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Fitting Guide For Altro P250 PVCu Ceiling Boards (Direct Fixing Method)



Altro Walls Direct Fix Ceiling Fitting Guide

This fitting guide, whilst compiled to the best of our knowledge is for guidance only, and Altro Walls cannot be held responsible for any faults which may occur. If in any doubt, contact the Walls technical services department to answer any queries you may have.
Tel: 01462 480480.

Altro P250 Ceiling is a twin wall, tongue and grooved PVCu system which is extruded from high grade PVCu in double skin profiles linked with PVCu 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.

Altro P250 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 PVCu internal / external corner profiles, a PVCu jointing strip, PVCu start & edge perimeter trim and a PVCu pliable joint trim for obtuse angles. Altro silicone sealant is available in a coordinating colour.

DESCRIPTION

Ceiling boards are 9mm thickness and are available in 3000mm, 4000mm, 5000mm and 6000mm lengths x 250mm width.

Altro P250 PVCu boards have a maximum service temperature of 60°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, Altro Walls recommends using stainless steel panels.

FIXING METHOD

Ceiling boards can be mechanically fixed with 13mm self-tapping 'wafer head' screws 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 P250 PVCu 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 P250 PVCu ceiling boards around these pipes.
- All pipes, screw fixings, bolts etc. fixed through the P250 PVCu ceiling board should have minimum 3mm expansion gaps and be sealed using Altro silicone sealant.

INSTALLATION TEMPERATURES

Altro Walls recommends the PVCu 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 flat and be pre-conditioned for up to 24 hours to attain the ambient room temperature prior to the installation.

The boards should be stored on a level flat surface. Storage on un-even surfaces could cause the boards to distort prior to installation.

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.

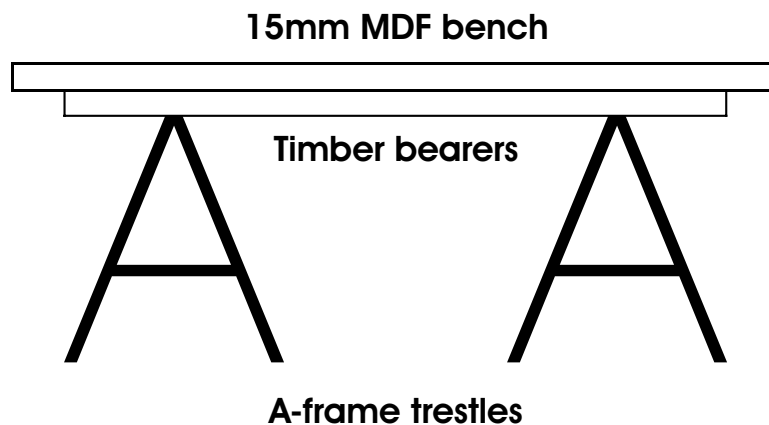
- 1m spirit level
- tenon saw
- stanley knife
- square
- chalk line
- adjustable block plane
- 8m tape measure
- hammer
- cold chisel
- carpenters bevel
- carpenters 19/25mm wood chisels
- screwdrivers
- files (round & square)
- hole cutters
- hacksaw
- sharpening stone
- 4" scrapers
- good quality mastic gun
- biro pens and pencils
- water based markers
- mitre block
- electric Jigsaw (with 'fine tooth' cutting blades)
- 750 watt electric hammer drill
- cordless drill and bits
- if required (on site) - 110 transformer (including 110v leads)

Safety equipment:

- barrier cream
- goggles/safety glasses
- protective gloves
- hard hat
- safety boots
- hi-viz safety vest

Other essential equipment:

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 PVCu ceiling boards.



SAFETY INFORMATION

Apart from the normal health and safety rules employed within the construction industry, the following points should be noted:-

- Safety information displayed on materials and containers supplied by Altro Walls must be strictly adhered to.
- Safety eye wear must be worn during cutting of materials, cleaning and preparation of site, and where necessary to adhere to site regulations.
- Display prominent safety signs when using materials, and to warn of a working area.
- Remove and dispose of all waste sensibly and carefully as per site instructions. Contact Altro on 01462 480480 for all COSHH (control of substances hazardous to health) data sheets.
- If necessary, apply barrier creams and wear protective gloves.
- Keep the working area clean and tidy.

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

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).

PLANNING AND SETTING OUT

The first consideration before commencing an installation of the Altro P250 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 taken into account. These must be installed prior to the P250 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.

If battens are to be installed, establish which way the PVCu ceiling boards are to run.

Plan the layout of the PVCu 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.

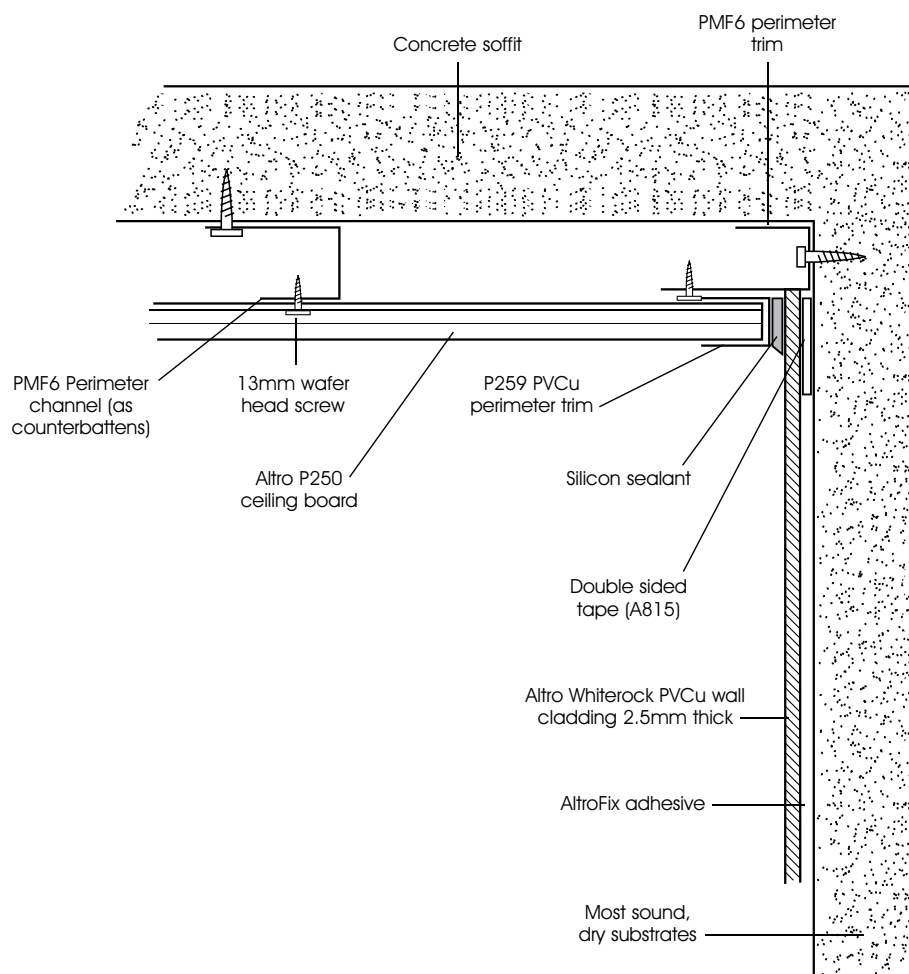
If necessary, the first ceiling board may need to be pre-cut before fitting.

INSTALLATION PROCEDURE (WITH BATTENS)

If battens are to be used, Altro recommends using Gyproc 'MF' type galvanised steel battens for this work. They are readily available, low cost and will not deteriorate over the life time of the installation.

- Before commencing construction, check to see if the surface to be fixed to is 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 Altro PMF6 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 P250 PVCu ceiling boards.
- Using the Altro PMF6 section as 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 P250 PVCu ceiling boards, ensure that all 'first fix' services are installed, and any extra PMF6 batten sections have been fitted where lighting units etc. will require an anchored fixing point.

Following completion of the PMF6 'grid', the P250 PVCu ceiling boards are now ready for installation.



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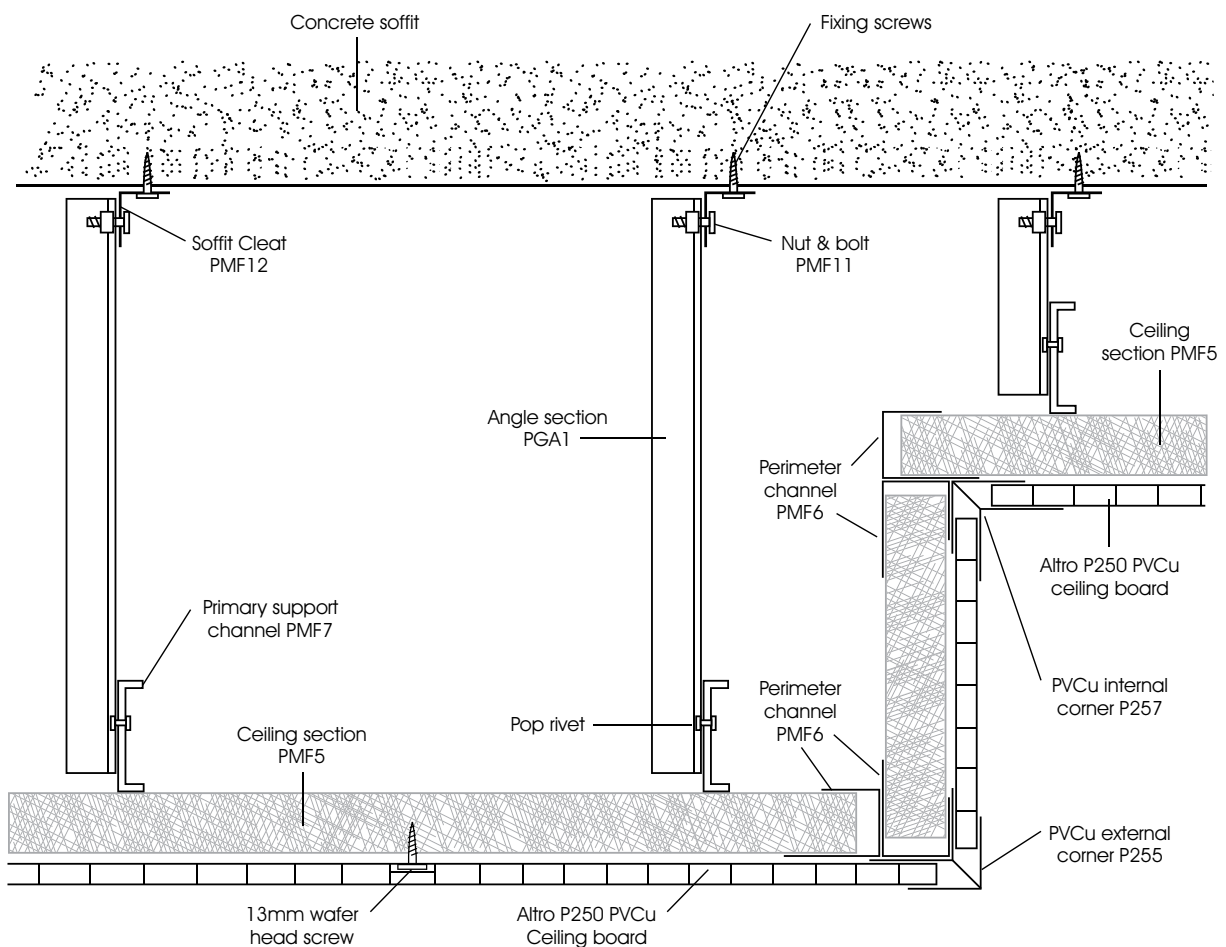
INSTALLATION PROCEDURE FOR P250 PVCU CEILING

- Firstly, fix Altro P259 PVCu perimeter trim to the Altro PMF6 perimeter channel around the room, using 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 PMF6 metal perimeter channel.
- P259 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 P250 PVCu 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 P250 PVCu ceiling board to length allowing for approximately 10mm reduction in the overall length for expansion.
- Fit the ceiling board into the P259 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 P250 board into the batten (or substrate) above, using the 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 P259 PVCu 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 P259 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.

FIXING AROUND BEAMS, BULKHEADS OR DOWNSTANDS

If the ceiling structure has beams, bulkheads or downstands incorporated in the room, the Altro P250 PVCu ceiling system can be constructed around these details.

- The substrate (except plywood) will need to be battened with Altro PMF6 sections down the face and on the underside.
- Where the internal and external angles are formed, you will need to 'couple together' two sections of PMF6 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 P250 PVCu boards and P255 / P257 PVCu angle sections to.
- Once the PMF6 'grid' is in place, fix Altro P257 internal PVCu corner sections with 13mm wafer head screws to all internal angles.
- Repeat the process with Altro P255 external PVCu corner sections with wafer head screws to all external angles.
- Once these corner sections have been fitted, install the Altro P250 ceiling boards as described previously.
- Ensure the last board is sealed into position with Altro silicone sealant.



* Caption shows a fully suspended ceiling system – (Support hangers are not required with the 'Direct fixing' ceiling system).

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

ACCESS HATCH PANELS

Access panels can be fitted into the P250 PVCu ceiling system if required.

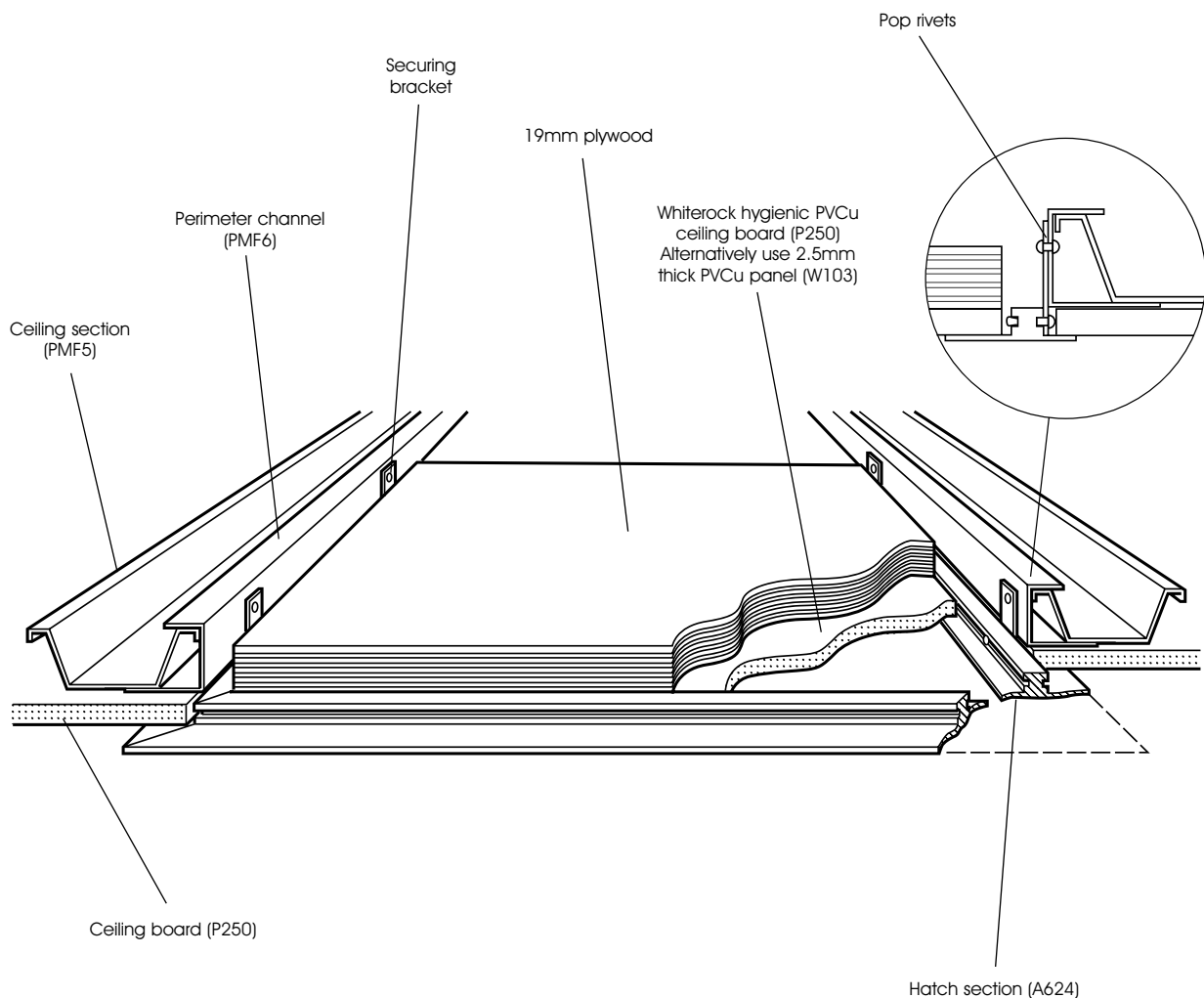
They are made to order and can be produced in almost any size, (contact Altro Walls for further details). Traditional stock size available is 600mm x 600mm.

The perimeter of the access 'opening' must be lined out with Altro PMF6 perimeter channel on all four sides.

The Altro access hatch framework kit (ref: A626K) is supplied pre-made (size to order) with a powder coated aluminium frame and plywood removable panel.

The plywood panel must be finished with Altro P250 PVCu ceiling boards (cut and fitted to suit on site).

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.



* Caption shows an access panel within a fully suspended ceiling system (PMF5 sections are not required with the 'Direct fixing' ceiling system).

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COMPLETION

Once the boards have been installed and silicone has been completed, clean all surfaces down with Altro antistatic solution (A809). This is required as the boards may have static build up and any dust in the atmosphere will adhere to the surface of the panel.

CLEANING

Regular cleaning using a soft cloth and suitably diluted mild detergent is all that is normally required. For heavy grease contamination use Altro 44 alkaline cleaner (or similar). Stubborn marks can be removed with Altro cleaner (ref: A859) cream, or use a non-abrasive domestic type cream bath cleaner.

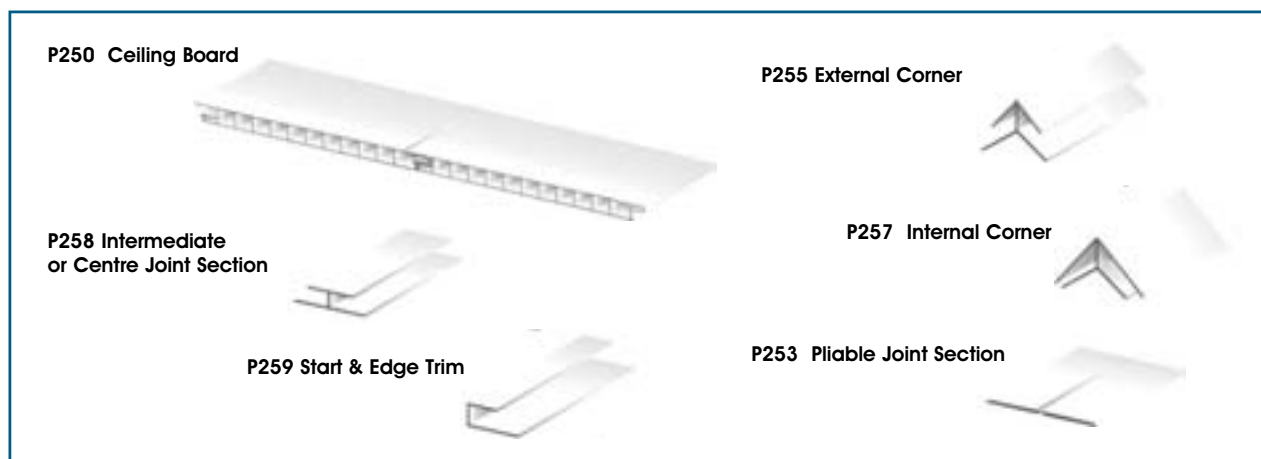
When cleaning the P250 PVCu surface, we recommend the temperature of water does not exceed 60° Centigrade.

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.

Cleaning cards are available on request.

PRODUCT REFERENCE



CONTACT

Altro Walls technical services department for any query regarding materials, installation or cleaning and maintenance instructions:

Tel: 01462 480480

Fax: 01462 480010

e-mail: info@altro.com

Visit the Altro website at www.altro.com for technical data sheets and technical drawings in pdf format for downloading.

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Altro Ltd
Works Road, Letchworth Garden City,
Herts, England SG6 1NW

Tel: +44 (0)1462 480480

Fax: +44 (0)1462 480010

e-mail: info@altro.com

www.altro.com

