

# **INSTALLATION GUIDE - CHEVRON & HERRINGBONE**

### **MATERIAL DELIVERY & STORAGE**

All WOODCUT Premium Engineered Timber Flooring should be handled with care and remain in unopened packs until installed. WOODCUT timber should be stored in dry conditions and elevated at least 100mm off any ground floor concrete slabs. Conditions within the dwelling should resemble as closely as possible, the in-service conditions of the completed building or dwelling. If the normal in-service conditions of a building are regularly air-conditioned or heated at that time of the year when the floor is being installed, then if possible these conditions should be replicated, prior to floor installation and then maintained thereafter. Internal temperatures of 20 degree Celsius and relative humidity of 40% to 60% are indicative of moderately dry conditions, that are best suited to floor installation. The focus should be on comfortable indoor conditions.

## SUBFLOOR PREPARATION DIRECT STICK INSTALLATIONS.

For direct stick applications, a wide range of subfloors can be laid over provided the subfloor is in a suitable condition to accept the flooring as outlined below. In the case of direct adhesive stick applications, the structural integrity of the subfloor must be adequate to withstand forces associated with board expansion.

All subfloors need to be sound and structurally complying with relevant Australian construction standards. Any determined problems with an existing subfloor or overlaid product that may affect the performance or appearance of the installed engineered floor need to be corrected prior to floor installation.

All subfloors need to be sufficiently flat to accept the flooring system (floated or direct stick installation). This must not exceed 3 mm beneath a 3 m long straight edge, in any direction.

Where concrete subfloors are not sufficiently flat, levelling compounds, grinding or other means to level the subfloor need to be undertaken. With timber subfloors, packing of joists and sanding of sheet subfloors may be necessary.

The surface on which the flooring is to be adhered must be free from all contaminants that could prevent or reduce the effectiveness of the adhesive. In particular the surface needs to free from any waxes, grease, paint, sealers and other similar substances. Sanding or grinding of concrete slabs may be required to provide a suitable surface.

When levelling compounds are used on a concrete slab, they are to be applied to manufacturers recommendations and care is needed to ensure sealers used in conjunction with the product are completely covered by the levelling compound. Sealers can prevent adhesion. The levelling compound also requires sufficient tensile strength to accommodate the expansion forces from the adhered flooring. Levelling compounds with low tensile strength are not sufficient for adhesive fixed floors.

### **MOISTURE CONTENT - CONCRETE SLABS**

Slab moisture must be assessed with a concrete moisture meter as well as an in-slab relative humidity test, prior to installation. Slab moisture must not exceed 6% when tested with a concrete moisture meter and 80% when tested using in-slab relative humidity test (hygrometer).

WOODCUT highly recommends with all direct stick installations, once the above readings have shown that they are within the percentages noted above, the TFS AA8800 4in1 Acoustic Adhesive and compatible trowel is used for fixing timber to the substrate.

## **MOISTURE CONTENT - TIMBER AND SHEET SUBFLOORS**

The drainage system provided to the dwelling site needs to ensure that run-off water will drain away from the building perimeter (not towards it) and that run-off water is prevented from entering the subfloor space

The subfloor space must be free from all building debris and vegetation. Landscaping, patios and the like should not limit air-flow around the external perimeter of the subfloor space, and structural elements should also not limit air-flow.

A minimum of three (3) resistance moisture meter test must be conducted in each area flooring is to be installed, before commencement of the installation and an expected average in-service moisture content should not exceed 11%-12%. This may vary greatly in tropical climates. Please contact WOODCUT for further information on installation in tropical climates.

# INSTALLATION – DIRECT STICK (DIRECT BOND INSTALLATION) OVER CONCRETE.

The timber flooring, is to be checked at the time of laying for manufacturing imperfections that could become a concern in the finished floor. This includes aspects of grade, imperfections in board shape, damage to boards as well as coating imperfections and moisture contents. You must notify WOODCUT of any concerns prior to the commencement of installation and affected boards should be set aside and not laid. WOODCUT will not replace any timber boards that have already been installed.

The installer is responsible for the placement of the boards in the floor in terms of colour and length distribution. Some boards may blend better to existing mouldings and placement of boards that create sharp contrasts that do not blend should be avoided. WOODCUT recommends end joints (staggered ends so they do not cluster) to be spaced at a minimum of 100 – 300mm apart.

WOODCUT floors require expansion allowances of a minimum of 10mm at skirting boards and around fixed objects. Joinery cupboards are permitted to have a 5mm expansion gap allowance only with



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# a direct stick (Direct Bond) installation. WOODCUT PERMITS THE INSTALLTION OF JOINERY, OVER DIRECT STICK/DIRECT BOND TIMBER FLOORING.

Greater expansion gap allowances may be required in areas deemed tropical, near the coast or with higher humidity levels. Further internal expansion allowances may be required in both the length and width of floors, if there is a concern with extreme fluctuations in humidity levels or temperature levels. It is to be ensured that internal expansion joints are installed and that appropriate expansion joints at doorways are also provided. Subfloor expansion joints and construction joints running parallel to the direction of laying should be mimicked in the engineered floor above.

The length and width at which internal expansion allowance is needed will depend on the area to which the timber flooring is being installed. With longer floors, expansion joints are required at doorways due to the differential movement of different sized floors in different rooms.

Aspects relating to the on-site storage and acclimatisation, the in-service environment, subfloor condition, safety aspects and equipment needed to complete the installation should all have been considered, prior to the point of floor installation.

WOODCUT recommends the use of the TFS AA8800 4in1 Adhesive with all WOODCUT Premium Engineered Timber Flooring installations, when moisture content of the subfloor is deemed to be within the parameters in the section <a href="Moisture Content">Moisture Content</a> – Concrete <a href="Slabs.">Slabs.</a>

A moisture vapour retarder compatible with the adhesive must be used if the moisture content exceeds the parameters in the sections <u>Moisture Content – Concrete Slabs</u>

The surface on which the flooring is to be adhered must be free from all contaminants that could prevent or reduce the effectiveness of the adhesive. In particular the surface needs to free from any waxes, grease, paint, sealers and other similar substances.

# **INSTALLATION PROCESS**

- 1. Determine the layout for the floor and the direction the pattern will run. Typically, the pattern will follow the length of the room.
- Stretch a string line along the rooms' centre. Starting at the nearest wall and following the string line, begin installing the parquetry strips.
- 3. Use a perfectly square plywood template/backer board, that is even or larger in size than the length of the parquetry boards being installed so that it can be used as a template and support for the first boards / rows installed. The template should be screwed down in a diamond shape fashion with its upper and lower points aligned with the centre line.
- 4. You must be very precise in the installation of the first row of parquetry boards. The parquetry boards are always placed in the adhesive in front of the previous row and pushed and rotated into place along the side and end of each.
- 5. When laying, it is usual to engage the end T&G joint with the

- side T&G's of the boards as close as possible. The side T&G's are then engaged with a minimal amount of sliding movement. This ensures minimal displacement of the adhesive and possibility of pull back from memory effects
- 6. The apex of the parquetry pattern must be exactly in line with the string line. Once the parquetry flooring that has been installed and the adhesive bonded sufficiently to the sub-floor, it can then be used as a template for the remainder of the floor.
- 7. During installation, the transfer of adhesive can be checked by removing smaller parquetry blocks after laying and checking the back of the board. If adhesive skins or application is inadequate the bonding will be compromised. WOODCUT recommends all timber floors to be weighted to achieve even transfer. Weather conditions affect the open time of the adhesive and care is necessary to not to spread the adhesive too far ahead of the work area.
- 8. Any adhesive on the board surface needs to be cleaned off during the laying with the recommended cleaner for the TFS AA8800 adhesive and cleaning cloths need to be frequently changed to prevent an adhesive haze to the board surface.
- 9. During laying, joints should be continually checked to ensure that they are tight.
- 10. Check the guide string regularly during installation.
- 11. When installing last rows, cut the boards allowing for an expansion gap of 10mm, as noted in the section <u>Installation Direct Stick (Direct Bond Installation) Over Concrete.</u>
- 12. It is important throughout the installation to consider the overall floor area and where intermediate expansion joints and joints at doorways are required. Refer to the section <a href="Installation">Installation Direct Stick (Direct Bond Installation)</a> Over Concrete.
- 13. If using trims, make sure the appropriate trims are being used to permit floor expansion / contraction movement.

When the installation is completed, the timber floor should be cleaned thoroughly using the appropriate cleaning products recommended by WOODCUT in the WOODCUT Maintenance Guide and any scuffing or minor scratches should be attended to prior by using an appropriate wax repair kit or filler. At times, minor imperfections may also be present in the floor and these can usually be filled with an appropriate colour matched filler or a hot wax repair. If the floor has been damaged and cannot be repaired to an acceptable condition, the individual board or area of flooring may need to be replaced.

After the flooring has been laid, skirting boards of sufficient width, should be fitted to cover the expansion allowance provided at walls etc. Ensure that the skirting board only sits on the timber flooring. Do not press skirting down on the timber flooring with force before fastening into the wall.

Where floors are laid with the skirting boards already fitted, timber abuts against metal window frames, pressed metal door frames, a fillet mould, c-channel trim or coloured caulking fill (elastomeric filler) is usually used to cover the expansion allowance.



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### INSTALLATION - DIRECT STICK/DIRECT BOND OVER EXISTING TIMBER FLOORING.

The timber flooring, is to be checked at the time of laying for manufacturing imperfections that could become a concern in the finished floor. This includes aspects of grade, imperfections in board shape, damage to boards as well as coating imperfections and moisture contents. You must notify WOODCUT of any concerns prior to the commencement of installation and affected boards should be set aside and not laid. WOODCUT will not replace any timber boards that have already been installed.

The installer is responsible for the placement of the boards in the floor in terms of colour and length distribution. Some boards may blend better to existing mouldings and placement of boards that create sharp contrasts that do not blend should be avoided. WOODCUT recommends end joints (staggered ends so they do not cluster) to be spaced at a minimum of 100 – 300mm apart.

WOODCUT floors require expansion allowances of a minimum of 10mm at skirting boards and around fixed objects. Joinery cupboards are permitted to have a 5mm expansion gap allowance only with a direct stick (Direct Bond) installation. WOODCUT PERMITS THE INSTALLTION OF JOINERY, OVER DIRECT STICK/DIRECT BOND TIMBER FLOORING.

Greater expansion gap allowances may be required in areas deemed tropical, near the coast or with higher humidity levels. Further internal expansion allowances may be required in both the length and width of floors, if there is a concern with extreme fluctuations in humidity levels or temperature levels. It is to be ensured that internal expansion joints are installed and that appropriate expansion joints at doorways are also provided. Subfloor expansion joints and construction joints running parallel to the direction of laying should be mimicked in the engineered floor above.

The length and width at which internal expansion allowance is needed will depend on the area to which the timber flooring is being installed. With longer floors, expansion joints are required at doorways due to the differential movement of different sized floors in different rooms.

Aspects relating to the on-site storage and acclimatisation, the in-service environment, subfloor condition, safety aspects and equipment needed to complete the installation should all have been considered, prior to the point of floor installation.

WOODCUT recommends the use of the TFS AA8800 4in1 Adhesive with all WOODCUT Premium Engineered Timber Flooring installations, when moisture content of the subfloor is deemed to be within the parameters in the section Moisture Content – Timber and sheet subfloors.

A moisture vapour retarder compatible with the adhesive must be used if the moisture content exceeds the parameters in the sections Moisture Content - Timber and sheet subfloors.

The surface on which the flooring is to be adhered must be free from all contaminants that could prevent or reduce the effectiveness of the adhesive. In particular the surface needs to free from any waxes, grease, paint, sealers and other similar substances.

#### INSTALLATION PROCESS

- Careful consideration must be made when choosing what direction, the new timber flooring is to be laid. All WOODCUT timber flooring, when installed over existing timber flooring, must run perpendicular in direction, to the direction of the existing timber floor.
- Should you wish to install the new timber flooring in the same direction as the existing timber direction, ply sheeting must be installed over the existing timber flooring first, before the new timber floor can be directly stuck/directly bonded. Ply sheeting must be a minimum of 3.6mm in thickness & should be nailed & glued in a "brick pattern" formation.
- Determine the layout for the floor and the direction the pattern will run. Typically, the pattern will follow the length of the room.
- Stretch a string line along the rooms' centre. Starting at the nearest wall and following the string line, begin installing the parquetry strips.
- Use a perfectly square plywood template/backer board, that is even or larger in size than the length of the parquetry boards being installed so that it can be used as a template and support for the first boards / rows installed. The template should be screwed down in a diamond shape fashion with its upper and lower points aligned with the centre line.
- You must be very precise in the installation of the first row of parquetry boards. The parquetry boards are always placed in the adhesive in front of the previous row and pushed and rotated into place along the side and end of each.
- When laying, it is usual to engage the end T&G joint with the side T&G's of the boards as close as possible. The side T&G's are then engaged with a minimal amount of sliding movement. This ensures minimal displacement of the adhesive and possibility of pull back from memory effects
- The apex of the parquetry pattern must be exactly in line with the string line. Once the parquetry flooring that has been installed and the adhesive bonded sufficiently to the sub-floor, it can then be used as a template for the remainder of the floor.
- During installation, the transfer of adhesive can be checked by removing smaller parquetry blocks after laying and checking the back of the board. If adhesive skins or application is inadequate the bonding will be compromised. WOODCUT recommends all timber floors to be weighted to achieve even transfer. Weather conditions affect the open time of the adhesive and care is necessary to not to spread the adhesive too far ahead of the work area.
- 10. Any adhesive on the board surface needs to be cleaned off during the laying with the recommended cleaner for the TFS AA8800 adhesive and cleaning cloths need to be frequently changed to prevent an adhesive haze to the board surface.
- 11. During laying, joints should be continually checked to ensure that they are tight.
- 12. Check the guide string regularly during installation.

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- 13. When installing last rows, cut the boards allowing for an expansion gap of 10mm, as noted in the section <u>Installation</u> <u>Direct Stick (Direct Bond Installation) Over Existing Timber Flooring.</u>
- 14. It is important throughout the installation to consider the overall floor area and where intermediate expansion joints and joints at doorways are required. Refer to the section <a href="Installation">Installation</a> Direct Stick (Direct Bond Installation) Over Existing Timber Flooring.
- 15. If using trims, make sure the appropriate trims are being used to permit floor expansion / contraction movement.

When the installation is completed, the timber floor should be cleaned thoroughly using the appropriate cleaning products recommended by WOODCUT in the WOODCUT Maintenance Guide and any scuffing or minor scratches should be attended to prior by using an appropriate wax repair kit or filler. At times, minor imperfections may also be present in the floor and these can usually be filled with an appropriate colour matched filler or a hot wax repair. If the floor has been damaged and cannot be repaired to an acceptable condition, the individual board or area of flooring may need to be replaced.

After the flooring has been laid, skirting boards of sufficient width, should be fitted to cover the expansion allowance provided at walls etc. Ensure that the skirting board only sits on the timber flooring. Do not press skirting down on the timber flooring with force before fastening into the wall.

Where floors are laid with the skirting boards already fitted, timber abuts against metal window frames, pressed metal door frames, a fillet mould, c-channel trim or coloured caulking fill (elastomeric filler) is usually used to cover the expansion allowance.

 $\label{loss} \mbox{Installation} - \mbox{Direct Stick (Direct Bond Installation)} \mbox{ Over Particle Board or Sheet Flooring.}$ 

Typically, joist and bearer structures or second levels in a home, are usually fitted with a 19mm or structural type particle board or sheet style substrate. This substrate is designed to create a platform (for timber flooring to be installed directly over.

There are two types of particle board used typically:

Yellow Tongue – Has a resin enriched surface. This surface must be sanded using a sanding machine prior to installing a timber floor, when using a direct stick/direct bond installation method. The reason for this is that the resin does not allow adhesive to spread evenly & therefore will compromise the installation.

Orange Tongue – Does not have a resin enriched surface. This surface can be installed over using a direct stick/direct bond installation method.

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- 10. Check the guide string regularly during installation.
- 11. When installing last rows, cut the boards allowing for an expansion gap of 10mm, as noted in the section <u>Installation</u> <u>Direct Stick (Direct Bond Installation)</u> Over Particle Board or <u>Sheet Flooring.</u>
- 12. It is important throughout the installation to consider the overall floor area and where intermediate expansion joints and joints at doorways are required. Refer to the section <u>Installation Direct Stick</u> (Direct Bond Installation) Over Particle Board or Sheet Flooring.
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### UNDERFLOOR HEATING INSTALLTION

When installing engineered boards over a heated slab, it is recommended that the board thickness is 15mm as this will aid in the transfer of heat.

The maximum width of board is 220mm. For boards wider than 220mm the veneers structure can be compromised and WOODCUT will not warrant these products on a heated slab. This includes Chevron and Herringbone formats in both 15 and 20mm.

A few general but very common rules need to be observed when installing your timber floor.

The moisture content of concrete subfloor should be <3% when underfloor heating is to be used. To achieve this you may need to have your floor heating turned on prior to installation.

Ensure that the instructions of heating procedures are followed before laying the floor boards.

The temperature on the surface of the subfloor can be a maximum of 26°C. If the subfloor heating system is newly installed, the system has to be switched on and left on for at least 3 weeks prior to laying the floor. Switch off the heating system 48 hours prior to installation.

Turn the heating system on again 1 week after the floor installation is completed, with a gradual increase of 1°C per day in accordance with the heating system regulations.

WOODCUT only warrants WOODCUT/WOODlife/Deep Down installations over heated slabs in conjunction with the TFS AA8800 4 in 1 adhesive which can be purchased from WOODCUT.