

Instructions for laying Parmate Engineered Flooring

Before Installation

The condition of the underlying substrate is extremely important. An uneven, physically weak or inappropriate substrate will affect the performance of the flooring.

Suitable substrates, depending upon the method of installation, include concrete, panel floors e.g. chipboard / plywood / etc., old floorboards, ceramic tiles, vinyl. Standard 14 mm Parmate flooring must not be laid directly onto joists or battens as it is not physically strong enough to withstand the loading created by such construction methods.

A check **must** always be made to ensure that the sub-floor is both flat and even by using a straight-edge. Maximum acceptable tolerances **must not** exceed **+/- 3 mm over 3000 mm**. If required concrete floors should be leveled using a suitable levelling compound or by grinding high spots down. Observe the manufacturer's instructions and ensure that the levelling compound has dried fully before proceeding with installing the flooring. Sub-floors made from timber or panel materials should be checked to ensure that they are stable, firmly fixed and sanded until flat and even, particularly across the joints between the boards. If required additional fixings should be made so as to prevent possible movement and / or noise from the subfloor.

Before laying the floor ensure the sub-floor is dry. For floating floor installation a damp proofing layer of 0.2 mm plastic sheeting is recommended for concrete sub-floors or where persistently high levels of humidity, 60 - 90% RH, may be expected. Lay the plastic so that the edges overlap by a minimum 20 cm. Ensure that the joints are firmly sealed with duct tape and that the plastic covers the entire floor and laps up the wall slightly, above the finished level of the installed flooring. For a fully adhered system use either the plastic sheet dpm with plywood or similar laid over this to form the subfloor or prepare the concrete floor using a surface applied dpm system compatible with the floor adhesive.

For a 'floating floor' installation a 2 mm high density cross-linked foam underlay designed for engineered flooring **must** be laid over the sub-floor. N.B. **do not** use the underlay to level the floor as it is designed only to cover minor unevenness and absorb noise. A suitable material is Sound Block Orange – SB250. If required a specialist acoustic matting may be used if specific acoustic performance is required e.g. if the flooring is to be adhered to the subfloor in multi-level buildings.

Store the Parmate flooring packs flat and unopened in a dry place, preferably off of the floor. Do not store in a cold damp place, e.g. a garage, carport or unheated building site. Do not open the flooring packs before installation. Open the packs as needed when installing the floor. It is good practice to have multiple packs open when installing so as to be able to randomly pick boards to ensure that that the appearance of the floor, with regard to colour and timber features, is varied.

Check the boards for defects **before laying**. Slight convex bowing of the boards, up to 20 mm, where the central part of the board is slightly raised off the subfloor when laid down is acceptable and should not affect the installation process. Where floors are being stuck down weight should be applied to the surface where this effect is seen to ensure that contact with the adhesive is maximized. If there are minor visual defects or slight damage to the joints, etc. the board can be cut and used as a part plank or along an edge. N.B. Gaps between the fingers making up the core of the planks are part of the design and stabilize the 3 layers of timber. This is not a defect or product fault.

If there is a product fault, do not install the flooring - contact the supplier immediately. If Parmate flooring is installed it is deemed that the installer has determined that it is of acceptable quality and appearance.

It is standard installation practice with timber flooring to order a minimum additional 5% of flooring to allow for wastage during the laying process. With awkwardly shaped rooms or where alternative laying patterns are used, e.g. diagonal, additional wastage may be expected.

N.B. Where Parmate flooring is to be installed in commercial areas it must be overcoated, at the time of installation, using 1 – 2 coats of Bona Traffic HD or Traffic HD Anti-Slip to provide additional protection against wear.

Installation – Floating

1. It is important to remember that whilst engineered flooring is likely to expand / contract less than solid timber some movement must nonetheless always be expected. Ensure there is a minimum expansion gap of 10 mm between the flooring and the room perimeter & other fixed structures i.e. door frames, kitchen cupboards, etc.

In large rooms a 10 mm gap is not sufficient. To calculate the required expansion gap use the following formula - for each metre above 6 metres add 1 mm to the expansion gap e.g. a 10 metre wide room would have an expansion gap of 10 mm + 4 x 1 mm = 14 mm. Use wedges to create and maintain the expansion gaps as required.

2. For floors larger than 12 metres in any direction the installation of control joints within the 'body' of the floor is likely to be required to maintain the stability of the floor. Usually these are required where large expanses of flooring extend through corridors, etc. and as such it is often convenient to have control joints at door thresholds.

3. Where possible lay the boards in relation to the dominant light source, i.e. facing the light when looking down the board length. Lay at 90° when installing over existing timber flooring. In corridors boards should be laid parallel to the walls rather than 'across' the corridor. Aesthetically it is more pleasing and it is easier to be able to deal with the smaller amount of potential expansion across the corridor rather than along it.

4. With T & G joints start with the grooved edge of the first board facing the wall, leaving the tongue facing 'outwards' into the room. With the 5 G – C LOC system start with the uppermost part of the joint to the wall and the lower part of the joint facing 'outwards'. If the wall is not straight then fit the boards to the shape of the wall using a string-line as a guide. Use wedges to ensure that the correct expansion gap is maintained.

Begin each new row with an offcut left from the previous row. Ensure that the distance between the end joints of adjoining board rows **is at least 50 cm** and that a regular pattern of end joints is not visible across the floor.

5. With T & G joints apply Bona D700 adhesive into the board groove, both along the length and width of the board. Do not apply excessive amounts. The 5 G – C LOC system does not require the use of adhesive.

6. With a T & G joint gently tap the individual boards together using a 'knocking' block or timber block between the hammer / mallet and the edge of the board's tongue. Do not use excessive force as this may damage the board. Wipe excess adhesive immediately from the board surface using a soft cotton cloth.

LOC joints should be clicked gently but firmly together. If there is any resistance do not force the joint but remove the board, check for any minor variations, clean the joint if necessary and then reinstall the board.

7. Where the floor has to be laid around heating pipes or other immovable objects drill a hole with a diameter larger than the pipe through the board; 20 mm wider than the pipe dimensions is recommended. Carefully saw out the piece of timber to the board edge. Insert the cut out piece when the board has been laid. Cover around the pipe with a pipe ferrule or similar.

8. Cut the boards in the last row to fit, taking into account the expansion gap required. Put the board in place using a tapping block or 'pulling bar'. Insert wedges to ensure that the floor and the expansion gap remain in place.

9. Where the floor meets a door frame or similar it is important that these are cut, using a saw, to allow the floor to slide easily beneath. Check that the expansion gap is both sufficient and maintained beneath the frame with no obstructions.

10. Joints between the new floor and floors in adjoining rooms should be covered with thresholds and trims as required. The expansion gap **must** be left under the trims. Ensure that the required size of the expansion gap is maintained so the expansion of the floor will not be affected by this.

11. Once the adhesive has dried remove any wedges from around the floor perimeter.

12. The expansion gap may be covered with skirting boards, quadrant, etc. Do not fix these to the floor. Ensure that a gap exists between the floor and the underside of the skirting boards, etc. to allow free movement of the floor. Where it is desired that there be no such fixings the floor may simply stop under the edge of the gypsum wallboards. However, irrespective of the finish chosen the required expansion gaps **must** be maintained.

13. Generally with a floor with a 5 G – C LOC system may be walked upon immediately. With T & G joints occupation is possible 24 hours after the installation has been completed, assuming that there are reasonable site conditions. In cold damp conditions it may be advisable to wait a further 24 hours.

Where Parmate flooring is to be installed in commercial areas it **must** be overcoated, at the time of installation, using 1 – 2 coats of Bona Traffic HD or Traffic HD Anti-Slip to provide additional protection against wear.

Installation – Direct stick

1. The concrete, or other suitable substrate, must be even, totally dry, clean, free from cracks and physically sound. The surface should also be slightly textured. If required the surface of the subfloor must be abraded to remove laitance, dirt or other contamination. Levelling compounds / grinding should be used to ensure the surface of the subfloor is suitable where necessary.

2. Where appropriate a surface applied moisture barrier should be applied. This operation and subsequent use of flooring adhesive should be carried out strictly in accordance with the manufacturer's instructions.

3. Ensure that an expansion gap, a minimum of 10 mm, is left around the perimeter of the floor and between the parquet and any other fixed structure i.e. door frames, kitchen cupboards, etc.

In large rooms, a 10 mm gap is not sufficient. To calculate the required expansion gap use the following formula - for each metre above 6 metres add 1 mm to the expansion gap e.g. a 10 metre wide room would have an expansion gap of $10\text{ mm} + 4 \times 1\text{ mm} = 14\text{ mm}$. Use wedges to create and maintain the expansion gaps as required.

4. Apply a suitable adhesive in accordance with the manufacturer's instructions. It is recommended that the Bona R848 system be used; **do not** use a foaming adhesive.

5. Do not apply the adhesive on a greater area than can be laid within a reasonable amount of time. The adhesive must not have started to cure or 'skin over' before the flooring is laid.

6. With T & G joints start with the grooved edge of the first board facing the wall, leaving the tongue facing 'outwards' into the room. With the 5 G – C LOC system start with the uppermost part of the joint to the wall and the lower part of the joint facing 'outwards'. If the wall is not straight then fit the boards to the shape of the wall using a string-line as a guide. Use wedges to ensure that the correct expansion gap is maintained.

Begin each new row with an offcut left from the previous row. Ensure that the distance between the end joints of adjoining board rows **is at least 50 cm** and that a regular pattern of end joints is not visible across the floor.

7. With a T & G joint gently tap the individual boards together using a 'knocking' block or timber block between the hammer / mallet and the edge of the board's tongue. Do not use excessive force as this may damage the board.

LOC joints should be clicked gently but firmly together. If there is any resistance do not force the joint but remove the board, check for any minor variations, clean the joint if necessary and then reinstall the board.

8. Lay the timber flooring on to the adhesive and press down firmly in accordance with the manufacturer's instructions. If required weigh the flooring down.

9. Any excess glue, which may have been pressed between the planks during the laying process, should immediately be carefully wiped away from the surface of the boards using a soft cotton cloth or a method recommended by the manufacturer. Allow the glue to fully set, and wait at least 24 hours before allowing people to walk on the floor.

10. Where the floor has to be laid around heating pipes or other immovable objects drill a hole with a diameter larger than the pipe through the board; 20 mm wider than the pipe dimensions is recommended. Carefully saw out the piece of timber to the board edge. Insert the cut out piece when the board has been laid. Cover around the pipe with a pipe ferrule or similar.

11. Cut the boards in the last row to fit, taking into account the expansion gap required. Put the board in place using a tapping block or 'pulling bar'. Insert wedges to ensure that the floor and the expansion gap remain in place.

12. Where the floor meets a door frame or similar it is important that these are cut, using a saw, to allow the

floor to slide easily beneath and that the expansion gap is both sufficient and maintained beneath the frame.

13. Joints between the new floor and other floors in adjoining rooms should be covered with thresholds and trims. The expansion gap must be left under the trims. Ensure that expansion of the floor will not be affected by this.

14. Once the adhesive has dried remove any wedges from around the floor perimeter.

15. The expansion gap may be covered with skirting boards skirting boards, quadrant, etc. Do not fix these to the floor. Ensure that a gap exists between the floor and the underside of the skirting boards, etc. to allow free movement of the floor. Where it is desired that there be no such fixings the floor may simply stop under the edge of the gypsum wallboards. However, irrespective of the finish chosen the required expansion gaps **must** be maintained.

16. Generally the floor may be walked upon 24 hours after the installation has been completed, assuming that there are reasonable site conditions. The adhesive manufacturer's instructions should be consulted to ensure that the floor is not used before the adhesive has achieved full bond.

17. Where Parmate flooring is to be installed in commercial areas it **must** be overcoated, at the time of installation, using 1 – 2 coats of Bona Traffic HD or Traffic HD Anti-Slip to provide additional protection against wear.

Installation – Locations with large variations in temperature & humidity

The use of engineered timber flooring in locations with widely varying environmental conditions, such as that experienced in NT or QLD, requires extra attention to be paid to the installation process. Parmate flooring can only be laid subject to the following conditions being understood:

- ▶ The only construction suitable for the expected conditions is Tongue and Groove joints with a Hevea (Rubberwood) core. The use of any engineered timber flooring system with a timber locking joint system or boards with a pine core would be unacceptable due to potential issues with stability.
- ▶ Parmate boards, as conditioned at the time of manufacture, have a moisture content of 8%, having been kept in conditioning rooms to de-stress and condition for such environmental conditions. It is extremely important that the Parmate boards are not stored in adverse conditions prior to installation so as to maintain this conditioning.
- ▶ Installation of the Parmate boards must be completed using a suitable adhesive designed to perform under conditions of high humidity; D3 according to EN204. It is recommended that Bona D700 be used.
- ▶ Special attention must be taken to comply with the requirements detailed within the Parmate Technical Manual and on the product label with regard to the provision of expansion gaps and control joints within the floor. Failure to observe these requirements may result in the floor being unable to expand freely during periods of high humidity.
- ▶ During periods of lower humidity it may be expected that minor gaps may develop at some joints in the floor as the floor 'dries out' slightly. This phenomenon is normal and is not an indication of a product fault. As time passes and the humidity increases these gaps will reduce in size and should close up. The use of a humidifier to maintain humidity levels at a more constant level may significantly reduce this effect.

Overcoating Parmate flooring

Where Parmate flooring is to be installed in commercial or very high wear areas it must be overcoated, at the time of installation, using 1 – 2 coats of Bona Traffic HD or Traffic HD Anti-Slip to provide additional protection against wear. These products should also be used to refurbish existing Parmate floors in commercial locations. These products or Bona Traffic are suitable for use in domestic situations.

UV factory applied finishes are designed to be very resistant to abrasion so as to extend the life of the floor. Preparation of the floor must therefore be carried out strictly in accordance with the instructions detailed in the appropriate Bona datasheets.

Further information can be found at www.bona.com.au in the **Professionals** section - <https://www.bona.com.au/professionals/overcoating-floors/overcoating-existing-floors>