

A-align Specifications

Concealed Fix – Bevelback Weatherboard



- ✔ Nail-free Boardface
- ✔ High Moisture Protection
- ✔ Fast Install & Less Waste
- ✔ Primed & Undercoated
- ✔ Superior Face Finish
- ✔ System Solution
- ✔ From Renewable Wood
- ✔ **NZBC** Compliant
- ✔ **BRANZ** Appraised



Scope

The A-lign Concealed Fix timber cladding cavity system can be used for the cladding specification of light commercial and domestic buildings where the:

- Building is within the scope of NZS 3604 timber framed buildings and E2/AS1.
- Building height does not exceed 10 metres.
- Building is situated NZS 3604 Building Wind Zones up to, and including 'Extra High'.
- Cladding solution uses the A-lign accessories and Quickflash flashings given in this specification.
- Building has an E2/AS1 risk score of 0-20.

Note: The A-lign Bevelback Weatherboard Cavity Cladding Solution can also be used as a wall cladding solution for buildings within the following scope:

- the scope limitations of NZS 3604 Clause 1.1.2; and,
- constructed with timber framing complying with the NZBC; and,
- up to 3 storeys with a maximum height from ground to highest point internal of the roof of 10m; and,
- with floor plan area limited only by seismic and structural control joints; and,
- situated in specific design wind pressures up to a maximum design differential ultimate limit state (ULS) of 2.5 kPa.

These specifications:

- Cover the installation of A-lign Concealed Fix bevelback weatherboards as a complete cladding solution following the details given in this document and associated CAD files.
- Must be made specific to each building project by including only those clauses that apply and omitting those that do not apply.
- Are written as direct instructions to the contractor (it does not make use of the words 'should' or 'shall') and this format must be adhered to.

Note: The success of the cladding solution is dependent on the stability and accuracy of the framing which must meet the minimum standards set by NZS 3604. Accurate face alignment of the profiled Concealed Fix structural cavity batten both in the horizontal and vertical planes is of critical importance.



Renewable natural pine

The NZ radiata pine used in the A-lign timber cladding system solution is from renewable and sustainable plantation resources.

It is a remarkably versatile timber renowned for exceptional machining properties, durability and lightness.

Once finger-jointed they form products that exceed the pine's original physical and structural characteristics by over 400%.

This makes it a brilliant natural 'environmentally friendly' construction choice over alternative building materials made from non-renewable fossil fuels.



Brnz Impact Test

Impact resistance is a key criteria for cladding materials being used in the construction of schools and similar light commercial buildings not exceeding 10 metres in height. To meet regulatory and specifier requirements, A-lign Concealed Fix timber weatherboard (18mm thick) were subjected to hard body high impact resistance tests performed by BRANZ. High density fibre cement weatherboard (16mm thick) were also included in these tests.

A-lign Concealed Fix timber weatherboard performed significantly better than the fibre cement weatherboard and, although the level of damage caused to both was small, the fibre cement weatherboard had a greater depth of ball indentation.

Independently assessed

A BRANZ Appraisal is a comprehensive independent assessment of building products and systems for fitness for purpose and Building Code compliance.

The A-lign Concealed Fix timber cladding system solution has been vigorously assessed from manufacturing processes, through to fitness for purpose, durability, weather-tightness performance and structural capability over a drained and vented cavity.

— Specifications for exterior cladding

1.0 Before application of the cladding

Before beginning installation of the A-lign Concealed Fix timber cladding system solution ensure that:

- The framing complies with the requirements of NZS 3604 timber framed buildings.
- The framing is straight and within the tolerances allowed by Table 2.1 Tolerances of NZS 3604.
- The moisture content of the framing timber does not exceed 20%.
- Additional studs are included at internal corners.
- The wall underlay complies with the requirements of Table 23 E2/AS1 and is installed in accordance with Section 5.0-5.4 of this specification.
- Window and meter box openings are framed out to give a 7.5mm minimum clearance between the reveal or window frame and the trimmed opening (5mm minimum finished clearance when window installed).

2.0 A-lign Concealed Fix weatherboard

2.1 Bevelback Concealed Fix weatherboard sizes

- 142 x 18mm
- 187 x 18mm

Lengths 6.1m and 7.2m

2.2 A-lign timber accessories

Note: A-lign accessories are finger-jointed, treated to H3.1 and primed and undercoated. The A-lign Concealed Fix structural cavity batten is treated but not painted.

- A-lign pre-fabricated 102 x 102mm box corner in 5.4m lengths.
- A-lign pre-cut 36 x 18mm scribe with pencil edge in 5.4m lengths.
- A-lign pre-cut 36 x 36mm internal corner scribe pencil edge in 5.4m lengths.
- A-lign pre-cut 42 x 36mm and 66 x 18mm transition scribes with pencil edge in 5.4m lengths.
- A-lign facing boards – available in 42, 66, 90, 116, 138, 185 x 18mm thickness in 5.4m lengths.
- A-lign bevelback tilting fillets – 42mm wide in 5.4m lengths.

- A-lign Concealed Fix structural cavity batten – 45 x 33mm in 5.4m lengths.
- A-lign Concealed Fix flashing batten – 42 x 14mm in 5.4m lengths.
- A-lign soffit eaves mould – 42 x 18mm in 5.4m lengths.
- A-lign weatherhead and sill mould – 42 x 30mm in 5.4m lengths.

2.3 Accessories by Quickflash

Use of Quickflash flashings are an integral part of the A-lign cladding system solution as defined in the CAD drawings. Select the flashings required.

Soakers are not part of the Quickflash range so should be purchased separately.

3.0 Detailing

A-lign Concealed Fix bevelback weatherboard CAD details are contained in the full A-lign technical manual.

4.0 A-lign Concealed Fix on site

Arrange for delivery of A-lign Concealed Fix timber weatherboards just prior to being required.

4.1 Storage

Note: Correct storage of weatherboards on site is critical.

A-lign Concealed Fix weatherboards, Concealed Fix structural cavity battens and accessories have been machined to fine engineered tolerances from finger-jointed clear wood base material with an equilibrium moisture content of 11% plus or minus 2%. If A-lign Concealed Fix weatherboards, Concealed Fix structural cavity battens and accessories are exposed to moisture before installing, as wood is hygroscopic and primers do not prevent moisture uptake, some dimensional swelling will occur and the ease of the system installation will be impaired. Correct storage of the weatherboards, battens and accessories is critical for ease of installation.

— Specifications for exterior cladding

Weatherboard, batten and accessory storage

At the merchant yard or warehouse keep the product in a roofed walled building at all times.

On site store

- On a firm level base with timber supports at no greater than 900mm centres.
- Clear of the ground by a minimum of 150mm.
- Under cover and protected from rain and sun.

Where A-lign Concealed Fix weatherboards are delivered with factory applied plastic protection, keep the protection in place and store as indicated above.

To ensure the product remains dry at all times prior to installation provide a secondary cover.

Where practical store the products within the covered building to provide total weather protection.

4.2 Handling

Do not tip the weatherboards from a truck.

Either use a mechanical lifting device or unload the weatherboards by hand.

Do not drag weatherboards across the ground.

Always carry individual weatherboards with their long section vertical, to avoid excessive bending.

5.0 Wall underlays

Note: A wall underlay is any material placed on the framing and behind the cladding to act as a second line of weathering defence.

Note: The selected wall underlay must have a serviceable life of at least 50 years.

Wall underlays include flexible materials, such as Kraft based papers or synthetic underlays, and rigid sheathings such as plywood or fibre cement sheet.

Wall underlays suitable for use with the A-lign Concealed Fix timber cladding system solution are those meeting the requirements of Table 23 of E2/AS1.

5.1 Non-rigid underlays

Note: Specify the actual name/insert specific manufacturer/product of underlay you wish to have installed and select the specific installation instructions.

Non-rigid underlays are suitable for use in NZS 3604 Wind Zones up to, and including 'Very High', except attached garages. Refer to E2/AS1 – 5.2.

A wall underlay complying with the requirements of E2/AS1 Table 23 must be installed to the outer face of the wall framing.

Select one option from the following:

- Fire retardant Kraft paper (insert specific manufacturer/product).
- Heavyweight bitumen soaked Kraft paper (insert specific manufacturer/product).
- Absorbent synthetic wall underlay (insert specific manufacturer/product).
- Non-absorbent synthetic wall underlay (insert specific manufacturer/product).

For buildings with other than flush-stopped sheet internal linings or areas of unlined wall, the wall underlay must meet the air-tightness requirement of E2/AS1 Table 23.

Openings for windows, doors and meter boxes must have the opening trimmed with flexible flashing tape compatible with the wall underlay, as required by details in E2/AS1.

5.2 Rigid underlay installation

Note: Specify the rigid sheathing material to be used. Proprietary systems shall be installed in accordance with the manufacturer's instructions. Generic sheathing materials shall be installed in accordance with the instructions below.

Rigid Underlays are required in 'Extra High' Wind Zones and specific design wind pressures within the scope of this Manual.

Support all rigid sheet edges with framing.

Fix in accordance with the sheet manufacturer's instructions.

Use hot-dip galvanised fixings, except in sea spray zones where stainless steel fixings must be used.

Tape all joints using barrier sealing tape as per manufacturer's instructions.

Fix rigid sheathing in place with sufficient fixings to resist wind loading (the sheathing will be finally held in place by the cladding fixings).

Be overlaid with a flexible wall underlay in accordance with E2/AS1 Table 23.

Rigid underlays are also required to external walls of attached garages that are unlined. Refer to E2/AS1 – 5.2.

5.3 Building underlay installation

Note: Select to suit the underlays.

Lay the Kraft-based building paper horizontally across the framing members with a minimum 150mm overlap at all joints.

Run material continuously around internal and external corners – do not join material at corners.

Install taut and ensure that there are no creases in the building paper.

Fix with clips or staples and tape in accordance with the building paper manufacturer's instructions.

Turn wall underlay into the framing all round windows, doors and meter box openings and tape the 'V' cut corners and the full width of the sill trimmer with compatible flexible flashing tape.

Cover the wall from bottom to top plate.

Repair all holes or tears in the building paper before commencing cladding installation. Ensure the building paper has not been exposed to the weather for more than the time allowed by the underlay manufacturer.

For installation under Concealed Fix structural cavity battens, install vertical or horizontal strips of plastic tape at 300mm centres and staple to the framing to prevent bulging where Concealed Fix structural cavity batten spacing exceeds 450mm centres.

5.4 Synthetic wall underlay installation

Lay the synthetic wall underlay horizontally across the framing members with a minimum 150mm overlap at sheet joints.

Run material continuously around internal and external corners – do not join material at corners.

Install taut and ensure that there are no creases in the underlay and use fixings that will resist tearing under wind loads.

Fix with clips or staples and tape in accordance with the synthetic underlay manufacturer's instructions.

Turn underlay edges into the framing all round windows, doors and meter box openings and tape the 'V' cut corners and the full width of the sill trimmer with compatible flexible flashing tape.

Cover the wall from bottom to top plate.

Repair all holes or tears in the underlay before commencing cladding installation.

Ensure the synthetic underlay has not been exposed to the weather for more than the time allowed by the underlay manufacturer.

For installation under Concealed Fix structural cavity battens, install vertical or horizontal strips of plastic tape at 300mm centres stapled to the framing to

prevent bulging where Concealed Fix structural cavity batten spacing exceeds 450mm centres.

6.0 Flashings

Note: Flashings as noted on the construction details must be provided and may be made from either sheet steel with a galvanized or zinc/aluminium alloy coating, aluminium, from stainless steel, or UPVC. They may be factory pre-finished if required. Refer to NZS3604 section 4 or E2/AS1 Table 20 for durability requirements.

6.1 Supply

Flashings for use with the A-lign Concealed Fix timber cladding system solution are those manufactured by Quickflash as detailed in the CAD drawings. Where the A-lign Concealed Fix cladding abuts a different cladding use flashings as shown in the A-lign Concealed Fix CAD details.

Aluminium window head flashings are the responsibility of the window supplier.

6.2 Materials

Note: Select the appropriate material for the environment.

Select the flashing material from:

- 0.55 BMT galvanised sheet steel.
- 0.55 BMT zinc/aluminium alloy coated.
- 0.55 BMT galvanised sheet steel factory coated.
- 0.55 BMT zinc/aluminium alloy coated factory coated.
- 316 grade stainless steel.
- 0.9mm powder-coated aluminium for window head flashings – window head flashing by window supplier.
- UPVC.

6.3 Fabrication and installation

Flashings must be machine bent accurately to the detailed profile.

Where necessary, site-cut each flashing to suit each circumstance and form stop-ends where appropriate.

Fix flashings using compatible fixings and ensure that the building underlay is installed as shown in the A-lign Concealed Fix CAD details.

Isolate zinc/aluminium alloy coated steel, galvanised steel and uncoated aluminium flashings from timber treated with copper-based treatments with a layer of kraft paper roof underlay.

— Specifications for exterior cladding

7.0 Sealants

Note: Sealants are used to assist with weathering at joints and laps. Sealants must not be relied on for primary weather protection.

7.1 Materials

Sealant suitable for use with the A-align Concealed Fix timber cladding system solution is a (specify brand/manufacturer) sealant complying with E2/AS1 or a sealant covered by a valid BRANZ Appraisal used in accordance with the manufacturer's instructions.

8.0 Air seals

Note: Air seals are an essential element of the air barrier component of the cladding solution. They complete the air barrier by sealing between the building underlay and the door and window reveals and meter boxes. The air seal is formed by applying sealant over a backing rod to which the sealant will not bond or by using self-expanding polyurethane foam over a backing rod.

8.1 Materials

Backing rod: Closed cell PEF rod of a diameter to suit the gap.

Air seal: Acrylic latex or modified silicon sealant complying with ISO 11600 used in accordance with the manufacturer's instructions or low expansion self-expanding polyurethane foam in accordance with the requirements of E2/AS1.

8.2 Installation

Insert the backing rod into the gap between the window reveal/meterbox and the trim framing to the perimeter of the opening. Press in approximately 15mm. Apply the sealant/expanding foam. Trim off excess material.

9.0 Drained and vented cavities

Note: For designs following E2/AS1 a drained and vented cavity is required behind bevelback weatherboards when the weathertightness risk score for that building face exceeds 12.

The cavity is formed by fixing A-align Concealed Fix structural cavity battens over the studs. A-align Concealed Fix structural cavity battens are to be structurally fixed in accordance with BRANZ Bulletin 475. Vermin proofing, which allows draining and ventilation, must be fitted to the bottom of the cavity.

9.1 Design

The cavity must be open to the exterior at the bottom of every second storey and across the tops of windows, doors and other penetrations such as meter

boxes. Fit Quickflash cavity closures to prevent vermin entry.

9.2 Materials

Concealed Fix structural cavity battens: A-align Concealed Fix structural cavity battens – 45 x 33mm are treated to H3.1.

Flashing battens: The A-align flashing battens are 45 x 14mm, treated to H3.1 and are designed to support internal and external corners and abutting cladding profile flashings so the folded edge of the flashing aligns with the adjacent Concealed Fix structural cavity batten and does not distort the weatherboard line.

Cavity closure: Zinc/aluminium alloy coated steel, aluminium or stainless steel supplied by Quickflash with a minimum ventilation area of 1000mm² per lineal metre of wall.

9.3 Fixing Concealed Fix structural cavity battens

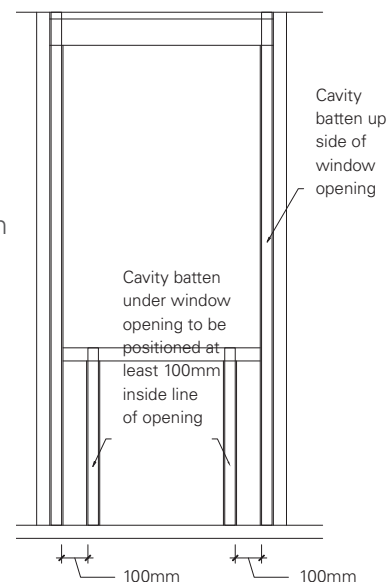
Note: Refers to the fixing of A-align Concealed Fix structural cavity battens, over wall underlay, to the wall studs. This allows the A-align Concealed Fix bevelback weatherboard to be fixed directly to the Concealed Fix structural cavity batten.

Set out

- As the batten fixing determines the weatherboard set-out it is critical that the base set-out of the batten is perfectly level and achieves the minimum tolerances from the bottom plate or floor slab and the finished ground level as set out in A-align Concealed Fix drawings Figure 6.01 or Figure 6.02.
- Window trim set out to ensure a full weatherboard at the head can also be calculated using the A-align Concealed Fix Set-out guides in this Manual.

Fix batten as follows:

- Over framing members.
- With a gap between battens at corners and below windows. Note that battens must be kept at least 100mm away from the line of the trimmed opening below windows.
- Where penetrations of the wall cladding (other than windows) are wider than the cavity batten spacing, allowance must be made



for air flow between adjacent cavities by leaving a minimum 10mm gap between the bottom of the vertical cavity batten and the flashing to the opening.

- With no continuous horizontal battens below windows.
- Vertical battens continuous past the ends of head flashings.
- Fix A-lign Concealed Fix structural cavity battens over wall underlay to studs with 60 x 2.80 hot dipped galvanised or stainless steel ring shank jolt head hand driven. 64 x 2.80 hot dipped galvanised gun driven/65 x 2.87 stainless steel ring shank gun driven 330mm centres for 150 x 25mm weatherboards or 310mm centres for 200 x 25mm weatherboards. Stagger fixings 12mm either side of the batten centre line. The fixing length must be increased by the thickness of the rigid sheathing where one is used.

9.4 Cavity closure

Fit continuous Quickflash cavity closure trim to the bottom of all cavities, including across the tops of openings to prevent vermin entry. Fix with 30 x 2.50mm galvanized flat head nails/clouts at 400mm centres.

10.0 Fixing A-lign Concealed Fix bevelback weatherboard

10.1 Fixings

Unlike standard A-lign bevelback Weatherboards, no nails are used in fixing the A-lign Concealed Fix bevelback weatherboard system apart from fixing the last board at the eaves, soffit or gable end.

In these isolated positions the nail may need to penetrate the weatherboard and will require punching, spot priming, filling, sanding and re-priming of the area surrounding the nail. If eaves moulds are used then this is fixed through the eaves mould and the weatherboard.

10.2 Fixing method

Fix each board on the A-lign Concealed Fix structural cavity batten by sliding the board up to the underside of the lock-grip. Engage it over the machined groove and slowly slide it down the Concealed Fix structural cavity batten until the wedge is engaged.

Do not use a hammer or percussion in this process as percussion can snap the lock-grip off.

Once the weatherboard is locked in position, install the A-lign Concealed Fix EPDM lockstrip by stretching it to reduce its diameter and install in the gap at the top of the weatherboard. Release and trim the EPDM 10mm out from the Concealed Fix structural cavity batten sides.

For long board lengths.

Start fixing the board from the centre position and work outwards to the ends repeating the above process.

Shorter board lengths can be engaged over all lock-grips at the same time.

Repeat this process up the wall until the cladding is complete.

EPDM Lockstrip

8mm EPDM Lockstrip is suitable for use in NZS 3604 Building Wind Zones up to and including 'High' when studs are spaced at a maximum of 600mm centres.

For Wind Zones 'Very High', 'Extra High' and specific design wind zones up to 2.5kPa. 8mm EPDM Lockstrip is suitable provided studs are spaced at a maximum of 400mm centres.

9.5mm EPDM Lockstrip is suitable for use in NZS 3604 Building Wind Zones up to and including 'Very High' when studs are spaced at a maximum of 600mm centres.

For Wind Zones 'Extra High', and specific design wind zones up to 2.5kPa. 9.5mm EPDM Lockstrip is suitable provided studs are spaced at a maximum of 400mm centres.

10.3 Setting out

The A-lign Concealed Fix structural cavity batten is the storey rod and once fixed in position accurately determines the weatherboard location and the 32mm minimum lap.

All scribes and interior corner moulds are accurately machined to match the Concealed Fix structural cavity battens weatherboard set out.

Remember timber even in its primed form is hygroscopic and will take on moisture and expand when it is exposed to the elements (rain or dampness).

Keeping the product dry at all times prior to installation ensures consistent measurement with minimum variation.

10.4 Fixing procedure for bevelback weatherboards

The location of the bottom weatherboard is pre-determined by the batten position to achieve minimum clearances between the bottom plate and finished ground levels. Use an A-lign Concealed Fix bevelback weatherboard and an A-lign Concealed Fix base mould. Fix the A-lign Concealed Fix base mould in place.

Continue installing A-lign Concealed Fix weatherboards up the wall.

Cut the final board to fit to the eaves/soffit.

— Specifications for exterior cladding

10.5 Joining weatherboard

Fix weatherboards in full wall lengths where possible.

Make joints where unavoidable over Concealed Fix structural cavity battens. Scarf the joint internal at 45° and use one fixing through the overlapping board.

Prime the cut-ends of scarf joints with End Seal aerosol primer, or with two coats of premium timber primer before fixing. Allow to dry between coats.

Cover the joint internal with a flat soaker.

10.6 External box corners

Fit A-align pre-fabricated 102 x 102 x 18mm external box corner with a minimum of 50mm cover over the weatherboards and fix with two, 50 x 2.50mm galvanised jolt head nails.

Locate the fixings where the box corner touches the weatherboard at:

- 440mm centres for 142mm weatherboards (4 laps).
- 465mm centres for 187mm weatherboards (3 laps).

Fit A-align pre-cut 18mm scribe over the weatherboards, tight against the box corner and fix through pre-drilled holes with 60 x 2.80mm galvanised jolt head nails at 400mm centres.

10.7 External mitred corners

Prime the cut-ends of scarf joints with End Seal aerosol primer, or with two coats of premium timber primer before fixing. Allow to dry between coats.

Install either (select one):

- A 50 x 50mm Quickflash hemmed angle back flashing as detailed directly over the Concealed Fix cavity batten.
- Soakers.

Join the weatherboards with a tightly fitting 45° mitre joint.

10.8 Internal corners

Install a 65 x 65mm (min 50mm cover) Quickflash hemmed angle back flashing over the Concealed Fix cavity batten.

Scribe and notch alternate weatherboards or use the A-align pre-cut 36 x 36mm internal corner double scribe.

Prime the cut-ends of scarf joints with End Seal aerosol primer, or with two coats of premium timber primer before fixing. Allow to dry between coats.

11.0 Window and door openings

Note: The integrity of the junctions at the interface of the cladding and the window and door openings is a vital part of the weatherproofing system. Care must be taken to ensure that the work is carried out correctly and that all flashings, weatherings and air seals are in place.

Note: This specification applies to the use of aluminium windows and doors that are in accordance with E2/AS1 paragraph 9.1.10. Use of bi-fold, sliding or other non-hinged windows and doors and timber windows and doors must be submitted to the Building Consent Authority as an Alternative Solution to NZBC Clause E2/AS1.

11.1 Aluminium windows

Aluminium windows installed into a A-align Concealed Fix timber cladding system solution must:

- Comply with NZS 4211 for the relevant wind zone or pressure.
- Have a minimum 10mm flange covering the weatherboard trim.
- Incorporate scribes to the flange.
- Include a sill tray under window mitres and mullion junctions. Cavity fix requires window support bars for trim opening wider than 600mm. Refer to E2/AS1 – 9.1.10.5
- Have window trimmed openings constructed as shown in E2/AS1 with flexible flashing tapes and air seals.
- At the point internal where Bevelback weatherboards overlap, the overall thickness of the two boards is a tight measurement of 32mm. When calculating jamb width, allow plus 34mm and 19mm for the cavity batten.

11.2 Timber windows

Note: Timber windows within a weatherboard cladding are not covered by E2/AS1 and must be consented by a BCA as an Alternative Solution.

Timber windows installed into an A-align Concealed Fix timber cladding system solution must:

- Have profiles in accordance with NZS 3610.
- Incorporate facings and scribes.
- Incorporate full width sill tray flashings.

- Have window trimmed openings constructed as shown in E2/AS1 with flexible flashing tapes and air seals.

11.3 Flashings

Flashing material and fabrication in accordance with section 6.0 of this specification.

Head flashings must have:

- 10mm stop-ends.
- 15° cross fall.
- 10mm min cover to the window flange.
- 50mm min back upstand to give 35mm min cladding cover.

Fit head flashings to all windows. Stop-ends to finish at back of cladding.

Sill flashings must have:

- 8mm min upstand.
- A 5° cross fall.
- 35mm cladding cover at front downturn.
- 20mm stop-ends.

11.4 A-lign facings

Fit A-lign grooved facings with a minimum of 50mm cover over the weatherboards and fix with two, 50 x 2.50mm hot dipped galvanised jolt head nails.

Locate the fixings above the lap of the weatherboard at:

- 440mm centres for 142mm weatherboards (4 laps).
- 465mm centres for 187mm weatherboards (3 laps).

Fit A-lign pre-cut 18mm scribe over the weatherboards, tight against the facing and fix through pre-drilled holes with 60 x 2.80mm hot dipped galvanised jolt head nails at centres as above.

11.5 Air seals

On completion fit air seals around all window and door openings as specified.

12.0 Painting A-lign Concealed Fix

12.1 Materials

A premium factory applied primer and undercoat has been applied in two separate coats. Site prime all bare timber surfaces and cut-ends with End Seal aerosol

primer before fixing. Allow to dry between coats. Finishing coats: 100% premium acrylic house paint internal (insert specific manufacturers product) as specified in Parts 7, 8, 9 and 10 of AS 3730.

12.2 Painting

Note: Resin bleed may occur from timber in hot conditions or where painted in dark colours. Adherence to the above specification will help minimise the problem.

Note: Primers cannot withstand exposure to weather for extended periods.

Note: Using light colours lessens the chance of distortion by reducing solar heat build up in the weatherboards.

Carry out all painting work in accordance with the appropriate clauses of AS/NZS 2311 Guide to Painting of Buildings.

Finishing coats to be applied after installation of the exterior sheathing, joinery and trim.

Prior to applying finishing coats ensure no moisture related dimensional swelling is evident by measuring profiles against original profile sizes. If swelling is present, delay finish coating until the timber profiles have returned to their original machined sizes.

Fill all nail holes with an exterior grade filler, sand to a smooth surface and spot-prime filled areas and wherever the coating is damaged.

Apply two full coats of 100% premium acrylic house paint internal with a gloss level of 10% and a Light Reflective Value of 45% or greater (ASTM C1549 or ASTM E903).

13.0 General information

13.1 Handling

Store the product where it is dry and kept off the ground using bearers. If stored outside use a secondary waterproof cover but allow for good air circulation. When handling, take care to avoid any damage to surfaces.

13.2 Installation

Avoid scratching or marking of the board during cutting and installation. Prime the cut-ends of scarf joints with End Seal aerosol primer, or with two coats of premium timber primer before fixing. Allow to dry between coats.

— Specifications for exterior cladding

13.3 Finishing

Remove all loose material, dirt etc. Spot prime exposed bare timber with selected premium timber primer, putty all nail holes, use a filler and sealants nominated as exterior type suitable for overcoating with 100% acrylic paint. Apply two coats of 100% premium acrylic house paint as per instructions on the container.

13.4 Moisture

Tannin extracts (dark stains in the film) are a result of the board being allowed to get wet. This is neither a board nor paint issue as it is a result of excessive moisture, which infiltrates the board through not following these guidelines. After installation of the board it is recommended that the painter be allowed to complete the finishing work as soon as practical. Refer to 12.2 Painting.

13.5 Heat generating colours

Dark colours absorb heat from the sun. Light colours reflect significantly more heat. Testing has shown that dark colours can generate temperatures in excess of 85°C in direct sunlight, whereas light colours under the same conditions can be as much as 35°C cooler. It is recommended that the chosen colour therefore has a Light Reflective Value greater than 45% (LRV of white is 95/100, LRV Black is 0).

14.0 Building maintenance

14.1 New construction

Building movement and settlement is inevitable. Paint coatings are affected by this occurrence whether it be concrete or timber substrate. It is important to deal immediately with new issues that are as a result of substrate movement in the case of timber it is movement of the board. Make good these areas by priming and then touching up with the original, topcoat paint.

14.2 Regular washing

Exterior building surfaces benefit from being cleaned regularly. This is particularly important under eaves and overhangs. Mould, fungi and marine salts can have a detrimental effect on the paint coating and the substrate if left. Arrange to lightly wash all surfaces at least annually. This is particularly important in a marine environment.

14.3 Maintenance painting

When required use a premium primer and undercoat, followed by the topcoat originally selected. In some circumstances where maintenance is delayed for many months it may be required to make good the repair area and then fully coat the whole section because of the change in the appearance of the coatings.

Loss of gloss, colour change, etc. is normal for paint. Mostly walls facing north will be subject to this requirement, particularly if maintenance is delayed. It is however, beneficial for both the paint film and the substrate to apply another coat. This maintenance should be viewed as a positive outcome for both the paint, the substrate and your investment in the home/building.

Building movement normally reduces over time. Experience has shown that areas that have been subject to maintenance in the main do not require further repairs providing the substrate is not subjected to continual movement.

As part of your maintenance, always check flashings, sealants and fastenings to ensure they do not permit the passage of water into the substrate. Left unchecked, water entry into the substrate can cause substantial damage which can become expensive to remedy.

Follow these instructions to ensure that your investment in A-lign Concealed Fix natural solid timber products will stand the test of time.

For more information on A-lign call the Helpline on:

0800 25 44 61

Monday to Friday 8am–5pm

For more technical information and downloadable CAD and 3-D drawings, visit:

claymark.co.nz

— A-lign Warranty

Warranty

Claymark Limited ('Claymark Ltd') warrants for a period of 15 years from the date of purchase that its A-lign Concealed Fix cladding and A-lign Concealed Fix accessories (The 'Products'), will be free from production defects, and subject to compliance with the conditions below, will be resistant to cracking, rotting, and damage from borer attacks to the extent set out in Claymark Ltd's product literature current at the time of installation.

The A-lign Concealed Fix Technical Manual sets out the approved and recommended methods for cladding installation. A copy of the A-lign Concealed Fix Technical Manual is available from Claymark Ltd, phone toll free on: 0800 25 44 61, Monday to Friday 8am–5pm.

Conditions of Warranty

The warranty is strictly subject to the following conditions:

(a) The Products must be installed by a competent and qualified builder, strictly in accordance with the A-lign Concealed Fix Technical Manual current at the time of installation, utilising A-lign Concealed Fix components or products specified in the A-lign Concealed Fix Technical Manual. Where the A-lign Concealed Fix Technical Manual does not provide a suitable detail for installation of The Products then installation must be in accordance with best trade practice determined in consultation with the Territorial Authority and designer of the building works. Further, all other products, including coating and jointing systems, applied to or used in conjunction with The Products must be applied or installed strictly in accordance with the relevant manufacturer's instructions and best trade practice.

(b) Claymark Ltd will not be liable under this warranty unless a written claim is notified to Claymark Ltd within 30 days of the defect becoming reasonably apparent.

(c) This warranty is for the benefit of the original owner of the building where the A-lign Concealed Fix cladding has been installed. This warranty is not transferable to subsequent owners of the building.

(d) The Products must be maintained strictly in accordance with the A-lign Concealed Fix Technical Manual. Further, all other products, including coating and jointing systems, applied to or used in conjunction with The Products must be maintained strictly in accordance with the relevant manufacturer's instructions and best trade practice.

(e) The building works in which The Product has been incorporated must be designed and constructed in strict compliance with all relevant provisions of the current New Zealand Building Code ('NZBC'), regulations and standards, and the Building Consent relating to the building works.

(f) The customer's sole remedy under this warranty is (at Claymark Ltd's option) that Claymark Ltd will either supply replacement Products, rectify the affected Products or pay for the cost of the replacement or rectification of the affected Products.

(g) Claymark Ltd will not be liable for any losses or damages (whether direct or indirect) including property damage, personal injury, consequential loss, economic loss or loss of profits, arising in contract or negligence or howsoever arising. Without limiting the foregoing, Claymark Ltd will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to

which The Products are attached, incorrect design of the structure, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to The Products, normal wear and tear, growth of mould, mildew, fungi, bacteria, or any organism on the surface of any Products (whether on the exposed or unexposed surfaces).

(h) All warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent permitted by law. This warranty does not exclude or modify any legal rights a customer may have under the Consumer Guarantees Act 1993. Unless otherwise specified in writing at the time of sale, Claymark Ltd assumes no liability for The Products being fit for any particular purpose under the Building Act 2004, other legislation or at common law.

(i) If any remedial work undertaken under this warranty involves re-coating of The Products, the customer acknowledges and agrees that there may be slight colour differences between the original and replacement Products due to the effects of weathering and variations in materials over time.



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For more information call the
Claymark Helpline Toll Free

0800 25 44 61
Monday to Friday 8am-5pm



claymark.co.nz