

TABLE OF CONTENTS

Roofing	5
EBuilt Ventia Iron - Roof and Wall Underlay System.....	5

1 ROOFING

1.1 Preliminary

Refer to General Conditions of Contract and the Special Conditions in this Specification as appropriate. Read this section in conjunction with all other trade sections.

1.2 Compliance

Comply with the New Zealand Building Code 1992 including all revisions and amendments, Verification Methods where appropriate, and construction principles that are embodied in the Acceptable Solutions.

Comply with all relevant provisions and recommendations of:

1530.2:1993(NZS/AS)	Methods for fire tests on building materials, components and structures - Test for flammability of materials
3604:2011(NZS)	Timber-framed buildings
4200.1:2017(AS NZS)	Pliable building membranes and underlays - Part 1: Materials
4200.2:1994(AS/NZS)	Pliable building membranes and underlays - Installation requirements
NZBC C/AS1-AS6	Protection from Fire

1.3 EBuilt Ventia Iron - Roof and Wall Underlay System

1.3.1 Scope

1.3.1.1 Scope:

Supply and install EBuilt Ventia Iron - Roof and Wall Underlay System, as specified herein, to the locations and details shown on the design drawings, complete with all necessary components and accessories required for proper installation and performance. All aspects of this work shall comply with the NZ Building Code, related EBuilt Ventia Iron - Roof and Wall Underlay System technical literature and publications (check <http://www.ebuilt.co.nz> or email info@ebuilt.co.nz, or call (09) 916 6750 for the latest editions), and other relevant product manufacturers recommendations.

Refer to BRANZ appraisal 1136 & 1137 for product approval.

No substitutions are permitted for EBuilt Ventia Iron - Roof and Wall Underlay System.

For the purpose of this specification, the Wall and Roof Underlay System is referred to as 'EBuilt Ventia Iron - Roof and Wall Underlay System' and all 'EBuilt' associated technical literature and publications, including the Product Technical Statement, installation instructions and drawings, are collectively referred to as the 'technical literature'.

EBuilt Ventia Iron - Roof and Wall Underlay System is designed for residential and commercial buildings as a roof and wall underlay system.

Extent of work:

The following is a list and/or general description of the extent of the EBuilt Ventia Iron - Roof and Wall Underlay System works, which are more specifically defined in the contract documents, required for the completion of the contract works:

1.3.2 Requirements**1.3.2.1 Safety:**

Comply with the Health and Safety at Work Act 2015 (HSWA), and with all relevant Health and Safety at Work Regulations 2016, and with all relevant WorkSafe New Zealand (WorkSafe) Approved Codes of Practice and WorkSafe Information and Guidance, particularly those for construction and building maintenance.

1.3.2.2 Warranty:

EBuilt Ventia Iron - Roof and Wall Underlay System Warranty - according to the warranty terms and conditions.

- 15 - year warranty for EBuilt Ventia Iron - Roof and Wall Underlay System materials.
- The warranty is based on EBuilt standard warranty terms and conditions.
- Commence the warranty from the date of original purchase.

1.3.2.3 Substitutions:

The EBuilt Ventia Iron - Roof and Wall Underlay System shall be as specified herein and on the design drawings. The substitution of the EBuilt Ventia Iron - Roof and Wall Underlay System for an alternative brand, system or product is not permitted under any circumstances.

The substitution of a specified EBuilt Ventia Iron - Roof and Wall Underlay System or component for an alternative EBuilt Wall and Roof Underlay System or component by the Contractor shall only be permitted with the Contract Administrator's written authorisation and shall be at no additional cost to the Principal. Should any resultant extra work and/or redesign work be required to accommodate an alternative EBuilt Ventia Iron - Roof and Wall Underlay System or component to satisfy design, performance, and compliance requirements, then the cost of these shall be borne by the Contractor.

1.3.2.4 Inspections & reporting:

BCA inspections shall take place at each of the stages as scheduled in the Building Consent. Confirm a written programme to facilitate these inspections, including notification when each stage of the work is ready for inspection.

Carry out all necessary pre-installation and installation inspections for each area of the works.

Complete all necessary Pre-Installation Checklists prior to installation, and all necessary Installation Checklists.

Complete all necessary Final Checklists and Installation Sign-Off Certificates before handing over completed work.

1.3.2.5 Quality assurance:

Maintain and comply with industry-recognised quality control and assurance procedures to ensure that all stages of the work are carried out to the highest standard.

1.3.2.6 Defective materials & workmanship:

Should defective materials and/or work be found at any time before the final acceptance of the work, it shall be rejected. Rejected EBuilt Ventia Iron - Roof and Wall Underlay System materials and work shall be repaired and/or replaced to the satisfaction of the Contract Administrator without delay and at no additional cost to the Principal.

1.3.3 EBuilt Ventia Iron - Roof and Wall Underlay System

1.3.3.1 EBuilt Ventia Iron - Wall Underlay System:

EBuilt Ventia Iron - Wall Underlay System – A self-supporting, non-porous, synthetic building underlay for use under wall claddings. Manufactured from a micro-porous water-resistant film laminated between two layers of spun-bonded polypropylene and is coloured grey and/or white on the top and bottom layers.

Suitable for use on timber and steel framed walls on building situated in NZS 3604 Wind Zones up to and including 'Extra High'.

Physical Properties:

- Installation – refer to 'installation' clause
- Accessories – refer to 'ancillary components and accessories' clause
- Fire rating – AS1530 Part 2 flammability index – no greater than 5
- Maximum UV exposure: 90 days.
- Roll width: Available in 2.74M x 36.5M long roll (100 M/2) or 1.5M x 50M long roll (75 M/2).

Installed in accordance with 'technical requirements', BRANZ Appraisal No.1137, and as shown on the drawings.

Location:

1.3.3.2 EBuilt Ventia Iron - Roof Underlay System:

EBuilt Ventia Iron - Roof Underlay System – A self-supporting, non-porous, synthetic building underlay for use under roof claddings. Manufactured from a micro-porous water-resistant film laminated between two layers of spun-bonded polypropylene and is coloured grey and/or white on the top and bottom layers.

Suitable for use on timber and steel framed roofs on building situated in NZS 3604 Wind Zones up to and including 'Extra High'. Can be used with masonry tile, metal tile and profiled metal roof claddings.

Physical Properties:

- Installation – refer to 'Installation' clause
- Accessories – refer to 'Ancillary components and Accessories' clause
- Fire rating – AS1530 Part 2 flammability index – no greater than 5
- Minimum roof pitch – 3 degrees
- Orientation - <10 degrees horizontal or vertical when fully supported with a corrosion resistant material. >10 degrees horizontal or vertical with spans no greater than 1200mm.
- Maximum UV exposure - 7 days.
- Roll width - Available in 2.74M x 36.5M long roll (100 M/2) or 1.5M x 50M long roll (75 M/2).

Installed in accordance with 'technical requirements', BRANZ Appraisal No.1136, and as shown on the drawings.

Location:

1.3.4 Ancillary Components & Accessories

1.3.4.1 Eproducts penetration seal:

Eproducts Penetration Seal. A range of pipe and service penetration seals consisting of an elastic EPDM sleeve fitted with a self-adhesive flange.

Eproducts Penetration Seals are part of the EBuilt Iron - Roof and Wall underlay system, and form an airtight solution for round pipes, cables or conduits when passing through underlay barriers.

Installed in accordance with the manufacturer's requirements and BRANZ Appraisal 1171, with stand-alone flexible or rigid wall underlay over timber or steel wall framed walls on buildings situated in NZS 3604 Wind Zones up to and including 'Extra High'.

Eproducts Penetration Seal, when used with BRANZ appraised flexible and rigid wall underlays, provides an Alternative Solution to the pipe and service penetrations specified in NZBC Acceptable Solution E2/AS1, Paragraph 9.1.9.3 and Figure 68.

Install Eproducts Penetration Seal to the correct size for the pipe or service penetration. Ensure the penetration is fully adhered to the flexible or rigid wall underlay. Ensure Eproducts Penetration Seal is protected from ultraviolet (UV) light when installed.

General:

Seal penetration size range - 10mm to 80mm diameter, 80mm to 170mm diameter.

Installed location:

1.3.4.2 Vibest Super Pro Flashing Tape

ViBest Super Pro Flashing Tape is a high performance self-adhering flashing tape. The advanced adhesive technology provides a high strength bond to most building surfaces and wall underlays. It is suitable for window and door installation as well as other wall penetrations.

ViBest Super Pro Flashing Tape is suitable for use on timber or steel framed buildings, in conjunction with a compatible flexible underlay, around framed joinery openings as a secondary weather barrier.

ViBest Super Pro Flashing Tape can be used as a flexible flashing system around window and door joinery openings on timber and steel framed buildings within the following scope:

- Installed into and around joinery openings over the wall underlay and exposed frame to cover both the face and edge of the opening as a secondary weather resistant barrier.
- To assist the overall weathertightness performance of window and door joinery installations.
- To be used in conjunction with air seals and joinery flashing systems. Installer must check for air seal product compatibility with ViBest Super Pro

Flashing Tape.

- Situated in NZS3604 Wind Zones up to, and including, 'Extra High'.

General:

- Installation temperature range: Minimum -5°C.
- Maximum UV exposure: 90 days
- Roll size - 75mm wide x 25M long, 150mm wide x 25M long.

Installed in accordance with the 'technical requirements' an BRANZ appraisal 1161 to the locations and details shown on the drawings.

1.3.4.3 EBuilt Corner Mold:

EBuilt proprietary PVC moulding used on underlay for protection around edges of framing and corners.

Finish - Anodised Silver.

1.3.4.4 Polypropylene Strap:

Refer to separate specification for the supply and installation of Polypropylene Strap item:

- stud straps/wrap strap required to the outside of Underlay in cavity constructions with stud spacing over 450mm.

1.3.4.5 Galvanised 7mm Wire Mesh Underlay Support System:

Refer to separate specification for the supply and installation of the 7mm Galvanised Wire Mesh Support System.

- supporting mesh required on roof pitches greater than 10 degrees with spans greater than 1200mm.

1.3.5 Co-operation

1.3.5.1 Co-operation:

Co-operate with other trades to ensure that all preliminary and preparatory works are completed to specification and as shown on the drawings.

Coordinate with other trades, as required, the assembly and installation of the EBuilt Ventia Iron - Roof and Wall Underlay System to the required layout, details and tolerances.

1.3.6 Workmanship

1.3.6.1 Workmanship:

Where required by the NZ Building Act 2004, it is the building contractor's responsibility to ensure that all restricted building work is carried out by a Licensed Building Practitioner.

Installation of the EBuilt Ventia Iron - Roof and Wall Underlay System shall only be carried out by Licensed Building Practitioners, familiar with the specified products and their installation techniques, in accordance with the manufacturer's requirements and 'technical Literature', and with the warranty requirements.

All installation techniques shall be exactly as recommended by 'EBuilt'. All work shall be such as to leave a neat, efficient, robust and structurally sound installation, to the required standard and free from damage and defects.

Take all reasonable measures during installation to protect the EBuilt Ventia Iron - Roof and Wall Underlay System finish from damage. Carry out routine cleaning of this work as necessary.

Make all necessary provisions to protect adjacent finished work and surfaces from damage during installation.

1.3.7 Delivery & Handling

1.3.7.1 Delivery & handling:

Take delivery of materials and accessories undamaged and in good condition. Reject any item found to be defective or damaged and contact the manufacturer/supplier for replacement.

Store components and accessories undercover in a secure and weatherproof space, off the floor, on a flat and level surface in accordance with the manufacturer's requirements. Ensure stored items are protected from damage and contamination and imposed loads until required for installation.

Do not use damaged or defective materials, or products that are beyond their designated shelf life.

Should a problem be encountered with any EBuilt Ventia Iron - Roof and Wall Underlay System items during use or delivery, immediately contact 'EBuilt on (09) 916 6750. Do not continue to use the item that is not performing to specification or expectation. Keep the item in question and where possible, the packaging and/or manufacturer's details.

Handle materials in accordance with the manufacturer's requirements and in a manner that prevents damage and marking and does not reduce its performance.

Installers shall be familiar with, and comply with, the manufacturer's safe handling requirements and precautions for use, and shall use appropriate safety gear as necessary.

Installers shall conform to all relevant WorkSafe NZ Guidelines and Codes of Practice <http://www.worksafe.govt.nz>- including the OSH Guidelines For the Provision of Facilities and General Safety in the Construction Industry.

1.3.8 Preparation

1.3.8.1 Preparation:

Prior to installation, carry out all necessary inspections of the supporting structure to ensure all preliminary work is complete. Do not commence installation until all necessary preliminary work by others is complete and to the required standard. The commencement of work on each section of the installation shall be deemed to indicate full acceptance by the Installer that all preliminary work by other trades is complete and to the required standard.

Supporting structures shall comply with the NZ Building Code, and must be structurally sound and dimensionally stable and in the correct alignment, true to line and level.

Confirm the location of all movement control joints prior to the commencement of the works.

Concrete:

- Supporting reinforced concrete elements shall comply with NZS 3101, or NZS 3604.
- New concrete must have aged for a minimum of 28 days prior to installation.

Concrete Masonry:

- Supporting reinforced concrete masonry elements shall comply with NZS 4229, or NZS 4230 and AS/NZS 1170.

Timber Framing:

- Supporting timber-framed structures shall comply with NZS 3604, or NZS 3603 and AS/NZS 1170.

Structural Steel:

- Supporting steel structures shall comply with NZS 3404.

1.3.9 Installation - Ventia Iron - Wall Underlay System

1.3.9.1 Ventia Iron - Wall Underlay Installation:

Ventia Iron - Wall Underlay shall be installed, printed face out, to the exterior face of the wall framing, run horizontally, starting from the bottom edge and finishing at the top edge, extending 20-25 mm

below the bottom plate or bearer, and lapped such that any water will be shed to the outside of the underlay with minimum 150mm horizontal laps and minimum 150mm vertical joint laps made over a stud, and kept taut without sagging or bulging. End laps must be made over framing and be no less than 150mm.

Fix at maximum 300mm centres, with 6-8mm stainless steel staples or 20mm large-head galvanised clouts or galvanised proprietary fixings. Provide additional fasteners fixed through Ventia Wall Underlay around framed openings before cutting Ventia Iron - Wall Underlay at openings.

Cut window and door openings just prior to joinery installation; cut underlay at 45° angle away from each corner and return full framing depth and fasten to inside of frame. Install Vibest Super Pro flashing tape over the underlay at opening corners and along sill trimmers in accordance with 'technical requirements'.

Where cavity battens are spaced at greater than 450mm centres, support the wall underlay with either polypropylene strap, 7mm galvanised mesh, galvanised wire or additional cavity battens.

Finish Ventia Iron - Wall Underlay at edges as detailed.

Install all necessary flexible flashing tapes to openings, around pipes, ducts and other services penetrating the underlay, parapet, and balustrade junctions, along head flashings and inter-storey flashings when installed, as required to seal the underlay, in accordance with 'technical requirements' and as shown on the drawings.

Check the installation for damage and defects. Repair tears, holes or gaps around service penetrations. Damaged areas must be repaired by covering with new material lapping the damaged area by 150mm or use ViBest Super Pro flashing tape in accordance with the 'technical requirements'

1.3.10 Installation - Ventia Iron - Roof Underlay System

1.3.10.1 Ventia Iron - Roof Underlay Installation:

Ventia Iron - Roof Underlay shall be installed on roofs with slopes 3° or greater (refer to EBuilt Ventia Iron - Roof and Wall Underlay system clause), run horizontally or vertically across the roof slope and over the purlins.

For horizontal installations start from the gutter/lowest point up to the ridge/highest point, extending maximum 20-25mm into gutters, with minimum 150mm vertical, horizontal and end lap, lapped such that any water will be shed to the outside of the underlay, and sufficiently tensioned without sagging.

Fix at maximum 300mm centres to purlins, with 6-8mm stainless steel staples, or 20mm long large-head galvanised clouts, or galvanised proprietary underlay fixings, or self-drilling wafer head screws.

Ventia Iron - Roof underlay along roof edges and junctions, valley gutters, and at the ridge as shown on the drawings. Carefully cut underlay at roof openings at 45° angle away from each corner and lap-tape closed to framed up-stands, ducts and other services penetrating the underlay in accordance

with 'technical requirements' and as detailed on the drawings. Leave underlay minimum 50mm distance clear of the outer liner of flue stacks.

Check the installation for damage and defects. Repair tears, holes or gaps around service penetrations. Damaged areas must be repaired by covering with new material lapping the damaged area by 150mm or use ViBest Super Pro flashing tape in accordance with the 'technical requirements'

1.3.11 Completion

1.3.11.1 Completion

Check the EBuilt Ventia Iron - Roof and Wall Underlay System has been correctly installed in accordance with the manufacturer's requirements to the locations, layout and details shown on the design drawings.

Check the installation for damage and defects. Repair tears, holes or gaps around service penetrations. Damaged areas must be repaired by covering with new material lapping the damaged area by 150mm or use ViBest Super Pro flashing tape in accordance with the 'technical requirements'

Replace EBuilt Ventia Iron - Roof and Wall Underlay System elements where repair is not possible or will not be accepted.

Leave all of this work complete, clean and free from damage and defects, and to the required standard in accordance with the manufacturer's requirements.

Leave surrounding surfaces clean and free of rubbish and debris. Remove all rubbish and excess material from the site.

Issue to the Owner a copy of the 'EBuilt' Warranty.