Dravitzki Brown Renovation

Project Specification

56 Hunter Road, Speargrass Flat, New Zealand
Project Ref: 26.11
Date: 12 October 2026

PROJECT SPECIFICATION Works, materials and workmanship for construction in accordance with the accompanying drawings.

Spec Version ID: 383701-464312
Document authenticity may be verified at masterspec.co.nz/verify/383701-464312
Prepared using Masterspec software

© CIL Masterspec Oct 2026

TABLE OF CONTENTS

3821	TIMBER FRAMING	3
4131VM	VIKING MERCURY TANKING MEMBRANE	9
4161T	KINGSPAN THERMAKRAFT UNDERLAYS, FOILS, DPC, DPM, & TAPES	15
4223SC	SHADOWCLAD® PLYWOOD CLADDING FOR CAVITY CONSTRUCTION	21
4422VE	VIKING ENVIROCLAD MEMBRANE	28
4521AR	APL RESIDENTIAL ALUMINIUM WINDOWS & DOORS	36
4711P	PINK® BATTS® THERMAL INSULATION	45
4711P	PINK® BATTS® THERMAL INSULATION	49
4821	FLASHINGS	53
5113G	GIB® PLASTERBOARD LININGS	57

© CIL Masterspec Oct 2026

3821 TIMBER FRAMING

1 GENERAL

This section relates to the supply and erection of timber framing, as a framed structure, or as part of a partitioning system.

1.1 RELATED WORK

Refer to ~ for ~.

Refer to 4161 UNDERLAYS, FOIL AND DPC for underlays, foils and DPC.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

FSC®	Forest Stewardship Council®
COC	Chain of Custody
PEFC	Programme for the Endorsement of Forest Certification

The following definitions apply specifically to this section:

SG Structural grade	to NZS 3604, 1.3 Definitions

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability
AS/NZS 2904	Damp-proof courses and flashings
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber-framed buildings
NZS 3622	Verification of timber properties
NZS 3631	New Zealand timber grading rules
NZS 3640	Chemical preservation of round and sawn timber
WorkSafe	Guidelines for the provision of facilities and general safety in the construction industry.
BRANZ BU 673	Cavity battens

***A copy of** NZS 3604 **Timber-framed building, must be held on site.**

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:

~

Manufacturer/supplier contact details

Company:	~
Web:	~
Email:	~
Telephone:	~

1.5 DIMENSIONS

All timber sizes except for roof battens are actual minimum dried sizes.

Requirements

1.6 QUALIFICATIONS GENERALLY

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

© CIL Masterspec Oct 2026

2 PRODUCTS

Materials

2.1 TIMBER FRAMING, TREATED

Species, grade and in service moisture content to NZS 3602, NZBC B2/AS1 and treatment to NZS 3640, NZBC B2/AS1. Structural grade (SG) to NZS 3604, NZS 3622 with properties to NZS 3603.

2.2 APPEARANCE TIMBERS

Graded to NZS 3631, treated where required by NZBC B2/AS1, NZS 3602, table 1, and treatment to NZS 3640.

2.3 STRAPPING

Treated to NZBC B2/AS1, NZS 3602, table 1 and to NZS 3640, clause 6.3.1.

Species:	Radiata pine
Grade:	SG6
Size:	70mm x 45mm, 45mm x 45mm or 45mm x 19mm

2.4 EXTERIOR CAVITY WALL BATTENS - TIMBER - NON-STRUCTURAL

To NZBC E2/AS1. H3.1 Radiata pine battens, 20mm thick, 45mm minimum width, and height to match timber framing studs. To NZS 3602, table 1, reference 1D.10, Requirements for wood-based building components to achieve a 50-year durability performance.

2.5 EXTERIOR CAVITY WALL BATTENS - TIMBER - STRUCTURAL

To BRANZ BU 673, part 6. H3.2 SG6 Radiata pine kiln dried battens, 20mm thick, 40mm minimum width, and height to match timber framing studs. To NZS 3602, table 1, reference 1D.10, Requirements for wood-based building components to achieve a 50-year durability performance.

2.6 DPC

Refer to 4161 UNDERLAYS, FOIL AND DPC section

Components

2.7 NAILS

Type to NZS 3604, section 4, **Durability**, and of the size and number for each particular types of joint as laid down in the nailing schedules of NZS 3604, sections 6 - 10.

2.8 SCREWS

Wood screws to the requirements of NZS 3604, 2.4 Fastenings and Fabrication, and section 4, Durability, and of the type, number and form required for each screw application to NZS 3604, sections 6 - 10.

2.9 BOLTS AND COACH SCREWS

Bolts and coach screws complete with washers, to the requirements of NZS 3604, clause 2.4.5 Bolts and Coach Screws, and section 4, Durability, and of the type, number and form required for each particular junction to NZS 3604, sections 6 - 10.

2.10 THREADED RODS

Use stainless steel threaded rods of the required length, with washers and nuts at both ends, when stainless steel bolts of the required length are not available.

2.11 TIMBER CONNECTORS AND FIXINGS

Supply for each particular joint the connectors and fixings as noted on the drawings. Comply with the requirements of the manufacturer, NZS 3604, section 4, Durability, and of the number and form required for each particular junction to NZS 3604, sections 6-10.

2.12 BRACING STRAPS

Nail-on type to the requirements of NZS 3604, section 4, Durability, and of the number and form required for each particular application to NZS 3604, sections 6-10.

2.13 POWDER ACTUATED FASTENERS

To type, size and charge required by the powder actuated tool manufacturer for each particular member and the substrate.

© CIL Masterspec Oct 2026

2.14 CORROSION RISKS

For interior timber, treated with copper-based timber preservatives (H3.2 or higher), use a minimum of hot-dipped galvanized steel fixings and fasteners.

For exterior timber, timber in damp areas and timber subject to occasional wetting, use only stainless steel (or equivalent) fixings and connectors, when the timber is treated with; Copper Azole (CuAz, Preservative code 58), Alkaline Copper Quaternary (ACQ, Preservative code 90), Micronise Copper Azole (code 88) or Micronised Copper Quaternary (code 89).

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.
Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Maximum allowable equilibrium moisture content (EMC) for non air-conditioned or centrally heated buildings, for framing to which linings are attached.

Moisture content:

At erection	24% EMC maximum
At enclosure	20% EMC maximum
At lining	16% EMC maximum

3.4 PROTECT TIMBER

Protect all timber against damage and from inclement weather. Ensure that any variation in moisture content is kept to a minimum, before and after erection and before enclosure.

Installation/application

3.5 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

Timber framing tolerances shall be in accordance with NZS 3604 Table 2.1 Timber framing tolerances.

3.6 SEPARATION

Separate all timber framing timbers from concrete, masonry and brick by: -

- a full length polyethylene damp-proof course overlapping timber by at least 6mm; or
- a 12mm minimum free draining air space

3.7 EXECUTION

Execution to comply with NZS 3604, except as varied in this specification. Execution to include those methods, practices and processes contained in the unit standards for the National Certificate in Carpentry and the National Certificate in Joinery (cabinetry, exterior joinery, stairs).

3.8 SET-OUT

Set-out framing generally in accordance with the requirements of NZS 3604, to carry superimposed loads, and as required to support sheet linings and claddings. When necessary provide framing to suit required cladding/lining control joints and sheet joints.

© CIL Masterspec Oct 2026

3.9 SET TIMBERS

Set timbers true to required lines and levels with mitres, butt joints, laps and housings cut accurately to provide full and even contact over the whole of the bearing surface.

3.10 TIMBER CUTTING

Select and cut spanning members to minimise allowable defects and avoiding knots and short grain on edges in the middle third, and shakes, splits and checks at mid-span and close to ends.

3.11 STRAIGHTENING STUDS

Cutting for straightening to comply with NZS 3604, 8.5.3, Straightening studs.

3.12 TIMBER PLATES AND FURRING

Fix to steelwork with bolts and washers or approved proprietary fastenings at 1 metre maximum spacing and not less than 2 fixings to each member, or to engineering specific design.

3.13 HOLES AND NOTCHES

Limit holes and notches, checks and half-housing for the structure to those allowable in NZS 3604. Neatly form holes and notches for services without lessening the structural integrity of the member.

3.14 EXPOSED TIMBER CONNECTORS AND FIXINGS

Do not use steel timber connectors and fixings on any structural framing exposed to view unless detailed on the drawings.

3.15 POWDER-ACTUATED FASTENING TOOLS

Comply with the requirements of WorkSafe and the Health and Safety at Work Act 2015. Powder-actuated fastening tool operators to have the appropriate current Certificate and/or Licence and tools to have the appropriate certificate of fitness if necessary.

3.16 ADDITIONAL FRAMING

Position and fix all necessary members for the fixing of all services, fittings, fixtures, edges of linings or claddings, and to provide lateral support to load carrying framing.

3.17 FORM NAILED JOINTS

Fully drive nails in all structural joints with the number and location for each particular joint, to the requirements of the nailing schedules of NZS 3604. Where splitting could occur, pre-drill to 80% of nail diameter.

3.18 FORM BOLTED JOINTS

Drill for and set bolts to ensure full bearing and development of the joint strength, with tension to just set the washers into timber or to engineering specific design.

3.19 FIT CONNECTORS AND FIXINGS

Fit connectors and fixings to obtain full bearing over all contact surfaces and full development of the required loading capacity for that particular joint and in accordance with the manufacturer's requirements or to engineering specific design.

3.20 FIT CAVITY BATTENS

Fit and fix 20mm cavity battens over wall underlay or rigid air barrier. Temporary fix battens before being permanently fixed into the framing with the cladding fixings, to the requirements of the manufacturer or to NZBC E2/AS1 and BRANZ BU 673. Make allowances for cladding control joints where required. Fit and fix related flashings. Fit and fix cavity closers to base of walls, open horizontal (or raking) junctions and over openings (windows, meters etc). Use cavity spacers set to 5° fall where fixing is required between cavity battens.

3.21 FIT STRUCTURAL CAVITY BATTENS

Fit and fix 20mm cavity battens over wall underlay or rigid air barrier. Permanently fix battens onto the framing using 60mm x 2.8mm jolt head (60mm x 2.87mm power-driven) hot-dip galvanized nails, or 64mm x 2.8mm power driven stainless steel annular grooved nails at 300mm centres maximum up to Very High Wind Zone and 250mm centres maximum for Extra High Wind Zone, and staggered 12mm either side of the batten centreline, to BRANZ BU 673, part 6. Make allowances for cladding control joints where required. Fit and fix related flashings. Fit and fix cavity closers to base of walls, open horizontal (or raking) junctions and over openings (windows, meters etc). Use cavity spacers set to 5° fall where fixing is required between cavity battens.

© CIL Masterspec Oct 2026

3.22 FIT BRACING

Fit and fix subfloor, wall and roof bracing elements to the requirements of the manufacturer or to NZS 3604, to develop the full number of bracing units required.

3.23 DPC TO LOSP TREATED TIMBER

Refer to 4161 UNDERLAYS, FOIL AND DPC section

3.24 DPC TO TIMBER

Refer to 4161 UNDERLAYS, FOIL AND DPC section

Completion

3.25 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

© CIL Masterspec Oct 2026

4 SELECTIONS

4.1 FLOOR FRAMING - RADIATA PINE

Member	Species	Grade	Treatment
Mid floor joists:	Radiata pine	SG8	H1.2
Boundary joists:	Radiata pine	SG8	H1.2

4.2 EXTERIOR WALL FRAMING - RADIATA PINE

Member	Species	Grade	Treatment
Exterior walls:	Radiata pine	SG8	H1.2
Parapets:	Radiata pine	SG8	H1.2
Enclosed decks and balconies:	Radiata pine	SG8	H1.2
Cantilevered joists enclosed decks and balconies:	Radiata pine	SG8	H3.2
Nogs	Radiata pine	SG8	H1.2
Wall battens (not cavity):	Radiata pine	Merch	H1.2
Jamb battens	Radiata pine	Merch	H3.1

4.3 ROOF FRAMING - RADIATA PINE

Member	Species	Grade	Treatment
Rafters:	Radiata pine	SG8	H1.2
Trusses:	Radiata pine	SG8	H1.2
Purlins:	Radiata pine	SG8	H1.2
Valley boards:	Radiata pine	Merch	H1.2
Sarking:	Radiata pine	Merch	H1.2
Skillion roof framing:	Radiata pine	SG8	H1.2
Enclosed flat roof framing:	Radiata pine	SG8	H1.2

4.4 INTERIOR WALL FRAMING - RADIATA PINE

Member	Species	Grade	Treatment
Non structural walls:	Radiata pine	SG8	H1.2
Structural and braced walls:	Radiata pine	SG8	H1.2

4.5 CEILING FRAMING - RADIATA PINE

Member	Species	Grade	Treatment
Ceiling joists:	Radiata pine	SG8	H1.2
Timber ceiling battens:	Radiata pine	SG8	H1.2
Proprietary ceiling battens:	Manufacturer ~	Type ~	Reference ~

4.6 CAVITY BATTENS

Cavity battens	Species	Grade	Treatment
Timber - Structural	Radiata pine	Merch	H3.2
Timber - Non Structural	Radiata pine	Merch	H3.1
Proprietary - non structural:	Manufacturer ~	Type ~	Reference ~
Cavity closer:	Manufacturer ~	Type ~	Reference ~

4.7 DPC

Refer to 4161 UNDERLAYS, FOIL AND DPC section

© CIL Masterspec Oct 2026

4131VM VIKING MERCURY TANKING MEMBRANE

1 GENERAL

This section relates to the application of Viking Mercury Tanking membrane, installed as a torch-on single or double layer system on below ground retaining walls with Viking Under-slab membrane installed under the slab complete with Drainage & Protection Board, all components and accessories to complete installation..

1.1 RELATED WORK

Refer to ~ for ~.

1.2 MANUFACTURER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:

BRANZ Appraisal 864 (2025) - Viking Post-Applied Tanking Membranes - Amended 17 June 2026
Viking Roofspec Below Ground Tanking Methodology
Viking Roofspec checklist: Below Ground Tanking Installation
Viking Roofspec checklist: Below Ground Tanking Site and Substrate
Viking Mercury FC Tanking Product Data Sheet, TM-PDS-001, July 2023
Viking Mercury FC Tanking Product Technical Statement, VMFC-PTS-V1, July 2023
Viking FleeceTank Product Data Sheet, FLT-PDS-V1.1, June 2026
Viking FleeceTank Product Technical Statement, FLT-PTS-V1.1, June 2026
Viking Below Ground Tanking - Torch-On Viking Roofspec Details Schedule, 01 March 2022

Manufacturer/supplier contact details

Company:	Viking Roofspec Ltd.
Web:	www.vikingroofspec.co.nz
Email:	info@vikingroofspec.co.nz
Telephone:	0800 729 799
Facsimile:	0800 729 788

Warranties

1.3 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

20 years	For Viking Mercury Tanking membrane including Viking FleeceTank and Mercury FC Under-slab membrane.

- Provide this warranty on the Viking Roofspec standard form.
- Commence the warranty from the date of completed installation.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.4 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

5 years	For Viking Mercury Tanking Membrane installation when installed by Viking Approved Applicator.

- Provide this warranty on the Certificate of Workmanship form in support of a Viking Roofspec Product Warrant.
- Commence the warranty from the date of completion of installation.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.5 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified Viking Roofspec membranes, components and associated products listed in this section.

© CIL Masterspec Oct 2026

1.6 QUALIFICATIONS - MANUFACTURER / SUPPLIER REQUIREMENTS

Installers to be Viking Approved Applicators, experienced in the installation of the Viking Mercury tanking systems.

Refer to 1270 CONSTRUCTION for additional requirements relating to qualifications.

1.7 PRE INSTALLATION

Convene a meeting between the applicator, contractor, all associated consultants and Viking Roofspec to ensure all parties know what is required for effective performance of the system, prior to tanking installation.

1.8 SPECIFIC DETAILS

All detailing to be in accordance with Viking Roofspec standard details. Any specific details not in accordance with the Viking Roofspec standard details or methodologies must be reviewed and approved by Viking Roofspec.

1.9 INSPECTION AND CHECKLIST

Complete Viking checklist for Below Ground Tanking Site and Substrate (by Main Contractor) and Below Ground Tanking Installation (by Installer). Checklist to be signed by applicator and main contractor and provided to Viking Roofspec for product warranty requirements.

1.10 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information.

Provide this information prior to practical completion.

1.11 HOT WORK - FIRE SAFETY

Refer to section 1270 CONSTRUCTION

Compliance information

1.12 INFORMATION REQUIRED FOR CODE COMPLIANCE

Provide the following compliance documentation: -

- Installer's approval certificate from the manufacturer / importer / distributor
- Manufacturer's, importers' or distributors warranty
- Installer's / applicator's warranty
- Producer Statement - Construction from the applicator / installer
- Other information required by the BCA in the Building Consent Approval documents.

Performance

1.13 PRESSURE RATING

Viking Mercury Tanking is limited to 10 meters depth or maximum 400kPa hydrostatic pressure. The use of drainage coil at the base of the slab or footing is highly recommended Refer to SELECTIONS for the designated water pressure head.

1.14 VAPOUR FLOW RESISTANCE

The membrane system is to have a vapour flow resistance of not less than 90 MN s/g.

2 PRODUCTS

Materials

2.1 TANKING MEMBRANE

Viking Mercury FC Tanking Membrane, 4mm thick reinforced-polyester and fibreglass SBS (Styrene butadiene styrene) modified-bitumen torch applied membrane. Available in 1000mm wide x 10m long rolls.



© CIL Masterspec Oct 2026

Components

2.2 TANKING PRIMER - (for walls) SOLVENT BASED

SES299 General Rapid Primer, fast-drying, solvent based bituminous primer. Coverage approximately 4m² per litre.

2.3 TANKING PRIMER - (for walls) WATER BASED

SES300 Eco Primer, slower drying water based primer for use in confined spaces. Coverage approximately 4m² per litre.

2.4 WALL TANKING ADHESIVE

SES302 Viking Easy Paste Bituminous, a thick water-based bituminous cold applied adhesive used in confined spaces where fumes may be hazardous.

2.5 DRAINAGE & PROTECTION BOARD

Viking Drainage and Protection Board, composite of nonwoven filter fabric bonded to the dimples of a high impact moulded polystyrene core. Enhances waterproofing by channeling water away, relieving hydrostatic pressure and protecting the waterproofing system.

2.6 BITUMEN FILLET

IMT603 Bituminous Angle Fillet 25mm x 25mm x 1.2m long, used at the junction of wall and concrete footing heel.

2.7 TANKING SEALANT

SES013 Bituminous sealant.

2.8 REINFORCEMENT AT PENETRATIONS

VSC300 Reinforcing Polyester Tape, 100mm wide x 91m roll. To be used with SES302 Easy Paste around pipe junctions.

Accessories

2.9 TERMINATION BAR / FLASHING

IMT708 Aluminium termination flashing, mill finish, 140mm high x 1.6mm thick x 2.4m long complete with IMT 710 External corner & IMT711 Internal corners. Designed to terminate the Viking Mercury Tanking and Viking Drainage and Protection Sheet 150mm above the finished soil height.

2.10 PRESSURE BAR

IMT709 aluminium pressure bar, mill finish, 65mm high x 1.6mm thick x 2.4m long.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

Take delivery of membrane in rolls undamaged, include for site handling facilities where required. Provide dry storage off the ground on a level surface for all products. Store membrane roll on end, protect from sunlight and ultra-violet (UV) radiation. Do not stack pallets.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.
Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Inspect substrate in its entirety, verify all details, penetrations and conditions. Comply with Viking Roofspec requirements prior to membrane installation. Installation of membrane indicates acceptance of substrate by installer.

© CIL Masterspec Oct 2026

Ensure substrate meets requirements of Viking Checklist- Below Ground Tanking Site & Substrate to be completed by the Main Contractor and Viking Checklist- Below Ground Tanking Installation by the tanking installer. Refer to www.vikingroofspec.co.nz for checklists.

3.4 SUBSTRATE - MERCURY

To be dry, clean, smooth and stable. Free of any contaminants, voids, or protrusions. Fill any voids with compatible non-shrinking material. Smooth off any ridges or rough areas of mortar or concrete which may damage the membrane. Substrate to have a relative humidity of 75% or less. Pre-cast concrete with no voids. Blockwork requires a flash finish to side of tanking.

Do not work on a wet substrate.

3.5 SUBSTRATE - UNDER-SLAB

Ensure the tidy slab of site concrete for the Under-slab tanking is a minimum of 50mm thick, for any site with springs or below the water table. For sites with no springs or above the water table compacted 25mm sand or fines such as gap 7 is acceptable.

3.6 COMPLY

Comply with current Viking Roofspecand BRANZ Appraisal 864 - Viking Post-Applied Tanking Membranes.

3.7 PLAN LAYOUT

Plan installation so that joints are minimised and occur in suitable locations.

3.8 COORDINATE

Coordinate all work with other trades to prevent damage to membrane. Plan work to minimise membrane exposure to sunlight or UV radiation and to comply with Viking Roofspec requirements for exposure. Viking Under-slab membrane must not be exposed for more than 30 days before structural concrete is placed and backfilling to commence within 14 days after the Mercury tanking membrane is installed to vertical surfaces.

3.9 WEATHER CONDITIONS

Lay membrane in fair weather, with ambient air temperature no less than -15°C

3.10 DE-WATERING

Water level to remain a minimum of 300mm below membrane works, until installation completed. Consider digging trench fill with scoria to a deeper hole with a bucket with holes and sump pump to remove excess water from the footings. Refer to Viking Below Ground Tanking Methodology, for further details.

Application - preparation

3.11 PRELIMINARY WORK - CONCRETE / CONCRETE MASONRY

Substrate with no voids or sharp protrusions, a flush finish to side of tanking. Fill any voids in the substrate with a compatible non-shrinking material. Smooth off or remove any ridges or rough areas of mortar or concrete which may damage the membrane.

3.12 FILLETS AND CHAMFERS

Apply Bitumen fillet IMT603 (or 25mm mortar fillet) to support membrane at internal corners and slab/wall junctions.

Chamfer external edges to minimum 10mm width sloping edge to accommodate membrane return.

3.13 SUBSTRATE JOINTS

Joints should be cleaned, primed and filled with a backing rod and caulked. Protect with aluminium tape or similar on mastic joint. Apply Viking Mercury tanking as 300mm wide under-flashing centred over join after priming.

3.14 REMOVE OTHER FORMWORK

Ensure that formwork is not removed before the Under-slab membrane is sealed to the footing (minimum 4 days from footing pour), or sealed to the footing by mechanically fastening with a batten. This can be removed once walls are in place and wall tanking is to be installed. Take care when removing formwork not to damage membrane.



© CIL Masterspec Oct 2026

3.15 APPLY GUSSETS - UNDER-SLAB

Once Under-slab membrane is placed, install 140mm gussets to all internal and external corners.

Application - Viking Mercury Tanking

3.16 PRIMING SUBSTRATE GENERALLY- MERCURY TANKING

Apply selected primer by medium nap roller or brush in an even film to recommended coverage rate. Apply only to surfaces where membrane will be applied in the same day. Primer shall be allowed to dry completely (lower temperatures will extend drying time) before additional coats are applied or membrane installed.

3.17 PRIMING GUSSETS & UNDERFLASHINGS - MERCURY TANKING

Prime areas requiring gussets and under-flashings first.

3.18 INSTALL GUSSETS - MERCURY TANKING

Install 140mm diameter gussets to all internal and external corners prior to installing Mercury Tanking or Under flashings.

3.19 INSTALL UNDER FLASHING - MERCURY TANKING

Install to Viking Roofspec requirements, centre continuous 300 mm wide strip of Mercury Tanking membrane on all internal and external corners, turn-up, turn-down, expansion joints, shrinkage control joints. If joins are required to under-flashing, overlap by 150mm.

3.20 PRIMING SUBSTRATE - MERCURY TANKING

Prime remaining areas for application of membrane.

3.21 LAP - MERCURY TANKING

Membrane sheet laps should be staggered. Side laps to be a minimum 100mm. End laps ("head laps") overlap by minimum 150mm.

3.22 INSTALL TANKING MEMBRANE - MERCURY TANKING

Unroll the 4mm Mercury Tanking membrane overlapping as required and allow to relax. Ensure complete bonding to primed substrate and complete bonding of membrane lap joins to Viking Roofspec requirements.

Tanking membrane must extend 150mm minimum above finished ground level and lap 100mm onto the Under-slab membrane below basement floor level and terminate as per Viking Standard Details.

3.23 TORCHING

Torch off film surface of the membrane using a sweeping motion to maintain even heat, using LPG gas torch (large) and LPG detailing gas torch (small), smoothing trowel and roller to Viking Roofspec requirements.

3.24 PENETRATIONS

All penetrations to receive an over-flashing or either Viking Mercury Tanking or VSC300 Reinforcing Tape embedded in SES302 Easy Paste with minimum 120mm overlap around penetration. Complete with a trowelled bead of SES013 Bituminous sealant and secure with a Stainless Steel hose clamp.

3.25 APPLY TANKING SEALANT

Apply a trowelled bead of SES013 Bituminous sealant to the top of the tanking sheet joins in accordance with Viking Roofspec requirements.

Application - Protection

3.26 INSTALL DRAINAGE & PROTECTION BOARD

Neatly scribe and fit Drainage & Protection Board to Viking Roofspec requirements.

Boards to be installed down to the level of the coil drain. Mechanically secure the top of the Drainage & Protection Board to 150mm above finished ground level with IMT708 Termination flashing.



© CIL Masterspec Oct 2026

Backfilling

3.27 SUPERVISION OF BACKFILLING

Backfilling to take place under supervision of the membrane installer and main contractor.

Application - Terminations / Flashings

3.28 TERMINATIONS / FLASHINGS

Use a Viking Standard detail to:

- mechanically fasten and terminate the top edge of the membrane using IMT708 Termination Flashing or IMT709 Pressure Bar with sealant to wall.

Completion

3.29 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to www.vikingroofspec.co.nz
Substitutions are not permitted to the following, unless stated otherwise.

Performance

4.1 PRESSURE RATING - SINGLE LAYER SYSTEM

Designated water pressure head: 5-metres

Tanking membrane

4.2 VIKING MERCURY TANKING MEMBRANE - SINGLE LAYER UP TO 5M DEPTH

Location:	as drawn
Substrate:	as required
Primer:	SES299 General Rapid Primer or SES300 Eco Primer - water based used in confined spaces or SES302 Easy Paste - Adhesive water based used in confined spaces
Tanking:	Viking Mercury Tanking
Finish/colour:	Sand/black
Tanking sealant:	SES013 Bituminous Sealant

Tanking membrane - Under slab

Drainage & Protection sheet

4.3 VIKING DRAINAGE & PROTECTION BOARD

Location:	as drawn
Brand/type:	Viking Drainage & Protection Board

Termination bar / pressure bar

4.4 TERMINATION BAR / FLASHING

Location:	as drawn
Type:	IMT708 Termination flashing complete with IMT710 External corner & IMT711 Internal corners - to terminate tanking in visible locations or IMT709 Pressure Bar - to terminate tanking where not visible to view

© CIL Masterspec Oct 2026

4161T KINGSPAN THERMAKRAFT UNDERLAYS, FOILS, DPC, DPM, & TAPES

1 GENERAL

This section relates to the supply and installation of Kingspan's Thermakraft product range including DPC, DPM, Wall & Roof Underlays, Foils, Flashing Tapes, and accessories.

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

DPC	Damp proof course
DPM	Damp proof membrane
EPDM	Ethylene propylene diene monomer

The following definitions apply specifically to this section:

Wall underlay	The same meaning as defined in NZBC E2/AS1, covering kraft based and synthetic wall underlays, sometimes called wall wraps, building wraps or building papers.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

AS 1530.2	Methods for fire tests on building materials, components and structures - Test for flammability of materials
AS/NZS 2904	Damp-proof courses and flashings
NZS 3604	Timber-framed buildings
NZS 4229	Concrete masonry buildings not requiring specific engineering design
AS/NZS 4347	Damp-proof courses and flashings - Methods of test
AS/NZS 4389	Roof safety mesh
AS/NZS 4534	Zinc and zinc/aluminium-alloy coatings on steel wire

CodeMark CMNZ10002 ver04 - Watergate Plus Wall Underlay
CodeMark CMNZ30028 (Rev J) - Thermakraft Covertek 407 Roof and Wall Underlay
CodeMark CMNZ30030 (Rev J) - Thermakraft Covertek 405 Roof and Wall Underlay
CodeMark CMNZ30069 (Rev I) - Thermakraft Covertek 403 Roof and Wall Underlay

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:

Thermakraft's Product Data Sheets
Thermakraft's Installation Guides
BRANZ Appraisal 329 (2022) - Supercourse 500 Damp-Proof Course and Concealed Flashing - Amendment 29.08.2023
BRANZ Appraisal 651 (2024) - Thermakraft Covertek 407 Roof and Wall Underlay - Amended 01.07.2025
BRANZ Appraisal 695 (2023) - Watergate Plus Wall Underlay - Amended 01.07.2025
BRANZ Appraisal 743(2025) - Thermakraft Covertek 405 Roof and Wall Underlay
BRANZ Appraisal 878 (2025) - Thermakraft Aluband Window Flashing Tape
BRANZ Appraisal 912 (2021) - Thermakraft 220 Synthetic Wall Underlay - Amended 01.07.2025
BRANZ Appraisal 917(2025) - Thermakraft Covertek 403 Roof and Wall Underlay
BRANZ Appraisal 942 (2022) - OneSeal Multi-fit Pipe and Cable Penetration Seals - Amendment 04.06.2024
BRANZ Appraisal 943 (2021) - Thermakraft Covertek 401 Roof and Wall Underlay - Amended 01.07.2025
BRANZ Appraisal 1000 (2023) - Thermakraft Thermabar 397 Light Diffusing Reflective Underlay - Amended 01.07.2025

© CIL Masterspec Oct 2026

BRANZ Appraisal 1029 (2023) - Thermakraft Ausnet Hexagonal Wire Mesh
BRANZ Appraisal 1104 (2020) - Thermathene Orange Concrete Underlay - Amendment 06.09.2024
BRANZ Appraisal 1122 (2020) - Thermaflash Flashing Tape - Amendment 02.09.2024
BRANZ Appraisal 1229 (2023) - Thermakraft Covertek 215 Roof Underlay - Amended 19.06.2025
BRANZ Appraisal 1277 (2025) - Thermakraft RainArmor Self Adhesive Roof Underlay and Wall Underlay

Manufacturer/supplier contact details

Company:	Kingspan Insulation NZ Ltd
Web:	www.thermakraft.co.nz
Email:	technical@kingspaninsulation.co.nz
Telephone:	0800 806 595

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

15 years	For Kingspan Thermakraft product range.

- Provide this warranty on the manufacturer/supplier standard form (if not available then use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.5 QUALIFICATIONS GENERALLY

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

Compliance information - CodeMark certified

1.7 CODEMARK CERTIFICATE - THERMAKRAFT COVERTEK 407

Thermakraft Covertek 407 roof and wall underlay meets the requirements of the NZBC when used within the conditions and limitations of its CodeMark Certificate of Conformity CMNZ30028 (Rev J).

Compliance information - BRANZ appraised

1.8 BRANZ APPRAISED - THERMAKRAFT SUPERCOURSE 500

Thermakraft Supercourse 500 DPC has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 329

1.9 BRANZ APPRAISED - THERMAKRAFT COVERTEK 407

Thermakraft Covertek 407 roof and wall underlay has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 651

1.10 BRANZ APPRAISED - THERMAKRAFT ONESEAL

Thermakraft OneSeal multi-fit pipe and cable penetration seal has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 942

1.11 BRANZ APPRAISED - THERMAKRAFT THERMAFLASH

Thermakraft Thermaflash flashing tape has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 1122

© CIL Masterspec Oct 2026

2 PRODUCTS

DPC

2.1 THERMAKRAFT SUPERCOURSE 500

BRANZ appraised, 0.5mm thick embossed black film DPC composed of recycled alloyed polyethylene. Tested to AS/NZS 4347 in accordance with AS/NZS 2904. Available in various width. Refer to SELECTIONS.

Synthetic underlays - fire retardant

2.2 THERMAKRAFT COVERTEK 407

CodeMark certified and BRANZ appraised self-supporting synthetic roof and wall underlay, white with red logo print, composed of a water resistant vapour permeable film laminated to two layers of non-woven, spun bonded polyolefin sheet. Fire retardant, tested to AS 1530.2 and assigned a Flammability Index of ≤12. Available in 1250mm and 2550mm width. Refer to SELECTIONS.

Components - sealing

2.3 THERMAKRAFT ONESEAL

BRANZ appraised black multi-fit pipe and cable penetration seal composed of adhesive coated, 1.2mm thick flexible synthetic rubber material (EPDM) with pre-notched ring markings. Refer to SELECTIONS.

2.4 THERMAKRAFT THERMAFLASH

BRANZ appraised self-adhering synthetic flexible flashing tape, white on the top surface. Available in 75mm, 150mm and 200mm width. Refer to SELECTIONS.

Components - secure strapping/netting

2.5 THERMAKRAFT THERMASTRAP

19mm wide, rigid embossed polypropylene strap, colour blue. Refer to SELECTIONS.

2.6 THERMAKRAFT STUD STRAP

25mm wide, flexible woven and coated polythene strap, colour black. Refer to SELECTIONS.

Fixings

2.7 FIXINGS - TO TIMBER

Little grippers, staples, clouts or screws to suit application. Refer to SELECTIONS.

2.8 FIXINGS - TO STEEL

Construction grade double sided tape, adhesive or galvanized flat head screws to suit application. Refer to SELECTIONS.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.

Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

© CIL Masterspec Oct 2026

Installation/application - generally

3.4 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

Installation - DPC

3.5 INSTALL DPC

Ensure substrate's surface is smooth, flat and free from sharp ridges/projections that may puncture membrane. Install as a single layer with minimum 50mm overlap at joints to the Installation Guide.

Installation - wall underlay

3.6 INSTALL WALL UNDERLAY

Install wall underlay to the Installation Guide horizontally and in true alignment over exterior face of wall framing including openings. Start by placing first sheet overlapping bearer or bottom plate by 35mm, draw taut and fix at maximum 300mm centres to wall framing members. Install additional sheets in row repeating the process for the first sheet with sheet end laps to be of at least 150mm and occurring over wall framing. Install sheets up to the top of the top plate repeating the installation process for the first row and overlapping higher over lower sheets by at least 150mm.

3.7 INSTALL WALL PENETRATION SEALS

Ensure wall underlay is free of dust and contaminates, where required clean with a dry cloth. Install penetration seal to the Installation Guide over pipe/conduit with a tight fit. Slide seal over pipe/conduit and place on underlay in a diamond shape. Remove backing release film and push firmly down to fix in place.

Installation - secure netting/strapping

3.8 INSTALL SECURE STRAPPING

Place straps on underlay, draw taut and fix to framing to the Installation Guide.

Installation - roof underlay

3.9 INSTALL ROOF UNDERLAY - HORIZONTAL

Install underlay to the Installation Guide horizontally and in true alignment over exterior face of roof framing. Place first sheet overlapping guttering (max. 20mm) or if eaves flashing is used terminate on the upper side of the flashing, draw sheet taut and fix at maximum 300mm centres to roof framing members. Install additional sheets in row repeating the process for the first sheet with sheet end laps to be of at least 150mm. Install sheets up to and over the ridge repeating the installation process for the first row and overlapping higher over lower sheets by at least 150mm.

3.10 INSTALL ROOF UNDERLAY - VERTICAL

Install underlay to the Installation Guide vertically and in true alignment over exterior face of roof framing. Place first sheet up the slope to the ridge overlapping guttering (max. 20mm) or if eaves flashing is used terminate on the upper side of the flashing, draw sheet taut and fix at maximum 300mm centres to roof framing members. Install additional sheets repeating the process for the first sheet lapping joints by at least 150mm.

Preparation of wall underlay for window/door placement

3.11 FORM OPENINGS

Form openings in wall underlay to the Installation Guide. Cut underlay diagonally from corner to corner across the opening and tightly fold underlay flaps into opening over the full depth. Secure underlay to the back face of opening framing with staples. Trim excess underlay off at internal face. Remove dust and contaminates from underlay with a dry cloth.

3.12 FLASHING TAPE APPLICATION - GENERALLY

Install flashing tape to the Installation Guide. Fold tape back onto exterior wall surface by at least 50mm, cover opening depth in full and finish by lining up with inside edge of opening framing. Fix tape by applying even pressure by hand or a roller leaving no air bubbles beneath the tape.

© CIL Masterspec Oct 2026

3.13 APPLY FLASHING TAPE ACROSS SILL/JAMB CORNERS

Cut 75mm wide tape to 100mm length. Apply to exterior wall surface across sill/jamb corners at 45°, overlap corners by 3mm.

3.14 APPLY FLASHING TAPE TO SILL

Use 150mm wide tape for up to 100mm deep opening framing and 200mm wide tape for deeper framing. Cut tape to sill length plus 400mm. Remove release film from tape, align back edge of tape with interior sill edge allowing for at least 200mm tape upstand at jambs, apply tape to sill and jamb. Cut tape overhang at external sill/jamb corners, fold back onto and apply to exterior wall face.

3.15 CREATE PENETRATION SELF-SEAL AT SILL

Cut 75mm wide flashing tape to sill length. Apply along entire length of sill at window/door fixing location to ensure fixing penetration self-seal.

3.16 APPLY FLASHING TAPE TO HEADER

Use 150mm wide tape for up to 100mm deep opening framing and 200mm wide tape for deeper framing. Cut tape to 400mm length. Remove release film from tape, align back edge of tape with interior opening framing edge and apply 200mm along head and 200mm down jambs. Cut tape overhang at external head/jamb corners, fold back onto and apply to exterior wall face.

3.17 APPLY FLASHING TAPE ACROSS HEAD/JAMB CORNERS

Cut 75mm wide tape to 100mm length. Apply to exterior wall surface across head/jamb corners at 45°, overlap corners by 3mm to create a seal at corner junctions.

Completion

3.18 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to www.thermakraft.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

DPC

4.1 DPC - THERMAKRAFT SUPERCOURSE 500

Location:	as drawn
Manufacturer:	Thermakraft
Brand:	Supercourse 500
Type:	Damp proof course
Width:	~

Synthetic underlays - fire retardant

4.2 ROOF & WALL UNDERLAY - THERMAKRAFT COVERTEK 407

Location:	as drawn
Manufacturer:	Thermakraft
Brand:	Covertek 407
Type:	Synthetic roof and wall underlay
Width:	~
Fixings:	~
Maximum UV exposure:	Walls - 60 days Roofs - 7 days

© CIL Masterspec Oct 2026

Components for sealing wall underlay penetrations

4.3 PENETRATION SEAL - THERMAKRAFT ONESEAL

Location:	as drawn
Manufacturer:	Thermakraft
Brand:	OneSeal
Type:	Pipe and service penetration seal
Size:	~

Components for securing underlays

© CIL Masterspec Oct 2026

4223SC SHADOWCLAD® PLYWOOD CLADDING FOR CAVITY CONSTRUCTION

1 GENERAL

This section relates to the use of Carter Holt Harvey Plywood Ltd (CHH PLY) Shadowclad® range of plywood exterior cladding on a drained cavity.
It includes:

- Shadowclad® Natural Texture
- Shadowclad® Natural Groove
- Shadowclad® Ultra Texture
- Shadowclad® Ultra Groove

1.1 RELATED WORK

Refer to ~ for ~

Refer to the appropriate timber framing section for timber framing.
Refer to the appropriate painting section for applied finishes.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

COC	Chain of Custody
FSC®	Forest Stewardship Council®

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
AS/NZS 1604.3:2012	Preservative-treated wood-based products - Part 3: Plywood
AS/NZS 2269.0	Plywood - Structural - Specifications
NZS 3602	Timber and wood-based products for use in building
NZS 3603	Timber structures standard
NZS 3604	Timber-framed buildings
NZS 3640	Chemical preservation of round and sawn timber

Window & Glass Association NZ (WGANZ) documents:

Window Installation Guide	Guide to Window Installation as described in E2/AS1

1.4 MANUFACTURER'S DOCUMENTS

Carter Holt Harvey Plywood Ltd documents relating to work in this section are:

Shadowclad® sITe App
Shadowclad® Specification and Installation Guide for Cavity Construction (Feb 2024)
Shadowclad® Specification & Installation Guide For Mixed Cladding Systems On Cavity Construction (May 2018)
Shadowclad® Safety Data Sheets
BRANZ Appraisal 764 - Shadowclad® Ventilated Cavity Cladding System

Manufacturer/supplier contact details

Company:	Carter Holt Harvey Plywood Limited
Web:	chhply.co.nz
Email:	info@ecoply.co.nz
Telephone:	0800 326 759

© CIL Masterspec Oct 2026

Requirements

1.5 QUALIFICATIONS

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

1.7 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1234 DOCUMENTATION for provision of the following general operation and maintenance information as electronic PDF format documents:

Shadowclad® Specification and Installation Guide for Cavity Construction and the Shadowclad Maintenance information bulletin.

Performance

1.8 APPRAISED

Shadowclad® Ventilated Cavity Cladding Systems is BRANZ Appraised (BRANZ Appraisal 764) with scope limitations. Shadowclad® Ventilated Cavity details were tested to E2/VM1 as part of the technical investigations carried out.

1.9 PERFORMANCE

Accept responsibility for the weather-tight performance of the completed cladding system, including all penetrations.

2 PRODUCTS

Materials

2.1 SHADOWCLAD® NATURAL TEXTURE CLADDING

Radiata pine veneer 12mm (nom) ply sheet manufactured to AS/NZS 2269.0. Treated LOSP Azole H3.1 to AS/NZS 1604.3. Bandsawn surface finish and vertical ship lap joint.

Standard sheet cover width is 1200mm. Standard sheet lengths are 2440mm and 2745mm.

2.2 WALL UNDERLAYS

For flexible wall underlays, rigid wall underlays and rigid air barriers, refer to the appropriate separate section(s).

2.3 EXTERIOR CAVITY WALL BATTENS

Radiata pine battens, nominal 20mm thick, 45mm wide and height to match timber framing studs. To NZS 3602, table 1, reference 1D.10, minimum H3.1 LOSP treated to NZS 3640.

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

2.4 EXTERIOR CAVITY CLOSER/VERMIN-PROOFING

Shadowclad® cavity base closure with upstand to two sides and 5mm diameter holes at 15mm centres to base. Available in aluminium (natural anodised) and stainless steel. Refer Shadowclad® Specification and Installation Guide for Cavity Construction. To NZBC E2/AS1: Vermin-proofing clause 9.1.8.3 and Cavity base closer figure 66.

2.5 EXTERIOR COVER BATTENS & TRIM

Radiata pine battens, trim and covers to profiles as required by the cladding manufacturer. Clears grade or finger-jointed, treated H3.1.

- cover battens minimum 65mm x 18mm with 6mm x 6mm weather grooves
- internal corner/soffit battens 18mm x 18mm with back corner chamfered

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

Components

2.6 NAILS

Refer to the Shadowclad® Specification and Installation Guide for Cavity Construction fixing requirements for size and use. Refer to SELECTIONS for material and type.

© CIL Masterspec Oct 2026

- Minimum 60mm x 2.8mm. (hand driven)

When using rigid air barriers, increase fixing length by at least the thickness of that panel. Refer to power tool manufacturers for equivalent power driven nail size.

2.7 SCREWS

Refer to the Shadowclad® Specification and Installation Guide for Cavity Construction fixing requirements for size and use. Refer to SELECTIONS for material and type.

- Minimum No. 8 x 65mm countersunk screws.

When using rigid air barriers, increase fixing length by at least the thickness of that panel.

2.8 FLASHINGS

Shadowclad® flashing range either; aluminium mill finish or anodised, or stainless steel. Note, lengths and finish do vary for aluminium profiles, but stainless steel profiles are all 3000mm long.

To NZBC E2/AS1, Table 20 Material Selection. Refer to the Shadowclad® Specification and Installation Guide for Cavity Construction.

2.9 FLASHING TAPE

Flexible flashing tape to NZBC E2/AS1, 4.3.11 Flexible flashing tape, UV resistant for exposed applications.

Accessories

2.10 SEALANT

Flexible neutral cure sealant to the plywood manufacturer's requirements to waterproof penetrations.

2.11 TREATMENT OF SHEET CUTS

Soudal Metalex Ready to Use, clear colour product.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

Shadowclad Panels:

- Keep Shadowclad® panels dry and store under cover, in well-ventilated areas away from sources of heat, flames or sparks.
- Handle and stack with care to avoid damage
- Stack flat, clear of ground, on at least three evenly spaced bearers

Shadowclad Flashings:

- Keep dry. If Shadowclad flashings arrive in a wet condition, immediately dry before storing.
- When storing avoid contact with other metals which may cause scratches or marks. The use of shelving or racks faced with dry wood is recommended.
- Keep away from caustics, nitrates and acids.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements. Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Ensure it is to NZS 3604, or specifically designed to NZS 3603, and the plywood manufacturer's requirements. Ensure all Shadowclad® edges and joints will be fully supported.

© CIL Masterspec Oct 2026

Ensure moisture content of timber framing and cavity battens is:
Timber: no greater than 20% maximum

3.4 VERTICAL JOINT EXPANSION - SHADOWCLAD® TEXTURE

Provide 2-3mm gap at all vertical edges of cladding for sheet expansion.

Maintain 2mm minimum expansion gap in the vertical shiplap joint to create an adequate expansion allowance. Refer Shadowclad® Specification and Installation Guide for Cavity Construction

3.5 HORIZONTAL JOINT EXPANSION - SHADOWCLAD® 'Z' FLASHING

For horizontal joints using Shadowclad® 'Z' flashings, provide a horizontal 9mm gap between the 'Z' flashing and the sheet above at the outside face to create an adequate expansion allowance. Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

Application

3.6 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.7 DRAINED CAVITY - 400 STUD SPACING

Confirm that drained cavity is installed as follows with 400mm stud spacing and 800mm max nog spacing, or 600mm max nog spacing when using vertical cover battens. 20mm nominal thickness drained cavity to NZBC E2/AS1: 9.0 Wall claddings, with battens over underlay or rigid air barrier. Vertical cavity battens fixed to each stud. Top of the cavity is to be sealed. Cavity closer/vermin proofing should be used at the base of walls, open horizontal (or raking) junctions, over openings (windows, meters etc). Horizontal cavity battens should not be used except when closing off the top of a cavity from all roof spaces and enclosed soffits to prevent entry of moist air.

Cavity spacers (i.e. short pieces of cavity batten) may be used to support the bottom sheet edge (or provide intermediate support where required eg above window openings) but must allow water drainage to the outside. The cavity spacers must be fixed at a 5˚ minimum slope (to horizontal) with a 50mm minimum air gap at either side.
Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

3.8 PENETRATIONS

Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames and other penetrations through the cladding. Required preparatory work includes the following:

- wall/cladding underlay to openings finished and dressed off ready for the installation of window and door frames and other penetrations
- treat all cut edges of plywood cladding with Soudal Metalex Ready to Use, to Soudal requirements.
- claddings neatly finished off to all sides of openings
- installation of flashings (those required to be installed prior to installation of penetrating elements).

Refer to the WGANZ Window Installation Guide. This covers the WGANZ recommendations on the preparation of window/door openings, minimum clearances between rough openings and the window/door frame, dressing of the wall underlay into the prepared opening, application of flexible flashing tape to the sill and top corners of the opening, installation of window/door frames and flashings, sealing of the window/door frame into the opening to create a pressure equalisation cavity, installation of flashings and the maintenance of appropriate clearances between the frame and the surrounding construction.

3.9 TREATING CUT EDGES

Treat cut edges of plywood with Soudal Metalex Ready to Use to Soudal requirements, before fixing. Cut edges must be placed at the top of the sheet to avoid rain drips soaking in to cut end grain.

3.10 PRIMING EDGES & REAR OF SHEET

Before installation prime the bottom edges and back (rear) of sheets to a height of 150mm. Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

© CIL Masterspec Oct 2026

3.11 PRE-PAINTING OR STAINING

Before installation pre-paint or pre-stain as appropriate, up to one finishing coat on exposed edges and surfaces that will be difficult to paint after installation. Refer to Metalex Ready to Use datasheet for specific requirements.

3.12 INSTALL SHADOWCLAD® PLYWOOD CLADDING

Install to the requirements of Shadowclad® Specification and Installation Guide for Cavity Construction. Ensure sheets are installed vertically, do not install horizontally. Use a Shadowclad Stick to determine required clearances.

3.13 FIXING SHADOWCLAD® PLYWOOD CLADDING

Fix at 150mm maximum centres at sheet edges and no closer than 7mm to the sheet edge. Fix intermediate supports at 300mm maximum centres to studs and nogs. Sheets to be nailed off independently of each other, with nailing pattern and ship lap joint nailing to detailed requirements of Shadowclad® Specification and Installation Guide for Cavity Construction (in particular refer details SC003, SC006, SC006A, SC008, SC008A). Do not fix through grooves.

Finish fixings flush.
Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

3.14 INSTALL COVER BATTENS AND TRIMS

Install as detailed on the drawings and in accordance with the cladding manufacturer's requirements.

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

3.15 INSTALLING FLASHINGS GENERALLY

Install flashings and covers as detailed on the drawings and in accordance with Shadowclad® recommended details. Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

3.16 INSTALLING SHADOWCLAD® 'Z' FLASHINGS - CONTINUOUS CAVITY

Install Shadowclad® standard Horizontal 'Z' flashing with the upstand over the cavity battens to Shadowclad® recommended details and as detailed on the drawings. Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

3.17 INSTALLING SHADOWCLAD® 'Z' FLASHINGS - NON-CONTINUOUS CAVITY

Install Shadowclad® Inter-Storey 'Z' flashing with the upstand under the cavity battens along with Shadowclad® Cavity Base Closure, to Shadowclad® recommended details and as detailed on the drawings.

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

3.18 JOINTING & TERMINATING SHADOWCLAD® 'Z' FLASHINGS

Horizontal 'Z' flashings shall be jointed as follows:

- Butt jointed over back flashing for aluminium flashings
- Overlapped by 150mm for stainless steel flashings

Horizontal 'Z' flashings shall have ends terminated as follows:

- 50 mm strip of neutral cure silicon or
- Stop ends
- End terminations not required butting into Shadowclad® metal corner flashings.

Refer **Shadowclad**® Specification and Installation Guide for Cavity Construction.

3.19 FINISHING

Refer to the appropriate painting section(s).

Panels are to be brush coated within 3 months of installation. If finished after 3 months ensure panels are prepared to Shadowclad® Specification and Installation Guide for Cavity Construction, Section 5.0.



© CIL Masterspec Oct 2026

For paint and film forming stains ensure cover is at least 90 microns (Min 30 microns/coat). For penetrating stains follow stain manufacturer's requirements.

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

For detailed advice on surface preparation, coating product suitability and general coating practice always refer to the coating manufacturer prior to application.

3.20 COMPLETE

Ensure the work is complete with all flashings, finishings and trim properly installed so the cladding system is completely weathertight.

Completion

3.21 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to: chhply.co.nz
Substitutions are not permitted to the following, unless stated otherwise.

4.1 SHADOWCLAD® NATURAL TEXTURE PLYWOOD CLADDING

Cladding type:	Shadowclad® Natural Texture
Treatment:	H3.1 LOSP
Finish:	black stain (refer to appropriate painting section)
Prime:	~ for exposed edges (refer to appropriate painting section)
Thickness:	12mm (nominal)

4.2 CAVITY BATTENS

Timber species:	Radiata pine
Timber grade:	Merchantable
Treatment:	H3.1

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

4.3 SHADOWCLAD® FLASHINGS - ALUMINIUM

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

Location	Flashing	Finish
Cavity base:	Cavity Base Closure	Natural Anodised (only)
Horizontal joints:	Horizontal Z Back	Mill finish (only)
Horizontal joints:	Horizontal Z	~
Inter storey junction:	Inter-Storey Z Back	Mill finish (only)
Inter storey junction:	Inter-Storey Z	~
Internal angle:	Internal 90 Angle	Natural Anodised (only)
Internal angle	Internal W Angle	~
Internal angle	Large Internal W Angle	~
External angle:	External Box Angle	~
External angle:	Large External Box Angle	~
Vertical details	Vertical Top Hat	~

Powder coating/colour:	black
Note:	Contractor to organise powder coating separately (not by Carter Holt Harvey Plywood Ltd)

4.4 SHADOWCLAD® FLASHINGS - STAINLESS STEEL

Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

Location	Flashing

© CIL Masterspec Oct 2026

Cavity base:	Cavity Base Closure
Horizontal joints:	Horizontal Z
Inter storey junction:	Inter-Storey Z
Internal angle:	Internal 90 Angle
Internal angle	Large internal W Angle
External angle:	Large external Box Angle

4.5 FASTENINGS FOR CLADDING - STAINLESS STEEL

Location: as drawn
Type/size: screw
Material: Stainless Steel
Note: Must be used with H3.2 treated timber and/or Stainless steel flashings only, increase length of fixing if rigid air barriers are used. Do not use with aluminium flashings.
Refer Shadowclad® Specification and Installation Guide for Cavity Construction.

4.6 COVER BATTENS AND TRIMS

Location	Material	Size	Finish
~	~	~	~ to match cladding

Finishing

4.7 FINISH

Type: stain - black
Note: Refer to the appropriate painting section(s).
For detailed advice on surface preparation, coating product suitability and general coating practice always refer to the coating manufacturer prior to application

© CIL Masterspec Oct 2026

4422VE VIKING ENVIROCLAD MEMBRANE

1 GENERAL

This section relates to **Viking Enviroclad** (Sure-Weld TPO) membrane, suitable for industrial, commercial and residential roofing and decking applications.

It includes:

- Enviroclad applied as a single layer membrane
- all required components and accessories to complete installation

1.1 RELATED WORK

Refer to ~ for ~.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section

CCA	Copper, chrome and arsenate
MCA	Micronized copper azole
TPO	Thermoplastic polyolefin
WMAI	Waterproofing Membrane Association Inc

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture provisions for timber-framed buildings up to 10 m in height
AS/NZS 1604.1	Preservative-treated wood-based products - Part 1: Products and treatment
AS/NZS 1859.1	Reconstituted wood based panels - Specifications - Particle board
AS/NZS 2269.0	Plywood - Structural - Part 0: Specifications
CodeMark™ CMNZ30058 verH	Viking Enviroclad Roofing and Deck Membrane System
CodeMark™ CMNZ70176 ver0	Viking Enviroclad "Sure-Weld TPO" Waterproofing membrane

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:

Viking Plywood Substrate Checklist - Enviroclad
Viking Plywood Substrate Checklist - Dec-K-ing
Viking Strandsarking Substrate Checklist - Enviroclad
Viking Concrete Substrate Checklist - Enviroclad
Viking Enviroclad Standard Details
Viking Enviroclad Applicator Handbook
Viking Enviroclad Product Technical Statement
Viking PDS – RhinoBond Mechanical Fastening to Enviroclad TPO
Viking Rhinobond Standard Details
Viking PDS EJOBAR TPO 2G Mounting Bar
Viking PDS Enviroclad Walkway Roll
Viking PDS Cav-Grip III, Low VOC Low Temperature Adhesive
Viking PDS Enviroclad TPO pourable sealer pockets and pourable sealer
Viking PDS Viking Surface Sealer
Viking PDS AFS Low Profile Barge Flashing System
Viking Technical Note Flood Testing
Viking Technical Note Venting
BRANZ Appraisal 656 (2020) - Enviroclad Roofing Membrane - Amended 16 April 2025

© CIL Masterspec Oct 2026

BRANZ Appraisal 713 (2018) - Viking WarmRoof / WarmSpan System - Amended 16 April 2025
BRANZ Appraisal 946 (2022) - Strandsarking® for Low Slope Membrane Roofs

Manufacturer/supplier contact details;

Company:	Viking Roofspec Ltd
Web:	www.vikingroofspec.co.nz
Email:	info@vikingroofspec.co.nz
Telephone:	0800 729 799

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

20 years:	For Viking Enviroclad Membrane

- Provide this warranty on the Viking Enviroclad Membrane Product Warranty standard form.
- Commence the warranty from the date of completion of fixing.

Refer to the section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

10 years:	For Enviroclad membrane when installed by Viking Approved Applicator with Viking Licensed Installer Stage 1 minimum

- Provide this warranty in the Certificate of Workmanship form in support of a Viking Roofspec Product Warranty.
- Commence the warranty from the date of completion of fixing.

Refer to the section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS WORKERS – MANUFACTURER / SUPPLIER REQUIREMENTS

Installation of the membrane to be carried out by Viking Licensed Installers holding a minimum Viking Stage 1 Licence. Installation of substrates must be completed by suitably qualified persons in accordance with instructions given in Manufacturers Technical Literature and BRANZ Appraisal 656 - Enviroclad Roofing Membrane.

Refer to 1270 CONSTRUCTION for additional requirements relating to qualifications.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any specified Viking membrane waterproofing materials, or associated products, components or accessories, unless agreed by Viking Roofspec.

Compliance information

1.9 COMPLIANCE - CODEMARK CERTIFICATE

Enviroclad (Sure-Weld TPO) meets the requirements of the NZBC when used within the conditions and limitations of its CodeMark Certificate:

- CodeMark™ CMNZ30058 Viking Enviroclad Roofing and Deck Membrane System
- CodeMark™ CMNZ70176 Viking Enviroclad "Sure-Weld TPO" Waterproofing Membrane

1.10 COMPLIANCE - BRANZ APPRAISAL

Enviroclad (Sure-Weld TPO) has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 656 (2020) - Enviroclad Roofing Membrane.

© CIL Masterspec Oct 2026

Performance

1.11 TEST - FLOOD

Where practicable, flood test horizontal applications to the overflow height for minimum 2 hours. Ensure that an overflow is incorporated during the flood testing and that there are no load limitations that might prevent testing. Make good any lack of watertightness when the surface is completely dry. Repeat flood test process after making repairs.

Refer to Viking Technical Note Flood Testing for further information.

1.12 PERFORMANCE

Accept responsibility for the weather-tight performance of the completed Viking Enviroclad system, including all penetrations through the roof and junctions with walls and parapets. All penetrations to comply with Viking Roofspec recommendations and standard details.

2 PRODUCTS

Materials

2.1 ENVIROCLAD (SURE-WELD TPO) WATERPROOFING MEMBRANE

Polyester reinforced thermoplastic polyolefin (TPO) membrane. Refer to SELECTIONS for size and colour options.

Components

2.2 VIKING SURFACE SEALER

Viking Surface Sealer is a two component water-based epoxy for use as a primer and sealer to green concrete or cement based substrates allowing earlier application of Viking single ply membranes.

2.3 ADHESIVE

Sureweld Bonding Adhesive - proprietary solvent based contact adhesive.

2.4 ADHESIVE, LOW TEMPERATURES /LOW VOC

Viking Cav-Grip III – proprietary low VOC, low temperature solvent based contact adhesive.

2.5 MECHANICAL FIXING PLATES

RhinoBond mechanical fixing plates – 80mm TPO coated plates for mechanical fixing method.

2.6 ENVIROCLAD CUT EDGE SEALANT (CLEAR)

Proprietary sealant for sealing cut edges.

2.7 WATER CUT-OFF MASTIC

Mastic Sealant for use at compression terminations, drains and beneath metal edging.

2.8 ENVIROCLAD UNIVERSAL SEALANT

UV stable sealant for use in exposed terminations in contact with Enviroclad Membrane (e.g. chase sealing). Available in colour white only.

2.9 ENVIROCLAD WEATHERED MEMBRANE CLEANER

Proprietary membrane cleaner. For use to clean membrane or TPO accessories prior to welding of laps or detail. Use with HP Splice Wipes.

2.10 HP SPLICE WIPES

Proprietary wipes for use with Enviroclad Weathered Membrane Cleaner to properly clean and prepare membrane and accessories prior to welding.

2.11 ENVIROCLAD OUTSIDE AND INSIDE CORNERS

Proprietary non-reinforced moulded TPO flashings to be welded as internal and external corners.

2.12 ENVIROCLAD NON-REINFORCED MEMBRANE

Proprietary non-reinforced TPO membrane or detailing. Available in grey and white in 300mm x 15.2m and other colours in 610mm wide x lineal metre.

© CIL Masterspec Oct 2026

2.13 ENVIROCLAD T-JOINT COVERS

Proprietary unreinforced TPO disks.

2.14 ENVIROCLAD PIPE SEAL

Proprietary non-reinforced moulded TPO flashings for sealing pipe penetrations. Sized for 19mm – 205mm diameter round penetrations. Suitable for maximum sustained temperature of 70°C.

2.15 ENVIROCLAD SPLIT PIPE BOOT

Proprietary split pipe boot for sealing in-situ round penetrations 80mm or 100mm. Suitable for maximum sustained temperature of 70°C. Colour: Grey

2.16 ENVIROCLAD TPO POURABLE SEALER POCKETS

Proprietary non-reinforced moulded TPO surrounds for encasing odd shaped or multiple pipe penetrations of maximum size 100mm x 250mm.

2.17 ENVIROCLAD WHITE ONE-PART POURABLE SEALER

Proprietary white pourable sealer for filling of Enviroclad TPO pourable sealer pocket or manufactured surrounds. Suitable for sustained service temperature of --29°C to 90°C. Use with WeatherBOND Multipurpose Primer.

2.18 PRIMER

WeatherBOND Primer SEC034 for priming all surfaces receiving Enviroclad White One-Part Pourable Sealer and for use with laptape.

2.19 LAPTAPE

Laptape SMT076V use for under-flashings or drip edge detail when required. Use with WeatherBOND Multipurpose Primer.

Accessories

2.20 VENTS

Aluminium vent or TPO vent for roof top mounted cavity ventilation.

2.21 ENVIROCLAD SCUPPER OUTLETS

TPO scuppers. 100mm x 65mm, 100mm x 100mm or 200mm x 80mm outlets.

2.22 ENVIROCLAD SCUPPER OVERFLOW

TPO scupper overflow. 200mm x 80mm overflow outlets.

2.23 SUMPS WITH TPO WELDABLE FLANGES

TPO Weldable Sumps with outlet and overflow diameters sized at 100mm/150mm or 150mm/200mm.

2.24 CLAMP RING ROOF DRAINS OR OVERFLOWS

80mm, 100mm or 150mm clamp sealed drains and overflows.

2.25 TPO COATED ALUMINIUM

Aluminium sheet, grey TPO coated to use for weldable flashings. Available in 3m x 1.2m

2.26 DRIP EDGE PROFILE

2mm Aluminium drip edge profile 66mm high x 50mm wide x 3m long, as recommended by WMAI. Secure membrane to drip edge with fastening bar.

2.27 FASTENING BAR

Fastening bar profiles 25mm x 2.4m long in anodised aluminium, SDF110 or mill finish SDF110C.

2.28 PRESSURE BAR

2mm Aluminium pressure bar 65mm x 2.4m long.

2.29 TERMINATION FLASHING

2mm Aluminium Termination Flashing 140mm x 2.4m long with proprietary internal and external corners.

© CIL Masterspec Oct 2026

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

Take delivery of Enviroclad membrane in rolls undamaged and include for site handling facilities where required. Store rolls horizontally only. Provide dry storage for all products. Stack off the ground on a level surface and with accessories.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.

Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Confirm the moisture content of substrates:

Concrete:	Relative humidity of 75% maximum
Plywood / timber substrate:	Moisture Content of 20% maximum

3.4 WEATHER

Lay Enviroclad membrane in fair weather, with ambient air temperature no less than 7°C when using Viking Sure-Weld adhesive. Cooler climates may require use of Viking Gav-Grip III adhesive or RhinoBond mechanical fixing, refer to Product Data Sheet for suitable temperature range for installation.

3.5 EQUIPMENT

Equipment to be used:

- Suitable welding equipment
- Hand rollers for welding
- Seam probe
- 35kg + roller for use with adhesive applied membrane
- Magnetic heat sink poles for Rhinobond
- Rhinobond Induction welder

Application - General / preparation

3.6 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.7 GENERALLY

All work and materials to comply with current Viking Enviroclad technical literature and standard details.

3.8 PRELIMINARY WORK

Ensure that preliminary work, including formation of falls, flashing rebates, grooves, ducts, provision of battens and fixing of vents and outlets to levels, is complete and properly constructed to enable the system to work as intended. The substrate to be smooth, clean, dry and stable.

3.9 ACCEPTANCE OF SUBSTRATE

Confirm that the substrate, including sumps, outlets, overflows and projections, will ensure work of the required standard. Ensure substrate falls comply with the consented plans and details, including positive watershed to drainage outlets or external spouting to avoid ponding.

- Ensure concrete roofs/deck to a minimum fall of 1:60 (1°) to CodeMark™ CMNZ30058
- Ensure other substrate roofs to a minimum fall of 1:30 (2°) to NZBC E2/AS1, paragraph 8.5.1.2a
- Ensure other substrate decks to a minimum of 1:40 (1.5°) to NZBC E2/AS1, paragraph 8.5.1.2b.

© CIL Masterspec Oct 2026

- Ensure gutters to a minimum fall of 1:100 (0.5°) to NZBC E2/AS1, paragraph 8.5.1.2c

3.10 CONCRETE SUBSTRATE

Ensure installation to requirements of current Viking Roofspec Membrane Concrete Substrate Checklist - Enviroclad. Ensure concrete substrate has been allowed to cure for at least 28 days before commencing application. If using a curing compound or sealer ensure compatibility with Viking membrane components prior to installation and follow the manufacturer's instructions. The relative humidity of concrete substrates must be 75% or less before membrane application. Prepare the surface to leave smooth, clean, dry and free of debris.

If required, apply 2 coats of Viking Surface Sealer to control moisture within the substrate prior to the waterproofing membrane installation

3.11 PLYWOOD SUBSTRATE

Ensure installation to requirements of current Viking Roofspec Plywood Substrate Checklist - Enviroclad.

Plywood to be;
- a minimum of 17mm thick and complying with AS/NZS 2269.0
- minimum CD structural grade with the sanded C side upwards
- H3.2 treated (CCA or MCA) to AS/NZS 1604.1, and kiln dried afterwards.

Lay plywood with staggered joints (brick bond) with all edges of the sheets fully supported. Do not use tongue and groove plywood.
Leave a 3mm gap between all sheets. Fix with 10 gauge x 50mm stainless steel countersunk screws. Fix at 50mm from the corners, 150mm centres on edges and 200mm centres on all intermediate supports. No triangular fillets are to be used at upstand transitions. Chamfer all external edges with a minimum radius of 5mm where the membrane is to be wrapped over.

Plywood and the timber substructure to have a maximum moisture content of 20% when the membrane is installed.

3.12 INSTALL DRAINAGE ACCESSORIES

Install all selected proprietary clamped drains, scuppers, overflows and sumps in accordance with the manufacturer's installation requirements.

3.13 INSTALL DRIP EDGE / FASTENING BAR

Install selected drip edge angle to the underside of plywood or rebate into concrete substrate to form drip edge at external spouting and secure membrane to drip edge with fastening bar in accordance with the manufacturer's installation requirements.

Application - laying

3.14 GENERAL

Install to current application standards as detailed in Viking Roofspec Technical literature and Viking Enviroclad Applicators Handbook.

3.15 SUBSTRATE PREPARATION

Substrate to be clean and dry before application of the waterproofing membrane.

3.16 POSITION AND RELAX

Membrane to be unrolled onto the prepared substrate and allowed to relax for at least 20 minutes prior to installation. Position membrane over acceptable substrate and fold membrane back to expose half of the underside.

3.17 LAP JOINTS

Install adjoining Enviroclad membrane sheets in the same manner, overlapping edges 50mm to provide a minimum 40mm hot air weld.

3.18 APPLY ADHESIVE - SUREWELD

Apply SureWeld Bonding Adhesive, to the exposed underside of the membrane and to the corresponding substrate, using a plastic core medium nap paint roller at a coverage rate of 2m² per litre (includes coverage on both membrane and substrate).

© CIL Masterspec Oct 2026

3.19 APPLY ADHESIVE – CAV-GRIP III

Apply Cav-GRIP III, spray applied bonding adhesive, to the exposed underside of the membrane and to the corresponding substrate, at a coverage rate of 90m² per cylinder (includes coverage on both membrane and substrate).

3.20 INSTALL MEMBRANE SHEETS - ENVIROCLAD ADHESIVE FIXED

Allow adhesive to flash off until tacky without transfer to a dry finger. Lay the glued Enviroclad membrane onto the glued substrate. Brush down the bonded section of Enviroclad membrane immediately with a soft bristle broom. Fold back the unglued half of the sheet and repeat procedure. Roll membrane to field area with 35kg roller to ensure full contact of adhesive.

3.21 INSTALL RHINOBOND PLATES

Install RhinoBond plates in accordance to manufacturer's requirements and to fixing Viking Detail RB01 RhinoBond Plate Fixing Pattern for Enviroclad TPO up to (ULS) 2.7kPa. Secure with selected fixings to substrate, do not overdrive.

3.22 INSTALL MEMBRANE SHEETS – ENVIROCLAD OVER RHINOBOND PLATES

Install in accordance with Viking Product Data Sheet – RhinoBond Mechanical Fastening to Enviroclad TPO.
Calibrate RhinoBond induction welder with a 5 plate test to determine correct settings. Calibrate each morning and afternoon or if ambient temperature changes by 7°C.
Lay Enviroclad membrane over the substrate to clean RhinoBond plates, if required wipe plates using Viking TPO Weathered Membrane Cleaner with HP Splice Wipes. Weld all sheet laps prior to induction welding to plates.
Centre RhinoBond induction welder over each RhinoBond plate, activate induction welder and leave in place until heating cycle is complete (approximately 5 seconds). Immediately after, place clean magnet over the plate and leave for 45-60 seconds.

Refer to Viking PDS - RhinoBond Mechanical Fastening to Enviroclad TPO for installation instructions.

3.23 MEMBRANE CLEANER

Ensure that all membrane, including accessories, to be welded is cleaned using Weathered Membrane Cleaner. Wipe the surface where the Enviroclad membrane cleaner has been applied with a clean, dry HP Splice Wipe to remove residue prior to welding.

For Enviroclad Seam Shield, exclusively, membrane cleaning of the factory laps is not required.

3.24 HOT AIR WELD

Hot air weld the adjoining Enviroclad membrane sheets (minimum width of weld is 40mm).

3.25 INSPECT

Inspect and test joints all welds using a seam probe. Repair all breaches immediately while clean. Seal all cut reinforced membrane edges using Cut Edge Sealer, or penny roll the cut membrane edge using the correct welding technique.

3.26 PENETRATIONS AND JUNCTIONS

Form and finish upstands, downturns, penetrations, outlets and vents to conform to current Viking Roofspec Standard Details. Confirm installation of all required flashings and terminations, to leave membrane watertight upon project completion.

3.27 VENTING – ROOF CAVITIES

Provide adequate ventilation to NZBC E2/AS1, paragraph 8.5.1.4. For substrate venting, Viking Roofspec recommends 1 vent per 50m² area for substrate. For Cavity ventilation cavity ventilation, check that the cavity is cross ventilated allowing air movement across the entire cavity to reach vent locations. Refer to drawings for vent placement details.

Finishing

3.28 PROTECTION CONSTRUCTION TRAFFIC

Protect completed areas of roof. Keep foot traffic to a minimum after laying the membrane. Lay protection / access boards as required for material storage, foot traffic or later works and remove when no longer required. Provide soft protection such as Viking Membrane Protection mat under hard protection access boards such as 17mm plywood.

© CIL Masterspec Oct 2026

3.29 ACCEPTANCE

Inspect the completed work. Protect and maintain roofing until completion of the contract works.

3.30 SUBSEQUENT WORK

Make good any damage and repair to Viking Roofspec specifications.

Completion

3.31 COMPLETION - TESTS & CERTIFICATION

Refer to 1270 CONSTRUCTION for general test and certification requirements at completion.

Carry out required testing procedures - ~.

4 SELECTIONS

Substitutions are not permitted to the following, unless stated otherwise.

4.1 VIKING ENVIROCLAD MEMBRANE – ADHESIVE FIXED

Location:	as drawn
Substrate:	as drawn
Sealer:	as required
Membrane:	Viking Enviroclad
Thickness:	1.52mm
Size:	~ metres wide x 30.4 metres long
Colour:	grey
Finish:	smooth
Adhesive:	Viking Sureweld or Viking Cav-Grip III spray applied (for low temperatures and low VOC)

4.2 VIKING ENVIROCLAD MEMBRANE – MECHANICAL FIXED

Location:	as drawn
Substrate:	as drawn
Sealer:	as drawn
Membrane:	Viking Enviroclad
Thickness:	as drawn
Size:	~ metres wide x 30.4 metres long
Colour:	g
Finish:	smooth
Plates:	Rhinobond Plates VWR005 80mm diameter
Fixings:	~
Adhesive:	For vertical upstands and detailing use: Viking Sureweld or Viking Cav-Grip III spray applied (for low temperatures and low VOC)

4.3 ACCESSORIES - DRAINAGE OUTLETS & OVERFLOWS

Location:

as drawn

Product: ~

4.4 ACCESSORIES - VENTS

Location:

Product: ~

4.5 ACCESSORIES - FLASHINGS / TRIMS

Location: ~

Product: ~

© CIL Masterspec Oct 2026

4521AR APL RESIDENTIAL ALUMINIUM WINDOWS & DOORS

1 GENERAL

This section relates to the fabrication, supply, and installation of APL Window Solutions residential window and door systems.

1.1 RELATED WORK

Refer to appropriate AGP glazing sections for glass types.

~

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

WGANZ	Window & Glass Association NZ
PQAS	Powder Coating Quality Assurance System

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture provisions for timber-framed buildings up to 10 m in height
NZBC F4/AS1	Safety from falling
NZBC G4/AS1	Ventilation of buildings
NZBC H1/AS1	Energy efficiency for all housing and buildings up to 300m²
NZBC H1/AS2	Energy efficiency for buildings greater than 300m²
NZBC H1/VM1	Energy efficiency for all housing and buildings up to 300m²
NZBC H1/VM2	Energy efficiency for buildings greater than 300m²
AS/NZS 1734	Aluminium and aluminium alloys - Flat sheet, coiled sheet and plate
AS/NZS 1866	Aluminium and aluminium alloys - Extruded rod, bar, solid and hollow shapes
NZS 4211	Specification for performance of windows
NZS 4223.3	Glazing in buildings - Human impact safety requirements
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
BS EN 673	Glass in building - Determination of thermal transmittance (U-value) - Calculation method
AAMA 2603	Voluntary specification, performance requirements, and test procedures for pigmented organic coatings on aluminium extrusions and panels (with coil coating appendix)
AAMA 2604	Voluntary specification, performance requirements and test procedures for high performance organic coatings on aluminium extrusions and panels
AAMA 2605	Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminium extrusions and panels
ISO 10077-1	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - General
ISO 10077-2	Thermal performance of windows, doors and shutters - Calculation of thermal transmittance - Numerical method for frames

Window & Glass Association NZ (WGANZ) documents:

Window Installation Guide	Guide to Window Installation as described in E2/AS1

© CIL Masterspec Oct 2026

SFA 3503-03	Anodic Oxide coatings on wrought aluminium for external architectural application (2005)

US Federal Specification:

TT-S-001543A	Sealing compound, silicone rubber base (for caulking, sealing and glazing in buildings and other structures)
TT-S-00230C	Sealing compound, elastomeric type, single component (for caulking, sealing and glazing in buildings and other structures)

CodeMark™ CMNZ10033 ver2	APL Metro Series ThermalHEART® with Centrafix™ Windows and Doors.

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents relating to this part of the work:

APL Window Solutions	Specifier Guide
APL Window Solutions	Metro Series ThermalHEART® with Centrafix™ System Guide (Version 08/23a)
APL Window Solutions	Windows and Doors for Residential Purposes BPIR
APL Window Solutions	Windows and Doors for Residential Purposes - Thermally Insulated BPIR
APL Window Solutions	Entrance Door Overview
APL Window Solutions	Testing of APL new window and installation to EM9 test method

BRANZ Appraisal 1188 (2023) - APL Metro Series ThermalHEART® with Centrafix™ Windows and Doors - Amended 2 May 2024
BRANZ Appraisal 1259 (2024) - APL ThermalHEART+® Window and Door Systems - Amended 2 May 2024

Manufacturer/supplier contact details

Company:	Architectural Profiles Ltd.
Trading as:	APL Window Solutions
Web:	www.altherm.co.nz www.firstwindows.co.nz www.vantage.co.nz www.aplnz.co.nz
Email:	apl.techinfo@aplnz.co.nz altherm.techinfo@aplnz.co.nz firstwindows.techinfo@aplnz.co.nz vantage.techinfo@aplnz.co.nz
Telephone::	07 849 8888

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

5 years:	For materials including hardware and componentry
12 years:	For AGP glass
~ years:	For ~

- Provide this warranty on the manufacturer/supplier standard form (if not available then use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

© CIL Masterspec Oct 2026

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

5 years: For installation

- Provide this warranty on the installer/applicator standard form (if not available then use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS GENERALLY

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

1.9 DESIGN PARAMETERS - WIND

Design the installation to the manufacturer requirements and as appropriate for the project wind design stated in the general section 1220 PROJECT.

1.10 SHOP DRAWINGS

Refer to the general section 1235 SHOP DRAWINGS for the requirements for submission and review and the provision of final shop drawings.

Provide shop drawings to show the general arrangement including, but not be limited to:
Fully dimensioned elevations of all elements
Construction details (minimum scale 1:5) showing the interface between joinery elements and the building structure including:

- Jointing details and method of fixing between individual elements and between this installation and adjacent work
- Interaction between claddings and linings
- Flashing details
- Sealants and air seals
- Non standard fixing details including bracketing

If requested provide the following additional information:

- Design calculations
- Producer Statement in the form PS1 Producer Statement Design
- Rebate sizes
- Dimensions of all typical elements and of any special sizes and shapes
- Provision for the exclusion and/or drainage of moisture
- Provision for adjustment of fixings to ensure true alignment of windows and doors
- Sealant types and full size sections of all sealants and backing rods
- Provision for thermal movement
- Provision for seismic movement and movement under wind loads
- Sequence of installation
- Glazing specification and details
- Information of Professional Indemnity Insurance held by the person providing the calculations and shop drawings

Submit shop drawings for review to ~.

- ~ working days (at least) before fabrication is planned to commence, provide shop drawings for review.
- Complete shop drawing review before commencing fabrication and/or installation.

© CIL Masterspec Oct 2026

1.11 INFORMATION FOR OPERATION AND MAINTENANCE

Refer to the general section 1239 OPERATION & MAINTENANCE for provision of the following general operation and maintenance information as electronic PDF format documents:
APL Window Solutions Specifier Guide

Provide this information prior to practical completion.

1.12 MARKING - EXTERNAL WINDOWS / DOORS

Each window claimed by the manufacturer to be complaint with NZS 4211 to be labelled on the frame to NZS 4211.

Compliance Information

1.13 COMPLIANCE - BRANZ APPRAISAL

APL ThermalHEART+® Window and Door Systems has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 1259.

Performance

1.14 EXTERNAL WINDOW PERFORMANCE

APL Window Solutions windows and doors have been tested to NZS 4211 and the requirements of BPS, 4.4.1 Structural and weathertightness provisions.

1.15 THERMAL PERFORMANCE - WINDOWS & GLAZED DOORS, HOUSING ONLY

Thermal performance of windows & doors to NZBC H1/AS1. The construction R-Value of windows & doors determined by Appendix D, Table D1.1.1: Construction R-values (R window) of selected generic windows and doors. Refer to SELECTIONS for construction R-values.

2 PRODUCTS

2.1 WINDOWS

Refer to SELECTIONS.

2.2 DOORS

Refer to SELECTIONS.

Materials

2.3 ALUMINIUM EXTRUSIONS

Alloy designation to comply with AS/NZS 1866. Branded and extruded for anodising or powder coating.

2.4 ALUMINIUM SHEET AND STRIP

Complying with AS/NZS 1734 of suitable thickness. Rolled for anodising or powder coating.

Alloy designation: 5251 - H16 or 5005 - H16

2.5 STAINLESS STEEL SHEET AND STRIP

Type: 316 austenitic steel
Finish grade: 2B (satin lustre)

2.6 GLASS

Refer to the glazing section for glass types and installation.

Reveals

2.7 REVEALS - ALUMINIUM

Aluminium reveals fitted to frame via thermal break.

© CIL Masterspec Oct 2026

Flashings

2.8 FLASHINGS GENERALLY

To NZBC E2/AS1, 9.1.9 Windows and doors. Material, grade and colour of head flashings to match the window frames. Ensure that materials used for head, jamb and sill flashings are compatible with the window frame materials and fixings and cladding materials.

Components for installation - cavity systems

2.9 STANDARD CAVITY CLOSER

A device constructed from either aluminium or PVC to close the cavity above the window or door unit, between the cladding and head flashing, to provide ventilation in accordance with NZBC E2/AS1 to the spaces above the window or door.

2.10 SUPPORT BAR

WGANZ extruded aluminium support bar with built in drainage and ventilation to NZBC E2/AS1, and support bar location bracket, to provide continuous support to the window unit. Size to suit cladding type.

Components

2.11 GLAZING GASKETS

PPL Thermoplastic rubber. Do not stretch glazing gaskets during installation. Measure and cut gaskets 5-10% over length before installation.

2.12 HARDWARE AND FURNITURE

Hinges, stays, catches, fasteners, latches, locks and furniture as offered by the window and door manufacturer. Refer to SELECTIONS for type and finish. Key alike all lockable window hardware able to be keyed alike.

2.13 SAFETY STAYS

Stainless steel non releasable restrictors to limit window opening to NZBC F4/AS1, Section 2.0, Opening windows.

2.14 FIXING BRACKETS

Designed by manufacturer to specific design.

2.15 WEATHERING/INSTALLATION SEALANT

Building sealant used in accordance with manufacturer's instructions for weather sealing aluminium frames to the cladding, complying with US Federal Specification TT-S-001543A, or a one-part polyurethane moisture curing, elastic joint sealant of medium modulus (± 25% movement) to US Federal Specification TT-S-00230C.

Finishes

2.16 FROST ULTRA ANODISED ALUMINIUM

To WGANZ SFA 3503-03. Refer to SELECTIONS.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.

Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.



© CIL Masterspec Oct 2026

Installation/application

3.4 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.5 INSTALLATION GENERALLY

Install in accordance with manufacturer's shop drawings and installation instructions.

Fabrication

3.6 FABRICATION

Fabricate frames as detailed on shop drawings. Install glazing, hinges, stays and running gear as scheduled. Provide temporary bracing and protection. Temporarily secure all opening elements for transportation.

3.7 HARDWARE GENERALLY

Factory fit all required and scheduled hardware. Account for all keys and deliver separately to the site manager.

3.8 SAFETY STAYS

Factory fit safety stays to all windows scheduled for safety stays and to all windows where safety stays are required to comply with NZBC F4/AS1 4.0, Opening windows.

3.9 PASSIVE VENTILATION

Factory fit all required and scheduled passive ventilation systems to NZBC G4/AS1, paragraph 2.2.2.5, NZS 4303 and manufacturer's requirements.

Installation - windows and doors

3.10 SUPPLY OF FIXINGS

Use only fixings and fastenings recommended by the manufacturer of the component being fixed.

3.11 EXPOSED FIXINGS AND FASTENINGS

Fixings and fastenings exposed to the weather to be aluminium, or Type 304 stainless steel.

3.12 PROTECTED FIXINGS AND FASTENINGS

Fixings and fastenings not exposed to the weather may be hot-dip galvanized steel with a coating weight of 610 g/m² complying with AS/NZS 4680.

3.13 CORROSION PROTECTION

Before fixing, apply suitable barriers of bituminous coatings, stops or underlays between dissimilar metals in contact, or between aluminium in contact with concrete.

3.14 INSTALLATION FIXING

To NZBC E2/AS1, paragraph 9.1.9.10. Fix windows/doors through reveal to frame with a pair of 75 x 3.15mm minimum galvanised jolt head nails or a pair of 8 gauge x 65mm minimum stainless steel screws. Fix at a maximum of 450 centres along all reveals and a maximum of 150mm from reveal ends. Ensure fixings do not penetrate metal flashings.

Install packers between reveals and framing at fixing points, except at the head.

3.15 INSTALLATION CAVITY CONSTRUCTION

Install to WGANZ Window Installation Guide details and drawings including WGANZ sill support bars.

For thresholds with support bars fixed through membranes, pre-fill support bar screw holes with silicone sealant to NZBC E2/AS1, Figure 8.5.6.1D: Junctions with walls for membrane.

3.16 INSTALL FLASHINGS

Install flashings to heads, jambs and sills of frames as supplied and required by the window manufacturer and as detailed on the drawings. Finish head flashings to match window finish.

Place all flashings so that the head flashing weathers the jamb flashings, which in turn weathers over the upstand of the sill flashing. Ensure that sill flashings drain to the outside air.

© CIL Masterspec Oct 2026

Except where window/door frames are recessed, ensure that head flashings over-sail unit by 20mm plus any jamb scriber width at each end.

3.17 COMPLETE AIR SEAL

To NZBC E2/AS1, 9.1.5 Air seals. Form an air-tight seal by means of proprietary expanding foam or sealants used with PEF backing rods, applied between the window / door reveal and structural framing to a depth of 10 - 20mm, to provide a continuous air tight seal to the perimeter of the window or door.

3.18 FIX HARDWARE

Fix all sash and door hardware and furniture as scheduled.

Application - jointing and sealing

3.19 SEAL FRAMES ON SITE

Seal frames to each other and to adjoining structure and finishes, all as required by the window and sealant manufacturer and to make the installation weathertight.. In very high and extra high or greater wind zones, seal between the window head and the head flashing. Do not seal the junction between the sill member and the cladding or sill flashing which must remain open.

3.20 PREPARE JOINTS

Ensure joints are dry. Remove loose material, dust and grease. Prepare joints in accordance with the sealant manufacturer's requirements, using required solvents and primers where necessary. Mask adjoining surfaces which would be difficult to clean if smeared with sealant.

3.21 BACK UP

When using back-up materials do not reduce depth of joint for sealant to less than the minimum required by the manufacturer of the sealant. Insert polyethylene rod or tape back-up behind joints being pointed with sealant.

3.22 SEALANT FINISH

Tool sealant to form a smooth fillet with a profile and dimensions required by the sealant manufacturer. Remove excess sealant from adjoining surfaces, using the cleaning materials nominated by the sealant manufacturer and leave clean.

3.23 SAFETY

Indicate the presence of transparent glasses for the remainder of the contract period, with whiting, tape or signs compatible with the glass type. Indicators other than whiting must not be applied to the glass surface. Masking tape must not be used for this purpose.

Completion & Commissioning

3.24 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to www.aplnz.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

4.1 SUPPLY AND INSTALLATION

Supply and installation of the specified APL aluminium joinery.

Supply:	By fabricator
Installation:	By ~

Performance

4.2 THERMAL PERFORMANCE - WINDOWS & DOORS

Window /Door Number:	Construction R-value:
~	~
~	~

© CIL Masterspec Oct 2026

4.3 AIR INFILTRATION

For NZS 4211, table 3 Air infiltration.

Non-air conditioned zones: ~

Air conditioned zones: ~

Finishes - Anodising

4.4 FROST ULTRA ANODISED ALUMINIUM FINISH

Thickness grade: 25 microns
Colour / finish: black
System integrity: ~
Brand: ~
Temporary protection: ~

Glazing

4.5 GLASS

Type/thickness: Refer to 4610AG AGP GLAZING RESIDENTIAL for type and thickness.

Hardware

4.6 WINDOW HARDWARE

Window fastener: ~

Location	Item
Elemental Hardware for all	Safety stays - non releasable
~	Safety stays - disconnectable
~	Sash locks
~	Louvres

4.7 DOOR HARDWARE

Locks & handles: ~

Location	Item
Elemental Hardware for all	Parliament hinges
~	Hold back devices
~	Patio bolts
~	Door restrictors
~	Twin bolt bifold lock

4.8 HARDWARE FINISH

Finish: black anodised
Colour: Black

Flashings and Sealant

4.9 FLASHINGS

Material/type: ~
Pattern: Formed to suit details provided

4.10 WEATHERING SEALANT

Type: 1-part polyurethane moisture curing, elastic joint sealant
Colour: ~

© CIL Masterspec Oct 2026

Reveals

4.11 ALUMINIUM REVEALS - ADAPTOR/INFILLS

Type: as drawn
Finish: as drawn

© CIL Masterspec Oct 2026

4711P PINK® BATTS® THERMAL INSULATION

1 GENERAL

This section relates to Comfortech Building Performance Solutions® Pink® Batts® thermal insulation materials for walls, floors, ceilings and roofs.

1.1 RELATED WORK

Refer to 4161 UNDERLAYS, FOIL AND DPC for wire netting, wall underlays and roofing underlays.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

BIB	Building Insulation Blanket

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS/AS 1530.1	Methods for fire tests on building materials, components and structures - Combustibility test for materials
AS/NZS 3000	Electrical installations (Known as the Australian/New Zealand Wiring Rules)
NZS 4246	Energy efficiency - Installing bulk thermal insulation in residential buildings
AS/NZS 4859.1	Thermal insulation materials for buildings - General criteria and technical provisions

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents related to this section are:

Comfortech H1 Overview
Comfortech Pink® Batts® Insulation - Safety Data Sheet
Comfortech Pink® Batts® Ceiling Product & Insulation Guide (June 2025)
Comfortech Pink® Batts® Skillion Roof Insulation Product & Installation Guide (Jan 2025)
Comfortech Pink® Batts® Wall Insulation Product & Installation Guide (Jan 2025)
Comfortech Pink® Batts® SnugFloor® Insulation Product & Installation Guide (Jan 2025)
Comfortech Pink® Batts® BIB Product & Installation Guide (July 2025)
Comfortech Pink® Batts® Superbatts® Installation Instructions
Comfortech Pink® Batts® Insulation Product Warranty
BRANZ Appraisal 238 (2023) - Pink® Batts® Insulation - Amended 23 February 2026
BRANZ Appraisal 632 (2023) - Pink® Batts® SnugFloor® Insulation - Amended 12 August 2024
BRANZ Appraisal 767 (2023) - Pink® Batts® Skillion Roof Insulation - Amended 21 January 2026

Manufacturer/supplier contact details

Company:	Tasman Insulation NZ Ltd
Trading as:	Comfortech Building Performance Solutions®
Web:	www.pinkbatts.co.nz
Telephone:	0800 746 522

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

50 years	For Pink® Batts® insulation products

- Provide this warranty on the manufacturer/ supplier standard form (if not available then use

© CIL Masterspec Oct 2026

the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

1 year For installation

- Provide this warranty on the installer/applicator standard form (if not available then use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS GENERALLY

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

Compliance information

1.9 COMPLIANCE - BRANZ APPRAISAL 238

Pink® Batts® Insulation has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 238.

Performance

1.10 FIRE PROPERTIES

Pink® Batts® insulation products are classified as non-combustible when tested to NZS/AS 1530.1 and achieve a Group Number of 1-S.

2 PRODUCTS

Materials

2.1 PINK® BATTS® INSULATION BATTS

Bio-soluble fibrous glass wool slabs manufactured from minimum 80% recycled window glass and bonded with thermosetting resin to AS/NZS 4859.1. Coloured Pink for identification. Available in a range of R-values, sizes and thicknesses. Refer to SELECTIONS.

Components

2.2 WIRE NETTING

Refer to 4161 UNDERLAYS, FOIL AND DPC for wire netting used to support the insulation.

2.3 PLASTIC STRAPPING TAPES

Proprietary plastic strapping tape.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.



© CIL Masterspec Oct 2026

Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Installation/application

3.4 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.5 INSTALL INSULATION - GENERALLY

Install insulation in a dry protected environment. Lay, fit and fix insulation without gaps, tucks, folds and over compaction to Pink® Batts® installation instruction and to NZS 4246 for all housing and buildings up to 300m². Allow insulation to re-loft/relax prior to installation. Do not cover vents. Lift up electrical wires, lighting transformers/ controllers and lay the insulation underneath. Use insulation offcuts to fill small gaps between framing.

3.6 INSULATION CLEARANCES

Provide insulation clearances to NZS 4246 and for recessed luminaires AS/NZS 3000, 4.5.3.2. Where allowed by these standards provide insulation clearances to product manufacturer's stated clearances. Secure insulation in place so clearances are maintained and use guards/barriers , if required, where insulation is not secured.

3.7 LAY WIRE NETTING - UNDER JOISTS / PURLINS

Lay at right angles across the rafters/ roof joists (under purlins). Pull tight and fix.

3.8 LAY WIRE NETTING - OVER PURLINS

Lay at right angles across the purlins with enough slack to allow insulation to retain its nominal thickness between. Tie edges of netting together with galvanized wire clips.

3.9 LAY PLASTIC STRAPPING TAPE

Lay at right angles across the framing at a minimum of 300mm centres, staple tape to each framing member with stainless steel staples.

3.10 PREPARATION INSULATION

Before installation, gently agitate the insulation by shaking or bouncing to assist recovery to the nominal thickness stated on the product label. Maintain the insulation in a dry state.

3.11 CUTTING INSULATION TO SIZE

Tear insulation by hand or cut with an insulation saw/knife, sharp scissors, or with sharp wide-blade knife. Cut slightly oversized for snug friction fit.

3.12 INSTALL PINK® BATTS® TIMBER WALL INSULATION

Friction fit insulation slabs between framing.

3.13 INSTALL PINK® BATTS® MASONRY WALL INSULATION

Friction fit insulation slabs between vertical strapping members. Staple the top of the insulation to the inside face of strapping.

3.14 INSTALL PINK® BATTS® CEILING INSULATION

Friction fit insulation slabs between framing. Maintain a 25mm gap clearance between the insulation slabs and roof underlay. Install to the midpoint of the top plate.

3.15 INSTALL PINK® BATTS® SUPERBATTS® CEILING INSULATION - SINGLE LAYER INSTALLATION

Notch out the underside of the first slab to the same size as the truss cord. Friction fit slabs between truss framing with notch fit over truss bottom chord. Butt up adjacent slab under slight compression. Install to the midpoint of the top plate. Maintain a 25mm gap clearance between the insulation slabs and roof underlay.

© CIL Masterspec Oct 2026

3.16 INSTALL PINK® BATTS® SUPERBATTS® CEILING INSULATION - DOUBLE LAYER INSTALLATION

Lay upper layer slabs over truss bottom chord perpendicular to chord. From underneath, friction fit the lower layer slabs between the truss bottom chords. Install to the midpoint of the top plate. Maintain a 25mm gap clearance between the insulation slabs and roof underlay.

Completion

3.17 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to www.pinkbatts.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

Materials

4.1 PINK® BATTS® TIMBER WALL INSULATION

Location:	~
Supplier:	Comfortech Building Performance Solutions®
Brand/Type:	Pink® Batts® ~
Secondary layer:	Pink® Batts® ~
R-value:	as drawn
Nominal stabilised thickness:	as drawn
Batt size:	as drawn

4.2 PINK® BATTS® MASONRY WALL INSULATION

Location:	as drawn
Supplier:	Comfortech Building Performance Solutions®
Brand/Type:	Pink® Batts® Masonry Wall
R-value:	as drawn
Nominal stabilised thickness:	as drawn
Batt size:	as drawn

4.3 PINK® BATTS® CEILING INSULATION

Location:	as drawn
Supplier:	Comfortech Building Performance Solutions®
Brand/Type:	Pink® Batts® ~
R-value:	as drawn
Nominal stabilised thickness:	as drawn
Batt size:	as drawn

© CIL Masterspec Oct 2026

4711P PINK® BATTS® THERMAL INSULATION

1 GENERAL

This section relates to Comfortech Building Performance Solutions® Pink® Batts® thermal insulation materials for walls, floors, ceilings and roofs.

1.1 RELATED WORK

Refer to 4161 UNDERLAYS, FOIL AND DPC for wire netting, wall underlays and roofing underlays.

1.2 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

BIB	Building Insulation Blanket

Documents

1.3 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZS/AS 1530.1	Methods for fire tests on building materials, components and structures - Combustibility test for materials
AS/NZS 3000	Electrical installations (Known as the Australian/New Zealand Wiring Rules)
NZS 4246	Energy efficiency - Installing bulk thermal insulation in residential buildings
AS/NZS 4859.1	Thermal insulation materials for buildings - General criteria and technical provisions

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer and supplier documents related to this section are:

Comfortech H1 Overview
Comfortech Pink® Batts® Insulation - Safety Data Sheet
Comfortech Pink® Batts® Ceiling Product & Insulation Guide (June 2025)
Comfortech Pink® Batts® Skillion Roof Insulation Product & Installation Guide (Jan 2025)
Comfortech Pink® Batts® Wall Insulation Product & Installation Guide (Jan 2025)
Comfortech Pink® Batts® SnugFloor® Insulation Product & Installation Guide (Jan 2025)
Comfortech Pink® Batts® BIB Product & Installation Guide (July 2025)
Comfortech Pink® Batts® Superbatts® Installation Instructions
Comfortech Pink® Batts® Insulation Product Warranty
BRANZ Appraisal 238 (2023) - Pink® Batts® Insulation - Amended 23 February 2026
BRANZ Appraisal 632 (2023) - Pink® Batts® SnugFloor® Insulation - Amended 12 August 2024
BRANZ Appraisal 767 (2023) - Pink® Batts® Skillion Roof Insulation - Amended 21 January 2026

Manufacturer/supplier contact details

Company:	Tasman Insulation NZ Ltd
Trading as:	Comfortech Building Performance Solutions®
Web:	www.pinkbatts.co.nz
Telephone:	0800 746 522

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

50 years	For Pink® Batts® insulation products

- Provide this warranty on the manufacturer/ supplier standard form (if not available then use

© CIL Masterspec Oct 2026

the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

1 year	For installation

- Provide this warranty on the installer/applicator standard form (if not available then use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Requirements

1.7 QUALIFICATIONS GENERALLY

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

1.8 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

Compliance information

1.9 COMPLIANCE - BRANZ APPRAISAL 238

Pink® Batts® Insulation has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 238.

Performance

1.10 FIRE PROPERTIES

Pink® Batts® insulation products are classified as non-combustible when tested to NZS/AS 1530.1 and achieve a Group Number of 1-S.

2 PRODUCTS

Materials

2.1 PINK® BATTS® INSULATION BATTS

Bio-soluble fibrous glass wool slabs manufactured from minimum 80% recycled window glass and bonded with thermosetting resin to AS/NZS 4859.1. Coloured Pink for identification. Available in a range of R-values, sizes and thicknesses. Refer to SELECTIONS.

Components

2.2 WIRE NETTING

Refer to 4161 UNDERLAYS, FOIL AND DPC for wire netting used to support the insulation.

2.3 PLASTIC STRAPPING TAPES

Proprietary plastic strapping tape.

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.

© CIL Masterspec Oct 2026

Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 PRE-INSTALLATION REQUIREMENTS

Check work previously carried out and confirm it is of the required standard for this part of the work.

Installation/application

3.4 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.5 INSTALL INSULATION - GENERALLY

Install insulation in a dry protected environment. Lay, fit and fix insulation without gaps, tucks, folds and over compaction to Pink® Batts® installation instruction and to NZS 4246 for all housing and buildings up to 300m². Allow insulation to re-loft/relax prior to installation. Do not cover vents. Lift up electrical wires, lighting transformers/ controllers and lay the insulation underneath. Use insulation offcuts to fill small gaps between framing.

3.6 INSULATION CLEARANCES

Provide insulation clearances to NZS 4246 and for recessed luminaires AS/NZS 3000, 4.5.3.2. Where allowed by these standards provide insulation clearances to product manufacturer's stated clearances. Secure insulation in place so clearances are maintained and use guards/barriers , if required, where insulation is not secured.

3.7 LAY WIRE NETTING - UNDER JOISTS / PURLINS

Lay at right angles across the rafters/ roof joists (under purlins). Pull tight and fix.

3.8 LAY WIRE NETTING - OVER PURLINS

Lay at right angles across the purlins with enough slack to allow insulation to retain its nominal thickness between. Tie edges of netting together with galvanized wire clips.

3.9 LAY PLASTIC STRAPPING TAPE

Lay at right angles across the framing at a minimum of 300mm centres, staple tape to each framing member with stainless steel staples.

3.10 PREPARATION INSULATION

Before installation, gently agitate the insulation by shaking or bouncing to assist recovery to the nominal thickness stated on the product label. Maintain the insulation in a dry state.

3.11 CUTTING INSULATION TO SIZE

Tear insulation by hand or cut with an insulation saw/knife, sharp scissors, or with sharp wide-blade knife. Cut slightly oversized for snug friction fit.

3.12 INSTALL PINK® BATTS® TIMBER WALL INSULATION

Friction fit insulation slabs between framing.

3.13 INSTALL PINK® BATTS® MASONRY WALL INSULATION

Friction fit insulation slabs between vertical strapping members. Staple the top of the insulation to the inside face of strapping.

3.14 INSTALL PINK® BATTS® CEILING INSULATION

Friction fit insulation slabs between framing. Maintain a 25mm gap clearance between the insulation slabs and roof underlay. Install to the midpoint of the top plate.

3.15 INSTALL PINK® BATTS® SUPERBATTS® CEILING INSULATION - SINGLE LAYER INSTALLATION

Notch out the underside of the first slab to the same size as the truss cord. Friction fit slabs between truss framing with notch fit over truss bottom chord. Butt up adjacent slab under slight compression. Install to the midpoint of the top plate. Maintain a 25mm gap clearance between the insulation slabs and roof underlay.

© CIL Masterspec Oct 2026

3.16 INSTALL PINK® BATTS® SUPERBATTS® CEILING INSULATION - DOUBLE LAYER INSTALLATION

Lay upper layer slabs over truss bottom chord perpendicular to chord. From underneath, friction fit the lower layer slabs between the truss bottom chords. Install to the midpoint of the top plate. Maintain a 25mm gap clearance between the insulation slabs and roof underlay.

Completion

3.17 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

For further details on selections go to www.pinkbatts.co.nz.
Substitutions are not permitted to the following, unless stated otherwise.

Materials

4.1 PINK® BATTS® TIMBER WALL INSULATION

Location:	~
Supplier:	Comfortech Building Performance Solutions®
Brand/Type:	Pink® Batts® ~
Secondary layer:	Pink® Batts® ~
R-value:	as drawn
Nominal stabilised thickness:	as drawn
Batt size:	as drawn

4.2 PINK® BATTS® MASONRY WALL INSULATION

Location:	as drawn
Supplier:	Comfortech Building Performance Solutions®
Brand/Type:	Pink® Batts® Masonry Wall
R-value:	as drawn
Nominal stabilised thickness:	as drawn
Batt size:	as drawn

4.3 PINK® BATTS® CEILING INSULATION

Location:	as drawn
Supplier:	Comfortech Building Performance Solutions®
Brand/Type:	Pink® Batts® ~
R-value:	as drawn
Nominal stabilised thickness:	as drawn
Batt size:	as drawn

© CIL Masterspec Oct 2026

4821 FLASHINGS

1 GENERAL

This section relates to the fabrication and installation of flashing systems not forming part of a proprietary system.

1.1 RELATED WORK

Refer to ~ for ~.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC B2/AS1	Durability provisions for building elements
NZBC E2/AS1	External moisture provisions for timber-framed buildings up to 10 m in height
AS/NZS 2728	Prefinished/prepainted sheet metal products for interior/exterior building applications - Performance requirements
AS 3566	Self-drilling screws for the building and construction industries - General requirements and mechanical properties
NZS 3604	Timber-framed buildings
NZMRM CoP	NZ Metal Roof and Wall Cladding Code of Practice

Requirements

1.3 QUALIFICATIONS

Work to be carried out by trades people experienced, competent and familiar with the materials and techniques specified.

1.4 VERIFY DIMENSIONS

Verify dimensions against site measurements prior to fabrication.

Standards of performance

1.5 DURABILITY REQUIREMENTS

Design and install the flashings appropriate for the durability applications in accordance with NZBC B2/AS1. The Building Code B2, 3.2 requires that all hidden elements have at least the same durability as that of the element that covers it. Refer to NZBC B2/AS1, Table C.1.1.1 and NZBC E2/AS1, Table C.1.1.1A: Material selection.

1.6 COMPATIBILITY REQUIREMENTS

Each flashing material shall be selected in accordance with NZBC E2/AS1, Table C.1.1.1A: Material selection, to minimise corrosion. Refer to either NZS 3604 Clause 4.2 or AS/NZS 2728 for the relevant exposure conditions. For compatibility of materials in contact and subject to run-off, refer to NZBC E2/AS1, Table C.1.1.1B: Compatibility of materials in contact, and Table C.1.1.1C: Compatibility of materials subject to run-off.

1.7 PROTOTYPES - REVIEW

Refer to the general section 1270 CONSTRUCTION for details of how prototypes will be reviewed and how instructions to proceed will be given. For flashings where there are no specific details or drawings, provide full size prototypes of the flashings to integrate components into the weathertight system. Co-ordinate with the trades affected by the installation. Provide the prototype flashings to the contract administrator for review.

© CIL Masterspec Oct 2026

2 PRODUCTS

2.1 FLASHING MATERIALS

Acceptable materials for flashings are described in NZBC E2/AS1, 4.0 Flashings. Material, grade and colour as detailed and scheduled. Ensure that materials used for flashings are compatible with the building and cladding materials and their fixings.

2.2 FLASHING FABRICATION

Fabricate flashings generally to NZBC E2/AS1, 4.0 Flashings, from a ductile grade of metal designed for lateral strength by folding, stiffening or ribbing on external edges, having a maximum un-stiffened width of 300mm. Provide all hooks, hems, kick outs, bird's beaks, stop ends, soft edges and turn downs etc. to NZBC E2/AS1, 4.0 Flashings, or as shown on the drawings.

2.3 FIXINGS

Rivets, screws, nails and cleats to be compatible with the materials being fastened. Fasteners complying with the corrosion requirements of AS 3566 are suitable for use with ZINCALUME® steel products. Use only low carbon non-conductive sealing washers.

2.4 JOINTS - SEALANTS

Neutral Curing silicone or MS polymer sealant as required, with low resistance to compression and be-able to withstand large temperature variations. MS polymer sealant to be used where the sealant is exposed and the surrounding surfaces are to be subsequently painted or coated.

3 EXECUTION

Conditions

3.1 DELIVERY

Keep flashings dry in transit. Take delivery of flashings in an undamaged condition. Reject all damaged materials.

3.2 STORAGE

Store materials and accessories on a level, firm base, in dry conditions, well ventilated, out of direct sunlight and completely protected from weather and damage. Ensure storage areas are away from current work areas. Cover to keep dry until fixed.

3.3 HANDLING

Avoid distortion and contact with potentially damaging surfaces/substances. Do not drag flashings across each other, or across other surfaces. Protect edges, corners and surfaces from damage.

3.4 SUBSTRATE

Do not commence work until the substrate is of the standard required by the installer for the specified flashings, level and in true alignment.

3.5 PROTECT

Protect surfaces, window and door joinery, and finishes already in place, from the possibility of damage during the installation process.

3.6 CONFIRM LAYOUT

Before commencing work confirm the proposed installation of the flashings and expansion joints and other visual considerations of the finished work.

3.7 CO-ORDINATE INSTALLATION

Co-ordinate installation of flashings with associated trades.

Application

3.8 INSTALLATION

Install flashings in accordance with NZMRM CoP and in compliance with NZBC E2/AS1, 4.0 Flashings. For very high wind zones and where the pitch of the roof is below 15° the flashing joint laps shall be sealed with sealant at each end of the lap to prevent the ingress of water.

Refer to NZBC E2/AS1, Table 4.5.1.1: General dimensions of metal flashings and other flashings as listed, for general dimensions of flashings.

© CIL Masterspec Oct 2026

3.9 FIXINGS

Fix flashings with fasteners appropriate to the situation. For fixing flashings with proprietary brackets or clips ensure they are aligned to allow for movement and are compatible with the flashing material.

Fix screws with the shank perpendicular to the surface of the flashing with the washer fitted firmly against the flashing. Screws to be compatible with the flashing material.

Rivets 'blind' or 'pop' are to be sealed when used. Aluminium rivets are compatible with zinc or AZ coated steel. Monel and stainless steel rivets can be used to fix galvanized steel flashings. Minimum diameter of rivet to be used is 4.0mm. Drill hole 1mm larger than the rivet size. Seal head of rivet with neutral cured silicone.

3.10 JOINTING - SEALANTS

Clean surfaces to be lapped using a solvent ensuring all traces of the solvent are removed with a clean rag. Apply sealant by gun in a continuous bead of approximately 5mm diameter. Width of sealant when compressed should not exceed 25mm. Sealant joints shall be mechanically fixed for strength. Refer to NZMRM CoP for details.

3.11 FINAL INSPECTION

A final inspection by the installer to take place after completion of the flashing work. Any defects or subsequent damage to be made good.

Completion

3.12 PROTECT

Protect new work from damage.

3.13 REPLACE

Replace all damaged or marked elements.

3.14 LEAVE

Leave work to the standard required for following procedures.

3.15 REMOVE

Remove debris, unused materials and elements from the site.



© CIL Masterspec Oct 2026

4 SELECTIONS

4.1 FLASHINGS

Type	Material and finish/colour
General flashings:	Alloy powdercoat, colour confirm with Architect
Window/doors:	
- Head:	Alloy powdercoat, colour confirm with Architect
- Sill:	Alloy powdercoat, colour confirm with Architect
Beam caps:	Alloy powdercoat, colour confirm with Architect
Cladding:	
- External corner:	Alloy powdercoat, colour confirm with Architect
- Internal corner:	Alloy powdercoat, colour confirm with Architect
Balustrade capping:	Alloy powdercoat, colour confirm with Architect
Garage door:	Alloy powdercoat, colour confirm with Architect
Meter box:	Alloy powdercoat, colour confirm with Architect
Chimney flue:	Alloy powdercoat, colour confirm with Architect
Soffit:	Alloy powdercoat, colour confirm with Architect
Wall/roof junctions:	Alloy powdercoat, colour confirm with Architect
Barge:	Alloy powdercoat, colour confirm with Architect
Apron:	Alloy powdercoat, colour confirm with Architect
Parapet capping:	Alloy powdercoat, colour confirm with Architect
Saddle:	Alloy powdercoat, colour confirm with Architect
Change of pitch:	Alloy powdercoat, colour confirm with Architect
Gutter apron:	Alloy powdercoat, colour confirm with Architect
Curved:	na
Roof penetrations:	Alloy powdercoat, colour confirm with Architect

© CIL Masterspec Oct 2026

5113G GIB® PLASTERBOARD LININGS

1 GENERAL

This section relates to the supply, fixing and jointing of GIB® plasterboard linings and accessories to timber and steel framed walls and ceilings to form:

- standard systems
- superior finish quality systems
- bracing systems
- fire rated garage boundary wall systems
- wet area systems
- GIBFix® Framing systems
- curved plasterboard systems.

1.1 ABBREVIATIONS AND DEFINITIONS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

The following abbreviations apply specifically to this section:

AWCINZ	Association of Wall and Ceiling Industries New Zealand

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC C/AS2	Protection from fire for buildings other than risk group SH
NZBC E2/AS1	External moisture provisions for timber-framed buildings up to 10 m in height
AS/NZS 2588	Gypsum plasterboard
AS/NZS 2589	Gypsum linings - Application and finishing
NZS 3604	Timber-framed buildings
ISO 5660.1	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 1: Heat release rate (cone calorimeter method)
ISO 5660.2	Reaction-to-fire tests - Heat release, smoke production and mass loss rate - Part 2: Smoke production rate (dynamic measurement)
BRANZ Technical Paper P21	BRANZ Technical Paper P21: A wall bracing test and evaluation procedure (2010)

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents which refer to work in this section:

GIB® Site Guide (April 2024)
GIB® Noise Control Systems (September 2017)
GIB® Fire Rated Systems (September 2024)
GIB® Wet Area Systems (February 2021)
GIB® Curveline Specification and Installation Manual for Curved Walls and Ceilings
GIB Toughline® Aqua (July 2018)
GIB Ezybrace® Systems (August 2016)
GIB Ezybrace® Bracing Design Software
GIB Ezybrace® Bracing Supplement Document (December 2016)
GIB Ezybrace® for Light Steel Frame Systems (March 2017)
GIBFix® Framing System (August 2016)
GIB Rondo® Metal Batten System (September 2024)
GIB-Cove®
GIB RocTape®
GIB® Goldline™ Platinum Tape-on Trims
GIB® UltraFlex high impact corner mould
GIB® Tough Systems (November 2014)
BRANZ Appraisal 289 (2024) GIB® Fire Rated Systems

© CIL Masterspec Oct 2026

BRANZ Appraisal 394 (2025) GIB® Noise Control Systems
BRANZ Appraisal 427 (2021) GIB® Wet Area Systems
BRANZ Appraisal 928 (2021) GIB EzyBrace® Systems

Manufacturer/supplier contact details
Company: Winstone Wallboards
Web: www.gib.co.nz
Telephone: 0800 100 442

Requirements

1.4 NO SUBSTITUTIONS

Substitutions are not permitted to any specified GIB® systems, GIB® system components, GIB® plasterboard, associated GIB® products or GIB® accessories.

1.5 QUALIFICATIONS

Refer to 1270 CONSTRUCTION for requirements relating to qualifications.

1.6 INSPECTIONS AND ACCEPTANCE

Allow for inspection of the finished plasterboard surface:

- before applying sealer and
- before applying finish coatings or decorative papers,

so that after assessment of the type and/or angle of illumination and its effect on the completed decorative treatment, group approval and acceptance of the surface can be given.

1.7 SOUND INSULATION REQUIREMENTS

Provide the GIB® Noise Control Systems. Refer to SELECTIONS for system/STC. Include for forming and treating of perimeters of openings and penetrations in the elements to ensure the specified performance. Ensure absence of adjoining flanking paths.

Compliance

1.8 COMPLIANCE - BRANZ APPRAISAL 394

GIB® Noise Control Systems has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 394.

1.9 COMPLIANCE - BRANZ APPRAISAL 427

GIB® Wet Area Systems has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 427.

1.10 COMPLIANCE - BRANZ APPRAISAL 928

GIB EzyBrace® Systems has been appraised as meeting provisions of the NZBC when used within the Conditions and Limitations of its BRANZ Appraisal 928.

Performance

1.11 BRACING REQUIREMENTS

Braced wall systems to NZS 3604 when tested to BRANZ Technical Paper P21, using:

- GIB Ezybrace® Systems and/or GIB Ezybrace® Bracing Design Software
- GIB Ezybrace® Bracing Supplement Document
- GIB Ezybrace® for Steel Frame Housing (NASH) Software (to NASH Residential and Low-Rise Steel Framing Part 1 2010 Design Criteria)

Refer to drawings for location and type.

1.12 SURFACE FIRE PROPERTIES - UNFINISHED BOARD

All GIB® unfinished plasterboard sheet materials achieve a Group Classification of, Group 1-S to NZBC C/AS2, Table 4.12.1.1: Maximum permitted Group Number for internal surface finishes, following testing in accordance with ISO 5660.1 and ISO 5660.2.

© CIL Masterspec Oct 2026

2 PRODUCTS

Materials

2.1 GIB® PLASTERBOARD

Gypsum plaster core encased in a face and backing paper formed for standard and water resistance use to AS/NZS 2588. Refer to SELECTIONS for location, type, thickness and finish.

GIB® Standard plasterboard
GIB Wideline® plasterboard
GIB Ultraline® high quality surface plasterboard
GIB Fyreline® fire resistant plasterboard
GIB Braceline® & GIB® Noiseline® dual purpose wall bracing & noise control plasterboard
GIB Aqualine® wet area plasterboard
GIB Toughline®
GIB Toughline® Aqua
GIB Curveline® plasterboard for forming tight curves.

Components

2.2 SCREWS

GIB® Grabber® drywall type screws as follows:

Grabber® type	Used for fixing:
High Thread	GIB Ezybrace® or Standard systems to timber
Self Tapping	Standard systems to light gauge steel or timber
Dual Thread Screws	GIBFix®, GIB Ezybrace®, or Standard systems, to light gauge steel or timber
Wafer Head Needle Tip	Light gauge metal to timber not directly under plasterboard
Pancake Head Drill Tip	Light gauge metal to light gauge metal directly under plasterboard

Refer to GIB® requirements for appropriate details.

2.3 TAPE ON TRIMS AND EDGES

GIB® Goldline™ tape-on trims

GIB® UltraFlex® high impact corner mould
GIB® Levelline® Tape on Trim

2.4 METAL ANGLE TRIMS

GIB® galvanized steel slim angle trims.

2.5 CONTROL JOINTS

GIB® Rondo® P35 control joints.

GIB® Goldline™ tape-on trims
GIB® plastic W-profile control joints.

Accessories

2.6 ADHESIVE

Timber frame and/or steel frame:

GIBFix® One ultra low VOC water based wallboard adhesive
GIBFix® All-Bond solvent based wallboard adhesive

2.7 JOINTING COMPOUND

Bedding compound:	GIB Tradeset®, GIB Lite Blue®, GIB MaxSet®, GIB ProMix® All Purpose, GIB Plus 4®
Finishing compound:	GIB ProMix® All Purpose, GIB® Trade Finish®, GIB® Trade Finish® Lite, GIB ProMix® Lite, GIB® U-Mix, GIB Plus 4®, GIB Trade Finish® Multi
Cove:	GIB-Cove® Bond

© CIL Masterspec Oct 2026

2.8 JOINTING TAPE

GIB® jointing tape.

2.9 FIRE/ACOUSTIC SEALANT

GIB Fire Soundseal® ultra low VOC, mulit use acoustic sealant that resists passage of smoke and fire.

2.10 GAP FILLER

GIB® Gap Filler ultra low VOC multi-purpose acrylic flexible filler

3 EXECUTION

Conditions

3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of products.

3.2 ROUTINE MATTERS

Refer to 1250 TEMPORARY WORKS & SERVICES for protection requirements.

Refer to 1270 CONSTRUCTION for requirements relating to defective or damaged work, removal of protection and cleaning.

3.3 LEVELS OF PLASTERBOARD FINISH

Provide the selected plasterboard surfaces to the pre decorative levels of finish specified in AS/NZS 2589.

3.4 PRE-INSTALLATION REQUIREMENTS - TIMBER FRAMING

Check work previously carried out and confirm it is of the required standard for this part of the work.

Framing substrates shall be in accordance to AS/NZS 2589, GIB® Site Guide and GIB X-Block® Radiation Shielding Systems literature.

Check timber framing moisture content is in accordance with requirements of AS/NZS 2589. Refer to NZBC E2/AS1 and GIB® Site Guide.

Timber framing:	18% maximum for fixing plasterboard to timber (8-12% recommended for fixing plasterboard to timber framing if air conditioning and/or central heating are to be installed)

If GIB EzyBrace® systems are used in conjunction with GIBFix® Framing System, ensure that the positioning of the GIB HandiBrac® panel hold-down brackets are to the manufacturers recommended placements for the GIBFix® Framing System.

3.5 CONFIRM LEVELS OF PLASTERBOARD FINISH ACCEPTANCE

Before commencing work, agree in writing upon the surface finish assessment procedure towards ensuring that the quality of finish expectations are reasonable and are subsequently obtained and acceptable.

Do not apply decorative treatment until it is agreed in writing by the contractor, subcontractors and decorator that the specified plasterboard Level of Finish has been achieved.

"Levels of plasterboard finish" is a tool for specifying the required quality of finish when installing and flush stopping GIB® plasterboard **prior** to the application of a range of decorative finishes under various lighting conditions. Refer to **AS/NZS** 2589.

3.6 PROTECTION

Protect surfaces; cabinetwork, fittings, equipment and finishes already in place from the possibility of water staining and stopping damage. Refer to GIB® Site Guide.

© CIL Masterspec Oct 2026

Application

3.7 LINING WALLS AND CEILINGS GENERALLY

Form to GIB® Site Guide. Ensure bulk insulation thickness shall not exceed that of the wall framing.

3.8 BOARD ORIENTATION

Minimise joints by careful sheet layout using the largest sheet sizes possible, and generally fixing horizontally. Where part sheets are required for various stud heights they should be positioned so the cut sheet is as low as possible to keep joints below eye level.

3.9 FORM NOISE CONTROL SYSTEMS

Form to GIB® Noise Control Systems requirements.

3.10 FORM WET AREA SYSTEMS

Form to GIB Aqualine® Wet Area Systems requirements.

3.11 FORM BRACING SYSTEMS

Form bracing systems to:

- GIB Ezybrace® Systems.

3.12 FORM CONTROL JOINTS

Form control joints to GIB® Site Guide requirements.

3.13 INSTALL TAPE-ON TRIMS

Install to GIB® Goldline™ Tape-on trims literature and/or GIB® Ultraflex high impact corner mould literature.

Finishing

3.14 FINISHING GENERALLY

To GIB® Site Guide and AS/NZS 2589.

Completion & Commissioning

3.15 COMPLETION MATTERS

Refer to 1270 CONSTRUCTION for completion requirements and if required commissioning requirements.

4 SELECTIONS

Plasterboard

4.1 GIB® STANDARD SYSTEMS WALLS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
~	GIB® Standard plasterboard	10mm	~
~	GIB® Standard plasterboard	13mm	~
~	GIB Ultraline® plasterboard	10mm	~
All Gib walls	GIB Ultraline® plasterboard	13mm	4

4.2 GIB® STANDARD SYSTEMS CEILINGS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
~	GIB® Standard plasterboard	13mm	~
all	GIB Ultraline® plasterboard	13mm	~

4.3 GIB® WATER RESISTANT SYSTEMS CEILINGS

Location	Plasterboard type / Lining requirements	Thickness	Finish Level
~	GIB Aqualine® plasterboard	13mm	~
All Gib ceilings	GIB Toughline® Aqua	13mm	5

© CIL Masterspec Oct 2026

4.4 GIB® SOUND RATED SYSTEMS

Refer to GIB® Noise Control Systems

Location	Plasterboard type / Lining requirements	STC / System specification	Finish Level
as drawn	as drawn	as drawn	4

4.5 GIB® BRACING SYSTEMS

Refer to:

- GIB Ezybrace® Systems

For bracing element location refer to drawn documentation.

Accessories

4.6 GIB® TAPE ON EDGE OR CORNER TRIMS

Brand/type: ~

4.7 GIB® EDGE PROFILES

Brand/type: ~

© CIL Masterspec Oct 2026