

TABLE OF CONTENTS

4421EB EQUUS DUO ROOF & DECK MEMBRANE BY SOPREMA

2



masterspec

Verified spec ID: **210116-339140**

This specification has been produced using Masterspec software and completed on 04/12/2023.
Scan to verify or go to masterspec.co.nz/verify

4421EB EQUUS DUO ROOF & DECK MEMBRANE BY SOPREMA

1 GENERAL

NOTE: Formally known as *Equus De Boer Duo Waterproofing Membrane*

This section relates to the supply and installation of **Equus Industries Ltd - Equus Soprema Duo** range of bitumen based flexible roll roofing membrane systems, in a single or two-layer configuration.

It includes:

- Soprema Duo waterproofing membranes
- 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:

PIR	Polyisocyanurate
SBS	Styrene-Butadiene-Styrene
APP	Atactic polypropylene
TPO	Thermo Plastic Poly-Olefin

The following definitions apply specifically to this section:

SBS modified bitumen	Elastomer modified bitumen which are more elastic and have a better adhesion compared to APP modified bitumen. Ideal for colder climate application.
APP modified bitumen	Plastomer modified bitumen which have a higher melting point and are harder compared to SBS modified bitumen. Ideal for warmer climate application
TPO modified bitumen membrane	Thermoplastic Polyolefin modified bitumen which have an excellent UV-resistance.

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
NZBC E2/AS1	External moisture
NZS 1170.2:2011	Structural design actions - Wind actions
NZS 3114	Specification for concrete surface finishes
NZS 3604	Timber-framed buildings
BS 476-3	Fire tests on building materials and structures. Classification and method of test for external fire exposure to roofs
EN 1350.5	Fire classification of construction products and building elements. Classification using data from external fire exposure to roof tests
WMAI CoP	Waterproofing Membrane Association New Zealand – Reinforced Modified Bitumen Membrane Systems for Roofs and Decks Code of Practice
CodeMark CMNZ70151	Soprema NZ Ltd Waterproofing Membrane Systems

1.4 MANUFACTURER/SUPPLIER DOCUMENTS

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

SOPREMA Roofer's Guide Bituminous Membranes 2021

Product Technical Data Sheets and Safety Data Sheets

[BRANZ Appraisal 685](#) - Soprema Duo Roof and Deck Membrane Systems

[BRANZ Appraisal 1169](#) - Equus Soprema Warm Roof System

BBA Appraisal 20/5843 - Soprema Modified Bitumen Membranes: Duo High Tech Waterproofing Membranes

Manufacturer/supplier contact details

Company: **Equus Industries Ltd**
 Web: <https://equus.nz/>
 Email: tech.support@equus.co.nz
 Telephone: +64 (0)3 353 2434

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

20 years For Equus Soprema Duo range of membranes and proprietary products. It includes an appropriate Maintenance Statement and schedule.

- Provide this warranty on the **Equus Industries Ltd** standard form (if unavailable 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.

Note: Soprema provides an additional material manufacturer warranty to the above. Refer to Equus Industries Ltd and Soprema for details.

1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an **Equus** certified applicator warranty:

10 years For application of Equus Soprema Duo membrane systems

- Provide this warranty on the applicator standard form (if unavailable 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 NO SUBSTITUTIONS

Substitutions are not permitted to any specified **Equus** system, or associated components and products.

1.8 QUALIFICATIONS WORKERS - MANUFACTURER / SUPPLIER REQUIREMENTS

Work to be carried out by certified applicators approved by Equus Industries Ltd. Refer to 1270 CONSTRUCTION for additional requirements relating to qualifications.

1.9 PRE-INSTALLATION MEETING

Convene a meeting between the applicator, contractor, all associated consultants and **Equus Industries Ltd** where appropriate to ensure all parties know what is required for effective performance of the system.

1.10 SPECIAL DETAILS

Where a standard **Equus Soprema Duo** detail does not exist, or if a standard detail cannot be applied, an approved alternative must be obtained from **Equus Industries Ltd** before proceeding with the installation.

1.11 INFORMATION FOR OPERATION AND MAINTENANCE

Provide **Equus Industries Ltd** inspection, maintenance and cleaning instructions to the owner at completion of the work.

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

~

Provide this information prior to Practical Completion.

Compliance information

1.12 INFORMATION REQUIRED FOR CODE COMPLIANCE

Provide the following compliance documentation: -

- Applicator's approval certificate from the manufacturer / importer / distributor
- Manufacturer's, importer's or distributors warranty
- 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 PERFORMANCE

Accept responsibility for the weather-tight performance of the completed membrane roofing system, including all penetrations through the roof and junctions with walls and parapets. All penetrations to comply with [NZBC E2/AS1](#) clause 8.5.9 - 'Penetrations' and **Equus** recommendations.

1.14 PERFORMANCE - DURABILITY

Equus Soprema Duo membrane roof system complies with [NZBC B2/AS1](#) when maintained to Equus Industries Limited requirements.

1.15 PERFORMANCE - FIRE SAFETY

The fire-retardant performance of the Equus Duo Firecare by Soprema waterproofing cap sheet is in accordance with European Norm EN13501-5:2016 Test 1, 2 and 4 (Broof(t1), (t2) and (t4)) and achieves an EXT.F.AA rating in accordance with BS476.3.

Performance - Wind

1.16 WIND DESIGN PARAMETERS – NON-SPECIFIC DESIGN

Installation to be in accordance with Equus Industries Limited requirements and as appropriate for the project wind design stated in the general section 1220 PROJECT.

Suitable for design wind pressures up to and including Extra High Wind Zone to [NZS 3604](#).

1.17 WIND DESIGN PARAMETERS – SPECIFIC DESIGN

Equus and Soprema provide job-specific wind load calculations to [NZS 1170.2](#) for all specifically designed buildings using Equus Soprema waterproofing systems. Refer to the project wind design stated in the general section 1220 PROJECT.

Quality control and assurance

1.18 QUALITY CONTROL

Maintain quality necessary to assure that work is performed in accordance with this specification and the qualifying requirements of **Equus Industries Ltd**.

1.19 TESTING - FLOOD

Where practical flood test horizontal applications with a minimum 50mm depth of water for 24 hours. Make good any lack of water tightness when the surface is completely dry. Repeat water test process after making any necessary repairs.

1.20 TEST - ELECTRONIC LEAK DETECTION

Carry out leak detection test using selected electronic leak detection system.

Test the waterproof membrane using Electronic Leak Detection procedure upon completion of membrane installation and prior to any covering. Test to be carried out by experienced operator. Make good any lack of water tightness when the surface is completely dry. Depending on conditions, repeat a total or localised test process after making repairs.

2 PRODUCTS

Materials

2.1 BASE SHEET - FULLY BONDED, FOR COLDER CLIMATES

Equus Soprema DeboFlex 2.5mm T/F C175 is a flexible waterproofing membrane consisting of elastomer (SBS) modified bitumen and reinforced with a layer of 175g/m² non-woven polyester with glass scrim. The membrane has an overlap of 80mm. It is used as a base sheet on plywood, cross laminated timber and concrete substrates in colder climates. Installed by torch-on application.

Supplied in 1m x 10m rolls.

2.2 BASE SHEET - FULLY BONDED, FOR WARMER CLIMATES

Equus Soprema Soprasun Plus 3, a 3mm thick a flexible waterproofing membrane consisting of APP-modified bitumen waterproofing base sheet with composite reinforcement. This membrane has an overlap of 80mm. It is used as a base sheet on plywood, cross laminated timber and concrete substrates in warmer climates. Installed by torch-on application. Supplied in 1m x 10m rolls.

2.3 BASE SHEET – SELF ADHERED, FULLY BONDED

Equus Soprema Soprastick (formerrly known as DeboTack T/F C175) is a flexible waterproofing membrane consisting of elastomer (SBS) modified, self-adhesive bitumen and reinforced with a layer of 175g/m² non-woven polyester with glass scrim. The membrane has an overlap of 80mm. It is used as a base sheet on plywood , cross laminated timber and concrete substrates. Supplied in 1m x 10m rolls.

2.4 BASE SHEET – SELF ADHERED, PARTIALLY BONDED

Equus Soprema Soprastick Venti Tack Plus (formerrly known as DeboTack T/F C175 Aero) is a flexible waterproofing membrane consisting of elastomer (SBS) modified, self-adhesive bitumen and reinforced with a layer of 175g/m² non-woven polyester with glass scrim. The membrane has a pattern of self-adhesive stripes at the back. The membrane is partially bonded to the concrete substrate and allows vapor distribution under the waterproofing membrane system. Supplied in 1m x 11.25m rolls.

2.5 CAP SHEET - STANDARD TWO-LAYER SYSTEM, FIRE RETARDANT, FULLY BONDED

Equus Soprema Duo HT 4 Slates/F C180 Firecare (FC), a 4mm thick flexible waterproofing membrane system in a two-layer configuration, comprised of a cap sheet with a TPO modified bitumen upper coating with mechanically pressed-in coloured slates, a SBS modified bitumen under coating and a composite reinforcement of 180 g/m² polyester and glass scrim. The membrane has an overlap of 80mm. This cap sheet is installed on top of the base sheet by fully bonded torch-on application. Laps of base and cap sheet shall be staggered for optimal, two-layer security. Supplied in 1m x 8m rolls. Standard colours available are Grey/White (GW), White/Green/Grey (WGG) and Black (AGR). Brown Oxide (BO) available on request. Refer to SELECTIONS for options.

2.6 CAP SHEET - SINGLE LAYER SYSTEM, MECHANICALLY FASTENED

Equus Soprema Duo HT 4 Slates/F C180 Firecare Mecano, a 4mm thick flexible, single-layer waterproofing membrane comprised of a TPO modified bitumen upper coating with mechanically pressed-in coloured slates, a SBS modified bitumen under coating and a composite reinforcement of 180 g/m² polyester and glass scrim. The membrane has an overlap of 130mm. This membrane is mechanically fastened to the substrate with all laps heat welded. Supplied in 1m x 8m rolls. Standard colours available are White/Green/Grey (WGG) and Black (AGR). Brown Oxide (BO) available on request. Refer to SELECTIONS for options.

2.7 CAP SHEET - ROOT RESISTANT FOR GREEN ROOFS AND PLANTERS

Equus Soprema Duo HT 4 Slates/F C180 Firecare Landscape (FC LC), a 4mm thick flexible waterproofing membrane system in a two-layer configuration, comprised of a cap sheet with a TPO modified bitumen upper coating with mechanically pressed-in coloured slates, a SBS modified bitumen under coating and a composite reinforcement of 180g/m² polyester and glass scrim. The membrane has an overlap of 80mm. This cap sheet is installed on top of the base sheet by fully bonded torch-on application. The membrane is root-resistant according to European Norm EN13948. Supplied in 1m x 8m rolls. Standard colour available is White/Grey/Green (WGG). Refer to SELECTIONS for options.

Components**2.8 PRIMER - SOPRADERE QUICK PRIMER**

Equus Soprema Sopradere Quick primer, a bitumen primer for torch-applied membranes.

2.9 PRIMER - EQUUS PEEL & STICK

Equus Peel and Stick Primer, a rubber based adhesive primer for self-adhered, membranes.

2.10 EQUUS SOPREMA FASTENERS

Equus SOPREMA fastening system for fixing of Soprema Duo Firecare Mecano cap sheets. Available in different lengths to suit different substrates.

2.11 BITUMINOUS SEALANT

Equus Alsan Mastic 2200 by SOPREMA bitumen sealant

- 2.12 MINERAL CHIP DRESSING
Equus Duo Mineral Chip scattered as needed to form uniform appearance.
- 2.13 EQUUS SOPREMA TERMINATION PROFILE
Equus Soprema C-profile to terminate the cap sheet to the wall or upstand.
- 2.14 EQUUS SOPREMA ROOF EDGE PROFILE
Equus Soprema roof edge profile to terminate the cap sheet at roof edges.
- 2.15 EQUUS LIQUID WATERPROOFING
Equus Maticryl liquid applied waterproofing for penetrations and other details as per detail drawings.
- 2.16 BITUMEN ANGLE FILLET
Equus Bitumen Angle Fillet is used instead of plywood angle fillet for increased flexibility and compatibility with bituminous waterproofing membranes.
- 2.17 DRAINAGE CELL - GREEN ROOF
Equus drainage & filter layer to ensure retention of soil and provide sufficient water to support plant growth while draining excess water.

Accessories

- 2.18 ROOF VENT
Equus Short Roof Vent domed vent 250mm Ø x 100mm high.
- 2.19 OUTLETS - ROOF DRAINS AND OVERFLOWS
Allproof roof drains and overflows. Refer to SELECTIONS.
- 2.20 OUTLETS - SCUPPER
Equus Stainless Steel Scupper 200mm wide x 75mm high aperture.
- 2.21 FLOATING DECK AND PAVER SUPPORT SYSTEM
Refer to 4381EF EQUUS FIXPLUS DECK & TILE SUPPORT SYSTEM for Equus Fixplus range of pedestals and tile supports. Pedestals are customisable to be compatible with a range of flooring materials.
- 2.22 EQUUS SOPREMA KRAITEC STEP RUBBER TILE
Rubber tiles 500mm x 500mm x 30mm thick with integrated drainage pattern for balconies, terraces or walkways for roof maintenance.
Standard colour: Grey with black, green and red available on request. Refer to SELECTIONS.
- 2.23 EQUUS SOPREMA SOPRASOLAR FIX EVO TILT
Non-penetrating support system for solar photovoltaic panels.

3 EXECUTION

Conditions

- 3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS
Refer to the general section 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of Equus Industries Limited product.
Take delivery of rolls of Equus Soprema Duo membrane and accessories undamaged. Include for site handling facilities where required. Store, on a level surface, off floors, out of direct sunlight and with the required accessories under conditions that ensure no deterioration or damage. Rolls should be stored upright to maintain roll shape.
- 3.2 ROUTINE MATTERS
Refer to the general section 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 moisture content is:

Timber substrate: 20% maximum

Concrete substrate: 75% maximum Relative Humidity

Confirm that the substrate, including sumps, outlets and projections, will ensure work of the required standard. Ensure the falls are the correct falls to rainwater outlets to avoid ponding.

3.4 WEATHER

Lay membrane in fair weather, with ambient air temperature no less than 8°C or when surface temperature is more than 4°C. Normal conditions are 18-23°C. Cooler/ humid conditions may prolong primer dry times.

3.5 EQUIPMENT

Equus Industries Limited requires the approved applicator to use the following equipment:

- Detail gas torch for application of modified bitumen membrane
- Round tipped trowel
- Knife for bitumen membrane with hook blade
- Primer brush or roller
- Lap pressure roller

Application

3.6 GENERALLY

All work and materials to comply with Equus Industries Ltd installation instructions, [NZBC E2/AS1](#) - 'External moisture', [Soprema Roofer's Guide Bituminous Membranes 2021](#) and the [WMAI Code of Practice for Reinforced Modified Bitumen Membrane Systems for Roofs and Decks](#),

3.7 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.8 PRELIMINARY WORK

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

3.9 MINIMUM FALLS

Ensure minimum falls for SOPREMA DUO membrane systems are:

- minimum fall for a roof and deck is not less than 1:80 (0.7°), to CodeMark [CMNZ70151](#)
- minimum fall for a gutter is not less than 1:100 (0.57°), to CodeMark [CMNZ70151](#)

Installation requirements - plywood substrate

3.10 PLYWOOD SUBSTRATE - GENERAL

Plywood shall be a minimum of 17mm for roofs, and 21mm for decks. Sheets shall be laid tight butt jointed to maximise the use of whole sheets with sheet joints laid over framing members, in a staggered brick-bond pattern, running across the fall of the roof.

Fix plywood in accordance with the Manufacturer's instructions using countersunk stainless-steel screws, with all sheets laid in a bead of construction adhesive. Screws shall be fixed at 150mm centres on sheet perimeter and 200mm through the body of the sheet. Tongue and Groove plywood does not negate any of the above requirements.

3.11 PLYWOOD CORNERS

Chamfer all leading edges of plywood with a 5mm radius corner. Install to all internal corners **Equus** bitumen angle fillet or H3.2 treated timber fillet of minimum 25mm x 25mm.

Installation Requirements - Concrete substrate

3.12 CONCRETE SUBSTRATE - GENERALLY

Allow sufficient drying time after the concrete has been poured which is generally between 14 and 28 days. Ensure that all traces of curing compound are gone or removed before commencing installation and any holes or voids are patched. Finish concrete to [NZS 3114 U3](#), with a light trowel texture. Stone flush all ridges and protrusions. Water blast to remove all detritus and allow to dry. Existing substrates and structures must be thoroughly inspected prior to specification.

Note that compliance for falls and drainage on concrete roofs and decks is achieved using specific design criteria to suit the project following WMAI Code of Practice and Manufacturer acceptable tolerances:

3.13 CONCRETE CORNERS

Chamfer all leading edges to 5mm radius and add **Equus** bitumen angle fillet, minimum 25mm x 25mm cement mortar or 25mm x 25mm H3.2 treated timber fillet installed in internal corners.

Installation Requirements - Cross Laminated Timber (CLT)

3.14 CROSS LAMINATED TIMBER SUBSTRATE GENERALLY

All sections shall be laid to manufacturer's instructions with all edges fully supported. Ensure joints are flush with edges chamfered and the surface is even and left clean and free of debris and dry before membrane application.

3.15 CROSS LAMINATED TIMBER CORNERS

Chamfer all leading edges of cross laminated timber with a 5mm radius corner. Install to all internal corners Equus bitumen angle fillet or H3.2 treated timber fillet of minimum 25mm x 25mm.

Installation Requirements - Existing membrane substrates

3.16 EXISTING MEMBRANE SUBSTRATE GENERALLY

Old membrane roofing must be structurally sound and free from any sharp protrusions, prior to application. Prepare surface, including vacuum cleaning as necessary to leave smooth, clean, dry and free of sharp edges, fines, loose or foreign materials, oil, grease or other materials which might damage the membrane.

Application - Electronic Leak Detection - conductive surface (by membrane installer)

3.17 INSTALL ELECTRONIC LEAK DETECTION CONDUCTIVE SURFACE

Install electronic leak detection conductive surface, in accordance with manufacturer's requirements. Refer to SELECTIONS.

Installation - Equus Soprema Duo membrane

3.18 CONTROL AND EXPANSION JOINTS

For control and expansion joints refer to details on the drawings.

3.19 APPLY PRIMER - EQUUS SOPRADERE QUICK PRIMER

Prime all dried and prepared substrates with Equus Sopradere Quick primer, as per manufacturer's instructions. Ensure a good even coverage and penetration as recommended by Equus Industries Ltd. Consumption rates will depend on surface profile and porosity. Allow primer to fully dry.

3.20 APPLY PRIMER - EQUUS PEEL & STICK PRIMER

Apply one coat of Equus Peel and Stick Primer to substrate using brush, roller with heavy nap or spray at rate of 6-8 sqm/litre to manufacturer's instructions. Allow to dry for 1 hour minimum.

3.21 APPLY BASE SHEET - TORCH-ON APPLICATION FOR COLDER CLIMATES

Unroll and align DeboFlex 2.5mm T/F C175 base sheet in the most suitable direction. Cut to length as required. Re-roll both ends to the middle and torch evenly overall to both base sheet and primed substrate as this is unrolled. Ensure even heat application. Repeat in sequence with all rolls, maintaining side laps of 80mm and end laps of 150mm. The lap automatically closes during the torching process. Offset end laps of minimum 500mm in adjacent runs.

3.22 APPLY BASE SHEET - TORCH-ON APPLICATION FOR WARMER CLIMATES

Unroll and align Soprasun Plus 3 base sheet in the most suitable direction. Cut to length as required. Re-roll both ends to the middle and torch evenly overall to both base sheet and primed substrate as this is unrolled. Ensure even heat application. Repeat in sequence with all rolls, maintaining side laps of 80mm and end laps of 150mm. The lap automatically closes during the torching process. Offset end laps of minimum 500mm in adjacent runs.

3.23 APPLY BASE SHEET – SELF-ADHESIVE APPLICATION

Unroll and align Equus Soprema Soprastick base sheet (fully bonded to plywood or CLT substrates) in the most suitable direction. Cut to length as required. Remove back covering, self-adhere evenly to the primed substrate and use light heat on side- and end laps with a detail torch or with hot-air welding equipment. Repeat in sequence with all rolls, maintaining side laps of 80mm and end laps of 150mm. Offset end laps of minimum 500mm in adjacent runs.

3.24 APPLY BASE SHEET - SELF-ADHESIVE APPLICATION TO CONCRETE

Unroll and align Equus Soprema Soprastick Venti Tack Plus, partially bonded, self-adhesive base sheet in the most suitable direction. Cut to length as required. Remove back covering, self-adhere evenly to the substrate and use light heat on side- and end lap with a detail torch or with hot-air welding equipment. Repeat in sequence with all rolls, maintaining side laps of 80mm and end laps of 200mm. The lap automatically closes during the torching process. Offset end laps of minimum 500mm in adjacent runs.

3.25 APPLY CAP SHEET - TORCH-ON APPLICATION

Unroll and align selected Equus Soprema Duo HT 4 Slates/F C180 Firecare (FC) or Equus Soprema Duo HT 4 Slates/F C180 Firecare Landscape (FC LC) cap sheet, offsetting half sheet from base sheet to create staggered laps. Cut to length as required, re-roll both ends to the middle and torch evenly overall to both base- and cap sheet as this is unrolled. Ensure even heat application. Repeat in sequence with all rolls, maintaining side laps of 80mm and end laps of 150mm. Ensure all laps are offset to prevent coincidence with the base-sheet laps. Following application of the cap sheet, back seal all joints separately to ensure they are neatly and correctly closed.

Where required during the back-sealing operation, scatter Equus Duo Mineral Chip carefully over the joint to provide a uniform appearance. Scatter Equus Duo Mineral Chip where detailing of the cap sheet has been carried out to provide protection and uniformity of finish where required.

3.26 APPLY CAP SHEET - MECHANICALLY FIXED

Unroll and align Equus Soprema Duo HT 4 Slates/F C180 Firecare Mecano, cap sheet. Loose lay and mechanically fasten in the laps to substrate to Equus requirements to suit wind zone maintaining side & end laps of 130mm. Heat weld all laps closed for full weathertightness.

Following application of the cap sheet, back seal all joints separately to ensure they are neatly and correctly closed. Where required during the back-sealing operation, scatter Equus Duo Mineral Chip carefully over the joint to provide a uniform appearance. Scatter Equus Duo Mineral Chip where detailing of the cap sheet has been carried out to provide protection and uniformity of finish where required.

3.27 DETAILING

Detail all outlets, pipe penetrations, gutter stop ends, parapet upstands, machinery plinths and anything above or below the roof surface. Detailing is carried out before, during or in some cases after the membrane is laid depending on the detail type. All detailing to be done in accordance with the manufacturer's technical literature and application manual current at the time of design, use, installation and maintenance.

Finishing

3.28 COMPLETION INSPECTION

Inspect the system upon completion and leave up to 2-3 weeks to stabilise. Recheck the entire system prior to any warranties being issued. Carry out a pond test where possible, especially on deck areas, for 24 hours. Have a pond test certified/signed off.

Main contractor to arrange appropriate protection for the completed installation. Damage caused to the completed installation, by other trades working over the membrane after the initial inspection, to be the responsibility of the main contractor.

3.29 INSTALL PHOTOVOLTAIC PANEL SUPPORTS

Where photovoltaic panels are to be installed, SOPRASOLAR FIX EVO TILT for bitumen roofs are to be installed as per the installation sheet provided by Equus Industries.

3.30 INSTALL KRAITEC STEP RUBBER TILES

For balconies and walkways, install Equus Kraitec Step rubber tiles as per manufacturer's instructions.

3.31 DRAINAGE - GREEN ROOF

Lay drainage cell and overlap adjacent sheets with the 100mm filter fleece overlap. At the edges and at details, lay the geotextile filter fabric across the top of the drainage cell ensuring fabric is lapped 100mm to prevent ingress of soil. Tape the geotextile filter fabric to the wall to prevent soil entering the drainage cell. Ensure the entire area is covered and that there is sufficient drainage to remove excess water from the installation. Do not place heavy materials on the drainage cell.

Once the geotextile fabric drainage layer is in place, overlay surface with 25mm grit sand prior to covering with soil.

3.32 GROWING MEDIUM AND PLANTING - GREEN ROOF

Refer to appropriate GREEN ROOF section(s) for supply and construction of green roof.

Testing Procedure

3.33 FLOOD TESTING

Where practical, flood test all horizontal applications with a minimum 50mm depth of water for 24 hours. Make good any lack of water tightness when the surface is completely dry. Ensure that an overflow is incorporated during the flood testing and that there are no load limitations that might prevent testing.

Completion - general

3.34 ACCEPTANCE

- Arrange for an inspection of the completed work.
- Protect the membrane until completion of the contract works.

3.35 COMPLETION MATTERS

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

4 SELECTIONS

For further details on selections go to <https://equus.nz/>

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

Materials

4.1 EQUUS SOPREMA DUO MEMBRANE - STANDARD TWO-LAYER, FIRE RETARDANT

Location:	~
Supplier:	Equus Industries Ltd
Substrate:	~
Type:	Soprema Duo Firecare
Primer:	~
Base sheet:	~
Cap sheet:	Duo HT4 Slates/F C180 Firecare (FC)
Colour:	~

4.2 EQUUS SOPREMA DUO MEMBRANE - SINGLE LAYER MECHANICALLY FASTENED FOR RENOVATION

Location:	~
Supplier:	Equus Industries Ltd
Substrate:	~
Type:	Soprema Duo Firecare Mecano
Base sheet:	No base sheet (single layer system)
Cap sheet:	Duo HT4 Slates/F C180 Firecare Mecano
Colour:	~

4.3 EQUUS SOPREMA DUO MEMBRANE - TWO-LAYER, ROOT RESISTANT

Location:	~
Supplier:	Equus Industries Ltd.
Substrate:	~
Type:	Soprema Duo Firecare Landscape (FC LC)

Primer:	~
Base sheet:	~
Cap sheet:	Duo HT4 WGG/F C180 Firecare Landscape (FC LC)
Colour:	White/Green/Grey (WGG)
Drainage layer:	Equus drainage cell complete with integrated geotextile filter fabric of 140gsm
Growing medium:	~

Accessories

4.4 ROOF VENT

Location:	
Type:	Equus Short Roof Vent
Size:	250mm Ø x 100mm high

4.5 ROOF DRAIN

Location:	~
Type/Brand:	~
Size:	~
Downpipe diameter:	~
Grill type:	~

4.6 OVERFLOW

Location:	~
Type/Brand:	~
Size:	~
Downpipe diameter:	~
Grill:	Overflow

4.7 OUTLETS - STAINLESS STEEL SCUPPERS

Location:	~
Type/Brand:	Equus Stainless Steel Scupper
Size:	200mm wide x 75mm high aperture

4.8 EQUUS SOPREMA KRAITEC STEP RUBBER TILES

Location:	~
Type/Brand:	Equus Soprema Kraitec Step
Size:	500mm x 500mm x 30mm
Colour:	~

4.9 EQUUS SOPREMA SOPRASOLAR FIX EVO TILT SOLAR PANEL SUPPORTS

Location:	~
Type/brand:	Equus Soprasolar

Electronic Leak Detection

4.10 ELECTRONIC LEAK DETECTION SYSTEM

Location:	~
Substrate:	~
System:	~