moisture is on the low end at 6% and you are in a high humidity environment (65%+), allow 7 days acclimatisation.

If moisture in the timber is at the high end 9% in low humidity (<40%), again, allow 7 days.

If you are at mid range of 7.5% and your humidity is stable at 50%, 3 days will be enough to acclimatise.

Do not install if you have weather events around the time of installation where there are spikes in environmental moisture (ie. heavy rain/high RH).

You need a consistent environment 7 days prior to installation.

***Refer to the last page of this document ('Acclimatisation Chart')…***

***Step 1:*** Confirm your average relative humidity in your home in the 14 days leading up to installation VS the average temperature.

***Step 2:*** Knowing these two average values, then apply to the table.

***Step 3:*** The value given is the moisture reading your moisture meter should show once your boards is acclimated.

# PREPARATION (CONT.)

**6. UNDERCUT DOOR JAMBS**

Your flooring will be placed under door jambs (with expansion space).

Using an electric multi-tool or undercut hand saw, hold a small section of board + underlay next to the door jamb and proceed to cut to this height.

**7. REMOVE SKIRTING (optional)**

Ideally, you should overlay skirting over the expansion space. This will give the best visual results.

If you plan to keep skirting in place to save time, you will need to use a 'Quarter Round' or alternative like 'Aluminium Angle' to cover this expansion space.

Ensure skirting is at least a 13mm thick to allow for the 10mm minimum expansion gap.

If your skirting is less than 13mm thick, you will need to use a Quarter Round trim.

Note: Using less that a 13mm skirting with a 10mm expansion space may result in a temporarily exposed gap if your flooring contracts in drier weather.

# PREPARATION DONE

# INSTALLATION

## *IMPORTANT ADVICE / TIPS*

Open and work with 3 packs of flooring at a time to enable grading/colour blending of the natural timber variations ( knots / grain / colour ).

**Do not open packs of flooring until the day you install.** You can open to inspect, then lightly tape the box again for acclimatisation (no need for an air tight seal).

Glue down installation recommended if you wish to place heavy items on top of the floor (kitchen units, island benches).

If floating the floor, lay around the heavy fixed items and use a 'quarter round' trim to cover the expansion space.

10m (in any direction) max lay distance before requiring expansion trim/transition strip (consider glue down method if you have expansive spaces that would be negatively affected by trims every 10m).

Clients installing over areas larger than 10m without trims, do so at their own risk.

1mm of expansion is required for every 1 metre of flooring (ie. 10m = 10mm expansion space).

Allow a 10mm minimum expansion gap to any items next to the flooring (walls, pillars, pipes, etc).

You should consider a 15mm expansion gap if you are in tropical climates of high humidity and large temperature variances between night and day and large seasonal variances (i.e. North QLD, NT).

Note: A larger expansion gap will result in requiring skirting boards thick enough to cover this gap, or if using existing skirting, a 'Quarter round' or 'Aluminium angle' to cover expansion gaps.

Ensure floors are free to move. Do not fix the edge of the floors to skirting/quarter round or vice versa. The floor needs to be able to 'float', free of all other fixtures.

Install transitions between rooms to ensure each room has it's own free floating 'raft' of timber.

Remember, expansion space is required around all fixed objects (pipes, door stops, pillars, stairs, etc).

If you find any bowed/twisted boards, these can be cut and used as end/starter pieces.

Ensure when tapping in boards, they are flush. If you do not take care, having just 1 board out of alignment will translate to all boards ‘down-wind’ of that board.

# INSTALLATION (CONT.)

## *WHAT YOU NEED...*

- Items with a * are sold by MiltonLane at engineeredflooring.com.au
- Other items are common to hardware stores.

- [ ] Tape Measure
- [ ] Painters Tape
- [ ] Chalk Line
- [ ] Rubber Mallet (White Non-Marking) *
- [ ] Moisture Meter
- [ ] Electric Multi-tool / Undercut Hand Saw *
- [ ] Jigsaw (for profiling boards at door frames)
- [ ] Mitre Saw (for cross cuts)
- [ ] Table Saw ( for length-wise cuts -- not essential, but quicker & more accurate than Jigsaw/Circular Saw )
- [ ] Pull Bar *
- [ ] Tapping Block *
- [ ] Spacers *
- [ ] Safety Glasses & Dust Mask
- [ ] PVA Adhesive (Crosslinked) – Do not use 'standard' PVA. *
- [ ] Cloth Towels
- [ ] 2in1 Underlay *
- [ ] Trims / Transitions *
- [ ] Relative Humidity & Temp Sensor *
- [ ] Stanley Knife + Pry Bar + Wide Chisel ( if removing skirting boards )

# INSTALLATION (CONT.)

## Step 1 - Measure

Find an external wall that is an important focal point of the room/area.

A long wall is usually a good choice.

Internal walls are rarely square, hence use an outside wall.

If installing boards parallel to this wall: Measure from this wall to the opposing wall.

If installing boards perpendicular to this wall: Measure the distance between the adjoining walls.

With this measurement, you need to divide this number by the width of the board you are laying.

Example: 6350mm (room width) / 220mm (board width) = 28.86 planks

Therefore, you have 28 (and a bit) boards to install across this space.

The 0.86 you need to then multiply by the plank width 0.86 x 220mm = 189mm

You should be installing so that you do not have a very thin board at either end of your installation.

Hence, halve 189mm and you have roughly 95mm planks at the start and end of your installation.

## Step 2 - Starting Point

Once you have this measurement above, you will then know where to start laying.

Snap a chalk line, 1 board width + the part board away from the starting wall (ie. 220 + 95mm).

Along this line, anchor a sacrificial plank (screw down if timber or light glue if cement).

This anchor board will be removed in the final step.

Ensure the groove side is facing the starting wall (tongue side facing the install direction).

# INSTALLATION (CONT.)

## Step 3 - Underlay

Roll out your Moisture Barrier & Acoustic underlay (often a 2in1 combination product, hence only 1 roll out process is necessary).

Ensure to allow the underlay to curl up the walls enough to protect the ends of the boards being laid from moisture.

Combination underlay will have a small section of waterproof material without foam along the side.

This thin waterproof material needs to overlap the adjacent underlay to maintain a waterproof seal between the sub-floor and the timber.

Tape the underlay together to avoid movement when installing.

NOTE: If using a lower quality EVA underlay (usually 2mm). Ensure to keep traffic to a minimum and avoid kneeling on it as it tends to compress easily and will not rebound (this results in hollow sounding floors in areas that have compressed underlay.

We recommend and supply a 2in1 IXPE Waterproof & Acoustic underlay (3mm) that will give optimal rebound and acoustic properties.

## Step 4 - Timber Installation

Starting in the corner, dry fit the first 2 rows and work left to right.

Place your spacer at the starting point to allow for the 10 – 15mm expansion space.

If you need the larger expansion space of 15mm due to large temp/humidity variations between summer/winter in your region, you can cut flooring into small pieces to use as spacers (if you have 15mm flooring).

Plan your lay to ensure you do not end up with a board smaller than 400mm at the end of each row.

Lay out and cut 2 rows at a time. This will be more efficient than row by row.

Ensure to stagger joins at least 500mm apart between rows for maximum floor strength.

Ensure to always remember the expansion space at the start and end of rows.

# INSTALLATION (CONT.)

## Timber Installation (cont.)

Once you have these 2 rows in place, you can disassemble and begin gluing together.

Apply a continuous line of PVA into the groove of the plank on both the long and short side.

NOTE: Do not 'spot' glue as the PVA acts as a moisture barrier also to prevent spills tracking between joints and then under the boards.

The PVA should be applied neatly and generously, but not to the point where you have PVA escaping from the joins when tapping together. You will find this correct amount quiet quickly with practice.

Immediately wipe away any excess PVA on the timber surface with a damp cloth.

Board can be tapped together with an offcut of flooring or using a tapping block.

Be careful to not apply too much force with the rubber mallet when tapping to prevent joint and/or surface damage.

Apply painters tape across the rows installed to ensure there is no 'creeping' and the boards stay tight together until the PVA cures sufficiently.

Remove tape after 2 hours to prevent removal difficulty and potential surface damage.

When you reach door jambs, you will need to mark on the board with pencil where to cut using a jigsaw. This piece will slide under the door jamb.

Ensure you know how much expansion space is under the door jamb before cutting to account for this. You may need to chip away plasterboard/timber under the trimmed door jamb if there is material encroaching on the required expansion space.

Repeat this process until you reach the last row.

For the final row, rip cut (using a table saw OR circular saw).

Once in place, use your 'Pull Bar' and mallet to pull this row in tight. Again, apply painters tape.

Move back to the starting point and remove the anchor board.

Complete these final rows.

Your installation is now complete.

Wait 24 hours until PVA is fully cured before allowing foot traffic.

After this time you are ready to install skirting / quarter round / trims.

Ensure now you understand what products you can and can not use on your flooring.

Timber Care & Maintenance

# ACCLIMATISATION CHART

(Ideal Method)

1. Mark the average RH in your home (measured over the preceding 14 days).
2. Mark your average temperature (measured over the preceding 14 days).
3. On the chart below, these two vales will then give you the approximate moisture value you should get when your timber is acclimated.

| Relative Humidity(RH) % | Ambient Air Temperature – degrees C | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| MC: | -1 | 4 | 10 | 16 | 21 | 27 | 32 | 38 | 43 | 49 |
| 5 | 1.4 | 1.4 | 1.4 | 1.3 | 1.3 | 1.3 | 1.2 | 1.2 | 1.1 | 1.1 |
| 10 | 2.6 | 2.6 | 2.6 | 2.5 | 2.5 | 2.4 | 2.3 | 2.3 | 2.2 | 2.1 |
| 15 | 3.7 | 3.7 | 3.6 | 3.6 | 3.5 | 3.5 | 3.4 | 3.3 | 3.2 | 3.0 |
| 20 | 4.6 | 4.6 | 4.6 | 4.6 | 4.5 | 4.4 | 4.3 | 4.2 | 3.0 | 3.9 |
| 25 | 5.5 | 5.5 | 5.5 | 5.4 | 5.4 | 5.3 | 5.1 | 5.0 | 4.9 | 4.7 |
| 30 | 6.3 | 6.3 | 6.3 | 6.2 | 6.2 | 6.1 | 5.9 | 5.8 | 5.6 | 5.4 |
| 35 | 7.1 | 7.1 | 7.1 | 7.0 | 6.9 | 6.8 | 6.7 | 6.5 | 6.3 | 6.1 |
| 40 | 7.9 | 7.9 | 7.9 | 7.8 | 7.7 | 7.6 | 7.4 | 7.2 | 7.0 | 6.8 |
| 45 | 8.7 | 8.7 | 8.7 | 8.6 | 8.5 | 8.3 | 8.1 | 7.9 | 7.7 | 7.5 |
| 50 | 9.5 | 9.5 | 9.5 | 9.4 | 9.2 | 9.1 | 8.9 | 8.7 | 8.4 | 8.2 |
| 55 | 10.4 | 10.4 | 10.3 | 10.2 | 10.1 | 9.9 | 9.7 | 9.5 | 9.2 | 8.9 |
| 60 | 11.3 | 11.3 | 11.2 | 11.1 | 11.0 | 10.8 | 10.5 | 10.3 | 10.0 | 9.7 |
| 65 | 12.4 | 12.3 | 12.3 | 12.1 | 12.0 | 11.7 | 11.5 | 11.2 | 11.0 | 10.6 |
| 70 | 13.5 | 13.5 | 13.4 | 13.3 | 13.1 | 12.9 | 12.6 | 12.3 | 12.0 | 11.7 |
| 75 | 14.9 | 14.9 | 14.8 | 14.6 | 14.4 | 14.2 | 13.9 | 13.6 | 13.2 | 12.9 |
| 80 | 16.5 | 16.5 | 16.4 | 16.2 | 16.0 | 15.7 | 15.4 | 15.1 | 14.7 | 14.4 |
| 85 | 18.5 | 18.5 | 18.4 | 18.2 | 17.9 | 17.7 | 17.3 | 17.0 | 16.6 | 16.2 |
| 90 | 21.0 | 21.0 | 20.9 | 20.7 | 20.5 | 20.2 | 19.8 | 19.5 | 19.1 | 18.6 |
| 95 | 24.3 | 24.3 | 24.3 | 24.1 | 23.9 | 23.6 | 23.3 | 22.9 | 22.4 | 22.0 |
| 98 | 26.9 | 26.9 | 26.9 | 26.8 | 26.6 | 26.3 | 26.0 | 25.6 | 25.2 | 24.7 |