

Altro PVCu wall sheet fitting guide

Altro Whiterock™ Digiclad

September 2020

For detailed instructions on installing Altro PVCu wall sheets, please refer to the Altro PVCu wall system fitting guide.

Description

Altro Whiterock Digiclad is created by reproducing a photographic image or vector art and printed onto Altro Whiterock wall sheet, with consistent photographic quality. Hard coat technology provides scratch resistant properties for added surface protection making Altro Whiterock Digiclad ideal for areas where durability is important. Altro Whiterock PVCu sheets are printed with UV cured ink for areas requiring bespoke decorative designs, logos, and signage.

Altro Whiterock Digiclad extruded sheets are hard coated with an anti-reflective coating for added scratch resistance. It is ideal for applications requiring a hygienic easy-to-clean, almost maintenance free wall finish, which conforms to UK hygiene requirements.

- Can be printed onto sheets from the Altro Whiterock Satins or Altro Whiterock Chameleon ranges.
- Surface finish – either Matt or Gloss.
- Thickness: 2.5mm
- Sheet size: 2500 x 1220 mm or 3000 x 1220 mm sheets can be CNC routed and cut to suit setting out and jointing configurations – Altro must be informed before ordering which type of installation is being planned
 - For installations using a joint strip, sheets are not trimmed before delivery
 - For installations where a butt joint is to be used, the sheets have been trimmed by approximately 10 mm around all edges to ensure the sheets are square and the edges are straight and true
 - For small designs, the sheets are trimmed to the size of the design
- Weight: 3.6 kg per m²
- Maximum service temp: 60°C

Fixing

The sheets can be fixed directly to most dry substrates depending on its surface suitability, using either:

1. AltroFix W139 all over adhesive using the relevant trowel notch to match substrate
2. AltroFix W157 all over adhesive (substrate surfaces to be of a high standard and porous) using the relevant trowel notch to match substrate

Cutting

A Festool and pressure guide is the best method, however a jigsaw fitted with a fine tooth metal cutting blade or fine toothed handsaw can also be used for more intricate sections to be cut. Care should be taken to ensure the print is protected at all stages of the fitting process.

Jointing

There are two main jointing methods for Altro Whiterock Digiclad;

1. Trims - High impact colour co-ordinating printed extruded PVCu trims – either single part trim for secure environments or 2 part “H” trim and start and edge trims. All trims incorporate a moisture resistant gasket seal on the inner edges.
2. Butt jointing - A flush seamless joint where the two square edges of the Altro Whiterock Digiclad sheets are butted together – If more than 4 sheets are installed in a continuous design please call Altro technical services to discuss expansion detailing

It is not recommended that Altro Whiterock Digiclad is jointed with a hot weld.

Internal / external corners

The corners of Altro WhiteRock Digiclad cannot be thermoformed if the gloss hard coating has been applied, in these circumstances extra bleed is provided to the sheets in these areas enabling internal corners to be scribed and butted into the corner then sealed with silicone sealant. The external corners have no bleed provided and are fitted to the edge of the external corner, a printed 20 mm x 20 mm (A839/20) trim is supplied to fit over the external corner, make sure the printed trim aligns correctly to the existing printed sheets.

Installation

Surface Preparation

All surfaces must be smooth, sound, dry and free of contamination. If necessary, the walls should be cleaned down prior to the Altro wall sheet installation, and primed using 10 parts water to 1 part PVA - do not use Altro W165. See Altro PVCu wall system fitting guide on substrate suitability and preparation or contact Altro technical services.

The working environment must also be clean and dust free. Failure to comply with these conditions will reduce the bond strength between adhesive and substrate, and may cause the sheets to de-bond.

- All substrates to be dry to 16% WME (Wood Moisture Equivalent) on Protimeter SurveyMaster equipment.
- All loose flaking paint and dust to be removed.
- Friable surfaces to be removed or made sound using proprietary surface treatment as advised by Altro.
- All surfaces to be free from grease. Ceramic tiles must be thoroughly cleaned, degreased, rinsed and left to dry.
- Loose tiles to be removed and the area made good using Ardurapide 45 or 46 rapid repair mortar, sand and cement with Unibond mix (if drying time permits), Hardwall gypsum render coat or a comparable thickness plywood infill.
- Depressions in the substrate should be filled with Ardurapide 45 or 46 rapid repair mortar, sand and cement with Unibond 10 parts water to 1 part PVA mix applied using brush or roller for dusty or friable surfaces, or Hardwall gypsum render coat if drying time permits.
- All electrical switches, power points etc. should be in a first fix state where possible.
- All electrical equipment should only be moved or altered by a qualified electrician.
- If possible, plumbing and pipework should be removed to be at first fix state and tails left protruding from the substrate. Sheets 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 sheets around these pipes.
- All pipes, screw fixings, bolts etc. fixed through the sheet should have minimum 3mm expansion gaps and be sealed using Altro sanitary sealant.

Selection of datum line height

- When surface preparation has been completed a datum line must be installed. The datum line is used for the calculation of measurements to ceiling height, sockets and pipes etc. and to ensure the sheets are plum as the installation proceeds. The datum line should be installed at approximately eye level on the wall and should be done with a laser for accuracy. Selection of the datum line is very important, floor levels can be uneven etc.
- Altro WhiteRock Digiclad prints can sometimes run across many sheets. Each printed sheet must match and correspond with the next one, any error in alignment will be immediately visible. When the first sheet is installed to the selected datum height all the corresponding sheets in the installation will follow this initial sheet so there is no room for discrepancies. Any discrepancies over the floor or ceiling finished heights could show as gaps, therefore measurements must be taken before the first sheet is installed to allow for any trimming of these sheets, which may have to be carried out at the top and bottom if the print is across many sheets. A series of check measurements should be taken where the Altro WhiteRock Digiclad is to be installed in the room from datum to subfloor or (ceiling if required) and ensure that when choosing a datum height it captures any runs or falls.
- Once all measurements have been taken from the wall, they can then be transferred on to the datum on the wall sheet. When the sheet is finally fitted to the wall, the datum line on the Altro WhiteRock Digiclad sheet edges must line up with the datum line on the wall. After calculating and installing the datum line to the relevant substrate, you must then plan the layout of the Altro WhiteRock Digiclad print. This will ensure the best layout of the sheets.

Setting out / Sheet Positioning

- When the printed image is across more than one sheet it is important time and attention is taken to ensure all the sheets align correctly to ensure the print is correct in appearance once installed. Generally an Altro Whiterock Digiclad sheet will have what is known as bleed on the end sheets, the bleed basically provides approximately 50mm extra length to each side of the overall supplied length dimension, this allows a small amount of lateral adjustment when positioning the sheet. When setting out a good starting point for the first sheet to be installed can be the centre of the proposed substrate; a vertical plumb line is placed at the centre and measurements can be worked out from there ensuring the end sheets of the print image can be cut / scribed in to fit and not fall short.
- When using the printed two part trim as part of an Altro Whiterock Digiclad installation; the middle bar of the base plate is 6mm wide, each leading edge of an Altro Whiterock Digiclad sheet will butt against the 6mm bar so when working out sheet positioning each time a trim is used 6mm must be added.
- If using a single part trim a gap of 6mm between sheets needs to be factored in when working out the sheet positioning.
- If more than 4 sheets are butt jointed in a continuous design please call Altro technical services to discuss expansion detailing.
- Prior to the installation of the Altro Whiterock sheets, Altro W165 tape primer should be applied in three locations to the substrate with a 50mm paint brush. The primer lines should correspond to the double sided tapes which will subsequently be fitted on the reverse side of the sheet - at the top, the middle (normally just below datum height) and at the bottom of the sheet. The double sided tapes hold the sheet firmly to the substrate whilst the AltroFix W139 adhesive cures. Allow the tape primer to dry to a tacky finish, (approximately 10 minutes). Note: The tape primer remains permanently tacky and never dries out totally.

Altro Whiterock Digiclad Sheet Preparation

- It is important to protect the printed face of the Altro Whiterock Digiclad sheet at all times, the protective foil should be left in place during installation where possible. When creating the datum line it is possible to remove a small area of protective foil and replace with a section of masking tape (ensure the tape doesn't permanently bond) allowing the datum line to be marked onto it rather than the face of the print. The edges of an Altro Whiterock Digiclad sheet will have been routed to ensure the squareness of each edge, these front edges of the sheets must not be chamfered.

- Place sheet on the workbench and inspect for any damage. Lightly mark your datum with a biro pen on the masking tape, taking care not to press too hard, thus damaging the surface of the sheet.
- Take measurements from the substrate, and then transfer these to the sheet. If necessary cut the sheet ensuring that the sheet is well supported to reduce any risk of stress in the material when being cut.
- Offer the sheet to the substrate to check your work (dry fitting), ensuring you have a 2-3mm expansion joint at all abutments and pipe work.
- When the sheet has finally been made to suit, lay this face-down on the workbench and clean the back of the sheet. If there is any wrap round of the protective foil carefully cut away. Apply double sided tapes at the top, middle and bottom of the sheet - to correspond with the Altro W165 primer (DO NOT remove the tapes' protective paper at this time).

Applying AltroFix adhesive

- Wear appropriate safety equipment before handling materials.
- For two-part AltroFix adhesives carefully mix parts A and B together using a large mixing drill and paddle for a minimum of 3 minutes, until an even colour is acquired. Note: Adhesive must be mechanically mixed.
- Apply the adhesive to the back of the sheet, using 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 AltroFix W139 adhesive is approximately 40 minutes depending on the ambient temperature of the room.
- The trowel must be held so that the adhesive is applied to an even finish, and the trowel notches are replicated to the same depth over the sheet.

Health and Safety Advice

Before using any adhesive, users must refer to the SDS (Safety Data Sheet) for correct safety advice and carry out a COSHH (Control of Substances Hazardous to Health) assessment and risk assessment.

Always wear appropriate PPE (Personal Protective Equipment) and RPE (Respiratory Protective Equipment) when handling adhesives and ensure the area is adequately ventilated.

In the case of contact with eyes or skin, rinse immediately with plenty of water and seek medical advice.

Fitting the Altro Whiterock Digiclad Sheet

- After applying the adhesive, carefully remove the double sided tapes protective film and place into a rubbish container. Lift the sheet and install to the required location, ensuring the datum line on the sheet corresponds to the datum line on the wall.
- Once fitted to the substrate, apply pressure to the whole of the sheet face to ensure the adhesive has been transferred and will be fully bonded to the substrate (this is normally done with a hand roller or block of timber covered with a material to prevent the surface being damaged).
- Failure to ensure a good transfer of adhesive to the substrate could result in the sheet de-bonding.
- Curing time of the adhesive is approximately 4-6 hours depending on the ambient temperature.
- Ensure any adhesive residue is thoroughly cleaned off the surface of the sheet or joint trims (and other adjacent surfaces). This must be done immediately, before the adhesive sets.

Fitting the two part PVCu trim (A831)

- Once the first sheet is in position, the back section of the two-part PVCu vertical joint strip should be fitted.
- This should be inserted behind the leading edge of the sheet until the central bar presses against the edge of the fitted sheet. It is essential to the success of the installation that this is carried out as the cover of the two part trim has been printed so when fitted correctly to the central bar the continuity of the print is carried across the two Altro Whiterock Digiclad sheets either side of the trim.
- Before cutting the trim to length, the finishing detail between the flooring and wall sheets will need to be identified. If a PVCu transition strip is to be used to create a joint between the panel and the sheet vinyl floor finish, the back part of the vertical strip should be cut back (20 mm) to allow the horizontal transition strip to be fitted at the base of the panel (at a later stage). To find the correct length of the vertical section required, use a small piece of transition strip (as a template) and fit this to the bottom of the sheet.
- Once the trim has been cut to length it is recommended, before sliding this back section behind the panel, a small bead of silicone is applied to the back of the trim to prevent movement once the installation is complete.
- When fitting the next sheet, ensure the datum lines are aligned correctly and then position the sheet on top of the back section of the base plate and firmly against the middle bar.

- Depending on where the first Altro Whiterock Digiclad sheet was positioned, if begun from the middle and worked outwards the end sheets should now require either scribing or measuring to fit, once all sheets are in position the cover trims can then be cut to length and fitted ensuring correct positioning and matching to the printed sheets.
- The front face joint strip covers should initially be positioned by hand pressure. They can then be fully located by tapping with a rubber mallet or small hammer and wooden block.

Fitting the single part PVCu joint trim (G831)

- The process of the single part joint strip is much the same as the two-part trim except, during the preparation of the sheet a small chamfer will need to be applied to the edges of the sheet. This will enable the single part joint strip to be fitted more easily to the sheet. The joint trim has a moisture resistant gasket seal on the inner edges which could be damaged if forced onto the sheet.
- Once the first sheet has been installed, the single part joint strip is fitted onto the leading edge which meets the next sheet. If required, cut the trim height to match sheet height ensuring the print on the trim aligns with the print on the sheet, this may require the top and bottom of the trim being cut to suit.
- Fit the single part trim by pushing onto the leading edge of the first sheet until all the middle spine of the trim rests against this edge.
- After the next sheet has been prepared and adhesive applied, a bead of Altro sanitary sealant should be applied alongside the joint strip prior to the next sheet being installed.
- Install the next sheet as close to the fitted single part trim as possible ensuring the datum line is lined up and press out the sheet.
- Gently tap the single part trim back so it slides over the edge of the second sheet, the single part trim is now fitted over both sheet edges and can be aligned correctly to match the print on both sheets by gently tapping into position until satisfied.
- By applying Altro sanitary sealant to the back edge of the joint strip, it prevents the strip being moved at a later stage and the sheet edge becoming visible and open.

Fitting the PVCu start and edge joint trim (A833)

- Altro A833 start and edge trim is a two-part (snap-on) PVCu trim, which is generally used to close any exposed edges (i.e. top or side edges) of the Altro PVCu sheet. This is usually fitted when the sheet is installed lower than the ceiling line, or when the sheet terminates along a wall before reaching a corner or abutment.
- Prior to fixing the start & edge trim to the exposed edge of the sheet, a bead of Altro sanitary sealant should be applied to the substrate (adjacent to the sheet). When the back section of the two-part PVCu start & edge trim is installed it beds into the sealant and maintains a tight hold to the substrate.

Other trim configurations are available – please check with Altro technical services for advice.

Butt joining the sheets

- Preparation for a Altro Whiterock Digiclad butt joint is very similar to the preparation for a welded joint using the Double sided foam tape A915 but without the need to leave a gap for welding. (Please refer to Altro PVCu wall sheet fitting guide).
- The first sheet is installed the same way as a welded sheet taking care to protect the printed face.
- Once the first sheet is in position offer up the next sheet and check the leading edge is square and the print aligns correctly.
- Prepare the next sheet for installation and ensure datum lines align, the sheet edges butt tightly together with the print matched across both sheets.
- Hold the second sheet in position whilst a knife is run down the non-leading sheet edge cutting through the A915 foam tape protective foil ensuring not to cut completely through the tape.
- Check that the sheet is still in the correct position and butted tightly against the first sheet, lift the non-leading edge, remove half of the protective foil from the tape, and check again for correct positioning. When satisfied, press non leading edge onto foam tape, press the sheet to the substrate but stay at least 250 mm away from the butt joint.
- Lift the butt joint edge and remove protective foil from the tape and gently press sheet onto foam tape.
- Fully press out sheet to substrate.

For further information or technical advice

tel: 01462 707600

email: enquiries@altro.com or www.altro.com