

Hygienic PVC wall cladding fitting installation guide



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Hygienic PVC semi-rigid extruded wall sheets are designed for use in hygienic environments and areas prone to wet conditions. These sheets exhibit excellent adhesion properties to all robust substrates commonly employed in internal wall construction. Suitable for both new constructions and refurbishment projects, these sheets are available in White, Satin, and High Gloss finishes.

The walling systems feature color-coordinated jointing systems, including two-part joint trims, welded trims, and single-part trims, making them suitable for use in secure environments. Premium-grade adhesives are provided for fixing various sheet types, and sanitary sealants in coordinating colors are also available.

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

Description

The sheets have a thickness of 2.5mm and are offered in dimensions of 2500mm or 3000mm in height and 1220mm in width. They come equipped with a protective film on the face, allowing it to be retained until the designated area is ready for use. This film serves a dual purpose, safeguarding the new surface from dust while other trades are active in the vicinity. With a maximum service temperature of 80°C, these hygienic PVCu wall sheets are versatile for most applications. However, it is crucial to avoid installing them near direct heat sources, such as cookers, oven ranges, or wall-mounted griddles, where exposure to naked flame or extreme heat could lead to distortion or damage. The recommended installation distance from a heat source is at least 30 cm.

Surface preparation

For optimal performance, ensure that all surfaces are smooth, sound, dry, and devoid of any contaminants before commencing the installation of Hygienic PVC wall sheets. If needed, clean the walls thoroughly before applying a primer, using a mixture of 10 parts water to 1 part PVA. It is essential to maintain a clean and dust-free working environment. Failure to adhere to these conditions may compromise the bond strength between the adhesive and substrate, potentially leading to the sheets' debonding.

- Ensure that all substrates are dry up to 16% WME (Wood Moisture Equivalent) using Protimeter 'Surveymaster' equipment.
- Remove all loose flaking paint and dust.
- Ensure all surfaces are free from grease. For ceramic tiles, thorough cleaning, degreasing, rinsing, and drying are necessary.
- Remove loose tiles and repair the area as needed.
- Fill any depressions in the substrate.
- Ensure that all electrical switches, power points, etc., are in a first-fix state, where possible. Any alterations or movement of electrical equipment should be carried out by a qualified electrician.
- Whenever feasible, plumbing and pipework should be removed to achieve a first-fix state, leaving "tails" protruding from the substrate. Sheets can then be drilled, and slid over the pipe "tails." Ensure that all holes are drilled 3mm oversize to allow for expansion. Plumbing tasks should always be undertaken by a qualified plumber.
- Insulate hot pipes and steam pipes, and ensure a 3-5mm expansion gap is created when installing sheets around these pipes.
- Ensure all pipes, screw fixings, bolts, etc., fixed through the sheet have a minimum 3mm expansion gap and are sealed using sanitary sealant.

Two-part polyurethane adhesive.

The sheets can be securely affixed to most solid and dry substrates using a two-part polyurethane adhesive.

The adhesive is available in two tub sizes:-

- 1 x 6.5kg unit for 2440mm sheets
- 1 x 8.0kg unit for 3050mm sheets

Part A is a dense cream-colored paste supplied in a plastic tub, while Part B serves as the catalyst (hardener) and is provided in a foil bag, separated within the tub.

Combine the liquid contents of the foil bag (Part B) with Part A, stirring thoroughly for approximately 2-3 minutes until a consistent uniformity is achieved.

It is recommended to use a low-speed electric drill with a mixing paddle attachment to ensure thorough mixing.

Once blended, apply the adhesive to the pre-cleaned back of the sheet using a 5mm x 5mm square notched trowel.

Health and Safety Advice

Prior to utilizing this adhesive, individuals should consult the MSDS (Material Safety Data Sheet) for accurate safety guidance and conduct both a COSHH (Control of Substances Hazardous to Health) assessment and a risk assessment.

Always don suitable PPE (Personal Protective Equipment) and RPE (Respiratory Protective Equipment) when handling adhesives, and ensure proper ventilation in the area.

In the event of contact with eyes or skin, promptly rinse with copious amounts of water and seek medical advice.

MS/HG Polymer Adhesive

The sheets can be securely affixed to most smooth, sound, dry, and porous substrates using a high-quality, single-component, high-strength synthetic polymer emulsion adhesive based on MS-Polymer.

This adhesive is chemically neutral and fully elastic. Apply the adhesive generously to the first marked-out section on the wall, using diagonal lines approximately 400mm long with 50mm gaps. After each row, alternate the direction of the lines. For an 8'x4' sheet, use approximately 900ml of adhesive, and for a 10'x4' sheet, use around 1200ml.

Health and Safety Advice

Prior to using this adhesive, individuals should consult the MSDS (Material Safety Data Sheet) for accurate safety guidance and conduct a COSHH (Control of Substances Hazardous to Health) assessment and risk evaluation.

Always wear suitable PPE (Personal Protective Equipment) and RPE (Respiratory Protective Equipment) when handling adhesives, and ensure the workspace is adequately ventilated. In the event of contact with eyes or skin, rinse immediately with plenty of water and seek medical advice.

Suitable fixing methods

Substrate	Two-part polyurethane.	MS/HG Polymer Adhesive
Gypsum Board 12.5mm (e)	T	T
Minimum 9mm WBP Plywood*	T	T
Metal	T	
Ceramic Tiles (a)	T	
Plaster (b)	T	T
Cement Render (b)	T	T
Brickwork (b & c)	T	
Blockwork (b & c)	T	
Painted (d)	T	

(a) = Assuming tiles are securely adhered to the substrate and devoid of surface contaminants or grease

(b) = Ensure the surface is dry. To verify, conduct a Protimeter test, yielding a maximum reading of 16% wood moisture equivalent (WME). Plastered surfaces require sealing with diluted PVA (or similar) before installation of the PVC wall sheet.

(c) = Brickwork and Blockwork should be of good quality and joints should be flush and dry.

(d) = A bond test is advisable to check adhesive does not react with paint.

(e) = 1 Part MS/HG Polymer Adhesive should not be used for bonding to moisture resistant substrates

* = Plywood must comply to EN 13986: 2004
 BS EN 636: 2003
 BS EN 315
 BS EN 314-2

Glue bond quality class 3 's' grade

Suitable substrates

- High-quality fair-faced brick or blockwork with well-aligned joints, bagged up flush, and cement spots removed. Must be straight to within 3mm over 2 meters, and bricks/blocks should be flush with adjacent ones. Not suitable for welding.
- Sand and cement rendering in a 1:3 mix with a steel troweled finish.
- 12.5mm thick plasterboard.
- Minimum 9mm resin-bonded plywood per specification details.
- Minimum 9mm MDF dense wood-based sheets.
- Ceramic tiles securely bonded to the substrate and thoroughly cleaned.
- Most sound painted surfaces (an adhesive test is advisable for suitability).
- New pink finishing plasters. These surfaces are generally dusty and should be brushed and thoroughly sealed with diluted PVA primer (1:10) to dry to 16% WME.

Installation temperatures

Building Plastics Online Ltd recommends that PVCu wall sheets be installed at approximately the same ambient 'service temperature' as the area will be when commissioned.

A minimum temperature of 14°C/57°F is recommended for all installation areas. The hygienic adhesive must never be used below +5°C.

Sheets should be stored flat and preconditioned for up to 24 hours to attain the ambient room temperature before installation. They must be stored on a level flat surface off the ground to avoid condensation on the sheets if stored on damp surfaces.

Storage on uneven surfaces could cause the sheets to distort before installation.

Tools and equipment

In general, the primary tools required are akin to carpentry hand tools. Below is a list of tools that may prove advantageous for the installation.

- 1 metre & 2 metre spirit levels
- stanley knife
- square
- chalk line
- laser level
- adjustable block plane
- 5m tape measure
- hammer
- carpenters bevel
- cold chisel
- rubber mallet
- carpenters 19/25mm wood chisels
- screwdrivers
- files (round & square)
- hole cutters
- hacksaw
- sharpening stone
- Scrapers
- metal snips
- 50mm paint brush
- good quality mastic gun
- mixing paddle
- 5mm x 5mm square notch steel trowel
- biro pens and pencils
- water based markers
- hand roller
- 3000mm rigid straight edge
- electric Jigsaw (with 'fine tooth' cutting blades)
- circular saw with T.C.T fine tooth blade and pressure guide for cutting
- 750 watt electric drill (for mixing adhesive)
- if required (on site) - 110 transformer (including 110v leads)

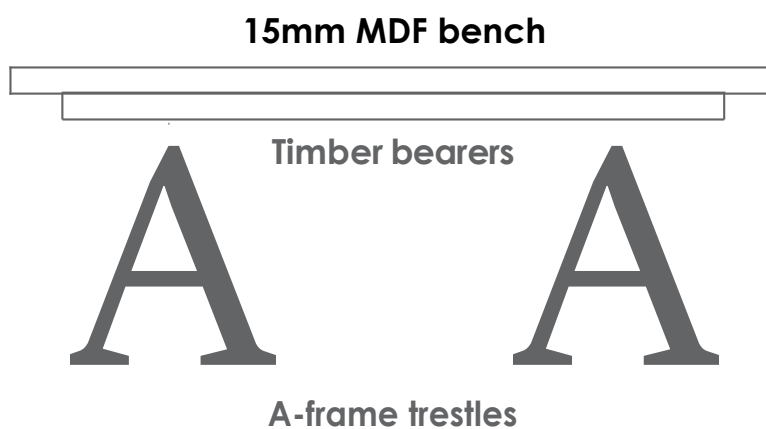
Ensure all electrical equipment is PAT tested.

Safety equipment:

- barrier cream
- goggles / safety glasses
- protective gloves
- face mask (nose / mouth protection)
- hard hat
- safety boots
- hi-viz safety vest

Other essential equipment:

You will also require a workbench measuring 2.5 x 1.22 meters, constructed from 15mm MDF board or a similar material, featuring support bearers to prevent bowing in the middle. This bench serves as an excellent work surface for the 1.220m x 3.000m sheets.



Safety information

In addition to the standard health and safety regulations practiced in the construction industry, consider the following points:

- Strictly adhere to safety information provided on tubs and containers from Building Plastics Online Ltd. Follow these safety measures:
- Wear safety eye protection when cutting materials, mixing adhesive, cleaning, and preparing the site. Adhere to site regulations.
- Use face masks as necessary.
- Display visible safety signs in areas where hazardous materials are used or to indicate a working zone.
- Ensure proper ventilation in the work area.
- Dispose of waste responsibly following site instructions. Contact Building Plastics Online Ltd for Material Safety Data Sheets (MSDS).
- Apply barrier creams and wear protective gloves when mixing and applying adhesives.
- Maintain a clean and tidy working environment.

Before commencing work, it is imperative to consult the applicable MSDS (Material Safety Data Sheet) for accurate safety guidelines and conduct necessary COSHH (Control of Substances Hazardous to Health) assessments. For additional guidance, feel free to reach out to Building Plastics Online Ltd.

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

Workstation

Establish a designated 'workstation' in close proximity to the cladding area, requiring a minimum space of 4m x 3m for your work bench.

Set up a 'glue-station' adjacent to the workstation for adhesive mixing, ensuring the floor is shielded with cardboard or a similar protective material to prevent adhesive splashes.

Safeguard the surrounding floor, especially if it's a newly laid or existing floor, to avoid any potential damage from spilled adhesive.

The 'glue-station' doubles as a cleaning area for trowels and mixing paddles to prevent the accumulation of excess adhesive on tools. It is crucial to promptly wipe up any adhesive spillage or splashes, as allowing it to set may lead to challenging or irreversible removal.

Setting out

- Begin by thoroughly examining the room slated for cladding, focusing on corners, window reveals, and door entrances. Verify that these areas are devoid of irregularities and construction debris that might hinder the sheets from lying flat after adhesive application and installation.
- Ensure the wall surface is clean before commencing the installation process.
- Establish a datum line that will be pivotal for determining measurements related to ceiling height, sockets, pipes, etc. This line aids in maintaining the sheets' vertical alignment as the installation progresses.
- Set the datum line at approximately eye level on the wall, using a laser for precision.
- Calculate the datum line height from the subfloor, accounting for the specific skirting height where the PVCu sheet's bottom meets the designated floor finish (e.g., sheet PVC flooring, quarry tiles, PVC sit-on skirting). Note: Install quarry tile coving before fitting the wall sheet.
- Take a series of check measurements around the room from the datum to the subfloor to establish the average height of the datum line.
- Transfer the datum height (minus the applicable floor skirting height) onto the face of the PVCu wall sheet. This facilitates subsequent measurements, ensuring alignment with the datum line on the wall when the sheet is installed.
- Once all wall measurements are transferred onto the sheet, plan the layout of the PVCu sheets, optimizing sheet placement to minimize joints in the system.
- If a concealed transition detail is to be used, apply it to the substrate before sheet application

Double sided tape primer application

- Before installing PVC Hygienic wall sheets, use a 50mm paint brush to apply double-sided tape primer to the substrate in three designated locations. These primer lines correspond to the locations where double-sided tapes will be affixed on the reverse side of the sheet – at the top, middle (usually just below datum height), and bottom of the sheet. The double-sided tapes secure the sheet firmly to the substrate during the adhesive curing process. Allow the tape primer to dry to a tacky finish, typically around 10 minutes. Note: The tape primer retains a permanent tackiness and never completely dries out.
- Consider the type of floor finish before priming. For a sheet vinyl floor finish with a self-coved skirting, apply the tape primer (and subsequent double-sided tape) high enough (e.g., minimum 20mm) to accommodate a PVCu 'transition strip' at the sheet's bottom*. In cases where the sheet overlaps a sheet vinyl floor skirting (e.g., in shower areas) installed first, maintain a minimum height of 50mm from the sheet's bottom. Refer to the diagram illustrating the double-sided tape layout on the sheet's back.
- When using two-part (snap-on) internal/external corner profiles, prime the wall corners adequately to cover the installation area for the corners. This should be done concurrently with priming for the double-sided tape, allowing the primer to dry for a tacky surface.
- When the walls are prepared for application, apply double-sided tape to the back of the PVCu corners in four strips of approximately 150mm each down the corner's length. Remove the protective cover from the tape and affix the corner to the substrate.
- If a PVCu 'transition strip' is to be later installed at the sheet's bottom (where wall sheets meet the sheet vinyl floor skirting), the corner profile's 'back section' must be 20mm shorter than the overall length.

* Note: The transition trim should never be used in wet areas such as showers and wet room adaptations.

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

Installation procedure

After completing all necessary preparations, ensuring walls are clean and free from dust, and eliminating any potential contamination, such as grease in kitchen and shower areas, you are now prepared to commence the installation of Hygienic PVCu wall sheets.

- Place the sheet on the workbench, carefully inspecting for any damage. On the front face (with the protective film), mark your datum with a biro pen, being cautious not to press too hard to avoid damaging the surface.
- Take measurements from the wall and transfer them to the sheet. Cut the sheet with proper support to minimize the risk of stress in the material.
- After the final cutting, use an adjustable block plane to smooth the edges and remove any burrs, leaving a clean finish.
- Dry fit the sheet to the substrate to check your work, ensuring a 2-3mm expansion joint at all abutments and pipe work.
- Lay the sheet face-down on the workbench after finalizing the required wall finish detail, and clean the back of the sheet.
- Apply double-sided tapes at the top, middle, and bottom of the sheet to correspond with the primer (DO NOT remove the tapes' protective paper at this time).

Applying adhesive

- Prioritize safety by wearing appropriate safety equipment when handling materials.
- For two-part adhesives, meticulously mix parts A and B using a large mixing drill and paddle for a minimum of 3 minutes until an even color is achieved. Note that adhesive must be mechanically mixed.
- Apply the adhesive to the back of the sheet with the recommended 5mm x 5mm notched trowel. The adhesive should be applied approximately 15mm from the edge of the sheet (where joint strips are to be fitted) and right up to the double-sided tapes.
- The working time of the two-part adhesive is approximately 40 minutes, contingent on the ambient temperature of the room.
- Hold the trowel in a way that ensures the adhesive is applied evenly, replicating the trowel notches to the same depth over the sheet.

Health and Safety Advice

Before utilizing this adhesive, individuals should consult the MSDS (Material Safety Data Sheet) for accurate safety guidance and conduct a COSHH (Control of Substances Hazardous to Health) assessment and risk assessment. Always wear suitable PPE (Personal Protective Equipment) and RPE (Respiratory Protective Equipment) when handling adhesives, and ensure the area is well-ventilated. In the event of contact with eyes or skin, promptly rinse with plenty of water and seek medical advice

Fitting Hygienic PVC sheets

- After applying the adhesive, carefully peel off the protective film from the double-sided tape and dispose of it in a rubbish container. Lift the sheet and position it in the designated location, making sure the datum line on the sheet aligns with the datum line on the wall.
- Once secured to the substrate, exert pressure across the entire sheet surface to ensure the adhesive is evenly transferred and fully bonded to the substrate. This is typically achieved using a hand roller or a timber block covered with a protective material to prevent surface damage.
- Failure to ensure a thorough transfer of adhesive to the substrate may lead to sheet debonding.
- Clean any adhesive residue thoroughly from the sheet's surface, joint trims, and other adjacent areas. This cleaning should be done promptly before the adhesive sets.

Fitting two part PVCu joint trims

- Once the sheet is correctly positioned, insert the 'back' section of the two-part PVCu vertical joint strip. Slide it behind the leading edge of the sheet until it is approximately 3mm from the central spine.
- If a PVCu 'transition strip' is intended for use to form a joint between the sheet and the sheet vinyl floor finish, cut back the back part of the vertical strip by 20mm. This allows the later installation of the horizontal transition strip at the sheet's base. To determine the correct length of the vertical section, use a small piece of transition strip as a template and fit it to the bottom of the sheet.
- When installing the next sheet, ensure proper alignment of the datum lines, and then place the sheet on top of the back section of the PVCu joint strip, positioning it approximately 3mm from the central spine.
- Maintain a 2-3 mm gap on either side of the central spine to provide sufficient space for the sheets to expand and contract beneath the 'front' face of the two-part (snap-on) cover trim.
- Repeat this process throughout the installation and conclude by fitting the 'front' face of the two-part (snap-on) cover trim, cut to the appropriate length. Note: The 'front' face cover trims can be installed progressively or left until all sheets have been installed.
- Initially position the 'front' face joint strip covers by applying hand pressure. Fully secure them in place by tapping with a rubber mallet or a small hammer and wooden block

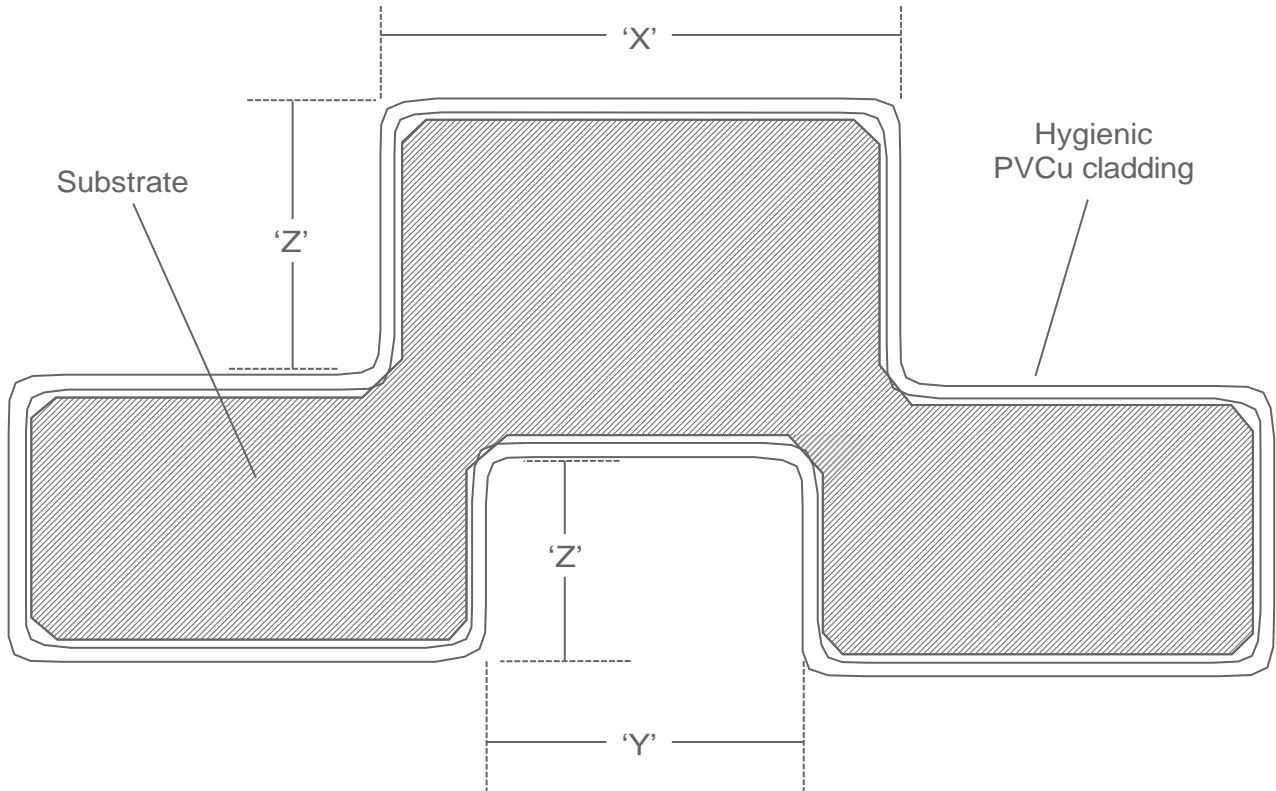
Fitting single part PVCU joint trims

- The process for the single part joint strip is similar to the two-part trim, with a small modification during sheet preparation. Apply a small chamfer to the edges of the sheet to facilitate easier fitting of the single part joint strip. The joint trim features a moisture-resistant gasket seal on the inner edges, which could be damaged if forced onto the sheet.
- After installing the first sheet, fit the single part joint strip onto the 'leading' edge that meets the next sheet. Once the next sheet is prepared with adhesive applied, apply a bead of sanitary sealant alongside the joint strip before installing the subsequent sheet. Knock the joint strip over the second sheet edge to achieve a sealed joint detail. Applying sanitary sealant to the back edge of the joint strip prevents the strip from being moved later, ensuring the sheet edge remains sealed and concealed

Thermoformed corner detail

Building Plastics Online Ltd recommends utilizing a thermoformed internal/external corner detail whenever feasible during sheet installation. This involves heating the sheet on a thermoformer unit and manually shaping it to achieve the desired angle.

Hygienic PVC wall sheets thermoformed corners



'X' - External to External corners = + 8mm

'Y' - Internal to Internal corners = -8mm

'Z' - Internal to External / or External to Internal corners - Is the same measurement as substrate

All measurements to be marked on 'face' of PVCu sheets and taken from outside of previous corner



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