

# Technical Data Sheet

## Formwall Ceiling Plank – Installation Guide



### DESCRIPTION:

Formwall Ceiling is a twin wall, tongue and grooved PVC system which is extruded from high grade PVC in double skin profiles linked with PVC fins to form a rigid, durable board.

It is an economical ceiling system for general purpose use and is suitable where boards may come into contact with food. It is ideal for hygienic and wet environments.

Formwall Ceiling system is easy to clean and is almost maintenance free. It is one of the few ceiling systems which can be hosed down in-situ.

The white, satin finish ceiling system incorporates colour coordinated PVC internal / external corner profiles, a PVC jointing strip, PVC start & edge perimeter trim and a PVC pliable joint trim for obtuse angles.

### ALLNEX CEILING PLANK INSTALLATION GUIDE:

Please ensure you follow the installation guidelines carefully to ensure best results.

This fitting guide is for guidance only. Refer to the installing contractor and/or builder for the exact job process.

### MATERIAL DESCRIPTION:

| Length  | Width | Thickness | Weight                   |
|---|-------|-----------|--------------------------|
| 3000mm   4000mm   5000mm (indent to special order only) | 250mm | 10mm      | 2.2kg / m <sup>2</sup> . |

- Formwall Ceiling PVC boards have a maximum service temperature of 80°C.
- Although the boards can be applied in most areas, they should never be installed near to a direct heat source (cookers, oven ranges, wall mounted griddles etc) where naked flame or severe heat would cause distortion or damage to the surface. For these situations, allnex recommends using stainless steel panels.

### FIXING METHOD:

Ceiling boards can be mechanically fixed with 16mm bevel point Stainless Steel staples that prevent withdrawal. (may be fixed with 13mm self-tapping 'wafer head' screws). Install to any substrate which provides a fixing point at a maximum of 600mm centres, e.g. timber joists, timber battens, PVC battens, galvanised steel battens, or direct to plywood.

### SURFACE PREPARATION:

- All ceiling structures must be sound and generally level. The substrate must be of adequate strength to support mechanical fixings, especially when installing battens.
- Typical substrates are concrete, timber, steel or plaster finishes. With certain concrete substrates, check to find out if the structure is constructed with hollow beams.
- All electrical fittings should be in a 'first fix' stage where possible. Electrical equipment should only be moved or altered by a qualified electrician.
- All plumbing should be at 'first fix' stage and pipe "tails" left protruding from the substrate.
- The ceiling boards can then be drilled and slid over the pipe "tails". All holes should be drilled 3mm oversize to allow for expansion.
- Plumbing should always be carried out by a qualified plumber.
- Hot pipes and steam pipes should be insulated and a 3-5mm expansion gap should be created when installing Formwall Plank ceiling boards around these pipes.
- All pipes, screw fixings, bolts etc. fixed through the Formwall Plank ceiling board should have a minimum 3mm expansion gaps and be sealed using allnex silicone sealant.

### MATERIAL REQUIREMENTS:

- Formwall Planks
- Outside Perimeter channel
- Division bar ( joiner)
- Edge trim perimeter trim
- Silicone sealant

## INSTALLATION TEMPERATURES:

- allnex recommends the PVC ceiling boards are installed at approximately the same ambient 'service temperature' at which the area will be used when commissioned.
- An ambient temperature of 14°C/57°F is recommended for all installation areas.
- Boards should be stored on a level flat surface and be pre-conditioned for up to 24 hours to attain the ambient room temperature prior to the installation.
- Storage on un-even surfaces could cause the boards to distort prior to installation.

## SAFETY EQUIPMENT:

- Appropriate safety Glasses / Goggles
- Ear Protection

## TOOLS AND EQUIPMENT:

In general, the main tools required are similar to carpentry hand tools. Below is a list of tools that you may find an advantage to have for the installation.

- 1m spirit level
- Adjustable block plane
- Hammer
- Hole cutters
- Chalk line
- Water based markers
- Jigsaw (with 'fine tooth' cutting blades)
- Tenon saw
- Tape measure
- Cold chisel
- Sharpening stone
- 4" scrapers
- Cordless drill and bits
- Carpenters 19/25mm wood chisels
- Stanley knife
- Screwdrivers
- Carpenters bevel
- Files (round & square)
- Good quality mastic gun
- Square
- Hacksaw
- Mitre block
- Electric drill
- Pens and pencils
- 16mm bevel point SS staples

## WORKSTATION:

Set up a 'workstation' in close proximity to the area to be boarded. A minimum area of 7m x 3m may be required to set up an adequate working area, \*(depending on the length of boards being used).

You will also need a 2.5m x 1.22m workbench made from 15mm MDF board (or similar), with support bearers to prevent the MDF from bowing in the middle. The bench provides an excellent work surface for the PVC ceiling boards.

## PLANNING AND SETTING OUT:

### Consideration 1.0

The first consideration before commencing an installation of the Formwall Ceiling direct fix ceiling system must be that of access to services. Due to the construction of the ceiling system, once installed it provides an impervious barrier, therefore access to services and the running in of cables and pipe work must be considered. These must be installed prior to the boards being fitted. If access is required for maintenance to services above, the inclusion of 'access hatches' should be considered.

Establish where light fittings are to be positioned and if sprinkler systems are to be incorporated.

### Consideration 2.0

If battens are to be installed, establish which way the PVC ceiling boards are to run. This determines the length of board to purchase.

### Consideration 3.0

Establish where access ports and lights, etc are to be placed.

### Layout

Plan the layout of the PVC ceiling boards across the ceiling structure. Each board is 250mm in width. Therefore, four boards locked together will equal 1 metre. Measure the complete distance across the room to establish that the last board to be fitted in the ceiling system will be of a suitable width.

If necessary, the first ceiling board may need to be pre-cut before fitting.

## INSTALLATION PROCEDURE:

### CEILING BATTENS

If battens are to be used, allnex recommends using galvanised steel battens for this work. They are readily available, low cost and will not deteriorate over the life. However, staples will not work with this material and the use of wafer head screws will be required.

### Time of installation.

- Before commencing construction, check to see if the surface to be fixed to is true and level and within standard building regulation guidelines. If found to be uneven, packers may have to be inserted.
- Firstly, butt up to the perimeter of the ceiling, and fix allnex outside corner or edge trim perimeter channel to the wall substrate. Fix in

position (with the longer edge on the underside) using suitable screw fixings, at a maximum of 600mm centres around the wall perimeter.

- Determine the direction of the Formwall Plank ceiling boards.
- Onto battens, install using appropriate fastenings to the substrate above (with the longer edge at the top). Fix in the opposite direction to the way your ceiling boards are to be installed. Space out the battens across the ceiling structure at a maximum of 600mm centres.
- Prior to installing the Formwall Plank ceiling boards, ensure that all 'first fix' services are installed, and any extra batten sections have been fitted where lighting units etc. will require an anchored fixing point.
- Following completion of the outside corner trim, the Formwall Plank ceiling boards are now ready for installation.

#### **INSTALLATION PROCEDURE FOR FORMWALL PLANKS:**

- Firstly, fix allnex outside corner perimeter trim around the room, using staples or 13mm wafer head screws, ensuring that no kinks appear in the trim as it is installed. The longer edge is to be fixed upper most to the perimeter channel.
- Internal angles can either be interlocked or mitred. However, external corners must be mitred to suit the correct angle.
- Take measurements from the ceiling structure, and then transfer these to the ceiling board. Cut the board using a jigsaw (or hand saw) with a fine-tooth blade, making sure the board is well supported to reduce any risk of stress in the material when being cut. After cutting, plane the edges with your adjustable block plane to remove burrs and to leave a clean smooth finish.
- Cut the first Formwall Plank ceiling board to length allowing for approximately 10mm reduction in the overall length for expansion.
- Fit the ceiling board into the trim and then stretch a string line from both ends. With the first board it is vital that it is installed straight and true along its length, as a hollow or curvature will not allow future boards to butt tight into the full length of the board.
- When the first board is fully in position, fix through the tongue of the board into the batten (or substrate) above, using the staples or 13mm wafer head screws.
- Fit the subsequent ceiling boards, ensuring they are butted tightly up to the previous board, until the whole area has been completed.
- With the last board to be fitted (usually a part-width board), you need to slot this carefully into the 'side' and 'end' section of the trim. Starting at one side and then easing it into the end trim as you move along the full length of the trim. This can be helped by using flat scrapers to ease the trim down.
- Once the last board has been fitted and butted tightly to the previous board, apply a bead of silicone inside the perimeter trim to keep the last board in position.
- Ensure all boards have at least 5mm clearance at each end to allow for expansion and contraction.

#### **Simplified installation:**

- 1.0** A framework of PVC battens must first be fastened to the existing ceiling or suspended from purlins at 40-60cm intervals.
- 2.0** Battens must also be run around the perimeter of the ceiling area.  
**\*\*Note\*\***  
Battens must run at right angles to the desired direction of your ceiling planks.
- 3.0** Using 16 mm stainless steel staples, fix the edge trim around the perimeter batten as close as possible to the walls.
- 4.0** Calculate the length of plank required by measuring from edge trim on to edge trim on wall.
- 5.0** Deduct 2cm from this length and cut your plank to this size. Insert plank with the tongue into edge trim and push into position.
- 6.0** Now staple plank into place at each batten by fastening through the planks fixing edge.
- 7.0** Screw fix the first plank into place, then simply push the remaining planks into the groove of the preceding plank and staple into position as before.
- 8.0** Before installing final plank, ensure you trim the plank to the desired width, then work into the edge trim with a pallet knife.

#### **FIXING AROUND BEAMS, BULKHEADS OR DOWNSTANDS:**

##### **Bulkheads / Access ports / lights**

If the ceiling structure has beams, bulkheads, lights incorporated in the room, the Formwall Ceiling PVC ceiling system can be constructed around these details.

- Use plywood as a prefixed substrate before the Formwall Plank to create a solid base for the access port, lights etc.
- Where the internal and external angles are formed, you will need to 'couple together' two sections of edge trim section (with wafer head screws, pop rivets or nuts and bolts) at right angles to each other to create a 'right angled section' to fix the Formwall Plank boards and trim angle sections to.
- Once the trim is in place, fix outside corner sections with staples or 13mm wafer head screws to all internal angles.
- Repeat the process with outside corner sections with wafer head screws to all external angles.
- Once these corner sections have been fitted, install the Formwall Ceiling Planks as described previously.
- Ensure the last board is sealed into position with silicone sealant.

#### **ACCESS HATCH PANELS:**

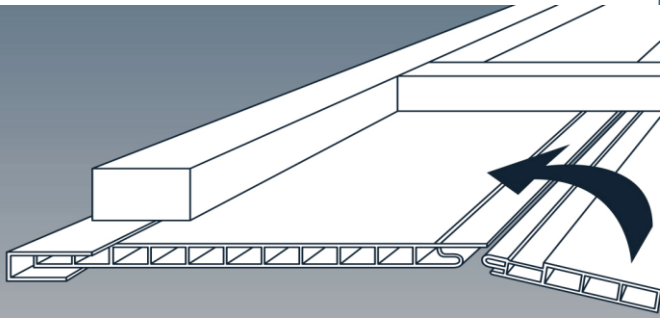
Access panels can be fitted into the Formwall Plank ceiling system if required.

They are made to order and can be produced in almost any size, (contact allnex Construction Products for further details).

The perimeter of the access 'opening' must be lined out with allnex perimeter channel on all four sides.

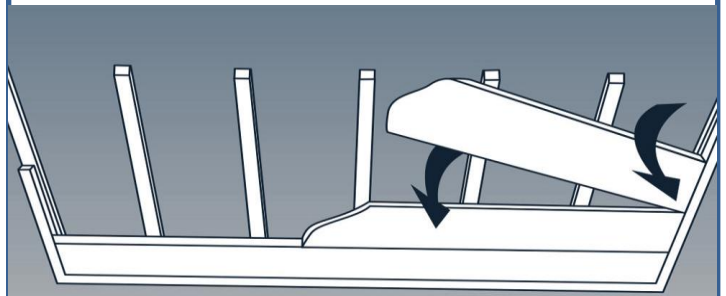
**Please note:** Access panels can only be used in this type of situation if there is sufficient height (void) above the hatch to allow the removable plywood panel section to be lifted up and angled outwards. A minimum of 200mm clearance is required to achieve this.

Hollow space feature prevents condensation and provides good insulation properties.



The specially designed jointing system ensures the best possible seal between each plank and allows for thorough cleaning.

Planks are manufactured from "Food Safe" PVC and have a Class 1 Fire Rating.



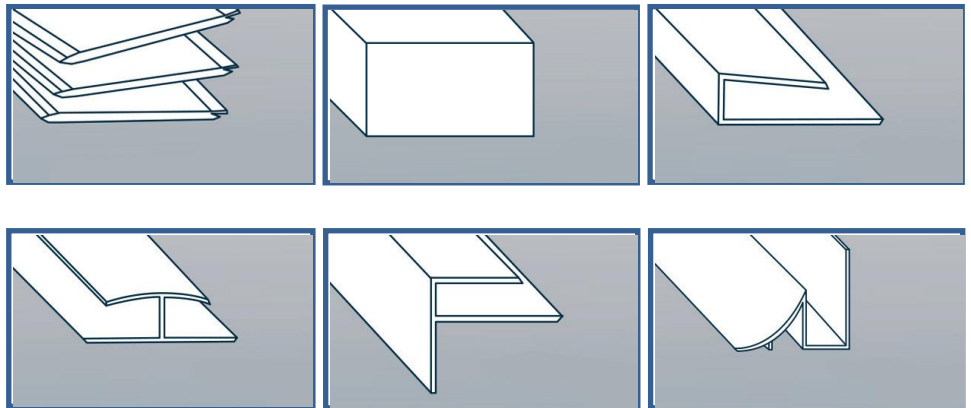
A complimentary range of PVC fixing accessories allow fast, easy installation with minimal loss of valuable production time.

### Six easy to work components

Enhances appearance of production Areas as well as increasing hygiene levels

Satisfies current Food Safety Legislation

Temperature Range -30 - +80°C



### Four simple procedures to install

A framework of battens must be fastened to the existing ceiling or suspended from purlins at 40cm - 60cm intervals. Battens must also be run around the perimeter of the ceiling area.

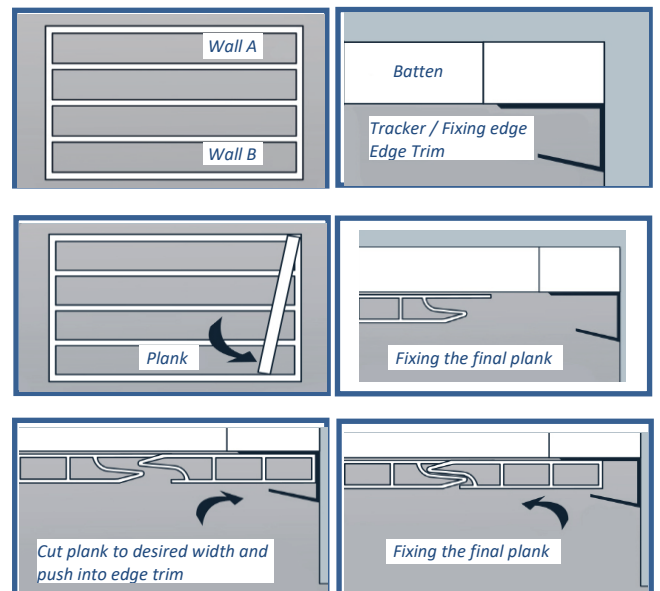
**\*\*Note\*\***

**Battens must run at right angles to the desired direction of your ceiling planks.**

Fix the edge trim around the perimeter batten as close as possible to the walls. Calculate the length of plank required by measuring from the edge trim on Wall (A) to the edge trim on Wall (B)

Deduct 2cm from this length and cut your plank to this size. Insert plank with the tongue into edge trim and push into position. Now fix the plank into place at each batten by fastening through the planks fixing edge.

Once the first plank is in place, simply push the remaining planks into the groove of the preceding plank and fix into position as before. Before installing final plank, ensure you trim the plank to the desired width, then work into the edge trim with a pallet knife.



**COMPLETION:**

Once the boards have been installed and silicone has been completed, clean all surfaces down with a cleaning solution or even alcohol (methylated Spirits) for a hygienic result.

**MAINTENANCE:**

Regular cleaning using a soft cloth and suitably diluted mild detergent is all that is normally required.  
For heavy grease contamination use a gentle alkaline cleaner (or similar).  
Stubborn marks can be removed with a non-abrasive domestic type cream bath cleaner.

When cleaning the Formwall Plank surface, we recommend the temperature of water does not exceed 60° Centigrade.  
If cleaning with hot water lance, temperatures must be regulated to a maximum of 60° Centigrade and not to be localised.

Do not use cleaning materials of an abrasive nature.



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Replaces: NA

**Allnex Construction products, a Division of Allnex New Zealand Ltd**

Auckland - 14 Industry Road Penrose phone: 095836544. Hamilton - 18 Somerset Street Frankton phone: 07-847-8658  
Wellington - Unit 9A 4 Glover Street Ngauranga Gorge phone: 04-240-0305. Christchurch - 112 Carlyle Street Sydenham phone: 03-366-6802  
Customer Service: 0508-882-288 [cs.constructionnz@allnex.com](mailto:cs.constructionnz@allnex.com)  
[www.allnexconstruction.com](http://www.allnexconstruction.com)

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