



INSTALLATION GUIDE

LiteClad / NuClad — pre-painted steel cladding profiles and metal-faced EPS panels

Roll-formed 0.5 mm pre-painted steel cladding profiles — Standing Seam, IBR Wide, Corrugated and ClipClad — laid as a bare weatherskin over a separate FRCell EPS insulation layer, plus two factory-laminated products: the DutchClad wall panel and the NuClad steel-faced board.

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lite-cladding

Issued for use

BEFORE YOU START

The supporting structure must be complete, aligned and signed off by the engineer BEFORE any cladding arrives. Purlins, girts or sub-girts must be in the plane, at the centres shown on the engineer's framing drawing (those centres are a design output from the wind and load case, not a rule of thumb), and straight enough that the finished face will not read as a wave: check with a stringline over 5 m and correct anything worse than about 5 mm out of plane before you start, because a 0.5 mm pre-painted face telegraphs every high spot. Steel members must be of a gauge the specified self-drilling screw can drill and grip — confirm that with the engineer, not on site with a scrap offcut. Masonry or concrete substrates for an over-clad must be sound, dry and free of loose plaster, and any rail or bracket anchoring back through the insulation must follow the engineer's fixing layout. If a drained cavity or a breather membrane is part of the design, it must be on the drawing — what is not drawn will not be built. Before starting, confirm which construction has been delivered: LOOSE sheeting plus separate EPS sheets (two products to lay), or FACTORY-LAMINATED panels (one product). The sequence, the screw lengths and the handling all differ.

TOOLS

- Cordless screwdriver with a depth-limiting clutch, or a screw gun with a depth stop — an over-driven wafer screw crushes the EPS and dimples the face
- Nibbler, or a fine-tooth metal-cutting blade or hand shears for the steel. No angle grinder on pre-painted steel
- Hot-wire cutter or fine-tooth handsaw for the EPS sheets
- Stringline, chalk line, spirit level and a long straightedge
- Tape, square, and a set-out rod for the course pitch
- Butyl tape (Neo25, 3 x 25 mm) and a roller
- Soft brush and clean rags for swarf removal
- Rivet gun and sealant gun — low-modulus neutral-cure silicone only
- Touch-up paint matched to the RAL number
- Fall arrest for roof work, gloves and eye protection for swarf, and a fire extinguisher wherever hot work is happening within reach of EPS

SEQUENCE

1. Receive, check and store

Check the delivery against the order before the truck leaves. Confirm the profile, cover width, RAL number and — critically — the construction (loose sheeting plus separate EPS, or factory-laminated panel), the core material (FRCel EPS or Rockwool) and the core thickness. If a fire class is being claimed on this project, confirm the EPS delivered is FRCel and not the LiteCel grade: the B-s1,d0 class belongs to FRCel. Store sheets flat, off the ground, on level bearers, under cover and out of standing water — water trapped between pre-painted sheets stains them permanently. Keep the EPS out of the sun and away from hot work, fuel and solvent.

CHECK BEFORE MOVING ON

- Profile, cover width, RAL and length match the order
- Construction is what the design assumed — loose or laminated
- Core is FRCel where a fire class is claimed, and the core thickness is the specified one
- Fasteners are the specified type and length: 12 x 65 mm Class 3 ZAP wafer for loose ClipClad roof; 12 x 85 mm for laminated DutchClad wall; 14 x 22 mm Class 4 hex-head stitching screw with EPDM washer for flashings
- Neo25 butyl tape, starting clips, flashings and gutters are all on site before cladding starts

2. Set out

Establish a true datum and work off it, not off the building. Mark the course pitch (DutchClad) or the sheet lines (the vertical profiles) with a chalk line on the framing, and set the first line dead level or dead plumb — every error from here is cumulative and lands on the last sheet. Take the cover width from a MEASURED sample sheet: the tolerance is +/- 2 mm, and over a 30 m elevation that is most of a sheet of drift. Multiply the measured cover out across the full elevation before the first fixing goes in. Plan the sheet lengths so no lap falls in a stupid place, and lay so the side-laps face away from the prevailing wind and rain.

CHECK BEFORE MOVING ON

- Datum line level or plumb, checked with an instrument, not by eye
- Cover width taken from a real sheet and multiplied out across the full elevation before fixing starts
- Sheet lengths and lap positions agreed; no lap left over an opening

3. Lay the insulation (loose-sheeting construction only)

Lay the FRCel EPS sheets (or Rockwool slabs) continuously over the framing per the layout, butting them tight. Every gap between boards is a thermal bridge you have paid for and not received. Cut with a hot wire or a fine-tooth saw, not by breaking. Do not walk on unsupported EPS. Get the steel over it the same day if you can: the EPS has no weather integrity and no UV resistance, and left open it chinks, gets wet and gets damaged. If the design includes a vapour control layer or a breather membrane, it goes in now, in the position shown on the drawing.

If factory-laminated panels have been delivered, skip this step — the core is already on the panel.

CHECK BEFORE MOVING ON

- Boards butted tight — no gaps, no crushed edges
- Insulation continuous across the whole area, including behind rails and at every junction
- Nothing solvent-based has touched the foam — no bitumen primer, no solvent mastic, no tar
- EPS covered by the steel before the end of the day, or protected overnight

4. Fix the starter and the first course

For DutchClad, fit the starting clip (or the 0.80 mm Z200 starting track) at the base, level, and set the bottom course into it — that clip is what makes the bottom edge straight and the fixing hidden. For the vertical profiles, set the first sheet plumb and fix it before anything else touches it. Check the first course against the datum with a level, then the second course against the first. The first two courses set the whole elevation: if the first sheet is 5 mm out, the twentieth is 100 mm out and the wall comes off.

CHECK BEFORE MOVING ON

- Starting clip or track fixed level along its whole length
- First sheet level or plumb, verified with an instrument
- The interlock of the first course closes properly and is not distorted

5. Fix the cladding

Drive the specified self-drilling screw at every crossing of a structural member. For the DutchClad wall, Technopol's typical rule is one screw at each interlock crossing, at roughly a 600 mm vertical pitch — but THE ENGINEER'S FASTENER SCHEDULE IS THE AUTHORITY ON SITE. Wind uplift at roof edges, corners and verges calls for more fixings than the field of the roof.

Drive the screw square and to depth. A wafer screw seats in the interlock and is then covered by the next sheet: over-driven, it crushes the interlock and the next sheet will not close; under-driven, it holds the next sheet off and you get a visible ripple. Use the clutch. Do not use an impact driver flat out.

On the loose-sheeting roof, the ClipClad screw goes through the UPTURNED RIB into the purlin or sub-girt, concealed by the adjacent sheet. On IBR Wide and Corrugated, the roof screw goes through the CROWN of the rib with its sealing washer, never through the pan — a screw in the pan is a leak on day one.

Brush every bit of drilling swarf off the painted face as you go, the same day. Iron filings left on pre-painted steel rust into the paint film and stain it permanently.

CHECK BEFORE MOVING ON

- Fastener type, length and centres match the engineer's schedule — not the last job's
- Extra fixings at edges, corners and verges exactly as scheduled
- Screws square and seated: no crushed interlocks, no proud heads, no dimpled face
- Roof screws through the rib crown, washer compressed but not squashed flat
- Swarf brushed off the whole face before the end of every day
- Sheets pulling to the line — restring and check every fifth sheet, not at the end

6. Laps and pitch-sensitive detailing

The ClipClad hidden-fix lap is rated for 8 degrees minimum pitch. Below that — down to about 3 degrees, which is the floor — continuous Neo25 butyl sealing tape (3 x 25 mm) is mandatory at EVERY sheet-to-sheet and sheet-to-flashing lap, and the full flashing detail at ridge, gable, eaves and every penetration must be executed exactly. Below 8 degrees the taped detail IS the waterproofing; it is not a place for site judgement. Run the tape continuously, press it home, do not stretch it. Lap generously and always in the direction of flow.

CHECK BEFORE MOVING ON

- Actual roof pitch measured on site, not assumed from the drawing
- Below 8 degrees: butyl tape continuous at every lap — no breaks, no stretched sections
- End-laps run downslope; side-laps face away from the prevailing weather

7. Flashings, closures and gutters — close every foam edge

Every eaves, verge, gable, base, corner, reveal and penetration gets its Chromadek flashing or closure: 0.80 mm Z200 for ridge caps and bases, gable barge caps and bases, flute and Z closures, wall and back flashings, the two-piece skirting cleat and cover, window and door head/sill/reveal flashings, and pipe and soaker flashings. Stitch them to the cladding with 14 x 22 mm Class 4 ZAP hex-head stitching screws with the bonded EPDM washer. Boxed gutters (0.50 mm Chromadek, 185 x 230 mm typical) come in 3 200 mm sections — splice and seal on site and fit the matching end caps.

The rule that matters: NO EPS EDGE IS LEFT VISIBLE OR REACHABLE. Not at the eaves, not at the verge, not at a cut opening, not behind a downpipe. Walk the whole building at the end and look for foam.

CHECK BEFORE MOVING ON

- Every flashing type on the schedule is actually fitted — count them against the shop drawing
- Stitching screws seated with the EPDM washer compressed, not chewed
- Sealant is low-modulus neutral-cure silicone — no solvent-borne mastic anywhere near the foam
- Zero exposed EPS anywhere on the building, at any height, including behind gutters and inside reveals
- Gutters laid to fall, joints sealed, end caps on

8. Clean down and hand over

Remove the protective film soon after fixing — left on through a hot season it bakes onto the paint and takes the finish with it. Brush the whole face down, remove all swarf and offcuts, and touch up any scratch that goes through to the metal with the RAL-matched paint: a scratch through the coating is where corrosion starts, and on a coastal site it starts fast. Photograph the fixings and the flashings before the scaffold comes down. Hand over the fastener schedule, the RAL number, the core material and thickness, and the delivery notes.

CHECK BEFORE MOVING ON

- Protective film off, whole face washed down
- Every through-coating scratch touched up
- Offcuts and EPS scrap removed from the roof, gutters and cavity — EPS floats and blocks gutters
- Photographic record of fixings and flashings taken before the scaffold drops

Loose ClipClad roof sheeting	12 x 65 mm Class 3 ZAP self-drilling wafer-head screw, driven through the upturned rib into the purlin or sub-girt, concealed by the adjacent sheet
Laminated DutchClad wall panel	12 x 85 mm Class 3 ZAP self-drilling wafer-head screw through the interlock, concealed by the next course. Technopol's typical rule: one screw at every crossing of a structural member, approximately 600 mm vertical pitch — the engineer's schedule sets the final centres
IBR Wide / Corrugated	Roof screw through the rib CROWN with a sealing washer — never through the pan. Head is visible
Standing Seam	Concealed holding clips fixed to the purlin or rail; sheets seamed in over the clips. No fastener penetrates the weather face
Flashings and closures	14 x 22 mm Class 4 ZAP hex-head stitching screw with a bonded EPDM washer; 12 x 25 mm Class 4 wafer screw with seal for short penetrations
Laps and closures	Neo25 closed-cell butyl sealing tape, 3 x 25 mm section, continuous — mandatory at every lap on roofs below 8 degrees
Bottom course (DutchClad)	Hidden-fix DutchClad starting clip, or the 0.80 mm Z200 starting track
Severe coastal exposure	Upgrade to 304 stainless fasteners
Sealant	Low-modulus neutral-cure silicone, non-staining, colour-matched. Never a solvent-borne mastic near EPS
Design authority	Fastener CENTRES and the pull-out and shear check are the project engineer's, verified against the actual framing

WHAT ACTUALLY GOES WRONG ON SITE

- Assuming the profile insulates. In the loose-sheeting construction the steel has no core at all. If nobody laid the EPS sheets, the building has a painted skin and no insulation — and it will pass a visual inspection.
- Over-driving the wafer screw. The clutch is not optional. An over-driven screw crushes the interlock, the next sheet will not close over it, and the ripple runs down the whole elevation — the only fix is to take it off.
- Leaving drilling swarf on the painted face overnight. Iron filings rust into the paint film and stain it permanently. Brush down at the end of every day, not at the end of the job.
- Screwing through the pan on IBR or Corrugated instead of through the rib crown. That is a leak, and it leaks in the first storm.
- Laying a hidden-fix ClipClad roof below 8 degrees without continuous butyl tape at every lap. Below that pitch the taped detail is the waterproofing, and without it the roof will not shed water.
- Leaving an EPS edge open at an eaves, verge, reveal or penetration. UV destroys it, rodents and birds burrow into it, and in an agricultural building that is a direct biosecurity failure.
- Cutting the pre-painted steel with an angle grinder. It burns the coating along the cut, throws hot swarf into the paint and into the EPS, and leaves a rust line that shows within a season. Nibbler or fine-tooth blade only.
- Using a solvent-based sealant, bitumen primer or tar product anywhere near the foam. The EPS dissolves silently at the contact face and the panel loses its core where nobody can see it.
- Setting out from a catalogue cover width instead of a measured sheet. The tolerance is +/- 2 mm; over a long elevation that is a full sheet of drift and a re-clad. Measure a delivered sheet and multiply it out first.

- Ordering LiteCel (non-fire-retardant) EPS on a job where a B-s1,d0 class has been specified. The class belongs to FRCel. Check the delivery note.
- Using the same fastener spacing at the roof corners and verges as in the field. Uplift is highest exactly where people skimp — fix to the engineer's schedule.
- Walking on unsupported EPS boards during the loose-sheeting stage. You go through, and the board is scrap.
- Leaving EPS offcuts in the gutters and behind the cladding. They float, they block the gutter, and they are fuel.

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