EQUUS SOPREMA SOPRATHERM WARM ROOF SYSTEM

Standard Building Consent Package

equus

CELEBRATING 40 YEARS 1982–2022

AUTHORISED DISTRIBUTOR SOPREMA

NOVEMBER 2023

CONTENTS

EQUUS SOPREMA SOPRASUN PLUS is a two-layer bitumen waterproofing membrane system, designed to meet the requirements and environmental challenges of the New Zealand climate, while still providing an economical waterproofing solution.

This system offers the building owner an attractive coloured slate finish, provides protection against the demanding local weather conditions, and maintains peace of mind with a 20 year material warranty.

EQUUS SOPREMA SOPRASUN PLUS

The EQUUS SOPREMA SOPRASUN PLUS membrane system consists of the SOPRASUN PLUS 4.5KG MINERAL cap sheet torched to the SOPRASUN PLUS 3 base sheet, forming a two-layer waterproofing membrane system suitable for flat roof waterproofing.

SOPRASUN PLUS 4.5KG MINERAL is a plastomeric reinforced modified bitumen waterproofing membrane (APP), manufactured to retain excellent technical characteristics. The composite reinforcement, and APP modified bitumen allows the softening point to increase from 50°C to 140-150°C. This creates a more forgiving membrane when installing in hot conditions.

This system can be used on plywood or concrete substrates to form a standard cold roof system or over thermal insulation to provide a warm roof system.

Available in Grey

System Components:

- SOPRASUN PLUS 4.5KG MINERAL
- SOPRASUN PLUS 3
- Bitumen Primer
- Alsan Mastic 2200
- Thermal insulation for warm roof systems

Key Benefits:

- CodeMark Certified
- BRANZ Appraised
- Economical solution
- Proven UV resistance
- Excellent dimensional stability and durable performance
- Can be installed any time of the year, wide temperature tolerance

CodeMark
CMNZ70151

BRANZ Appraised
Appraisal No.819 [2019]

Equus SOPREMA Technical Support:

- Project specific specifications and details
- Condensation risk analysis for warm roof systems
- Wind uplift study for warm roof systems
- On-site quality assurance
- Nationwide network of Certified Applicators
- Warranties available

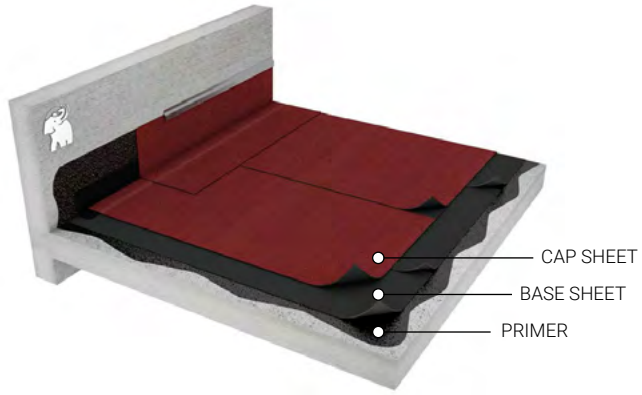
SYSTEM OPTIONS

EQUUS SOPREMA SOPRASUN PLUS membrane systems offer great waterproofing design tailored to your needs.

CONVENTIONAL ROOF SYSTEM

Exposed roof | Non-trafficable

The waterproofing system is applied directly onto the construction deck. This is a fast and cost effective way to waterproof an exposed roof.

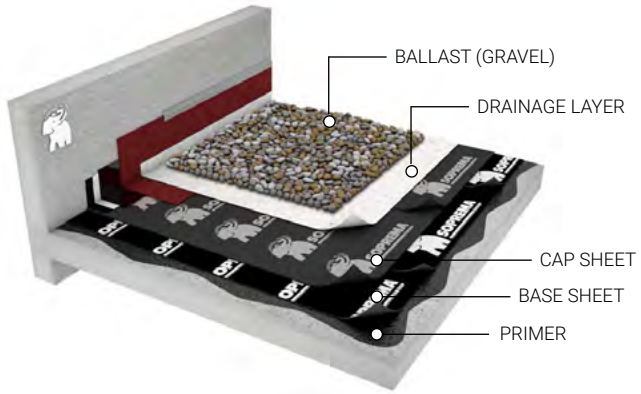


BALLASTED / GREEN ROOF SYSTEM

Protected roof | Non-trafficable

The waterproofing system is protected from weathering and UV.

Using a drainage layer will allow the roof to drain freely and not be affected by the build up of silt that can form over the years.

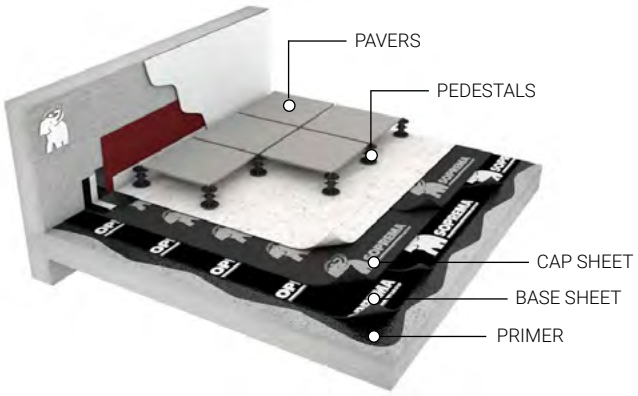


PAVED ROOF SYSTEM

Protected roof | Trafficable

Designed for areas with heavy pedestrian traffic. The waterproofing system is installed, and then protected with paving slabs.

The Equus FIXPLUS pedestal range pavers allows continuous and effortless adjustments and leveling of slabs.

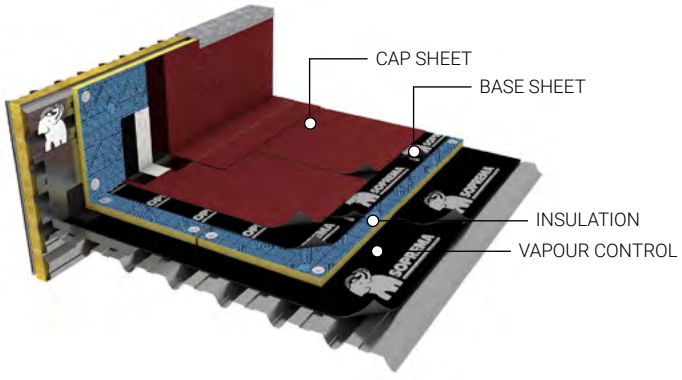


WARM ROOF SYSTEM

Protected roof | Non-trafficable

Provides the longest available expected lifetime based on proven durability of the waterproofing in NZ climate conditions.

It's a light-weight, thermally insulated roofing system which consists of a two-layer membrane system applied over a rigid thermal PIR or SOPRAROCK mineral wool insulation board and vapour barrier. This guarantees a continuous and efficient thermal resistance (R-value) for a healthier building.



4421ES EQUUS SOPRASUN PLUS ROOF & DECK MEMBRANE BY SOPREMA

1 GENERAL

This section relates to the supply and installation of Equus Industries Limited SOPREMA SOPRASUN PLUS Roof and Deck Membrane System, a two-layer modified-bitumen waterproofing membrane for cold and SOPREMA SOPRATHERM system for warm roofs.

It includes:

- Modified bitumen waterproofing membranes
- All required components and accessories to complete installation

1.1 RELATED WORK

Refer ~ 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:

APP	Atactic Polypropylene
CLT	Cross Laminated Timber
PIR	Polyisocyanurate
SBS	Styrene-butadiene-styrene

The following definitions apply specifically to this section:

APP modified bitumen	Plastomer modified bitumen.
Cold roof	Roof assembly where insulation is below the roof deck, in the ceiling cavity or between the joists
Warm roof	Roof assembly where rigid insulation is above the roof deck with a waterproofing membrane over the insulation

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
AS 1562.1-1992	Design and installation of sheet roof and wall cladding - Metal
AS 2122.1.	Combustion propagation characteristics of plastics - Part 1: Determination of flame propagation following surface ignition of vertically oriented specimens of cellular plastics
NZS 3114	Specification for concrete surface finishes
NZS 3604	Timber-framed buildings
AS/NZS 4859.1	Thermal insulation materials for buildings - General criteria and technical provisions
HB 39-1997	Installation code for metal roof and wall cladding
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 No. 819 SOPREMA ROOFING MEMBRANE SYSTEMS

BRANZ Appraisal No. 1169 EQUUS SOPREMA WARM ROOF SYSTEM
Equus SOPREMA SOPRASUN PLUS and SOPRATHERM standard detail drawings

Manufacturer/supplier contact details.

Company:	Equus Industries Ltd
Web:	www.equus.nz
Email:	info@equus.nz
Telephone:	Northern Branch, Auckland: 09 415 4314 Central Branch, Wellington: 04 576 0333 Southern Branch, Christchurch: 03 353 2434

Warranties

1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

20 years	For Equus SOPREMA SOPRASUN PLUS membrane or SOPRATHERM warm roof system against failure under NZ climate conditions.

- 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 installer/applicator warranty:

10 years	For application of Equus SOPREMA SOPRASUN PLUS membrane or SOPRATHERM warm roof systems

- 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 NO SUBSTITUTIONS

Substitutions are not permitted to any specified Equus Soprema system, or associated components and products unless approved by Equus.

1.8 QUALIFICATIONS - MANUFACTURER / SUPPLIER REQUIREMENTS

Workers to be certified 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 PROJECT SPECIFIC DETAILS

Where a standard detail does not exist, an approved alternative can be obtained from Equus Industries Ltd.

Compliance information

1.11 INFORMATION REQUIRED FOR CODE COMPLIANCE

Provide the following compliance documentation: -

- Applicator approval certificate from the manufacturer / importer / distributor

- Manufacturer / supplier warranty
- Installer / applicator warranty
- Producer Statement - Construction from the applicator / installer
- Other information required by the BCA in the Building Consent Approval documents.

Performance

1.12 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.

1.13 PERFORMANCE DURABILITY

Equus SOPREMA SOPRASUN PLUS and SOPRATHERM insulated roof system complies with NZBC B2/AS1 when maintained to Equus Industries Limited requirements.

1.14 PERFORMANCE - ENERGY EFFICIENCY

Equus PIR insulation board has an aged thermal resistance (R Value) TO AS/NZS 4859.1.
Equus PIR insulation boards have a thermal conductivity 0.021 W/mK for 50mm-70mm thick boards and 0.020 W/mK for 80mm-100mm thick boards. Refer to SELECTIONS for R-value.

1.15 PERFORMANCE - FIRE SAFETY

Equus PIR insulation board complies with the flame propagation criteria as specified in AS 2122.1.

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 ASSURANCE

The Equus Certified Applicator is responsible for onsite QA following the standard Equus SOPREMA SOPRASUN PLUS and SOPRATHERM Quality Assurance (QA) Checklists.

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 - Cold Roof - SOPRASUN PLUS two-layer waterproofing membrane system

2.1 PRIMER - SOPRADERE QUICK PRIMER

Bitumen primer for torch-applied modified-bitumen membranes.

2.2 BASE SHEET - SOPRASUN PLUS 3 – TORCH APPLIED, FULLY ADHERED BASE SHEET

3mm thick APP-modified bitumen waterproofing base sheet with composite reinforcement supplied in 1m x 10m rolls.

2.3
CAP SHEET - SOPRASUN PLUS 4.5KG MINERAL – TORCH-APPLIED – FULLY ADHERED CAP SHEET

4mm thick APP-modified bitumen waterproofing cap sheet with mineral finish for additional UV protection supplied in 1m x 10m rolls.

Materials - Warm roof: SOPRATHERM insulated warm roof system

2.4 PRIMER - EQUUS PEEL & STICK PRIMER

Rubber based adhesive primer for self-adhered, modified-bitumen membranes.

2.5
VAPOUR BARRIER - COLPHENE 3000 – SELF-ADHESIVE, FULLY ADHERED VAPOUR BARRIER

1.5mm thick, self-adhesive SBS modified bitumen vapour barrier with tri-laminated woven polyethylene to upper surface supplied in 1m x 18.7m rolls.

2.6 EQUUS PIR INSULATION BOARD

EQUUS PIR insulation board with a core of rigid polyisocyanurate foam faced on both sides by gaslight multi-layered complex.
Equus PIR thermal insulation board is supplied in the following thicknesses:

- 50mm - R value 2.35
- 60mm - R value 2.85
- 70mm - R value 3.30
- 80mm - R value 4.00
- 90mm - R value 4.50
- 100mm - R value 4.85
- 140mm – R value 6.60

2.7 TAPERED EQUUS PIR INSULATION BOARD

EQUUS tapered PIR insulation board with a core of rigid polyisocyanurate foam faced on both sides by gaslight multi-layered complex are supplied in different gradients to suit specified roof fall.

2.8 BASE SHEET SOPRASTICK VENTI TACK PLUS - SELF-ADHESIVE

Self-adhesive flexible waterproofing membrane for use as a base sheet.

2.9
CAP SHEET - SOPRASUN PLUS 4.5KG MINERAL – TORCH-APPLIED – FULY ADHERED CAP SHEET

4mm thick APP-modified bitumen waterproofing cap sheet with mineral finish for additional UV protection supplied in 1m x 10m rolls.

Components

2.10 EQUUS SOPREMA C-PROFILE

Cap sheet termination piece.

2.11 EQUUS SOPREMA ROOF EDGE PROFILE

Cap sheet termination piece for use at roof edges.

2.12 ALSAN MASTIC 2200 SEALANT

Flexible, rubber-modified bitumen sealant for use with Equus SOPREMA bitumen membranes.

2.13 BITUMEN ANGLE FILLET

Bitumen angle fillet.

2.14 ALSAN FLASHING LIQUID DETAILING MEMBRANE

Polyurethane bitumen liquid waterproof coating for roof details

2.15 EQUUS SOPREMA FASTENERS

Equus SOPREMA fastening system for fixing of insulation boards and base sheets. Available in different lengths to suit different substrates.

Accessories

2.16 ROOF VENT

Equus Short Roof Vent domed vent 250mm ∅ x 100mm high.

2.17 OUTLETS - ROOF DRAINS AND OVERFLOWS

Allproof roof drains and overflows. Refer to SELECTIONS.

2.18 OUTLETS - SCUPPER

Equus Stainless Steel Scupper 200mm aperture width x 75mm aperture height.

2.19 FLOATING DECK AND PAVER SUPPORT SYSTEM

Refer to 4381EF EQUUS FIXPLUS DECK & TILE SUPPORT SYSTEM.

2.20 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.

2.21 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 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.
Moisture content:
Concrete substrate - Relative Humidity of maximum 75%.
Plywood/timber substrate - moisture content of maximum 20%

Confirm that the substrate, including fillets, 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 INSTALLATION SEQUENCE - WARM ROOF SYSTEMS

Install SOPREMA SOPRATHERM system components, vapour barrier, insulation sheets with membrane in sections to produce a weather-tight section each day complete with all joint seams, edge flashings and terminations. Cover off exposed edge at the end of each workday or if rain is imminent to ensure complete system remains dry.

Installation/application

3.5 GENERALLY

All work and materials to comply with Equus Industries Ltd installation instructions, NZBC E2/AS1, SOPREMA Roofer's Guide Bituminous Membranes 2021 and the WMAI Code of Practice for Reinforced Modified Bitumen Membrane Systems for Roofs and Decks.

3.6 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

3.7 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.

3.8 MINIMUM FALLS

Ensure minimum falls for SOPREMA SOPRASUN-PLUS and SOPREMA SOPRATHERM 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

Substrate - ALL ROOFS

Plywood substrate

3.9 PLYWOOD SUBSTRATE

Plywood minimum 17mm thick for roofs, and 21mm thick for decks. Lay sheets 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 fixed at 150mm centres on sheet perimeter and 200mm through the body of the sheet. Fix tongue and groove plywood to same specification.

Concrete substrate

3.10 CONCRETE SUBSTRATE

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 NZS3114:1987 U3, with a light trowel texture. Stone flush all ridges and protrusions.
Water blast to remove all detritus and allow to dry.
Thoroughly inspect existing substrates and structures prior to specification.

3.11 EXPANSION MOVEMENT JOINTS

For expansion/ movement joints refer to details on the drawings.

Metal Tray Substrate

3.12 METAL TRAY SUBSTRATE

Confirm metal tray substrate is minimum 0.7mm gauge reverse profile run metal roofing to AS 1562.1-1992 and HB 39-1997. Installed in accordance with manufacturer's and Equus requirements.

CLT Substrate

3.13 CROSS LAMINATED TIMBER (CLT)

Lay all sections 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.

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

3.14 INSTALL ELECTRONIC LEAK DETECTION CONDUCTIVE SURFACE

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

Application - concrete, plywood & CLT substrates - COLD ROOF: SOPRASUN PLUS 2 layer system

3.15 PRIME SUBSTRATE

Prime the dried and prepared surface with Sopradere Quick Primer by roller or brush, at a spreading rate of 5m² per litre, ensuring a good even coverage and penetration as recommended by Equus Industries Ltd. Application to include upstands to a minimum height of 150mm adjacent to all horizontal surfaces being coated. Consumption rates will depend on surface profile and porosity. Allow the primer to fully dry for 4 to 24 hours depending on prevailing weather conditions. Prevent contamination of the primed surface prior to application of the membrane.

3.16 INSTALL BASE SHEET MEMBRANE - SOPRASUN PLUS 3

Decide the most suitable direction to follow. Unroll the roll and discard packaging. Align and cut to length as required. Re-roll both ends to the middle, then torch evenly overall to both base sheet and primer as the membrane is unrolled. Evenly torch off the sacrificial film at the back of the membrane using a sweeping motion to maintain even heat across the roll. Ensure even heat application. Repeat in sequence with all rolls, maintaining laps of minimum 80mm. Offset end laps in adjacent runs. End laps shall be minimum 150mm.

3.17 INSTALL CAP SHEET MEMBRANE - SOPRASUN PLUS 4.5KG MINERAL

Decide the most suitable direction to follow. Unroll the roll and discard packaging. Align and cut to length as required. Re-roll both ends to the middle, then torch evenly to the base sheet as the membrane is unrolled. Ensure even heat application. Repeat in sequence with all rolls, maintaining side laps of minimum 80mm. End laps shall be minimum 150mm. The lap automatically closes during the torching process. All laps shall be offset to prevent coincidence with the base sheet laps.

Application - concrete, plywood, metal & CLT - WARM ROOF: SOPRATHERM insulated system

3.18 PRIME SUBSTRATE

To the dried and prepared surface apply one full coat of EQUUS PEEL AND STICK primer at a spreading rate of 6 to 8 m²/L depending on the porosity of the substrate. Allow to dry for minimum one (1) hour depending upon prevailing weather conditions.

3.19 APPLY PRIMER TO UPSTANDS

Apply one coat of Equus Peel and Stick Primer to upstands 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.

3.20 COLPHENE 3000 (SELF- ADHESIVE)

Decide the most suitable direction to follow. Unroll and discard packaging. Align the first roll and cut to length as required. Remove the siliconised film and press the membrane into place on the surface. The self-adhesive properties are automatically activated during installation. Repeat in sequence with all rolls, maintaining minimum laps of 100mm. Offset end laps in adjacent runs. Over upstands, the vapour barrier shall be taken up 50mm past the top of the insulation board. This ensures a suitable connection to create a complete waterproof envelope of the insulation.

3.21 INSTALL THERMAL INSULATION - EQUUS PIR

Install the Equus PIR insulation boards in a brick-lay pattern to achieve a close tight butt finish without gaps. Fix the boards with EQUUS SOPREMA fixings through the PIR boards into the substrate following the manufacturer’s recommendations and fixing patterns.

3.22 INSTALL SELF-ADHESIVE BASE SHEET - SOPRASTICK VENTI TACK PLUS

Decide the most suitable direction to follow. Unroll and align the first roll. Discard packaging. Cut to length as required. Remove the siliconised film and press the membrane into place onto the surface of the insulation. The self-adhesive properties are automatically activated during installation. Light heating is recommended at the edges to ensure all laps are fully closed. Full adhesion is advanced when the SOPRASUN PLUS 4.5KG MINERAL cap sheet is finally torched over it. Repeat in sequence with all rolls, maintaining minimum side laps of 80mm and end laps of 150mm. Offset end laps in adjacent runs.

3.23 INSTALL CAP SHEET: SOPRASUN PLUS 4.5KG MINERAL

Decide the most suitable direction to follow. Unroll the roll and discard packaging. Align and cut to length as required. Re-roll both ends to the middle, then torch evenly to the base sheet as the membrane is unrolled. Ensure even heat application. Repeat in sequence with all rolls, maintaining laps of minimum 80mm. All laps shall be offset to prevent coincidence with the base sheet laps.

Generally

3.24 DETAILING

Detailing shall be carried out using SOPRASUN PLUS 4.5KG MINERAL cap sheet and/or in combination with the Alsan Flashing liquid membrane. This includes all outlets, pipe penetrations, gutter stop ends, parapet upstands, machinery plinths and anything above or below the roof surface. This is carried out before, during or, in some cases, after laying the membrane, depending on the type of detail. All detailing shall be completed in accordance with the manufacturer's technical literature current at the time of design, use, installation and/or maintenance.

3.25 SEALANT

ALSAN MASTIC 2200 shall be used where required.

3.26 MEMBRANE TERMINATION

The membrane will be terminated with C-PROFILE and ALSAN MASTIC 2200 on upstands and parapets as per the manufacturer's termination details.

3.27 COMPLETION

Upon completion of the system it shall be inspected and left for a short period (up to 2-3 weeks) to stabilize. At this time the entire installation shall be rechecked prior to any warranties being issued. Where possible, particularly on the deck areas, carry out a 24 hour pond-test.

Other Application ALL ROOFS

3.28 TRAFFICABILITY

The EQUUS SOPREMA SOPRASUN PLUS system is suitable for roof maintenance foot traffic.

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, walkways and roofing applications with raised floors, install Equus Kraitec Step rubber tiles as per manufacturer's instructions.

Completion & Commissioning

3.31 COMPLETION MATTERS

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

4 SELECTIONS

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

Cold Roof

4.1 EQUUS SOPREMA SOPRASUN PLUS TWO-LAYER MEMBRANE SYSTEM

Location:	~
Supplier:	Equus Industries Ltd.
Product:	SOPREMA SOPRASUN PLUS
Substrate	~
Primer:	SOPRADERE Quick Primer
Base sheet:	SOPRASUN PLUS 3
Cap sheet:	SOPRASUN PLUS 4.5KG MINERAL
Colour:	~

Warm Roof

4.2 EQUUS SOPREMA SOPRATHERM WARM ROOF SYSTEM

Location:	~
Supplier:	Equus Industries Ltd.
Product:	SOPREMA SOPRATHERM
Substrate:	~
Primer:	~
Vapour barrier:	COLPHENE 3000

Insulation:	EQUUS PIR INSULATION
Insulation fixing:	Mechanical fixing
Insulation thickness:	~
Base sheet:	SOPRASTICK VENTI TACK PLUS
Cap sheet:	SOPRASUN PLUS 4.5KG MINERAL
Colour:	~

Accessories

4.3 ROOF VENT

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

4.4 ROOF DRAIN

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

4.5 OVERFLOW

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

4.6 OUTLETS - STAINLESS STEEL SCUPPERS

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

4.7 EQUUS SOPREMA KRAITEC STEP

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

4.8 EQUUS SOPREMA SOPRASOLAR FIX EVO TILT SOLAR PANEL SUPPORTS

Location:	~
Type/Brand:	Equus Soprasolar
Size:	~

Electronic Leak Detection

4.9 ELECTRONIC LEAK DETECTION SYSTEM

Location:	~
Substrate:	~
System:	~

Quality Assurance

EQUUS SOPREMA SOPRATHERM

Two layer membrane warm roof system applied to plywood surfaces

Specification No: **Date Prepared: November 2023**

Project & Address: _____

_____

Certified Applicator: _____

Building Contractor: _____

Building Owner/Property Manager: _____

1. Statement of Intent

(a) This checklist is to be completed by both the Equus Applicator and the Building Contractor, as a step by step record of compliance with both the Equus Specification provided for the contract, and the requirements of the Manufacturers for Warranty.
(b) A copy of this checklist must be forwarded to the nearest Regional Office of Equus Industries Ltd. A Warranty will not be issued by Equus Industries Ltd. without a copy of this Checklist being filed.
(a) A copy of this checklist should form part of the Contract Documentation filed with the Property Manager on job completion.

2. Areas Treated

The areas to which the Warm Roof is applied are detailed below, with reference to plans (where appropriate).

_____

_____

_____

3. Sign Off

We confirm that all applicable processes listed in Section 4 have been correctly completed and that sign-off on each stage has been made by a person with the authority to do so.

For: _____ _____ (Signature)
(Building Contractor)
Date: / / _____ (Name)

For: _____ _____ (Signature)
(Equus Applicator)
Date: / / _____ (Name)

4. Checklist And Method Statement

* Denotes those processes which must be signed off by the Building Contractor as well.

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
1.*	Plywood surface installed correctly, with all corner fillets installed.				
2.*	Ensure outlets are sufficiently sized for anticipated run-off.				
3.*	Falls to be incorporated as per plans: □ Specified falls: or standard minimum falls: □ Gutters 1:100 □ Roof 1:80 □ Deck 1:80				
4.*	*For areas with a fully torched vapour barrier.* Apply one full coat of **SOPRADERE QUICK** primer by brush/roller at spreading rate 5-6 m²/L. Allow to dry minimum 1 hour.				
5.*	*For areas with a self-adhesive membrane.* Apply one full coat of **EQUUS PEEL AND STICK PRIMER** by brush/roller at a spreading rate of 6-8 m²/L. Allow to dry for minimum 1 hour.				
6.*	_____ (Nominate vapour barrier) Install vapour barrier either fully torched, or self-adhered.				
7.	Install PIR insulation board in a brick pattern with: □ Mechanically fasten through the center of each board. □ Mechanically fasten as per the SOPREMA engineered fixing plan □ Adhere using **Equus PU FOAM** adhesive.				
8.	Install mineral wool insulation in a brick pattern. Using one fastener per board to tack in place.				
9.	Install roofboard where required, and prime using **SOPRADERE QUICK** or **EQUUS PEEL AND STICK PRIMER** depending on nominated base sheet.				
10.	_____ (Nominate base sheet) Unroll base sheet, align and cut to length, discard inner roll packaging, □**Mechanically** fasten as per SOPREMA engineered fixing plan through base sheet to concrete substrate. □ Torch to primed roof board. □**Self-adhesive** base sheet remove film and press membrane down. Maintain laps minimum 100mm				

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www.equus.nz

4. Checklist And Method Statement

***** Denotes those processes which must be signed off by the Building Contractor as well.

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
11.	_____ (Nominate cap sheet) Unroll **SOPRASUN PLUS 4.5KG MINERAL** cap sheet, discard packaging, align and cut to length, re-roll each end back to centre. Torch evenly and off-set laps to not coincide with base sheet. All joints back sealed separately ensure correctly closed. Maintain a minimum 100mm side and 150mm end lap.				
12.	Detailing shall occur using **SOPRASUN PLUS 4.5KG MINERAL** cap sheet and/or **ALSAN FLASHING or MATACRYL THIX** with **DEXX TOPCOAT** on all outlets, pipe penetrations, gutter stops ends, parapet upstands, machinery plinths and anything above or below roof surface.				
13.	Membrane terminated with **C-PROFILE** and **ALSAN MASTIC 2200** sealant				
14.	Install **FIXPLUS** tile supports, **KRAITEC STEP** rubber tiles or **SOPRASOLAR FIX EVO TILT** photovoltaic panel supports where required.				
15.*	System to be inspected on completion.				
16.	Re-inspection of work after 2 – 3 weeks.				

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Quality Assurance

EQUUS SOPREMA SOPRATHERM

Two layer membrane warm roof system applied to metal tray surfaces

Specification No: **Date Prepared: November 2023**

Project & Address: _____

_____

Certified Applicator: _____

Building Contractor: _____

Building Owner/Property Manager: _____

1. Statement of Intent

(a) This checklist is to be completed by both the Equus Applicator and the Building Contractor, as a step by step record of compliance with both the Equus Specification provided for the contract, and the requirements of the Manufacturers for Warranty.

(b) A copy of this checklist must be forwarded to the nearest Regional Office of Equus Industries Ltd. A Warranty will not be issued by Equus Industries Ltd. without a copy of this Checklist being filed.

(a) A copy of this checklist should form part of the Contract Documentation filed with the Property Manager on job completion.

2. Areas Treated

The areas to which the Warm Roof is applied are detailed below, with reference to plans (where appropriate).

_____

_____

_____

3. Sign Off

We confirm that all applicable processes listed in Section 4 have been correctly completed and that sign-off on each stage has been made by a person with the authority to do so.

For: _____ _____ (Signature)

(Building Contractor)

Date: ____/____/____ _____ (Name)

For: _____ _____ (Signature)

(Equus Applicator)

Date: ____/____/____ _____ (Name)

4. Checklist And Method Statement

***** Denotes those processes which must be signed off by the Building Contractor as well.

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
1.*	Metal deck installed in accordance with Manufacturer's recommendation.				
2.*	Outlets are sufficiently sized for anticipated run-off.				
3.*	Metal roof edges overhanging into gutters are cut back and timber upstand installed at the height of insulation board.				
4.*	Falls to be incorporated as per plans: □ Specified falls: or standard minimum falls: □ Gutters 1:100 □ Roof 1:80 □ Deck 1:80				
5.	Metal surface satisfactory for installation of membrane by Equus Certified Applicator.				
6.	*For details and upstands.* Apply one full coat of **EQUUS PEEL AND STICK PRIMER** by brush/ roller at a spreading rate of 6-8 m²/L. Allow to dry for minimum 1 hour.				
7.	_____ (Nominate vapour barrier) Install vapour barrier either fully torched, or self -adhered.				
8.	Install PIR insulation board in a brick pattern with: □ Mechanically fasten through the center of each board. □ Mechanically fasten as per the SOPREMA engineered fixing plan □ Adhere using **Equus PU FOAM** adhesive.				
9.	Install mineral wool insulation in a brick pattern. Using one fastener per board to tack in place.				
10.	Install roofboard where required, and prime using **SOPRADERE QUICK** or **EQUUS PEEL AND STICK PRIMER** depending on nominated base sheet.				
11.	_____ (Nominate base sheet) Unroll base sheet, align and cut to length, discard inner roll packaging, □**Mechanically** fasten as per SOPREMA engineered fixing plan through base sheet to concrete substrate. □ Torch to primed roof board. □**Self-adhesive** base sheet remove film and press membrane down. Maintain laps minimum 100mm				

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4. Checklist And Method Statement

***** Denotes those processes which must be signed off by the Building Contractor as well.

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
12.	_____ (Nominate cap sheet) Unroll **SOPRASUN PLUS 4.5KG MINERAL** cap sheet, discard packaging, align and cut to length, re-roll each end back to centre. Torch evenly and off-set laps to not coincide with base sheet. All joints back sealed separately ensure correctly closed. Maintain a minimum 100mm side and 150mm head lap.				
13.	Detailing shall occur using **SOPRASUN PLUS 4.5KG MINERAL** cap sheet and/or **ALSAN FLASHING** or **MATACRYL THIX** with **DEXX TOPCOAT** on all outlets, pipe penetrations, gutter stops ends, parapet upstands, machinery plinths and anything above or below roof surface.				
14.	Membrane terminated with **C-PROFILE** and **ALSAN MASTIC 2200** sealant				
15.	Install **FIXPLUS** tile supports, **KRAITEC STEP** tiles or **SOPRASOLAR FIX EVO TILT** photovoltaic panel supports where required.				
16.*	System to be inspected on completion.				
17.	Re-inspection of work after 2 – 3 weeks.				

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Quality Assurance

EQUUS SOPREMA SOPRATHERM

Two layer membrane warm roof system applied to concrete surfaces

Specification No: **Date Prepared: November 2023**

Project & Address: _____

_____

Certified Applicator: _____

Building Contractor: _____

Building Owner/Property Manager: _____

1. Statement of Intent

(a) This checklist is to be completed by both the Equus Applicator and the Building Contractor, as a step by step record of compliance with both the Equus Specification provided for the contract, and the requirements of the Manufacturers for Warranty.

(b) A copy of this checklist must be forwarded to the nearest Regional Office of Equus Industries Ltd. A Warranty will not be issued by Equus Industries Ltd. without a copy of this Checklist being filed.

(a) A copy of this checklist should form part of the Contract Documentation filed with the Property Manager on job completion.

2. Areas Treated

The areas to which the Warm Roof is applied are detailed below, with reference to plans (where appropriate).

_____

_____

_____

3. Sign Off

We confirm that all applicable processes listed in Section 4 have been correctly completed and that sign-off on each stage has been made by a person with the authority to do so.

For: _____ _____ (Signature)

(Building Contractor)

Date: ____/____/____ _____ (Name)

For: _____ _____ (Signature)

(Equus Applicator)

Date: ____/____/____ _____ (Name)

4. Checklist And Method Statement

***** Denotes those processes which must be signed off by the Building Contractor as well.

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
1.*	**Concrete** correctly formed to falls as per plans and cured at least 28 days prior to membrane application.				
2.*	Concrete to have all ridges and protrusions stoned flush.				
3.*	Shall be finished to NZS3114:1987 U3, with light trowel texture or suitably diamond ground.				
4.*	Depressions flushed with **Schomburg ASOCRET BIS 5/40** or and allowed to cure 48 hours before overcoating.				
5.*	Ensure outlets are sufficiently sized for anticipated run-off.				
6.*	Falls to be incorporated as per plans: □ Specified falls: or standard minimum falls: □ Gutters 1:100 □ Roof 1:80 □ Deck 1:80				
7.	Concrete surface satisfactory for installation of membrane by Equus Certified Applicator.				
8.	*For areas with a fully torched vapour barrier.* Apply one full coat of **SOPRADERE QUICK** primer by brush/roller at spreading rate 5-6 m²/L. Allow to dry for minimum 1 hour.				
9.	*For areas with a self-adhesive membrane.* Apply one full coat of **EQUUS PEEL AND STICK PRIMER** by brush/roller at a spreading rate of 6-8 m²/L. Allow to dry for minimum 1 hour.				
10.	_____ (Nominate vapour barrier) Install vapour barrier either fully torched, or self -adhered.				
11.	Install PIR insulation board in a brick pattern with: □ Mechanically fasten through the center of each board. □ Mechanically fasten as per the SOPREMA engineered fixing plan □ Adhere using **Equus PU Foam** adhesive.				
12.	Install mineral wool insulation in a brick pattern. Using one fastener per board to tack in place.				
13.	Install roofboard where required, and prime using **SOPRADERE QUICK** or **EQUUS PEEL AND STICK PRIMER** depending on nominated base sheet.				

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4. Checklist And Method Statement

***** Denotes those processes which must be signed off by the Building Contractor as well.

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
14.	_____ (Nominate base sheet) Unroll base sheet, align and cut to length, discard inner roll packaging, □**Mechanically** fasten as per SOPREMA engineered fixing plan through base sheet to concrete substrate. □ Torch to primed roof board. □**Self-adhesive** base sheet remove film and press membrane down. Maintain laps minimum 100mm				
15.	_____ (Nominate cap sheet) Unroll **SOPRASUN PLUS 4.5KG MINERAL** cap sheet, discard packaging, align and cut to length, re-roll each end back to centre. Torch evenly and off-set laps to not coincide with base sheet. All joints back sealed separately ensure correctly closed. Maintain a minimum 100mm side and 150mm head lap.				
16.	Detailing shall occur using **SOPRASUN PLUS 4.5KG MINERAL** cap sheet and/or **ALSAN FLASHING or MATACRYL THIX** with **DEXX TOPCOAT** on all outlets, pipe penetrations, gutter stops ends, parapet upstands, machinery plinths and anything above or below roof surface.				
17.	Membrane terminated with **C-PROFILE** and **ALSAN MASTIC 2200** sealant				
18.	Install **FIXPLUS** tile supports, **KRAITEC STEP** rubber tiles or **SOPRASOLAR FIX EVO TILT** photovoltaic panel supports where required.				
19.*	System to be inspected on completion.				
20.	Re-inspection of work after 2 – 3 weeks.				

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CodeMark

Certificate no: CMNZ70151
Version: 0
Original issue date: 30 June 2023
Version date: 30 June 2023

1. Certificate Holder Details

SOPREMA NEW ZEALAND LTD
Level 1, 245 High Street, Hutt Central Lower Hutt
5010 New Zealand
www.soprema.com.au

Distributed in New Zealand by:

Equus Industries
info@equus.nz
Ph: +64 3 353 2434
www.equus.nz

2. Product Certification Body

Bureau Veritas Australia Pty Ltd

11/500 Collins Street
Melbourne VIC 3000 Australia

product.certification@bureauveritas.com

Ph: 1800 855 190
www.bureauveritas.com.au

Complaints: The complaints process for this certificate can be found here:
www.bureauveritas.com.au/your-feedback

Product Certificate

SOPREMA NEW ZEALAND LTD
Waterproofing Membrane Systems

3. Description of Building Method or Product

Name of the product or method in Aotearoa New Zealand, including any brand names used. Description of what it is and the components that make up any system and its physical attributes including the materials and make-up of the product, where applicable.

Matters that should be taken into account in the use or application of the building method or product can be found in item 6. Conditions and Limitations of Use

The building method's or building product's catalogue or model identification number or numbers or other unique identifiers that might be used to identify the building product or building method

SOPREMA Waterproofing Membrane Systems are reinforced, double-layer bituminous waterproofing membrane systems, consisting of a cap sheet (DuO, Nova-SK, SOPRASUN and SOPRALENE) used with a basesheet (Soprasun Plus 3, DeboFlex, DeboTack, Soprastick, Nova-SK).

4. Intended use of Building Method or Product

Intended use of the building method or product as described in the product manual and other instructional materials.

A statement of the function or purpose of the building method or product.

SOPREMA Waterproofing Membrane Systems provide a waterproofing system, on new and existing roofs, podiums and decks of any size. SOPREMA Waterproofing Membrane Systems may be installed on a cold roof with insulation installed below the substrate or as a warm roof with PIR or Mineral Wool insulation installed above the substrate. A system incorporating a root-resistant cap sheet can be used in green roofs.

5. New Zealand Building Code Provisions

The performance clauses of the New Zealand Building Code that are relevant to the intended use and with which the building method or product complies or contributes to (where used as part of a system). eg Clause B2 – DURABILITY Performance B2.3.1

How the building method or product complies or contributes can be found in item 9. Basis for Certification.

Any qualifications on the extent of that compliance can be found in item 6. Conditions and limitations of use.

Clause B2 Durability: Performance Clauses B2.3.1(a*, b), B2.3.2(a*) (* when protected e.g. with pavers or green roof)
Clause E2 External moisture: Performance Clauses E2.3.1 (contributes to), E2.3.2, E2.3.7
Clause F2 Hazardous building materials: Performance Clauses F2.3.1

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Version: 0

Product Certificate

SOPREMA NEW ZEALAND LTD – Waterproofing Membrane Systems

6. Conditions and Limitations of Use

The building method or product's use is to be in accordance with the installation instructions and requirements against which the building method or product was assessed.

Conditions or limitations of conformity for the performance requirements the building method or product is compliant with, including any requirements for people with the qualifications and skills to install or use the building method or product, any known or demonstrated situations where the building method or product should not be used. A statement as to whether there are any matters that should be taken into account in the use or application of the building product or building method and, if so, what those matters are.

NOTE: Together, items 3,4,5 and 6 define scope of use

1. SOPREMA Waterproofing Membrane Systems are certified for use:
   a. on buildings
      i. within the scope limitations of NZBC Acceptable Solution E2/AS para 1.1 located in all wind zones up to and including Extra High (as in NZS3604:2011), or
      ii. subject to specific structural engineering design (complying with Verification Method B1/VM1 and referenced Standard AS/NZS1170:2002 Structural Design Actions and relevant cited material standard) up to:
         1) a maximum ULS wind design pressure of 4.5 kPa, or
         2) higher ULS wind design pressures subject to the manufacturer's site specific fastening requirements to resist wind forces as determined by AS/NZS 1170, and
   b. where the finished fall is not less than 1:80 for roofs, podiums and decks and not less than 1:100 for gutters
   c. applied to the following substrates:
      i. H3.2 treated timber, including plywood sheets and reconstituted wood panels (Strandboard), Cross laminated timber (CLT) (directly to the timber substrate or to PIR or Mineral Wool boards in between the substrate and basesheet). The preservative treatment shall not be LOSP (light organic solvent preservative) or CuN (copper nitrate).
      ii. Concrete substrates (directly to the concrete substrate or to PIR or Mineral Wool boards in between the substrate and basesheet).
      iii. SOPREMA approved metal tray decks (to PIR or Mineral Wool boards in between the metal tray deck substrate and basesheet).
      iv. SOPREMA approved roof cover boards.
      v. SOPREMA approved insulated panels.

2. SOPREMA Waterproofing Membrane Systems shall be:
   a. designed and installed in accordance with the SOPREMA Roofers Guide Bituminous Membranes 2021 Edition, and
   b. installed by a SOPREMA Certified Applicator (see https://equus.nz/find-an-applicator-3/ to find an approved installer in New Zealand).
   c. protected (e.g by pavers) where subject to general pedestrian traffic. For light roof maintenance foot traffic, it is suitable to remain unprotected.

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Version: 0

Product Certificate

SOPREMA NEW ZEALAND LTD – Waterproofing Membrane Systems

7. Health and Safety Information

Health, safety, and well-being declarations associated with installation, maintenance, and use of the building method or product, and their specific editions and dates necessary to ensure the performance requirements of clauses F1 to F9 of the Building Code can be met.

The compliance with any manufacturer's installation instructions, maintenance, OH & S Statements, MSDS's and other Health and Safety declarations will provide the necessary Health and Safety Information pertaining to the product.

8. Signatures

Name and Signature of the Product Certification Body's (PCB) authorised representative and, where different, the person assigned by the PCB to make the certification decision.

Sam Guindi
Product Certification Manager

For and on behalf of
Bureau Veritas Australia Pty Ltd

9. Basis for Certification

How the performance requirements in the Building Code were met for each of the provisions. Where used as part of a system, the specific contribution to compliance.

B2 Durability - By testing and comparison with Verification Method B2/VM1
E2 External moisture - By testing and comparison with Acceptable Solution E2/AS1
F2 Hazardous building materials - By comparison with the performance requirements of the Building Code clause F2.3.1

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Product Certificate

SOPREMA NEW ZEALAND LTD – Waterproofing Membrane Systems

10. Supporting Documentation for Certification

Reference to any Acceptable Solutions, Verification Methods, New Zealand Standards, or other compliance pathways referenced against each individual performance requirement the building method or product is compliant with, and their specific version and date.

Reference to documents describing tests and evaluations and any other documents relied on for certification or used to prove compliance, including their full title, specific version and date.

- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B2 Durability Second edition (Amendment 12), 28 November 2019
- Verification Methods E2/VM1 and Acceptable Solutions E2/AS1, E2/AS2 and E2/AS3 for New Zealand Building Code Clause E2 External Moisture Third edition (Amendment 10), 5 November 2020
- Acceptable Solutions and Verification Methods for New Zealand Building Code Clause B1 Structure First edition (Amendment 20), 29 November 2021
- NZS3604:2011 Timber framed buildings
- AS/NZS1170:2002 Structural Design Actions
- ATG 1924 Technical Approval, Belgian Construction Certification Association, 2 November 2022
- ATG 2814 Technical Approval, Belgian Construction Certification Association, 6 April 2021
- BBA Agrément Certificate 20/5843, Soprema Modified Bitumen Membranes, DUO High Tech Waterproofing Membranes, 15 December 2020
- BRANZ Appraisal 520, Novaflex and Polibit Roof and Deck Waterproofing Membranes, 2019
- BRANZ Appraisal 685, Soprema DUO Roof and Deck Membrane Systems, 2021
- BRANZ Appraisal 689, Soprema DUO Roof Membrane Systems, 2021
- BRANZ Appraisal 819, Allnex Soprema Bitumen Roofing Membrane Systems, 2019
- BRANZ Appraisal 1145, Soprema Bitumen Roofing Membrane Systems, 2021
- Roofers Guide Bituminous Membranes 2021 Edition

11. Supporting Information About Description (Optional)

Any supporting information for section 3.

DuO High Tech Waterproofing Membranes comprise a polyester/glass composite reinforcement with an upper coating of thermoplastic polyolefin (TPO)-modified bitumen and a lower coating of styrene butadiene-styrene (SBS)-modified bitumen:

- DuO High Tech — the standard membrane, for use in built-up specifications
- DuO High Tech FC — an enhanced fire-resistance version of the standard membrane
- DuO High Tech Mecano — for use in mechanical fastened specifications
- DuO High Tech FC Mecano — an enhanced fire-resistance version of the DuO High Tech Mecano membrane
- DuO High Tech Landscape — for use on green roofs and planter boxes
- DuO High Tech FC Landscape — an enhanced fire-resistance version of the DuO High Tech Landscape membrane.

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Product Certificate

SOPREMA NEW ZEALAND LTD – Waterproofing Membrane Systems

Nova-SK, and Nova-SK Mineral, are self-adhesive bitumen waterproofing membranes, reinforced with nonwoven spun bond polyester in combination with fiberglass.

SOPRASUN is an APP-modified bitumen waterproofing membrane system consisting of a base and cap sheet:

- SOPRASUN PLUS 3 is an APP-modified bitumen waterproofing base sheet membrane designed for roofing applications. SOPRASUN PLUS 3 is reinforced with a non-woven polyester combined with fiberglass.The top surface is sanded and the bottom surface is covered with a thermofusible plastic film.
- SOPRASUN PLUS 4.5KG MINERAL is an APP-modified bitumen waterproofing cap sheet membrane designed for roofing applications. SOPRASUN PLUS 4.5KG MINERAL is reinforced with a non-woven polyester combined with fiberglass. The top surface is coated with slate chips and selvedge edge is slate free on one side; the bottom surface is covered with a thermofusible plastic film.

SOPRALENE is a SBS-modified bitumen waterproofing membrane system consisting of a base and cap sheet:

- SOPRALENE FLAM 180 and SOPRALENE FLAM 180 GR are SBS-modified bitumen waterproofing membranes designed for roofing applications. Both membranes are reinforced with an ultra-high strength 180g/m2 non-woven polyester. SOPRALENE FLAM 180 top and bottom surface are covered with a thermofusible plastic film. SOPRALENE FLAM 180 GR top surface is covered with granules; bottom surface is covered with thermofusible plastic film.
- SOPRALENE FLAM 180 ALU is a flexible SBS elastomeric bitumen waterproofing membrane with a non-woven polyester reinforcement. SOPRALENE FLAM 180 ALU can be used as a protection layer on top of waterproofing systems where fire retardant properties are required. The topside is protected by an embossed aluminium foil and the underside is covered by a thermofusible film.
- SOPRALENE FLAM JARDIN CAP is a flexible SBS elastomeric bitumen waterproofing membrane with a non-woven polyester reinforcement. The topside of SOPRALENE FLAM JARDIN CAP is protected by slate chippings and the underside is covered by a thermofusible film. SOPRALENE FLAM JARDIN CAP bitumen mass contains anti-root penetration properties for green roofs.

DeboFlex is a 2.5 mm I/F C175 - a 2.5 mm thick, SBS modified bitumen-based sheet waterproofing membrane with a mixture of talcum and sand on the upper surface and an ultra-thin polyethylene foil on the under layer used as a base layer in multi-layer systems. It has a composite reinforcement of 175 g/m2 polyester and glass and is supplied in 1 m x 10 m rolls.

DeboTack is a flexible self-adhesive waterproofing membrane consisting of a mixture of penetration bitumen, improved with SBS (Styrene-Butadiene-Styrene). It is reinforced with a composite fleece of 175 g/m² polyester and glass.

- DEBOTACK 2.5 T/F C175 is a flexible self-adhesive waterproofing membrane consisting of a mixture of penetration bitumen, improved with SBS (Styrene- Butadiene-Styrene). It is reinforced with a composite fleece of 175 g/m² polyester and glass.
- DEBOTACK 2.5 T/F C175 AERO is a flexible self-adhesive waterproofing membrane consisting of a mixture of penetration bitumen, improved with SBS (Styrene-Butadiene-Styrene). It is reinforced with a composite fleece of 175 g/m² polyester and glass.

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Product Certificate

SOPREMA NEW ZEALAND LTD – Waterproofing Membrane Systems

Soprastick and Soprastick Venti are self-adhesive membrane composed of elastomer modified bitumen and a composite polyester reinforcement. Used as a base layer in combination with a torched upper layer. The upper surface is sanded or protected by a thermofusible film.

12. Supporting Information About Intended Use (Optional)

Any supporting information for section 4.

N/A

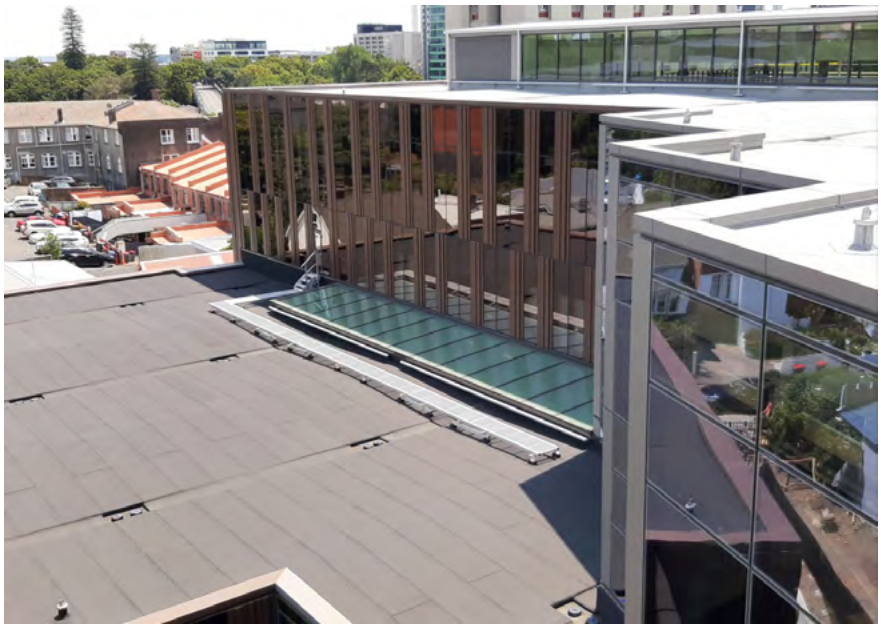
13. Supporting Information About Conditions and Limitations of Use (Optional)

Any supporting information for section 6.

N/A

BRANZ Appraised
Appraisal No. 1169 [2021]

EQUUS SOPREMA WARM ROOF SYSTEM



Appraisal No. 1169 (2021)

Amended 02 November 2022

BRANZ Appraisals

Technical Assessments of products for building and construction.

Equus Industries Ltd
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Tel: 03 578 0214
Web: www.equus.nz

BRANZ
1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand
Tel: 04 237 1170
branz.co.nz

Product

1.1 Equus Soprema Warm Roof System is an insulating roofing system for limited access flat roofs and decks with concrete, timber or steel structural decks. It consists of a thermal insulation layer and a roof finish of modified bitumen waterproofing membrane or single-ply TPO waterproofing membrane.

Scope

2.1 Equus Soprema Warm Roof System has been appraised for use as an insulating roof or deck on buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regards to building height and maximum floor plan areas; and,
- on limited access flat roofs with concrete, timber or steel substrates and incorporation of the Equus Soprema Warm Roof System subject to specific structural design; and,
- with roofs and decks constructed to drain water to gutters and drainage outlets complying with the NZBC; and,
- with roofs and decks constructed to suitable falls (refer to Paragraphs 15.3 and 15.4); and,
- with no integral roof gardens and no direct discharge from downpipes; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High.

2.2 Equus Soprema Warm Roof System has also been appraised for durability and thermal performance as an insulated roofing system on buildings that are the subject of specific design with no building height restriction. Building designers are responsible for the building design and for the incorporation of Equus Soprema Warm Roof System into their design in accordance with the declared properties and instructions of Equus Industries Ltd.

2.3 Equus Soprema Warm Roof System must be installed by Equus Industries Ltd approved and trained installers.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, Equus Soprema Warm Roof System, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet or contribute to meeting the following provisions of the NZBC:**

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years. Equus Soprema Warm Roof System meets this requirement. See Paragraphs 10.1 and 10.2.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.1 and E2.3.2. Equus Soprema Warm Roof System meets these requirements. See Paragraphs 15.1–15.9.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Equus Soprema Warm Roof System meets this requirement.

Clause H1 ENERGY EFFICIENCY: Performance H1.3.1 (a). Equus Soprema Warm Roof System contributes to meeting this requirement. See Paragraph 14.1.

Technical Specification

4.1 Equus Soprema Warm Roof System is an insulating roofing system for flat roofs and decks. The thermal layer is a polyisocyanurate board or mineral wool insulation board available in a number of thicknesses to suit design requirements. The insulation board is mechanically or adhesive fixed on limited access flat roofs and concrete, timber and steel structural decks. The roof finish is a modified bitumen waterproofing membrane or single-ply TPO membrane, which is adhered to the insulation or roof cover board as per the manufacturer's installation guidelines.

4.2 Materials supplied by Equus Industries Ltd are as follows:

- Equus Soprema Duo High Tech Waterproofing Membrane System
- Equus Soprema Flagon TPO Waterproofing Membranes
- Equus Novaglass Waterproofing Membranes
- Equus Soprema Deboflex 2.5 mm T/F C175
- Thermal Insulation: Soprema SOPRA-ISO/Recticel Eurothane Silver/Soprarock Mineral Wool
- Equus Guardian Fastener Range - fixings as below:
  - Wood - BSRF 4.8 s/s
  - Metal - BS 6.1
  - Concrete - CS 6.1
  - Tubes R75 and ASTL
  - Plates SP-70 and SP- 8240
- Equus Soprema Easyfoam PU Adhesive - used to adhere SOPRA-ISO and Eurothane Silver to vapour barrier.

Handling and Storage

5.1 Handling and storage of all materials, whether on-site or off-site, is under the control of the Equus Industries Ltd approved and trained installers. Dry storage must be provided for all products and the rolls of membrane must be stored in an upright position.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Equus Soprema Warm Roof System Details D1-D19.

6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

7.1 The Equus Soprema Warm Roof System is a roof and deck system which provides thermal insulation and waterproofing. It is for use on limited access flat roofs subject only to light foot traffic for maintenance purposes. The insulation board is mechanically fixed or adhered with PU adhesive to concrete, timber or metal structural decks which are subject to specific structural design. The insulation board is available in several thicknesses to suit various thermal insulation designs.

7.2 The system can be used on new or existing roofs subject to the suitability of the structural deck of existing roofs.

7.3 The waterproofing membranes are fully-bonded, partially-bonded, adhesive or mechanically fastened Soprema waterproofing systems with a valid BRANZ Appraisal which are two-layer modified bitumen sheet or single-ply TPO with heat welded joints.

7.4 A vapour control membrane must be used in Climate Zone 3 (as defined in NZBC Verification Method H1/VM1 and NZBC Acceptable Solution H1/AS1). The vapour control membrane is self-adhesive and applied over the structural deck before the installation of the insulation board.

7.5 The effective control of internal moisture must be considered at the design stage due to the impermeability of the membrane. Refer to the BRANZ Good Practice Guide: Membrane Roofing.

Structure

8.1 In all cases, the fastening requirements are specified by Equus Industries Ltd to resist wind forces as determined by AS/NZS 1170. This calculation is specific to each project.

8.2 For buildings subject to specific design, the structural designer must confirm that the fixing has adequate holding into the structural decking.

Substrates

Plywood

9.1 Plywood must be treated to H3 (CCA treated). LOSP treated plywood must not be used. Plywood must be a minimum of 17 mm to comply with AS/NZS 2269, at least CD Grade Structural with the sanded C face upwards.

Concrete

9.2 Concrete substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101.

Steel

9.3 The steel substrate must be G550 aluminium-zinc AZ150 to AS1397.

Existing Construction

9.4 A thorough inspection of the substrate must be made to ensure it is in fit condition.

9.5 Repairs must be undertaken, where applicable, to ensure the substrate is sound. Plywood and steel substrates must be checked for screw fixings, and if necessary refixed as for new plywood and steel.

Durability

Serviceable Life

10.1 The Equus Soprema Warm Roof System is expected to have a serviceable life of at least 15 years, provided it is designed, used, installed and maintained in accordance with this Appraisal and the Technical Literature.

Chemical Resistance

10.2 Industrial air pollutants and windborne salt deposits should not significantly affect the durability of the membrane. However, the long term properties of the material may be affected by contact with petroleum-based products such as oils, greases and solvents.

Maintenance

11.1 The membrane roof system, must be regularly [at least annually] checked for damage, rubbish and debris or coating breakdown. Damage, such as small punctures and tears must be repaired and coatings reapplied as recommended by Equus Industries Ltd.

11.2 Special care must be taken when inspecting the membrane roof system to ensure the continuing prevention of moisture ingress, and repairs must be undertaken where required.

11.3 Drainage outlets must be maintained to operate effectively.

Prevention of Fire Occurring

12.1 Separation or protection must be provided to the Equus Soprema Warm Roof System from heat sources such as fireplaces, heating appliances, flues and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

Fire Affecting Areas Beyond the Fire Source

Control of Internal Fire and Smoke Spread

13.1 The Equus Soprema Warm Roof System includes Soprema SOPRA-ISO or Recticel Eurothane Silver [combustible insulants] and therefore requires a suitable interior surface finish for the completed system to achieve the required Group Number as specified in C/AS2 Table 4.3. The combustible insulant shall comply with the flame propagation criteria as specified in AS1366 Parts 1-4 for the material being used.

13.2 The Soprema SOPRA-ISO or Recticel Eurothane Silver used in the Equus Soprema Warm Roof System has been tested and complies with the flame propagation criteria of AS 1366 as required by NZBC Acceptable Solution C/AS1 Section 4.3 and C/AS2 Paragraph 4.17.2.

13.3 Where the system is installed over metal roofing this will not meet the interior surface finish requirements alone and will need to be protected by an interior surface finish meeting the requirements of C/AS2 Table 4.3.

Energy Efficiency

14.1 Thermal resistance [R-Value] of building elements may be verified by using NZS 4214. The R-Values for the insulation are given in Table1.

Table 1: R-Values

Thickness	R-Value
SOPRA-ISO/Eurothane Silver 40 mm	1.7
SOPRA-ISO/Eurothane Silver 60 mm	2.5
SOPRA-ISO/Eurothane Silver 80 mm	3.35
SOPRA-ISO/Eurothane Silver 100 mm	4.2
SOPRA-ISO/Eurothane Silver 120 mm	5.05
SOPRA-ISO/Eurothane Silver 140 mm	5.9
SOPRA-ISO/Eurothane Silver 160 mm	6.75
SopraRock 60 mm	1.64
SopraRock 80 mm	2.17
SopraRock 100 mm	2.75
SopraRock 120 mm	3.34
SopraRock 140 mm	3.89

External Moisture

15.1 Roofs must be designed and constructed to shed precipitated moisture. They must also take account of snowfalls in snow prone areas. A means of meeting code compliance with NZBC Clause E2.3.1 is given in the Technical Literature which aligns with details in NZBC Acceptable Solution E2/AS1.

15.2 When installed in accordance with this Appraisal and the Technical Literature, Equus Soprema Warm Roof System will prevent the penetration of water and will therefore meet code compliance with NZBC Clause E2.3.2. The membranes are impervious to water and will give a weathertight roof.

15.3 Roof falls must be built into the substrate or formed using tapered insulation board.

15.4 The minimum fall to roofs is 1 in 30 for plywood and steel, 1 in 60 for concrete and 1 in 100 for gutters. The minimum fall for decks is 1 in 40 *(Note: Where possible, BRANZ recommends a fall of 1 in 60 in gutters).*

15.5 Allowance for deflection and settlement of the substrate must be made in the design of the roof to ensure falls are maintained and no ponding of water can occur.

15.6 Equus Soprema Warm Roof System is impermeable; therefore a means of dissipating construction moisture must be provided in the building design and construction to meet code compliance with NZBC Clause E2.3.6.

15.7 Drainage flanges must be used for any outlet and must be fitted with a grate or cage to reduce potential sources of blockages. An overflow must be provided where the roof does not drain to an external gutter or spouting.

15.8 Penetrations and upstands of the membrane must be raised above the level of any possible flooding caused by the blockage of roof drainage.

15.9 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Appraisal.

Condensation Control

16.1 In Climate Zone 3, as defined in NZBC Verification Method H1/VM1 and NZBC Acceptable Solution H1/AS1-Definitions, a vapour control membrane must be installed over the substrate prior to installing the insulation.

Water Supplies

17.1 Water is not contaminated by Equus Duo High Tech Waterproofing Membrane System or Equus Novaglass Waterproofing Membranes.

17.2 The first 25 mm of rainfall from a newly installed roof must be discarded before water collection starts. This is to remove residues which may have developed in the process involved in the production of the Equus Soprema Warm Roof System.

17.3 Though it will not contaminate water, it must be noted that all water collected off roof surfaces made from any material is considered to be non-potable due to possible contamination from other sources. Water collection in this way can only be considered potable if it has been passed through a suitable sterilization system and tested. Sterilization systems such as this have not been assessed and are outside the scope of this Appraisal.

17.4 Equus Soprema Flagon TPO Waterproofing Membranes have not been assessed for roofs used for the collection of potable water.

Installation Information

Installation Skill Level Requirement

18.1 Installation must always be carried out in accordance with Equus Soprema Warm Roof System Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

18.2 Installation and finishing of components and accessories supplied by Equus Industries Ltd and its approved and trained installers must be completed by approved and trained installers, approved by Equus Industries Ltd.

18.3 Installation of the accessories supplied by the building contractor must be carried out in accordance with Equus Soprema Warm Roof System Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

Preparation of Substrates

19.1 Substrates must be dry, clean and stable before installation commences.

19.2 The relative humidity of concrete substrates must be 75% or less before membrane application. The concrete can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 585.

19.3 The moisture content of the plywood and timber substructure must be a maximum of 20% and the plywood sheets must be dry at time of membrane application.

System Installation

20.1 The Equus Soprema Warm Roof System must be installed in accordance with the Technical Literature.

20.2 Where a vapour layer is required, it is installed onto the substrate followed by the insulation. The insulation is set out in a brick bond fashion and is adhered with PU adhesive or screwed down using the screws and washers as defined in the Technical Specification.

20.3 The membranes are then installed as per the Technical Literature.

Inspections

21.1 Critical areas of inspection for waterproofing systems are:

- Construction of substrates, including crack control and installation of bond breakers and movement control joints.
- Moisture content of the substrate prior to the application of the system.
- Acceptance of the substrate by the system installer prior to application of the system.
- Installation of the system to the Technical Literature.

Health and Safety

22.1 Safe use and handling procedures for Equus Soprema Warm Roof System are provided in the Technical Literature. The products must be used in conjunction with the relevant Material Safety Data Sheets for each membrane.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

23.1 The following is a summary of the testing and test reports on Equus Soprema Warm Roof System:

- The manufacture of the membranes has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. The manufacturer of Soprema DuO Roof and Deck Membrane Systems has been assessed and registered as meeting the requirements of ISO 9001 and ISO 14001.
- Testing has been carried out on the membranes for elongation, tensile strength, seam strength, breaking strength, low temperature, resistance to aging, water absorption, resistance to ultraviolet (UV) and peel adhesion to plywood and concrete.
- Dimensions, density, thermal conductivity, compressive strength, tensile strength, fire behaviour (Class E), water absorption, specific heat capacity, water vapour diffusion resistance and linear expansion coefficient.

23.2 The above test methods and results have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

24.1 A durability opinion has been provided by BRANZ technical experts.

24.2 Installation of the insulation and membranes has been assessed by BRANZ for practicability of installation and found to be satisfactory.

24.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

25.1 The manufacture of the components of the system has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory.

25.2 The quality of the supply of products to the New Zealand market is the responsibility of Equus Industries Ltd.

25.3 Quality on-site is the responsibility of the Equus Industries Ltd approved and trained installers.

25.4 Designers are responsible for the building design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of Equus Industries Ltd and this Appraisal.

25.5 Building owners are responsible for the maintenance of the membrane system in accordance with the instructions of Equus Industries Ltd and this Appraisal.

Sources of Information

- AS 1366:1992 Rigid cellular plastics sheets for thermal insulation.
- AS/NZS 1170:2002 Structural design actions - General principles.
- AS/NZS 2269:2012 Plywood – structural.
- BRANZ Bulletin No. 585 Measuring Moisture in Timber and Concrete.
- BRANZ Good Practice Guide: Membrane Roofing (second edition), October 2015.
- NZS 3101:2006 The design of concrete structures.
- NZS 3604:2011 Timber-framed buildings.
- NZS 4214:2006 Methods of Determining the Total Thermal Resistance of Parts of Buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 02 November 2022

This Appraisal has been amended to update the product name from Soprema Efyos Blue A to Soprema SOFRA-ISO.

BRANZ Appraised
Appraisal No.1169 [2021]

BRANZ Appraisal
Appraisal No. 1169 (2021)
21 December 2021

EQUUS SOPREMA WARM ROOF SYSTEM

BRANZ

In the opinion of BRANZ, Equus Soprema Warm Roof System is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Equus Industries Ltd, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
   a) relates only to the product as described herein;
   b) must be read, considered and used in full together with the Technical Literature;
   c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
   d) is copyright of BRANZ.
2. Equus Industries Ltd:
   a) continues to have the product reviewed by BRANZ;
   b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
   c) abides by the BRANZ Appraisals Services Terms and Conditions;
   d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
   a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
   b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
   c) any guarantee or warranty offered by Equus Industries Ltd.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to Equus Industries Ltd or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
21 December 2021

BRANZ Appraised
Appraisal No. 819 [2019]

SOPREMA ROOFING MEMBRANE SYSTEMS

Appraisal No. 819 (2019)

This Appraisal replaces BRANZ Appraisal No. 819 (2014)

Amended 31 August 2022

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 Soprema Roofing Membrane Systems are a range of double-layer, torch-applied fully bonded reinforced modified-bitumen membranes for use on nominally flat or pitched roofs and decks.

Scope

2.1 Soprema Roofing Membrane Systems have been appraised as roof and deck waterproofing membranes on buildings within the following scope:

- the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with respect to building height and maximum floor plan areas; and,
- situated in NZS 3604 Wind Zones up to, and including, Extra High; and,
- the building is subject to specific structural design; and,
- a substrate of plywood on timber framing; or,
- a substrate of suspended concrete slab; and,
- with minimum fall for plywood roofs of 1:30, concrete substrates of 1:60 and all decks of 1:40; and,
- with deck size limited to 40 m^2.

2.2 Roofs and decks waterproofed with Soprema Roofing Membrane Systems must be designed and constructed in accordance with the following limitations:

- nominally flat or pitched roofs and decks constructed to drain water to gutters and drainage outlets complying with the NZBC; and,
- with no steps within the deck level, no integral roof gardens and no downpipes directly discharging to the deck; and,
- with the deck membranes continually protected from physical damage by pedestal protection system.

2.3 The design and construction of the substrate and movement and control joints is specific to each building, and are therefore the responsibility of the building designer and building contractor and is outside the scope of this Appraisal.

2.4 The membranes must be installed by Equus Industries Ltd certified applicators.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, Soprema Roofing Membrane Systems, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:**

Clause B2 DURABILITY: Performance B2.3.1 (b) 15 years. Soprema Roofing Membrane Systems meet this requirement. See Paragraph 9.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.1 and E2.3.2. Soprema Roofing Membrane Systems meet these requirements. See Paragraphs 12.1-12.9.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Soprema Roofing Membrane Systems meet this requirement.

Technical Specification

4.1 Materials supplied by Equus Industries Ltd are as follows:

- **Soprasun Plus 3 and Soprasun Plus 4** - APP modified bitumen sheet waterproofing membranes used as a base layer in a double layer system. The lower face has a thermofusible film which is torched off during application and the upper face is finished with sand. It is supplied as a roll 3 or 4 mm thick, 1 m wide and 10 m long.
- **Soprasun Plus 4.5 kg Mineral** - an APP modified bitumen sheet waterproofing membrane used as a cap sheet in a double layer system. The lower face has a thermofusible film which is torched off during application and an upper face finished with slate chipping. It is supplied as a roll, grey or black in colour, 4 mm thick, 1 m wide and 10 m long.
- **Sopralene Flam 180** - a SBS modified bitumen sheet waterproofing membrane used as a base layer in a double layer system. The lower and upper faces have a thermofusible film which is torched off during application. It is supplied as a roll 3 mm thick, 1 m wide and 10 m long.
- **Sopralene Flam 180 GR** - a SBS modified bitumen sheet waterproofing membrane used as a cap sheet in a double layer system. The lower face has a thermofusible film which is torched off during application and an upper face finished with slate chipping. It is supplied as a roll, black in colour, 4 mm thick, 1 m wide and 8 m long.
- **Soprastar Flam GR** - a SBS modified bitumen sheet waterproofing membrane used as a cap sheet in a double layer system. The lower face has a thermofusible film which is torched off during application and an upper face of high reflective white granules. It is supplied in rolls 4 mm thick, 1 m wide and 8 m long.
- **Sopragum Garden Plus 4** - a APP modified bitumen sheet waterproofing membrane used as a cap sheet in a double layer system. The lower surface has a thermofusible film which is torched off during application and an upper face finished with sand. This membrane is used in protected system that require root resistance. It is supplied in rolls 4 mm thick, 1 m wide and 10 m long.
- **Soprafix Base 630** - a SBS modified bitumen sheet waterproofing membrane with a composite reinforcement. The upper face is covered with a thermofusible plastic film and the lower face is sanded. Soprafix Base 630 is provided with Duo Selvedge technology which allows the immediate sealing of the membrane alongside laps. It is supplied as a roll, 2.5 mm thick, 1 m wide and 10 m long.
- **Sopralast TV Copper** - a SBS modified bitumen sheet waterproofing membrane used as a cap sheet in a double layer system. The lower face has a thermofusible film which is torched off during application and an upper face finished with copper foil. It is supplied as a roll, copper in colour, 3 mm thick, 1 m wide and 8 m long.
- **Sopraply Stick Duo** - a SBS modified bitumen, self-adhered waterproofing membrane used as a base sheet in a double layer system. The self-adhesive lower face is covered with a silicone release film and the upper face is sanded. It has a composite reinforcement of polyester and glass fibre. It is supplied as a roll, 3 mm thick, 1 m wide and 10 m long.

- **Colvent Base 840** - a partially-bonded, SBS modified bitumen, self-adhered waterproofing membrane used as a base sheet in a double layer system. The lower face, made of discontinuous self-adhesive strips, is covered with a silicone release film and the upper face is sanded. It has a glass matt reinforcement. It is supplied as a roll, 2.5 mm thick, 1 m wide and 12 m long.
- **Sopraply Stick Traffic Cap** - a SBS modified bitumen, self-adhered waterproofing membrane used as a cap sheet in a double layer system. The self-adhesive lower face is covered with a split-back silicone release film and the upper face is protected with coloured granules. It has a composite reinforcement of polyester and glass fibre. It is supplied as a roll, 4 mm thick, 1 m wide and 10 m long.
- **Aerisol Flam Vent Sheet** - a perforated bituminous separating membrane designed for partial bonding of torch-applied waterproofing membranes. It is supplied as a roll, 1.5 mm thick, 1 m wide and 40 m long.
- **Sopradere Quick primer** – a solvent-based, bituminous varnish used to prime dry and porous surfaces. It is supplied in 25 L pails.
- **Soprema Alsan Flashing** – a waterproofing, one-component polyurethane/bitumen resin. It is dedicated to roof flashings and details where it is difficult to apply waterproofing membranes. It is supplied in 19 L pails.
- **Sopraboard** – a support panel composed of asphalt-saturated glass mat reinforcement covering a mineral-fortified asphaltic core. It is used as a support panel on low-slope roofing. It is supplied as a panel in different thicknesses and dimensions.
- **2-1 Soprasmart Board** – a support panel composed of an SBS modified bitumen waterproofing membrane with non-woven polyester reinforcement and an upper face covered with a thermofusible film. This membrane is factory laminated to the Sopraboard. It is used as a base sheet in a double layer system. It is supplied as a panel in different thicknesses, 0.914 m wide and 2.44 m long.
- **Duotack** – a low-rise, two-component polyurethane adhesive used to adhere layers of insulation boards of polystyrene, of polyurethane, of approved mineral fibre (stone wool) and for cover boards such as asphaltic, wood fibre, perlite, gypsum or cement boards. It is supplied in 18.9 L kits.
- **Elastocol Stick/Equus Peel & Stick primer** – a blend of SBS synthetic rubbers, volatile solvents and adhesive enhancing resins used to adhere self-adhesive membranes at temperatures above 10°C.
- **Soprema Alsan Mastic 2200** – a bituminous, adhesive/sealant used for cold bonding and sealing when necessary. It is a black paste, supplied in 310 ml cartridges.
- **Equus Fix Plus pedestals** – adjustable pedestal protection system.
- **Permabase Dek Roof Cover Board** – a lightweight cement roof cover board for modified bitumen waterproofing membranes. It is supplied as a 9 mm thick, 2.4 m long and 1.2 m wide board.

Handling and Storage

5.1 Handling and storage of all materials, whether on-site or off-site, is under the control of the Equus Industries Ltd certified applicator. Dry storage must be provided for all products and the rolls of membrane must be stored in an upright position.

Technical Literature

6.1 This Appraisal must be read in conjunction with:

- Equus Sopralene Membrane System – Details on Concrete, May 2022.
- Equus Sopralene Membrane System – Details on Plywood, May 2022.
- Equus Soprasun Membrane System – Details on Concrete, May 2022.
- Equus Soprasun Membrane System – Details on Plywood, May 2022.

6.2 All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

7.1 Soprema Roofing Membrane Systems are for use on roofs, gutters and decks where an impervious waterproof membrane is required to prevent damage to building elements and adjoining areas. The products can be used on new or existing buildings. Equus Industries Ltd should be consulted as to the suitability of any existing substrates prior to using Soprema Roofing Membrane Systems.

7.2 The effective control of internal moisture must be considered at the design stage due to the impermeability of the membrane. Refer to the BRANZ Good Practice Guide: Membrane Roofing.

7.3 There are a number of different base sheets and cap sheets contained within the Soprema Roofing Membrane Systems. Generally the cap sheets have a slate or metal foil finish for when ultraviolet (UV) protection is required. All the systems require a pedestal protection system for when anything other than irregular maintenance foot traffic is expected. When the deck membrane system is two-layers of plain membrane, this system requires UV protection as well as the pedestal protection system. Equus Industries Ltd should be consulted for the best system to meet the design requirements.

Substrates

Plywood

8.1 Plywood must be treated to H3 (CCA treated). LOSP treated plywood must not be used. Plywood must comply with NZBC Acceptable Solution E2/AS1, Paragraph 8.5.3 and 8.5.5, or to a specific design.

Concrete

8.2 Concrete substrates must be to a specific engineering design meeting the requirements of the NZBC, such as concrete construction to NZS 3101.

Existing Construction

8.3 A thorough inspection of the substrate must be made to ensure it is in a fit condition and does not contain any materials that will adversely affect the performance of the membrane.

8.4 Repairs must be undertaken, where applicable, to ensure the substrate is sound, the joints are sealed, and the flashings are sound. Plywood substrates must be checked for screw fixings, and if necessary refixed as for new plywood.

Durability

Serviceable Life

9.1 Soprema Roofing Membrane Systems are expected to have a serviceable life of at least 15 years, provided they are designed, used, installed and maintained in accordance with this Appraisal and the Technical Literature.

Chemical Resistance

9.2 Industrial air pollutants and windborne salt deposits should not significantly affect the durability of the membranes. However, the long term properties of the material may be affected by contact with petroleum-based products such as oils, greases and solvents.

Maintenance

10.1 Soprema Roofing Membrane Systems must be regularly (at least annually) checked for damage, rubbish, debris or coating breakdown. Special care must be taken when inspecting the membrane roof and deck systems to ensure the continuing prevention of moisture ingress, and repairs must be undertaken where required. Damage, such as small punctures and tears must be repaired and coatings reapplied as recommended by Equus Industries Ltd.

10.2 Drainage outlets must be maintained to operate effectively.

Prevention of Fire Occurring

11.1 Separation or protection must be provided to Soprema Roofing Membrane Systems from heat sources such as fireplaces, heating appliances, flues and chimneys. Part 7 of NZBC Verification Method C/VM1 and Acceptable Solution C/AS1, and NZBC Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

External Moisture

12.1 Roofs and decks must be designed and constructed to shed precipitated moisture. They must also take account of snowfalls in snow prone areas. A means of meeting code compliance with NZBC Clause E2.3.1 is given by the Technical Literature which aligns with details in NZBC Acceptable Solution E2/AS1.

12.2 When installed in accordance with this Appraisal and the Technical Literature, Soprema Roofing Membrane Systems will prevent the penetration of water and will therefore meet code compliance with NZBC Clause E2.3.2. The membranes are impervious to water and will give a weathertight roof.

12.3 Roof and deck falls must be built into the substrate.

12.4 The minimum fall to roofs is 1:30, decks 1:40, concrete substrates 1:60 and gutters 1:100. All falls must slope to an outlet. Inadequate falls will allow moisture to collect and increase the risk of deterioration of the membrane. *[Note: Where possible a gutter fall of 1:60 is preferred.]*

12.5 Allowance for deflection and settlement of the substrate must be made in the design of the roof to ensure falls are maintained and no ponding of water can occur.

12.6 Soprema Roofing Membrane Systems are impermeable; therefore a means of dissipating construction moisture must be provided in the building design and construction to meet code compliance with NZBC Clause E2.3.6.

12.7 Drainage flanges must be used for any outlet and must be fitted with a grate or cage to reduce potential sources of blockages. An overflow must be provided where the roof does not drain to an external gutter or spouting.

12.8 Penetrations and upstands of the membrane must be raised above the level of any possible flooding caused by the blockage of roof drainage.

12.9 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Appraisal.

Water Supplies

13.1 Soprema Roofing Membrane Systems have not been assessed for roofs used for the collection of potable water.

Installation Information

Installation Skill Level Requirement

14.1 Installation of the membranes must be completed by an Equus Industries Ltd certified applicator.

14.2 Installation of substrates must be carried out in accordance with the Equus Industries Ltd Technical Literature and this Appraisal by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant Licence Class.

Preparation of Substrates

15.1 Substrates must be dry, clean and stable before installation commences. Surfaces must be smooth and free from nibs, sharp edges, dust, dirt or other materials such as oil, grease or concrete formwork release agents. All surface defects must be filled to achieve an even and uniform surface.

15.2 The relative humidity of concrete substrates must be 75% or less before membrane application. The concrete can be checked for dryness by using a hygrometer, as set out in BRANZ Bulletin No. 585.

15.3 The moisture content of the plywood and timber substructure must be a maximum of 20%. The plywood sheet surface must be dry at time of membrane application. This will generally require plywood sheets to be covered until just before the membrane is laid, to prevent rain wetting.

15.4 All substrates must be primed with a suitable Soprema primer and installed following the manufacturer's Technical Literature.

Membrane Installation

16.1 The membranes must be installed in accordance with the Technical Literature.

16.2 All roof/deck and wall junctions must have a 20 x 20 mm fillet installed at the junction. Plywood substrates must use a wooden fillet and concrete substrate junctions a cement mortar fillet installed. All external edges must be chamfered to a 5 mm radius to remove sharp edges. Alternatively, pre-formed bitumen fillets of 25 x 25 mm can be used.

16.3 The membranes are installed from the lowest point and each layer is installed across the roof fall allowing an 80 mm side overlap and a 150 mm end overlap. The cap sheet layer must be offset against the base sheet layer.

Inspections

17.1 Critical areas of inspection for waterproofing systems are:

- Construction of substrates, including crack control and installation of bond breakers and movement control joints.
- Moisture content of the substrate prior to the application of the membrane.
- Acceptance of the substrate by the membrane installer prior to application of the membrane.
- Installation of the membrane to the Technical Literature instructions.

Health and Safety

18.1 Safe use and handling procedures for Soprema Roofing Membrane Systems is provided in the Technical Literature. The products must be used in conjunction with the relevant Material Safety Data Sheets for each membrane.

Basis of Appraisal

The following is a summary of the technical investigations carried out:

Tests

19.1 The following is a summary of the testing and test reports on Soprema Roofing Membrane Systems: Tensile strength, elongation, tear strength, dimensional stability, low temperature flexibility of heat aged (180 days at 70°C) and UV aged (2,000 hours xenon arc), heat resistance after heat aged (180 days at 70°C), unrolling at low temperatures, sliding resistance, watertightness, static and dynamic indentation, fatigue cycling of heat aged specimens (28 days at 80°C), peel resistance of heat aged specimens (28 days at 70°C), tests on joints including: air pressure after heat ageing (28 days at 80°C) and water soak (7 days at 60°C), tensile strength of joints after heat ageing (28 days at 80°C) and water soak (7 days at 60°C)

19.2 The above test methods and results have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

20.1 A durability opinion has been provided by BRANZ technical experts.

20.2 Installation of the membranes has been assessed by BRANZ for practicability of installation and found to be satisfactory.

20.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

21.1 The manufacture of Soprema Roofing Membrane Systems has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. BRANZ has taken note of product certification and compliance certificates covering quality aspects associated with these products.

21.2 The quality of the supply of products to the New Zealand market is the responsibility of Equus Industries Ltd.

21.3 Quality on-site is the responsibility of the Equus Industries Ltd certified applicator.

21.4 Designers are responsible for the building design, and building contractors are responsible for the quality of construction of substrate systems in accordance with the instructions of Equus Industries Ltd and this Appraisal.

21.5 Building owners are responsible for the maintenance of the membrane systems in accordance with the instructions of Equus Industries Ltd and this Appraisal.

Sources of Information

- AS/NZS 1170:2002 Structural design actions.
- AS/NZS 2269:2012 Plywood - structural.
- BRANZ Bulletin No. 585 Measuring moisture in timber and concrete.
- BRANZ Good Practice Guide: Membrane Roofing (Second Edition), October 2015.
- Code of Practice for Torch-on Membrane Systems for Roofs and Decks, September 2015, second edition.
- NZS 3101:2006 Concrete structures standard.
- NZS 3604:2011 Timber-framed buildings.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 29 March 2021.

This Appraisal has been amended to add Soprastar Flam GR to the technical specifications.

Amendment No. 2, dated 31 August 2022.

This Appraisal has been amended to add update the Appraisal holder and distributor.

In the opinion of BRANZ, Soprema Roofing Membrane Systems are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Soprema New Zealand Ltd and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
   a) relates only to the product as described herein;
   b) must be read, considered and used in full together with the Technical Literature;
   c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
   d) is copyright of BRANZ.
2. Soprema New Zealand Ltd
   a) continues to have the product reviewed by BRANZ;
   b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
   c) abides by the BRANZ Appraisals Services Terms and Conditions;
   d) warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
   a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
   b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
   c) any guarantee or warranty offered by Soprema New Zealand Ltd
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to Soprema New Zealand Ltd or any third party.

For BRANZ

Chelydra Percy
Chief Executive

Date of Issue:
23 May 2019

SOPRASUN PLUS 4.5KG MINERAL

Description:

SOPRASUN PLUS 4.5KG MINERAL is a plastomeric modified bitumen waterproofing membrane (APP), manufactured by impregnation of the reinforcement with the waterproofing compound based on distilled bitumen modified with polyolefin polymers, which gives the compound excellent technical characteristics.
The composite reinforcement, made of non-woven polyester in combination with fibreglass, conveys good mechanical characteristics, excellent dimensional stability and elastic performance.
The upper surface is coated with coloured chips and selvedge edge is slate free at one side.
The lower surface is coated with a thermofusible polyolefin film.

Application - Use:

- Top layer in multilayer roofing and waterproofing systems
- Single layer roofing and waterproofing membrane
- Can be used in both exposed and protected systems
- To be fully heat welded with propane torch or Mini Macaden machine

Application Procedure:

SUBSTRATE

- No work should be started until all surfaces are smooth, dry, and free of ice, snow or any other substance that may prevent the membrane from adhering properly.
- Substrate must have minimum 1% fall to ensure that water drains to drainage outlets.
- Do not install heat welded membranes directly onto combustible substrate.
- Concrete substrate must be fully cured before application of the membrane.
- Concrete substrate must have a Concrete Surface Profile (CSP) between 3 and 6 (As per International Concrete Repair Institute).
- Adhesion test is recommended prior to installation of membrane.
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator.

PRIMER

- When installed as top layer over base sheet membrane, primer is not required.
- When installed over concrete or metal surface prime with Antirock primer at the rate specified in TDS.

CodeMark CMNZ70151

BRANZ Appraised
Appraisal No.819 [2019]

HEAT WELDING

- Unroll membrane sheets onto the roof surface and allow time to relax prior to heat welding.
- Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps.
- Ensure specified side-laps and end-laps are maintained. End-laps should be staggered 1 metre apart.
- As the membrane ply is unrolled, apply heat to the underside of the ply until plastic burn-off film melts away sufficiently for full adhesion to the substrate, and full adhesion between plies.
- For hand-held roof torches, continuously move the torch side-to-side across the underside of the roll to melt the bitumen while continuously unrolling the sheet.
- While unrolling and heating the sheet, ensure approximately 6 to 12 mm of hot bitumen flows ahead of the roll, and there is 3 to 6 mm bleed out at all laps. Ensure all side-laps are fully adhered and sealed watertight.
- Adjust application methods to accommodate varying environmental conditions as necessary to achieve the desired results.
- At the 150mm end-laps ensure a fully adhered watertight seal. Melt the plastic burn-off film or embed granules and remove other membrane surfacing, where present, using a torch or hot-air welder.
- All penetrations and upturn details should be waterproof as per SOPREMA installation manuals and detail drawings.
- If in doubt, contact your local Equus Representative.

Packaging:

Composition	Testing Method	SOPRASUN PLUS 4 MINERAL
Thickness	EN 1849-1 ASTM 5147	3.6 ± 10% (mineral area) 2.6 ± 10% (overlap area)
Dimension	-	10 x 1 m
Top Face	-	Slates Grey
Underface	-	Torch-off film
Rolls per pallet	-	20
Packing type	-	Pallet + shrink film

3130

2 pages

PRODUCT DATA SHEET

SOPRASUN PLUS 4.5KG MINERAL

Properties:

	Unit	SOPRASUN PLUS 4 MINERAL	Standards
Weight of 1 square metre	Kg/m^2	4.5 ± 5%	EN 1849-1 ASTM 5147
Tensile strength, MD/CD	N\50 mm	800/550 ± 20%	EN 12311-1 ASTM 5147
Elongation, MD/CD	%	30/35 ± 15% EN 45/45 ± 15% ASTM	EN 12311-1 ASTM 5147
Nail tear strength	N	275/275 ± 20%	EN 12310-1
Flexibility	°C	-5	EN 1109 ASTM 5147
Heat resistance	°C	120	EN 1110 ASTM 5147
Ring & Ball	°C	Min. 150	EN 12691-A
Resistance to static loading	Kg	15	EN 12730 Method A
Dynamic puncturing (impact resistance)	mm	600	EN 12691 Method B
Dimension stability	%	± 0.5	EN 1107-1
Water impermeability watertightness at low pressure	-	Pass at 60kpa	EN 1928 Method A
Water impermeability watertightness at high pressure	-	Pass at 200kpa	EN 1928 Method B
Water absorption	%	< 1	ASTM D5147
Vapour permeability	μ	60,000	EN 1931
Thermal ageing in air (in oven 28 days at 70°C)	-	Passed	UNI 8202 / 26
Ageing due to atmospheric agents (UV test weathering)	-	Passed	ASTM G 53 UNI 8202 / 29
Reaction to fire	Class	E	EN 13501

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August 2023

SOPRASUN PLUS 3

Description:

SOPRASUN PLUS 3 is a plastomeric modified bitumen waterproofing membrane (APP), manufactured by impregnation of the reinforcement with the waterproofing compound based on distilled bitumen modified with poly-olefin polymers, which gives the compound excellent technical characteristics.
The composite reinforcement, made of non-woven polyester in combination with fibreglass, conveys good mechanical characteristics, excellent dimensional stability and elastic performance.
The upper surface is sanded. The lower surface is coated with a thermofusible polyolefin film.

Application - Use:

- Base sheet in multi-layer roofing and waterproofing systems
- Top layer in protected systems (no UV exposure)
- Single layer roofing and waterproofing membrane (no UV exposure)
- Can be fully heat welded with propane torch, Mini Macaden machine, or mechanically fixed (only when used as a base sheet in a multi-layer roofing assemblies)

Application Procedure:

SUBSTRATE

- No work should be started until all surfaces are smooth, dry, and free of ice, snow or any other substance that may prevent the membrane from adhering properly.
- Substrate must have minimum 1% fall to ensure that water drains to drainage outlets.
- Do not install heat welded membranes directly onto combustible substrate.
- Concrete substrate must be fully cured before application of the membrane.
- Concrete substrate must have a Concrete Surface Profile (CSP) between 3 and 6 (As per International Concrete Repair Institute).
- Adhesion test is recommended prior to installation of membrane.
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator.

PRIMER

- When installed over concrete or metal surface prime with Antirock primer at the rate specified in TDS.

CodeMark CMNZ70151

BRANZ Appraised
Appraisal No.819 [2019]

HEAT WELDING

- Unroll membrane sheets onto the roof surface and allow time to relax prior to heat welding.
- Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps.
- Ensure specified side-laps and end-laps are maintained. End-laps should be staggered 1 metre apart.
- As the membrane ply is unrolled, apply heat to the underside of the ply until plastic burn-off film melts away sufficiently for full adhesion to the substrate, and full adhesion between plies.
- For hand-held roof torches, continuously move the torch side-to-side across the underside of the roll to melt the bitumen while continuously unrolling the sheet.
- While unrolling and heating the sheet, ensure approximately 6 to 12 mm of hot bitumen flows ahead of the roll, and there is 3 to 6 mm bleed out at all laps. Ensure all side-laps are fully adhered and sealed watertight.
- Adjust application methods to accommodate varying environmental conditions as necessary to achieve the desired results.
- At the 150mm end-laps ensure a fully adhered watertight seal. Melt the plastic burn-off film or embed granules and remove other membrane surfacing, where present, using a torch or hot-air welder.
- All penetrations and upturn details should be waterproofed as per SOPREMA installation manuals and detail drawings.
- If in doubt, contact your local Equus Representative.

Packaging:

Composition	Testing Method	SOPRASUN PLUS 3
Thickness	EN 1849-1 ASTM 5147	3 ± 5% mm
Dimension	-	10 x 1 m
Top Face	-	Sand
Underface	-	Torch-off film
Rolls per pallet	-	25
Packing type	-	Pallet + shrink film

3131

2 pages

PRODUCT DATA SHEET

SOPRASUN PLUS 3

Properties:

	Unit	SOPRASUN PLUS 3	Standards
Weight of 1 square metre	Kg/m^2	4 ± 5%	EN 1849-1 ASTM 5147
Tensile strength, MD/CD	N\50 mm	800/550 ± 20%	EN 12311-1 ASTM 5147
Elongation, MD/CD	%	30/35 ± 15% EN 45/45 ± 15% ASTM	EN 12311-1 ASTM 5147
Nail tear strength	N	275/275 ± 20%	EN 12310-1
Flexibility	°C	-5	EN 1109 ASTM 5147
Heat resistance	°C	120	EN 1110 ASTM 5147
Ring & Ball	°C	Min. 150	EN 12691-A
Resistance to static loading	Kg	15	EN 12730 Method A
Dynamic puncturing (impact resistance)	mm	600	EN 12691 Method B
Dimension stability	%	± 0.5	EN 1107-1
Water impermeability watertightness at low pressure	-	Pass at 60kpa	EN 1928 Method A
Water impermeability watertightness at high pressure	-	Pass at 200kpa	EN 1928 Method B
Water absorption	%	< 1	ASTM D5147
Vapour permeability	μ	60,000	EN 1931
Thermal ageing in air (in oven 28 days at 70°C)	-	Passed	UNI 8202 / 26
Ageing due to atmospheric agents (UV test weathering)	-	Passed	ASTM G 53 UNI 8202 / 29
Reaction to fire	Class	E	EN 13501

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August 2023

SOPRASTICK VENTI TACK PLUS TF

formerly known as DeboTack 2.5 T/F C175 Aero

CodeMark CMNZ70151

BRANZ Appraised Appraisal No.1169 [2021]

BRANZ Appraised Appraisal No.685 [2021]

Description:

Self-adhesive membrane with a vapour-pressure and tension dispersion system, composed of elastomer modified bitumen and a composite polyester reinforcement.
Used as a base layer within a multi layer waterproofing system on surfaces where partial adhesion is required.
The upper surface is finished with talcum/sand.
The self-adhesive overlap and lower surface are protected by a silicon release film.

Installation:

Self-adhesive including the overlaps.
On surfaces other than insulation, the substrate is primed with Equus Peel & Stick Primer.
In order to obtain a good adhesion, the membrane has to be placed at a temperature above +10°C.
If installation takes place at lower temperatures, the upper layer is to be welded directly after the base layer was placed. The full bond strength is achieved after the application of an additional thermal activation (e.g. welding upper layer).
Before processing, the rolls must be stored for at least 12 hours at a temperature above +10°C.

Characteristics:

Composition	Standard	Unit	Value	Tolerance
Reinforcement			Composite polyester	
Finish upper side			Talcum/sand	
Finish lower side			Silicone release film	
Coating mass			Self-adhesive elastomer modified bitumen	
Technical Characteristics				
Thickness	EN 1849-1	mm	2.5	± 5 %
Mass (indicative)	EN 1849-1	kg/m^2	2.7	
Tensile force (L / T)	EN 12311-1	N/50 mm	780 / 650	± 20 %
Elongation at max. tensile force (L / T)	EN 12311-1	%	30 / 30	± 15
Dimensional stability	EN 1107-1	%	≤ 0.5	
Resistance to tearing (nail shank) (L / T)	EN 12310-1	N	335 / 335	± 25 %
Flexibility at low temperature	EN 1109	°C	≤ -15	
Flow resistance at elevated temperature	EN 1110	°C	≥ 100	
Reaction to fire	EN 13501-1	Class	E	
Water vapour diffusion-equivalent	EN 1931	m	125	± 20 %
Packing				
Dimensions of the roll	EN 1848-1	m	≥ 10 x 1	
Mass/roll	EN 1941-1	kg	± 27	
Rolls/pallet			30	

NPD = no performance determined

335
2 pages

PRODUCT
DATA SHEET

SOPRASTICK VENTI TACK PLUS TF

formerly known as DeboTack 2.5 T/F C175 Aero

Certifications:

- BENOR (B)

Special Indications:

Hygiene, Health and Environment
The product does not contain any substance which is likely to be detrimental to your health or the environment and complies with generally admitted Health and Safety Requirements. For more information, please refer to the relevant safety data sheet.

Quality, Environment and Safety Management
SOPREMA always recognises as a high level of importance the quality of the products, the environment and safety. For this reason, we operate independently monitored Quality and Environment Assurance Systems in line with EN ISO 9001 and EN ISO 14001.

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August 2023

UNIFIX INC.
A SUBSIDIARY OF NATIONAL GYPSUM COMPANY

PermaBase® DEK

Roof board

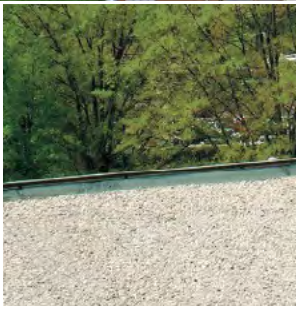
BRANZ Appraised
Appraisal No.520 [2019]

BRANZ Appraised
Appraisal No.685 [2021]

Product Description:
Permabase DEK Roof Board is a 9mm panel that is light-weight, easy to cut and fasten, and very durable in the presence of moisture. It will not rot, swell, or disintegrate in the presence of moisture. As an underlayment board or cover board for commercial, low slope roofs it provides excellent compressive strength, delamination resistance, and fungus resistance. It can be used in combination with a variety of roofing membranes and systems.

Features/Benefits:
- Unaffected by prolonged exposure to moisture
- Low water absorption
- Scores and snaps easily and cleanly
- Increases metal deck stiffness and roof system durability
- Superior impact and puncture resistance due to high compressive strength
- Fire resistant
- 1219mm x 2286mm sheets for ease of handling
- Outperforms fiberboard, perlite, and glass mat faced gypsum boards in moisture protection and durability
- Suitable for inverted roof assemblies with liquid membranes
- Allows roof coverings to be mechanically fastened without sacrificing strength
- Meets CAN/ULC-S126-M86 standard. See assemblies C40 and C41 in the ULC database.

Applications:
Roofing Systems manufacturers have found that PermaBase Dek roof board works well in the following applications or systems.
- Modified bitumen membranes
- Built-up roofing systems with single-ply roofing systems
- Metal roofing
- Inverted and green roof systems



Properties	Test Standard	PermaBase DEK
Thickness: mm	Property of Material	9.5
Mass: Kg/m^2	Property of Material	11.0
Water absorption: (%)	ASTM C 473	<10
Thermal Expansion: mm/C/m	Property of Material	.007
Linear Variation vs. Humidity (%)	ASTM D 1037	<0.07
Flame Spread/Smoke Spread	ASTM E 84 ULC S102	0/0 5/0
Flame Spread/Under Roof Deck	ULC S126—M86	Passed
Delamination Resistance	Property of Material	Excellent
Compressive Strength: Mpa (psi)	ASTM C 495	9 (1305)
Indentation Resistance: N (lbf)	ASTM D 1037	1316 (296)
Membrane Adhesion	Property of Material	Excellent
Bacteria/Fungus Resistance	ASTM G 22/G 21	No Growth
Permeance (Perms) (Board only)	ASTM E 96	7.7 perms

ISO 9001:2000

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June 2023

Eurothane Silver

Insulation board

BRANZ Appraised
Appraisal No.1169 [2021]

Product Description:

Eurothane Silver is an insulation board with a core of rigid polyisocyanurate foam, faced on both sides with a gastight multi-layered complex.

Technical Data:

- Thermal conductivity: λ_D-value according to EN 12667: 0,022 W/mK
- Core volume weight: ± 30 kg/m^3

Mechanical performance:
- Compressive strength with 10% deformation: CS(10/Y)150 according to EN 826: ≥ 150 kPa (1.5 kg/cm^2)
- Performance under the influence of an equally distributed load: UEAtc class C

- Performance under the influence of an equally distributed load: UEAtc class C
- Transformation under the influence of a load: DLT(2) 5 according to EN 1605: 40kPa, at 70ºC during 168 hours: ≤ 5%

- Vapour diffusion resistance number μ of the PIR*foam*: 50-100
- Facing: Gastight multi-layered complex.
- Tensile strength perpendicular to surface: TR80 according to EN 1607 ≥80 kPa
- Long-term water absorption WL(T)2 according to EN 12087 <2%
- Fire behavior:
  - A1 according to RD 19/12/1997
  - Euroclass B s2 d0 (end use steeldeck)
  - Euroclass F according to EN 13501-1
  - Class 1 according to BS 476 Part 7
- Dimensional stability DS(TH)8 according to EN 1604
  - Humidity text 48 hours: 70ºC, 90% RH
  - Change in length: ≤ 2%
  - Change in width: ≤ 2%
  - Change in thickness: ≤ 6%

Dimensions*:

Width:	1200 mm
Lengths:	600 mm, 1000 mm en 2500 mm
Thickness:	30 mm - 60 mm on stock
	70 mm - 100 mm on request

Application:
Mainly flat roof insulation constructed with steel deck covered with mechanically fixed double-layered bituminous or single ply synthetic coverings.

(*) Note: On request and for considerable quantities, the board length may be customized to fit the corrugation opening in order to avoid the cutting of the board lengthways.

Certificates:

ATG 1575, ATG 2481
ATG/H750, CTG-077
E001-BK-514-0004-0024-W012

Standards:

EN 13165
The production of these boards is certified according to ISO 90001:2000

Size (mm)	R Value
50	2.25
60	2.70
81	3.65
90	4.05
100	4.50
120	5.45

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February 2022

SOPRAROCK HD 60

Description:

SOPRAROCK HD 60 is a non-flammable water-repellent thermal and sound insulation slab of mineral wool based on basalt rocks.

Application:

SOPRAROCK HD 60 slabs are used as a thermal insulation layer in new constructions or reconstructions of industrial and civil buildings and structures. Designed for installation as the top thermal layer on flat roofs.

BRANZ Appraised
Appraisal No.1169 [2021]

Properties:

Essential characteristics	Performance	Harmonised technical specification	
Nominal volumetric weight, kg/m^3	180	-	EN 13162:2012 + A1:2015
Declared thermal conductivity at 10°C, W/m*K	0.038	EN 12667	
Length, mm	1200, 2400 (±2%)	EN 823	
Width, mm	600, 1200 (±2%)	EN 823	
Thickness (with increments of 10 mm), mm	30-100	EN 823	
Deviation from squareness, mm/m	<5	EN 824	
Deviation from flatness, mm	<6	EN 825	
Compressive stress at 10% deformation, kPa	CS(10)60	EN 826	
Tensile strength perpendicular to faces, kPa	TR15	EN 1607	
Point Load, N	PL(5)700	EN 12430	
Dimensional stability % -at specified tempertature -under specified temperature (23°C) and humidity conditions (90% R.H.)	DS(70,-) <1 DS(23,90) <1	EN 1604	
Reaction to fire, euroclass	A1	EN 13501-1	
Water Absorption during short / long term immersion kg/m^2	WS <1 WL(P) <3	EN 1609 EN 12087	
Water vapour transmission, MU	MU1	EN 12086	

Thermal Resistance (EN 12667)

Thickness, mm	30	40	50	60	70	80	90	100
RD, m2*K/W	0.75	1.00	1.30	1.55	1.80	2.05	2.35	2.60

Storage:

The slabs must be stored in covered warehouses. Storage under an awning protecting the slabs from atmospheric precipitation is permitted. The slabs shall be stored in containers or stacked on pallets or on the supports during the whole period of storage. The height of the stack shall not exceed 3 metres.

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February 2022

COLPHENE 3000

BRANZ Appraised
Appraisal No.1037 [2018]

Description:

COLPHENE 3000 is a self-adhesive waterproofing membrane composed of SBS modified bitumen and a tri-laminated woven polyethylene facer. The underface is covered with silicone release film.

COLPHENE 3000 is designed for foundation walls and other below grade vertical surfaces, as well as a vapour barrier for warm and green roof systems.

Recommended Substrates:

This product can be used on most building surfaces, such as masonry, concrete and wood.

Surface Preparation:

The use of a compatible primer for self-adhesive membranes is required before the installation of **COLPHENE 3000** membrane. Contact Equus for suitable primer.

The substrate should be clean, sound, dry and free of loose materials, grease and any contaminants, which may compromise the performance of the product.

Installation:

SELF-ADHESIVE
COLPHENE 3000 membrane must be adhered to substrate by peeling off the silicone release film.
Side lap joints must be a minimum of 75 mm and end lap joints must be a minimum of 150 mm.
Once installed, pressure must be applied over the whole surface using a membrane roller to ensure good contact with the substrate.
The upper most edge of the membrane shall be mechanically fastened using termination bars and sealed with a compatible SOPREMA sealant.
Contact Equus for suitable sealant.

Application temperatures: Winter grade: -10 to 10° C
Summer grade: 10 to 50° C

UV exposure: up to 60 days

Restriction:

Concrete must be cured a minimum of fourteen (14) days and an adhesion test is recommended before membrane application.

For complete information on product installation, please consult your Equus Consultant.

Specifications	COLPHENE 3000
Thickness	1.5 mm
Dimensions	1 x 18.7 m
Weight	1.5 kg/m^2
Selvage width	75 mm
Surface	Tri-laminated woven polyethylene
Underface	Silicone release film
Qty/pal	30

Packaging:
(All values are nominal)

Storage and Handling:

Rolls must be stored upright, with the selvedge side on top. If the product is stored outdoors, cover them with an opaque protective cover after removal of the delivery packaging.

Properties	Standards	COLPHENE 3000
Tensile strength, MD/XD	ASTM D5147	11.3 / 15.4 kN/m
Tensile strength, MD/XD	ASTM D412	11.2 / 13.1 MPa
Ultimate elongation, MD/XD	ASTM D412	88 / 55 %
Ultimate elongation, MD/XD	ASTM D5147	40 / 25 %
Elongation of rubberised asphalt	ASTM D5147	> 1000 %
Flexibility at cold temperature	ASTM D5147	-35°C
Dynamic puncture	ASTM E154	747 N
Static puncture	ASTM D5602	400 N
Tear resistance, MD/XD	ASTM D5601	375 / 400 N
Lap adhesion	ASTM D1876	2000 N/m
Water absorption	ASTM D5147	0.1 % max
Peel resistance	ASTM D903	3500 N/m
Water vapour permeability	ASTM E96 (Procedure B)	< 2.5 ng/Pa·s·m^2 (< 0.04 perm)
Crack cycling at –32°C, 100 cycles	ASTM C836	Unaffected
Resistance to hydrostatic head	ASTM D5385	Minimum 114 m
Adhesion to strength to concrete -not primed -combined with primer	ASTM D1000	 560 N/m 1650 N/m

Properties:
(All values are nominal)

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July 2021

SOPRASTICK TF

formerly known as DeboTack 2.5 T/F C175

CodeMark CMNZ70151

BRANZ Appraised Appraisal No.1169 [2021]

BRANZ Appraised Appraisal No.685 [2021]

Description:

Self-adhesive membrane composed of self-adhesive elastomer modified bitumen and a composite polyester reinforcement. It is used as a self-adhesive vapour repellent layer for concrete, steel, wooden surfaces or as a self-adhesive base layer within a multi layer water-proofing system in combination with a welded top layer.
The upper surface is finished with talcum/sand.
The self-adhesive overlap and lower surface are protected by a silicon release film.

Installation:

Self-adhesive including the longitudinal overlaps (transverse overlaps to be welded).
On substrates other than insulation with a suitable finish, the substrate is primed with Equus Peel & Stick Primer.
In order to obtain a good adhesion, the membrane has to be placed at a temperature above +10°C.
If installation takes place at lower temperatures, the surface has to be heated or the upper layer is to be welded directly after the base layer was placed. The full bond strength is achieved after the application of an additional thermal activation (e.g. welding upper layer).
Before processing, the rolls must be stored for at least 12 hours at a temperature above +10°C.

Characteristics:

Composition	Standard	Unit	Value	Tolerance
Reinforcement			Composite polyester	
Finish upper side			Talcum/sand	
Finish lower side			Silicone release film	
Coating mass			Self-adhesive elastomer modified bitumen	
Technical Characteristics				
Thickness	EN 1849-1	mm	2.5	± 5 %
Mass (indicative)	EN 1849-1	kg/m^2	2.7	
Tensile force (L / T)	EN 12311-1	N/50 mm	780 / 650	± 20 %
Elongation at max. tensile force (L / T)	EN 12311-1	%	30 / 30	± 15
Dimensional stability	EN 1107-1	%	≤ 0.5	
Resistance to tearing (nail shank) (L / T)	EN 12310-1	N	335 / 335	± 25 %
Flexibility at low temperature	EN 1109	°C	≤ -15	
Flow resistance at elevated temperature	EN 1110	°C	≥ 100	
Reaction to fire	EN 13501-1	Class	E	
Water vapour diffusion-equivalent	EN 1931	m	125	± 20 %
Packing				
Dimensions of the roll	EN 1848-1	m	≥ 10 x 1	
Mass/roll	EN 1941-1	kg	± 27	
Rolls/pallet			30	

NPD = no performance determined

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2 pages

PRODUCT DATA SHEET

SOPRASTICK TF

formerly known as DeboTack 2.5 T/F C175

Special Indications:

Hygiene, Health and Environment
The product does not contain any substance which is likely to be detrimental to your health or the environment and complies with generally admitted Health and Safety Requirements. For more information, please refer to the relevant safety data sheet.

Quality, Environment and Safety Management
SOPREMA always recognises as a high level of importance the quality of the products, the environment and safety. For this reason, we operate independently monitored Quality and Environment Assurance Systems in line with EN ISO 9001 and EN ISO 14001.

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AUTHORISED DISTRIBUTOR SOPREMA

DUO 'EASY FOAM'

BRANZ Appraised
Appraisal No.1169 [2021]

Description:

Duo 'Easy Foam' is a rapid curing, gun grade polyurethane adhesive, specially developed to bond various typed of insulation materials on flat roofs.

With **'Easy Foam'** it is convenient to bond different types of insulation (PUR, PIR, Rockwool, XPS and EPS) to various types of surfaces:

- Bitumen vapour barrier
- Existing bituminous waterproofing membranes
- Concrete

Surface Preparation:

The substrate shall be free from dust and grease. It shall be dry and solid. If required, moistening the substrate will speed up the curing time.

Application:

- Shake the tin thoroughly for at least 15 seconds.
- Screw the tin onto the 'Duo Easy Gun' and apply at least 3 vertical beads of foam onto the surface.
- Apply at least 4 beads of foam in corners and at roof edges (see installation guidelines). Can also be applied in serpentine pattern (max 25cm between curbs).
- Press the insulation panels softly onto the beads.
- Ready to be treated after 30 minutes. Full strength after 3 hours.
- Application temperature for the tin: +10ºC to +30ºC.
- Always keep the tin upright for the most efficient application.

Technical Data:

Characteristics	*Values*
Fire class	B1DIN 4102
Base	Polyurethane pre-polymer
Curing	Moisture curing
Type	Glue
Tack free	After +/- 10 minutes
Initial strength	After +/- 30 minutes
Full strength	After +/- 3 hours
Consumption	+/- 10 to 11m2 of adhesive per tin
Thermal conductivity	40 m W/M.K
Compression resistance	30kPa (at 10% deformation)
Tensile strength	100 kPa
Elongation at break	15%
Shear	80kPa
Application temperature	Surrounding: 0ºC to +35ºC Tin: +10ºC to +30ºC
Temperature resistance	Prolonged: -40ºC until +90ºC Brief: -40ºC until+130ºC
Shelf life	9 months (store cool, dry and upright)

Precautions:

- Always read the safety precautions mentioned on the tin before use.
- Use only in well-ventilated areas.
- No smoking. Protect eyes and wear suitable protective clothing and gloves.
- Protect surrounding surfaces from splashes.
- Superfluous foam can be removed with 'Duo Easy Cleaner'.
- Cured foam has to be removed mechanically.
- Safety precautions: See material safety data sheet.

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March 2022

Equus Peel and Stick Primer

Product Description:

Equus Peel and Stick Primer is a rubber based adhesive solvent solution which is specifically formulated to provide excellent adhesion with the Equus self-adhesive Waterproofing Membranes under many kinds of surface conditions. **Equus Peel and Stick Primer** is an integral part of Equus self-adhesive Waterproofing Systems and sufficient primer must be used on dry surfaces to condition them to be dust free so that the substrate is suitable for the self-adhesive application of Equus Waterproofing Membranes.

BRANZ Appraised
Appraisal No.520 [2019]

Uses:

Used to prime all structural concrete, masonry, or wood surfaces on which waterproofing membranes will be used.

Designed to be used on applications down to –4°C.

May be used on horizontal surfaces, but remains tacky, and precautions must be used in this application to prevent contamination of the Primer surface prior to installation of the membrane.

Must be used on all concrete block and brick wall conditions.

Do not use on EPS sheet or block. In this case use **Equus EPS Primer.**

Application:

Equus Peel and Stick Primer may be applied with roller, brush or spray. A roller with a heavy nap should be used to carry sufficient material to the area being primed.

Apply all **Equus Peel and Stick Primer** to a clean, dry, dust free and frost free surface at a coverage of approximately 6-8 sqm/litre. The primer should be spread sufficiently to avoid areas of excess material. Areas of excess material will lengthen the drying time on the application of the primer.

Equus Peel and Stick Primer is to dry a minimum of one hour - may dry quicker due to drying conditions, such as wind and warmth.

This product is red in colour and will remain tacky when dry. The application of primer should be limited to what can be covered with Waterproofing Membrane in one working day. Any areas not covered with membrane during the day must be reprimed - be sure to cover all open containers when not applying primer, as the primer is volatile.

Safety, Storage & Handling Information:

Equus Peel and Stick Primer vapours are flammable. User should review the Safety Data Sheet (SDS) for this product and follow safety instructions listed therein.

Transport Classification:

IMDG Class 3.1
UN No. 1294

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June 2023

ALSAN MASTIC 2200

Description:

Flexible mastic based on bitumen and synthetic rubber. Used for sealing small tears, cracks, joints and local repairs.

Properties:

Composition:	bitumen and synthetic rubber
Temperature resistance:	-20/+80 °C
Application temperature:	+5/+35 °C
Consumption:	15-20 m/cartridge

Packing & Storage:

Cartridge 310 ml
20 cartridges/box

Minimum 12 months in original unopened packaging, strored in a dry and cool place, protected from sunlight at a temperature between +10 and +25 °C.

Installation:

ALSAN MASTIC 2200 is applied with a gun on a clean and dust -free surface. It has excellent adhesion to most materials without prior treatment with a primer. It can be applied on a slightly damp surface.

Apply **ALSAN MASTIC 2200** so that it is in full contact and has good adhesion to the edges of the joint. The curing time is 4 to 24 hours depending on the conditions and dimensions of the joint.

Cleaning Tools:

White Spirit

BRANZ Appraised
Appraisal No.520 [2019]

BRANZ Appraised
Appraisal No.685 [2021]

Special Indications:

Hygiene, Health and Environment
For more information, please refer to the relevant safety data sheet.

Quality, Environment and Safety Management
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June 2023

SOPRADERE QUICK

Cold applied fast drying primer

Description:

Cold applied fast drying primer based on bitumen, solvents and adhesion-improving additives. Impregnation to ensure good adhesion to substrate (concrete, metal and wood) before welding (torch-on or hot-air method) or gluing bituminous waterproofing membranes.
It is also suitable on old/weathered bituminous waterproofing membranes with a slate or granulated finish.

Properties:

Composition:	bitumen, solvents and adhesion -improving additives
Curing time*:	530 min.
Consumption (l/m^2):	0.15 - 0.25
Application temperature (°C):	min +5

Packing & Storage:

Cans of 5 and 25 l.

12 months in original unopened packaging. Store frost-free and protected from sunlight.

Installation:

Thoroughly mix the product before use. Apply with a brush, roller or rubber squeegee on a dry, dust and grease free substrate. Allow to dry completely before applying the membrane. See label for more information.

Cleaning tools:
- wet product - white spirit

Certifications:

BRANZ Appraised Appraisal No.1169 [2021]
BRANZ Appraised Appraisal No.685 [2021]
BRANZ Appraised Appraisal No.1037 [2016]

Special Indications:

Hygiene, Health and Environment
For more information, please refer to the relevant safety data sheet.

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February 2022

DUO C-PROFILE

Description:

The **C-Profile** is a pre-manufactured profile that terminates the waterproofing membrane at the wall in a professional and watertight, wind-peel resistant manner.
The **C-Profile** is used at concrete or wooden walls and curbs.

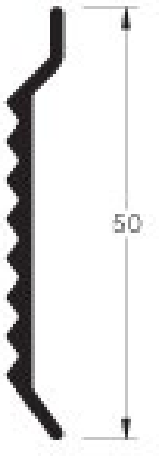
Characteristics:

Material:	Extruded aluminium profile (Al Mg Si 0.5 F22 quality)
Tensile strength:	215 N/mm^2
Yield point:	160 N/mm^2
Elongation:	10%
Hardness:	70 brinell
Length:	2500 mm
Width:	50 mm
Colour:	Metallic

Characteristics tested according to German DIN 1748 standard.

Advantages:

- Increases the durability of the waterproofing system.
- Increases the bonding of the waterproofing to the wall or curb.
- Wind-peel resistant.
- Corrosion resistant.
- Continuous quality.
- Provides an aesthetical, straight finishing.
- Provides a dripping point off the wall.



Installation:

- The waterproofing is installed according to manufacturers details.
- The **C-Profile** is fastened at the edge of the waterproofing membrane into the wall.
- The **C-Profile** covers the membrane with 2/3 of its total width of 50mm. The rest of the profile protrudes above the membrane.
- The space created at the top of the **C-Profile** is filled with a sealant compatible to the wall's material, bitumen and aluminium. **SOPREMA** recommends Alsan Mastic 2200 sealant.

BRANZ Appraised
Appraisal No.685 [2021]

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July 2021

EASY FLASHING

BRANZ Appraised
Appraisal No.520 [2019]

Description:

EASY FLASHING is a thixotropic waterproofing coating, formulated with bitumen in water emulsion, selected elastomeric resins and special additives, multipurpose with high adhesiveness.

Field of Application:

EASY FLASHING is used:

- As a waterproofing liquid membrane when the application of polymer-bitumen membranes should be difficult or when the use of the flame should be forbidden. It can be applied both vertically and horizontally.
- Suitable for waterproofing of foundation walls and foundations.
- Laying of insulation panels.
- For quick local repairs.
- Restores the waterproofing effect on balconies and terraces with no need to destroy the old pavement.
- Prepare a waterproofing and gripping base for the subsequent bonding of tiles with the appropriate cement-based adhesives (category C according to EN 12004).
- If diluted at 50%, the product can be used as a dust-proof primer.

Excellent adhesion on the following surfaces:

- Bituminous membranes with sand or self protected with slates
- Concrete
- Different types of metal surfaces (pipelines, eaves, IBCs)
- Fibrocement
- Plasterboard
- Wood
- Ceramic pavements
- Glass

Advantages:

- Excellent elasticity
- Waterproofs and protects from atmospheric agents and from UV rays
- Resistance against corrosive action of many acids
- Encourages the cold laying
- Perfect grip on different materials
- Compatible with cementitious adhesives
- Long-lasting product
- Odourless and non-flammable product
- Non-toxic, solvent free
- Does not crack at low temperatures and does not pour at high temperatures.

Standards & Certifications:

EASY FLASHING is CE marked in accordance with:

- EN 1504-2:2004 - Surface protection system for concrete.
- EN 14891:2012 - Dispersion liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesive.

Method of Use:

Operating conditions
It is recommended to apply the product with an ambient temperature not lower than +5 °C and when there are no climatic conditions of fog, rain and frost, avoiding extreme situations of cold and heat.

Surface preparation
Before applying the product, make sure that the non-coherent parts, or non-adherent parts, paints, rust, dust, disarming oils are removed and carefully clean surfaces that need to be solid and dry.
The efficiency of the water outflow must be ascertained (slopes, positioning and size of the drains).
This product can also be applied on wet surfaces, but it is necessary there is no water stagnation.

Preparation
Mix the product thoroughly until the mixture is fully homogenous before using.

Application
EASY FLASHING can be applied by roller, brush, spray, spatula or notched squeegee.
It is generally applied in two coats. To facilitate the application on large surfaces it is advisable to dilute up to a maximum of 10% water. Apply the second coat fresh on fresh if the first has been reinforced, otherwise after complete drying of the first, after 24-48 hours.
On surfaces larger than 10 sqm or stressed supports, we recommend reinforcing EASY FLASHING with the special Alsan Voile-P fabric embedded in the first still fresh coat.

Cleaning tools
After use, clean the tools with water and, if the product has dried, it is advisable to remove it with hot water or the most common synthetic thinners.

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3 pages

PRODUCT DATA SHEET

EASY FLASHING

Consumption:

- Between 0.6-0.9 kg/sqm per coat, the consumption of the product varies according to the substrate and thickness desired. To obtain a dried film of 1mm, the quantity of product used will be about 1.5 kg/sqm. Approx. 2kg/sqm if the appropriate Alsan Voile-P reinforcement fabric is used.
- Between 400-700 g/sqm if used as an adhesive for spot bonding of insulation panels.

Additional Information:

- It is recommended to apply the product with an ambient temperature no lower than +5 °C and when there are no weather conditions of fog, rain and frost, avoiding in any case extreme situations of cold and heat and high humidity.
- Particular attention should be paid to the application of the product on some new bituminous surfaces so as to avoid the risk that hydrocarbons still present in the support may compromise the correct adhesion of the product.
- In the realisation of waterproof protections executed with EASY FLASHING, or in any case in applications between materials of different nature, structural joints, or in the presence of important cracks it is recommended to use the Voile-P reinforcement impregnating it completely in the first coat still fresh.
- Do not exceed the quantity and drying times recommended for each coat in order to guarantee the correct drying of the product in all its thickness.
- Temperatures over 35 °C could accelerate the drying of the product, compromising its workability.
- In the case of waterproofing walls against the ground with EASY FLASHING, suitable mechanical protection must be provided mainly for backfill operations.
- EASY FLASHING can be walked on occasionally in the case of occasional maintenance.
- To improve the durability of EASY FLASHING it is recommended painting with suitable protective paints.
- Do not use EASY FLASHING on supports subject to counter-thrust or strong water pressure.

For more information, ask for the Safety Data Sheet.

General Warnings:

The information provided in this technical data sheet is valid only for the product supplied by Soprema srl. Please note that the mentioned data might differ from those valid in other countries. The above data, in particular the advice on the processing and method of use of our products, are the result of our knowledge and experience considering normal application cases. The above information regarding the application of the products is provided according to science and consciousness. However, it is up to the applicator to determine the suitability of the product based on the objective requirements and conditions of the job site. The product is subject to revision if necessary for technological progress or product improvement.

Packaging & Storage:

EASY FLASHING	
Packaging	- 310 ml plastic cartridges in boxes of 24 pieces - 5, 20 kg metal cans
Colour	Black (when dried)
Storage	Storage up to 12 months from the production date in the original packaging, in a cool environment, protected from frost and direct sunlight. EASY FLASHING fears frost, do not expose the packages to a temperature below +5 °C; once frozen the product is not recoverable.

Technical Characteristics:

Characteristic	Test Method	Performance
Physical form	-	Pasta Tixotropica
Dry residue at 130 °C	EN ISO 3251	53÷59%
Viscosity Brookfield (at 20 °C, Impeller n. 6; 10 rpm)	EN ISO 3219	70.000 cP (± 14.000)
Specific weight at 20 °C	EN ISO 2811-1	1.21 kg/l (±0.04)
pH (at 20 °C)	-	8.3÷9.0
Flexibility at low temperatures	EN 15813	-30 °C
Dimensional stability at high temperatures	EN 15818	+150 °C
External drying time	-	4 hour
Drying time for finishing covering	-	24÷48 hours*

* Values recorded at a temperature of 23 °C and 50% humidity. The data expressed may vary depending on thickness of the product applied and the specific conditions of the site; temperature, humidity, ventilation, absorbency of the bottom.

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3 pages

PRODUCT DATA SHEET

EASY FLASHING

Technical Characteristics:

Performance Characteristic (UNI EN 1504-2 - C Coverings - Principles: PI MC IR)	**Test Method**	**Performance**
Permeability to CO_2	EN 1062-6	S_D>50 m
Water vapour permeability	EN ISO 7783	Class I (S_D<5 m)
Liquid water permeability	EN 1062-3	W < 0.1 kg/sqm x $h^{0.5}$
Tensile bond strength (by pull off)	EN 1542	≥1 N/mm^2

* Values recorded at a temperature of 23 °C and 50% humidity. The data expressed may vary depending on thickness of the product applied and the specific conditions of the site; temperature, humidity, ventilation, absorbency of the bottom.

Performance EN 14891 Liquid applied water impermeable products for use beneath ceramic tiling bonded with adhesive	**Requirements EN 14891**	**Product Performance**
Initial tensile adhesion	>0.5 N/mm^2	Passed
Tensile adhesion after water contact	>0.5 N/mm^2	Passed
Tensile adhesion after heat aging	>0.5 N/mm^2	Passed
Tensile adhesion after freeze/thaw cycles	>0.5 N/mm^2	Passed
Tensile adhesion after contact with time lime water	>0.5 N/mm^2	Passed
Water impermeability	No penetration	Waterproof
Crack Bridging Ability (at 20 °C)	>0.75 mm	Passed
CLASSIFICATION ACCORDING TO EN 14891	Class DM 02	Waterproof product applied in dispersed liquid with improved crack bridging capacity at low temperature (-20 °C)

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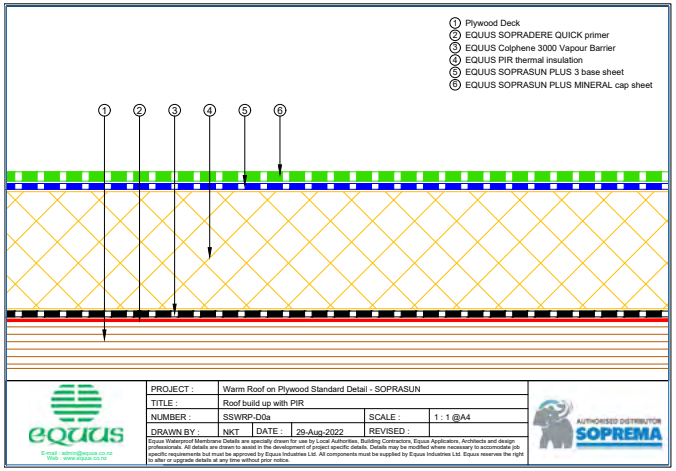
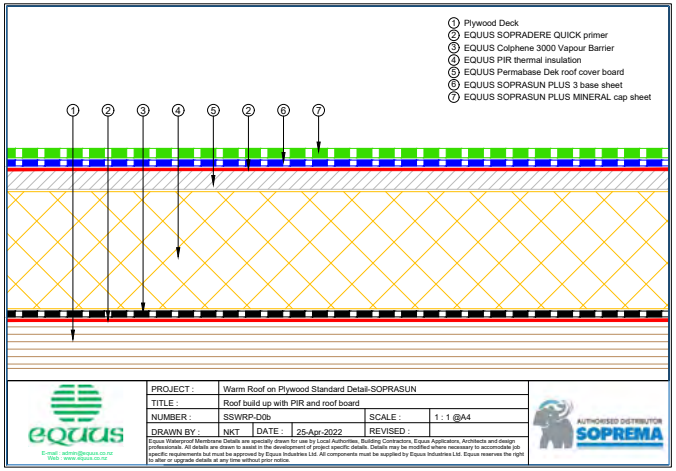
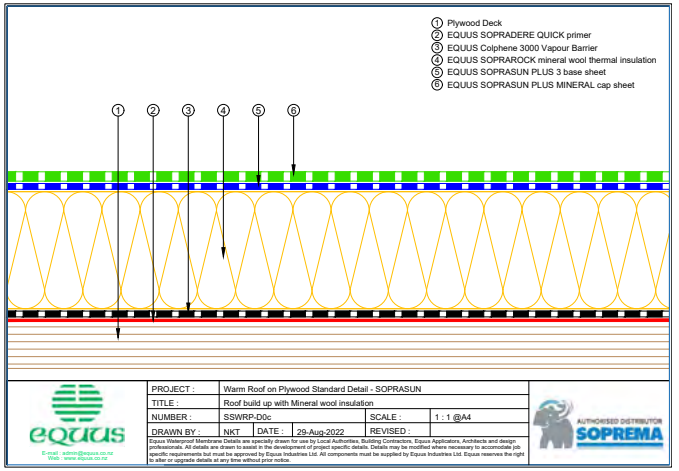
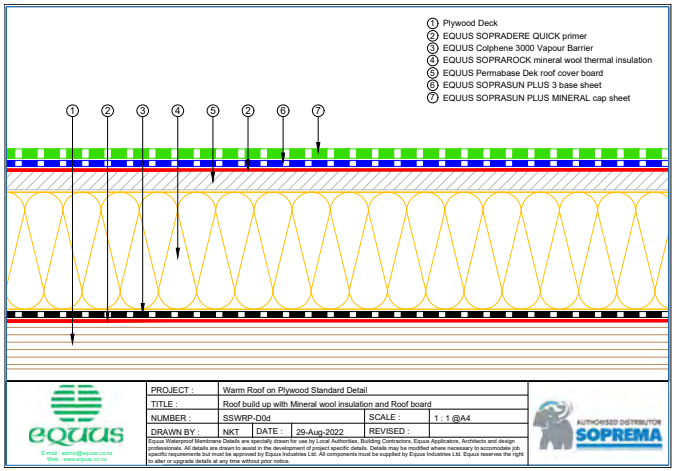
June 2023

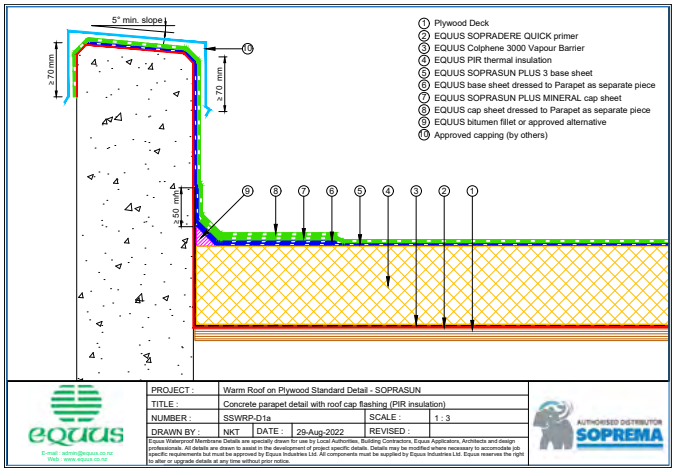
To see or download full size details click here

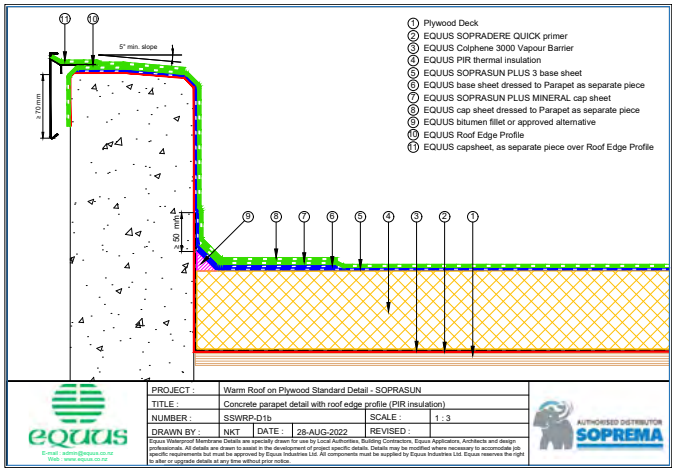


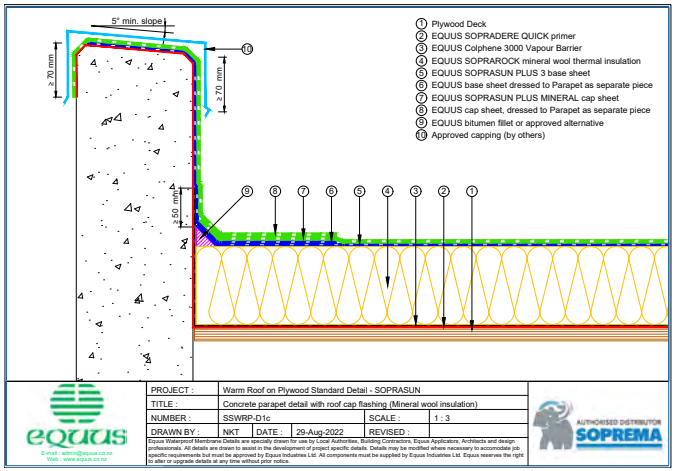


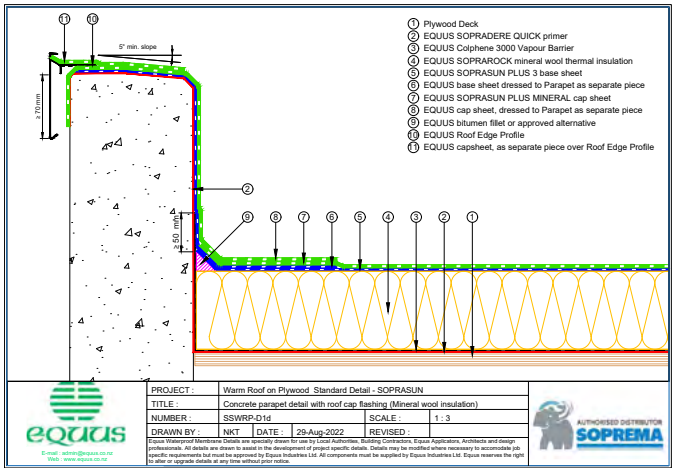


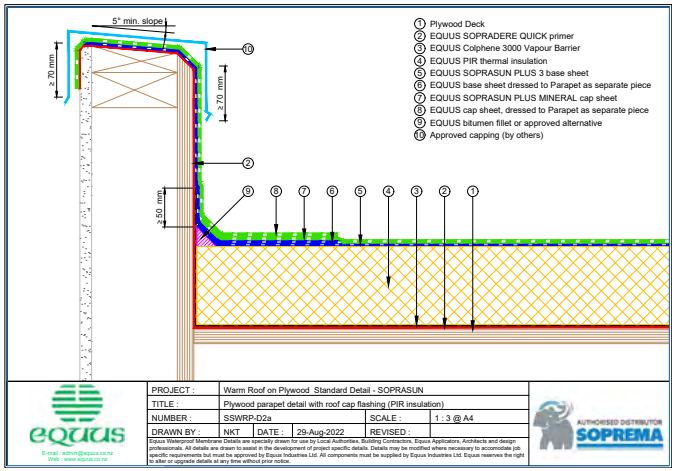












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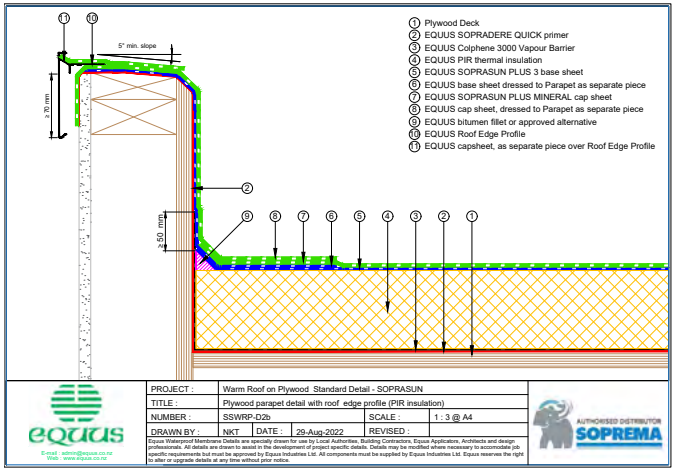
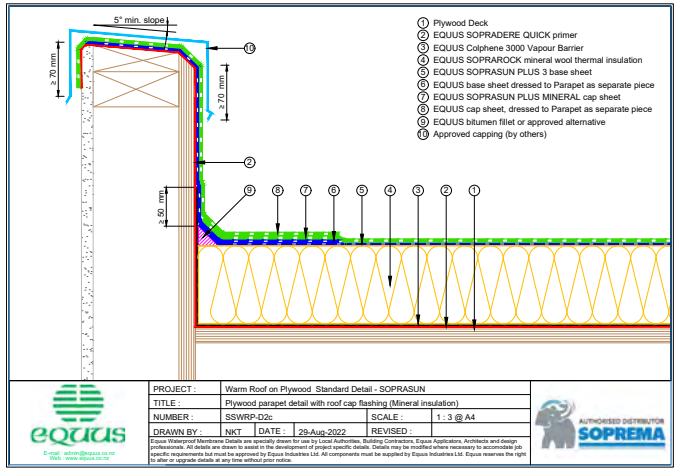


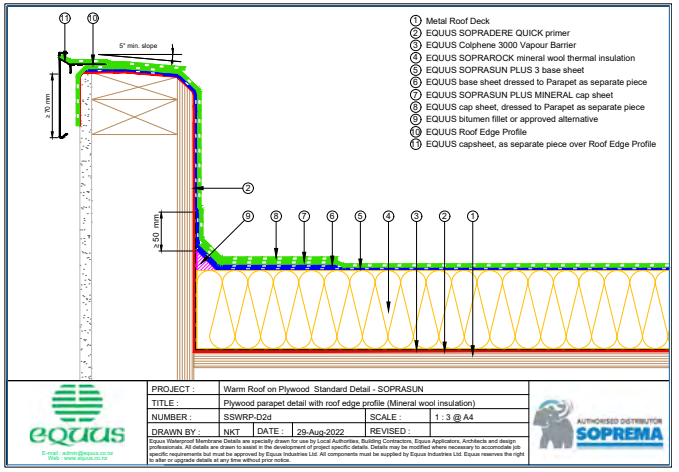
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS base sheet dressed to Parapet as separate piece
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. EQUUS cap sheet, dressed to Parapet as separate piece
9. EQUUS bitumen fillet or approved alternative
10. EQUUS Roof Edge Profile
11. EQUUS capsheet, as separate piece over Roof Edge Profile

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Plywood parapet detail with roof edge profile (PIR insulation)
NUMBER :	SSWRP-D2b
SCALE :	1 : 3 @ A4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



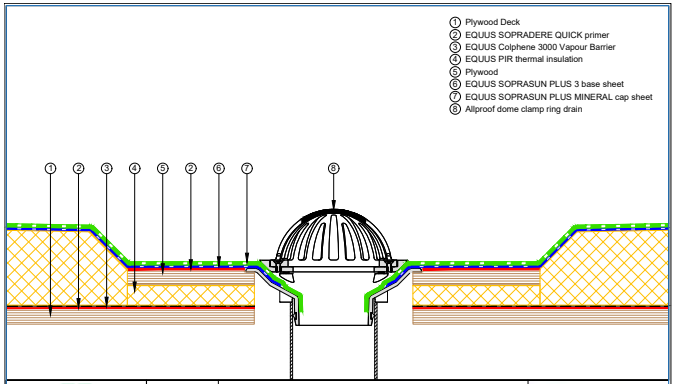
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS base sheet dressed to Parapet as separate piece
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. EQUUS cap sheet, dressed to Parapet as separate piece
9. EQUUS bitumen fillet or approved alternative
10. Approved capping (by others)

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Plywood parapet detail with roof cap flashing (Mineral insulation)
NUMBER :	SSWRP-D2c
SCALE :	1 : 3 @ A4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



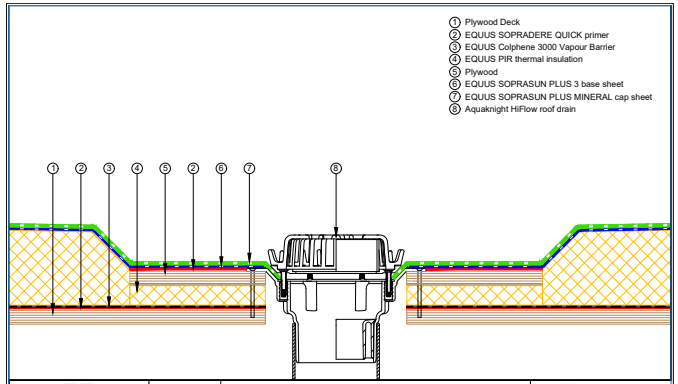
1. Metal Roof Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS base sheet dressed to Parapet as separate piece
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. EQUUS cap sheet, dressed to Parapet as separate piece
9. EQUUS bitumen fillet or approved alternative
10. EQUUS Roof Edge Profile
11. EQUUS capsheet, as separate piece over Roof Edge Profile

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Plywood parapet detail with roof edge profile (Mineral wool insulation)
NUMBER :	SSWRP-D2d
SCALE :	1 : 3 @ A4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



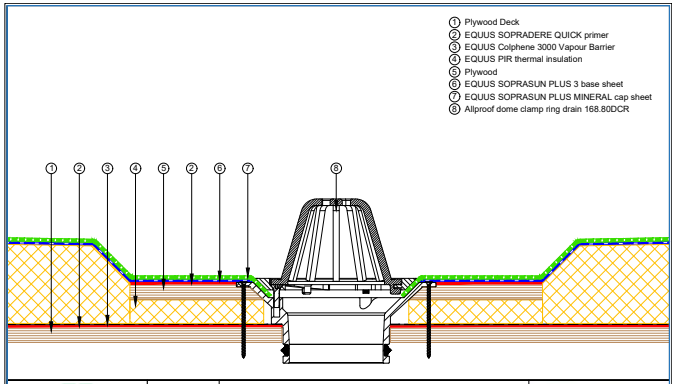
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. Plywood
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Allproof dome clamp ring drain

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Allproof dome clamp ring drain
NUMBER :	SSWRP-D3a
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



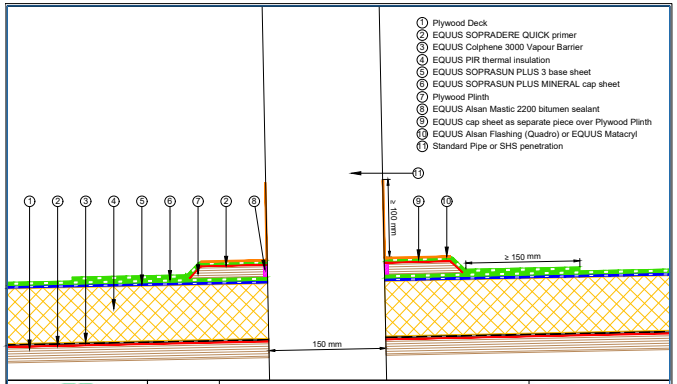
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. Plywood
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Aquaknight HiFlow roof drain

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Aquaknight HiFlow roof drain
NUMBER :	SSWRP-D3b
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



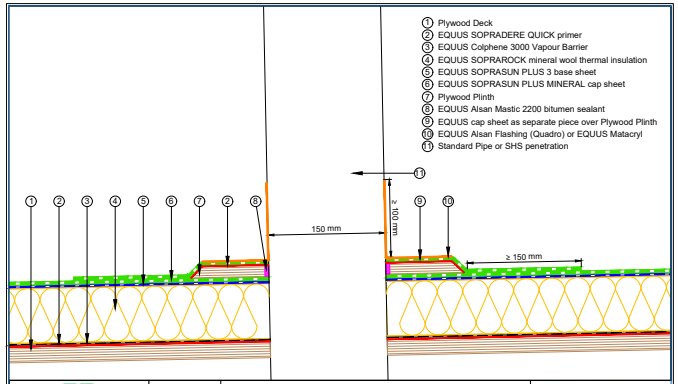
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. Plywood
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Allproof dome clamp ring drain 168.80DCR

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Allproof dome clamp ring drain 168.80DCR
NUMBER :	SSWRP-D3c
SCALE :	NTS
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



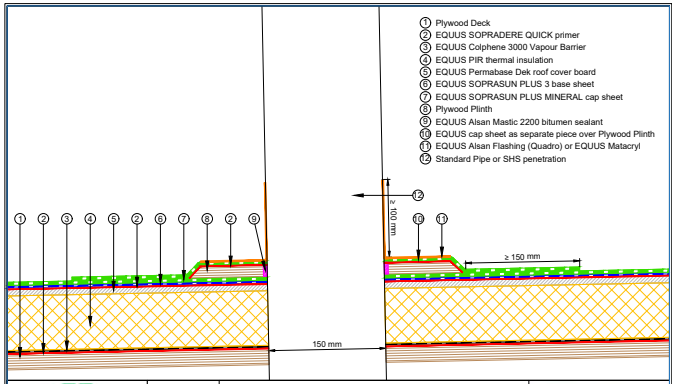
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
11. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration (PIR insulation)
NUMBER :	SSWRP-D5a
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
11. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration (Mineral wool insulation)
NUMBER :	SSWRP-D5b
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	



1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS Permabase Dek roof cover board
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Plywood Plinth
9. EQUUS Alsan Mastic 2200 bitumen sealant
10. EQUUS cap sheet as separate piece over Plywood Plinth
11. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
12. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration with cover board (PIR insulation)
NUMBER :	SSWRP-D5c
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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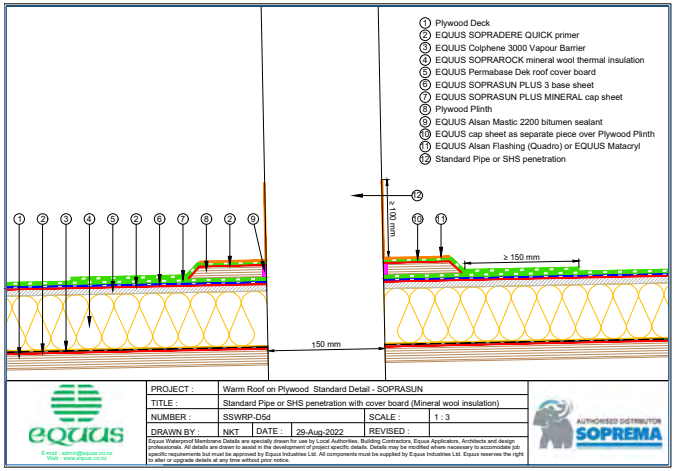
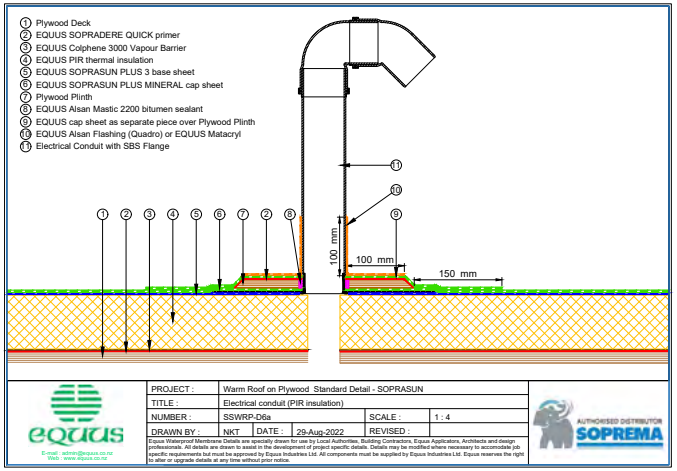
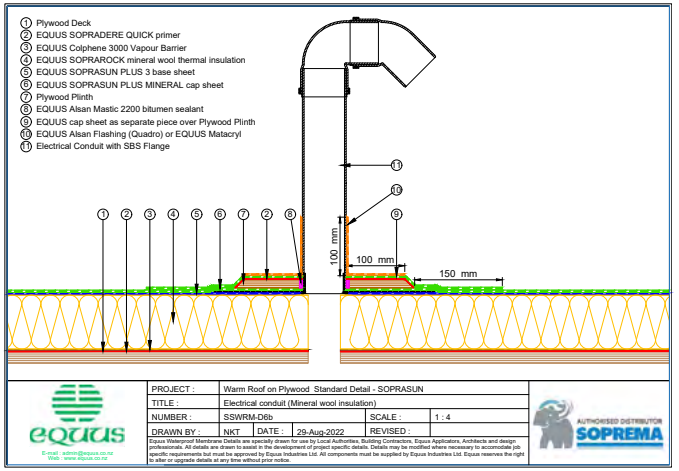
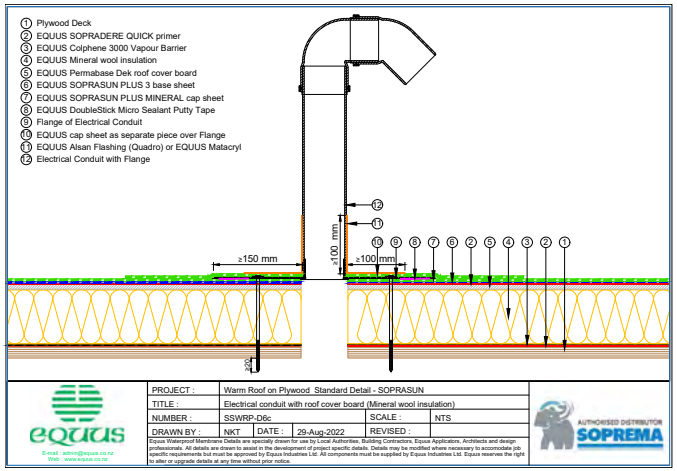
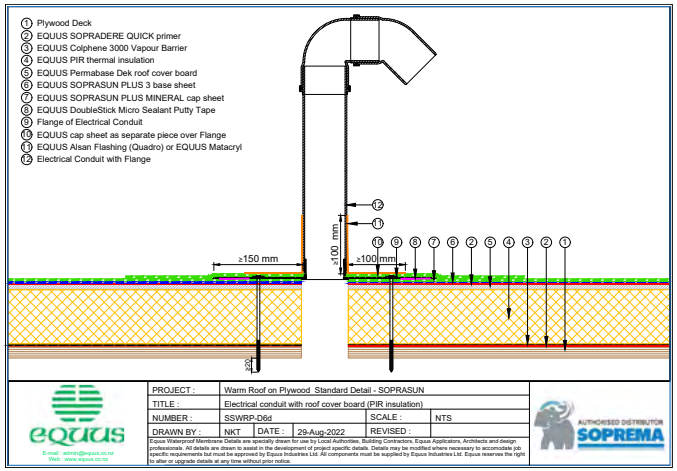
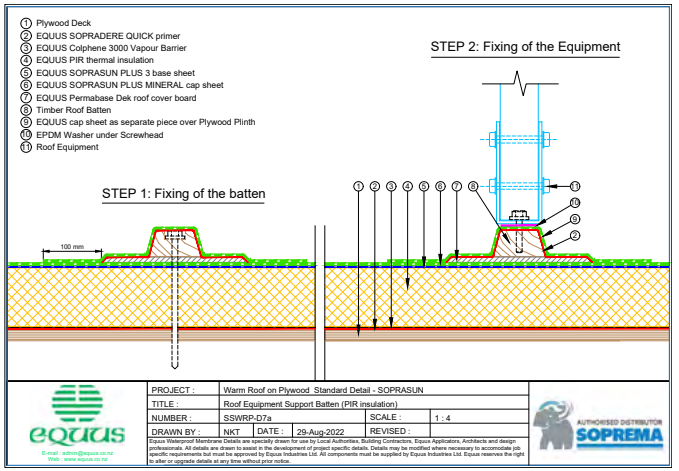


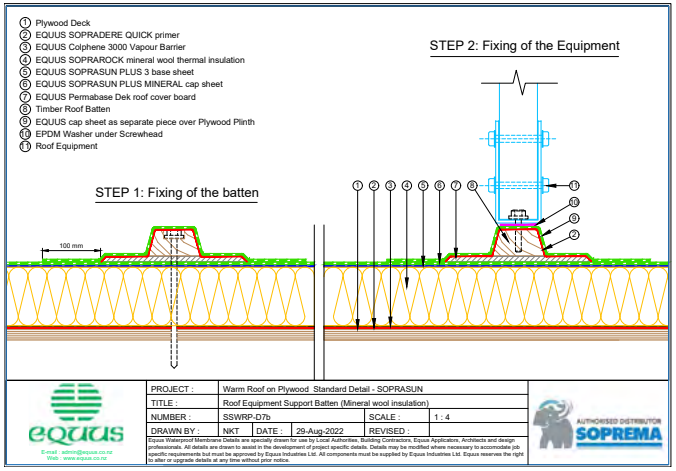


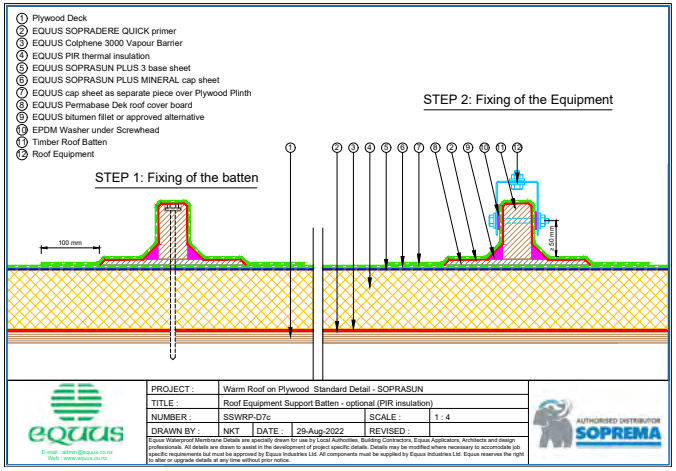


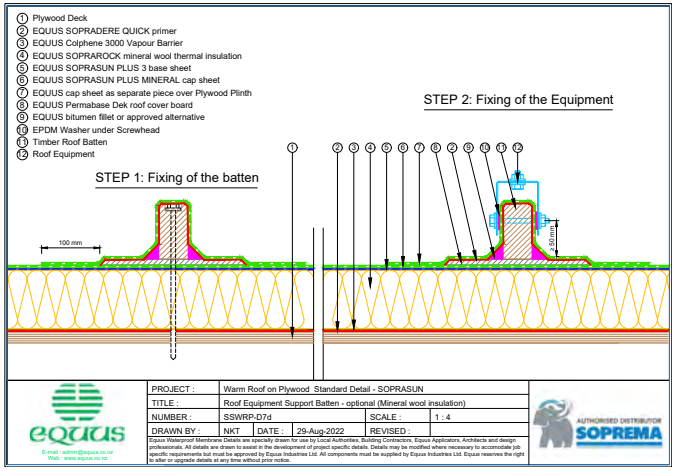






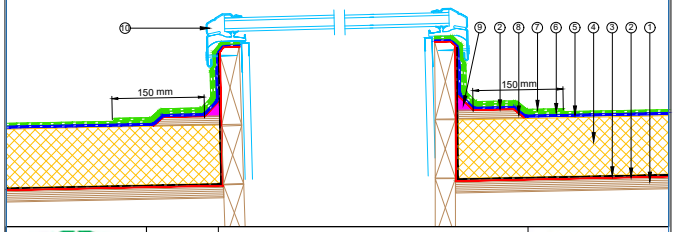






To see or download full size details click here

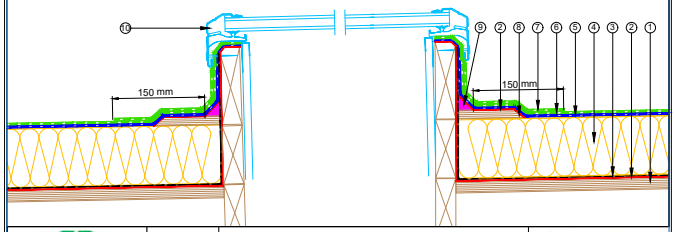
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS cap sheet as separate piece over Plywood Plinth
8. Plywood Plinth
9. EQUUS bitumen fillet or approved alternative
10. Skylight Joinery



PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Skylight (PIR insulation)
NUMBER :	SSWRP-D8a
SCALE :	1 : 4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

Equus Waterproof Membrane Details are specially drawn for use by Local Authorities, Building Contractors, Equus Applicators, Architects and design professionals. All details are drawn to assist in the development of project specific details. Details may be modified where necessary to accomodate job specific requirements but must be approved by Equus Industries Ltd. All components must be supplied by Equus Industries Ltd. Equus reserves the right to alter or upgrade details at any time without prior notice.

1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS cap sheet as separate piece over Plywood Plinth
8. Plywood Plinth
9. EQUUS bitumen fillet or approved alternative
10. Skylight Joinery



PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Skylight (Mineral insulation)
NUMBER :	SSWRP-D8b
SCALE :	1 : 4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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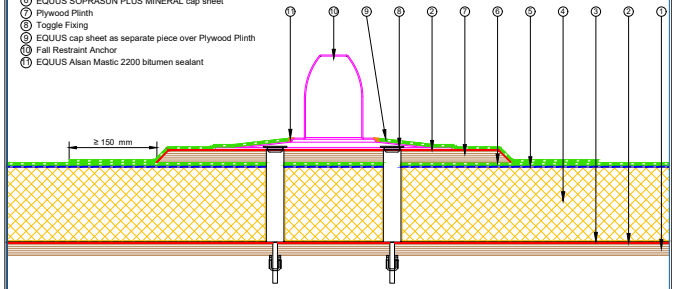
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS cap sheet as separate piece over Plywood Plinth
8. Toggle Fixing
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. Fall Restraint Anchor
11. EQUUS Alsan Mastic 2200 bitumen sealant



PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Fall restraint (PIR insulation)
NUMBER :	SSWRP-D9a
SCALE :	1 : 4
DRAWN BY :	NKT
DATE :	28-Aug-2022
REVISED :	

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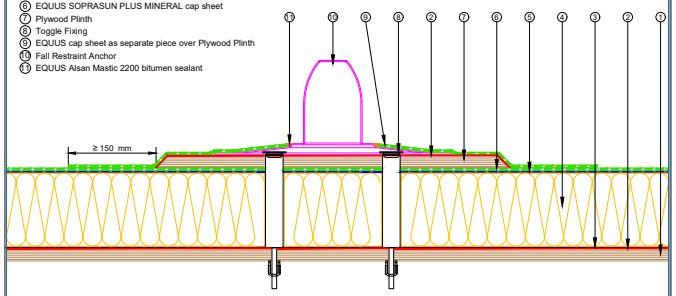
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. Toggle Fixing
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. Fall Restraint Anchor
11. EQUUS Alsan Mastic 2200 bitumen sealant



PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Fall restraint (Mineral wool insulation)
NUMBER :	SSWRP-D9b
SCALE :	1 : 4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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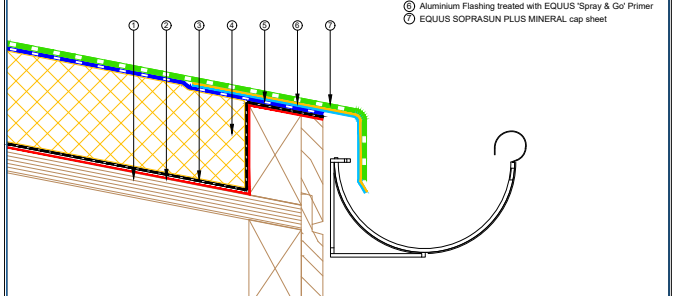
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet



PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Connection to External Gutter (PIR insulation)
NUMBER :	SSWRP-D10a
SCALE :	1 : 2
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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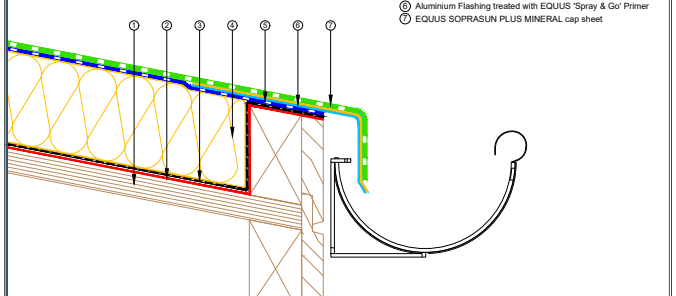
1. Plywood Deck
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. Aluminium Flashing treated with EQUUS 'Spray & Go' Primer
7. EQUUS SOPRASUN PLUS MINERAL cap sheet



PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Connection to External Gutter (Mineral wool insulation)
NUMBER :	SSWRP-D10b
SCALE :	1 : 2
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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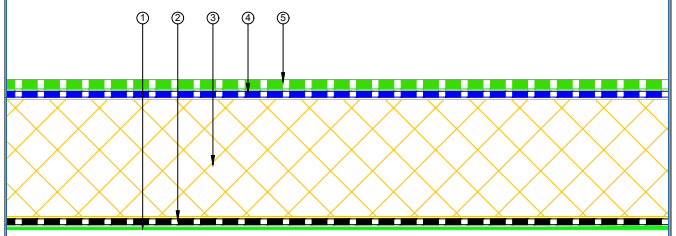
1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet



PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Roof build up with PIR
NUMBER :	SSWRM-D0a
SCALE :	1 : 1
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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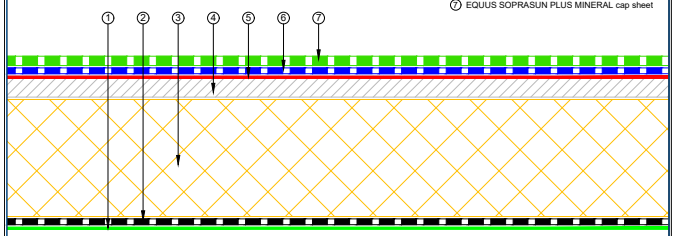
1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS Permabase Dek roof cover board
5. EQUUS Sopradere Quick primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet



PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Roof build up with PIR and roof board
NUMBER :	SSWRM-D0b
SCALE :	1 : 1
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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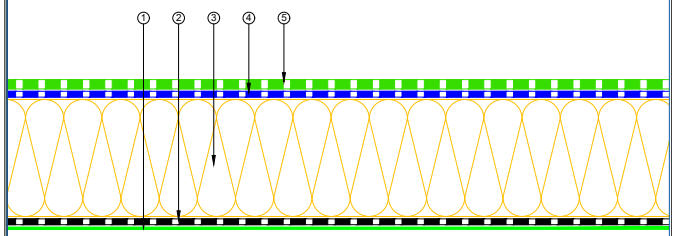
1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet



PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Roof build up with Mineral wool insulation
NUMBER :	SSWRM-D0c
SCALE :	1 : 1
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

Equus Waterproof Membrane Details are specially drawn for use by Local Authorities, Building Contractors, Equus Applicators, Architects and design professionals. All details are drawn to assist in the development of project specific details. Details may be modified where necessary to accomodate job specific requirements but must be approved by Equus Industries Ltd. All components must be supplied by Equus Industries Ltd. Equus reserves the right to alter or upgrade details at any time without prior notice.

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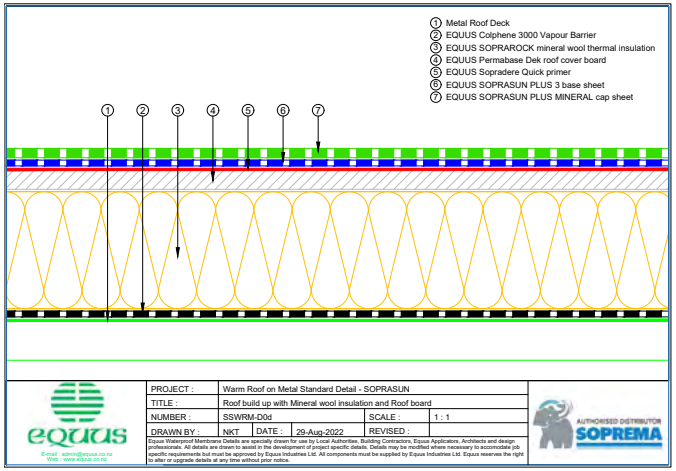
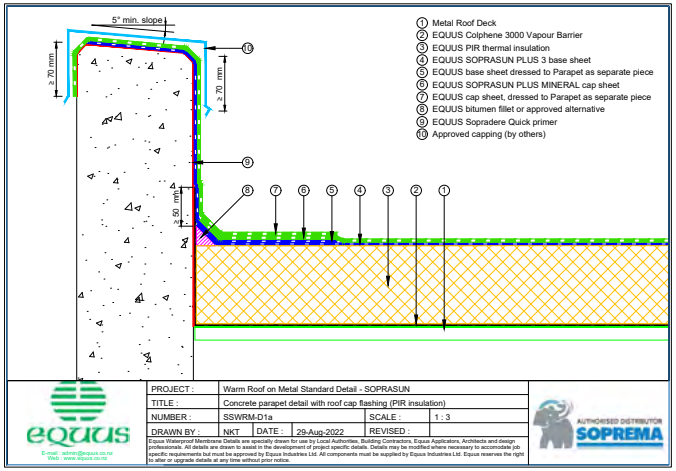
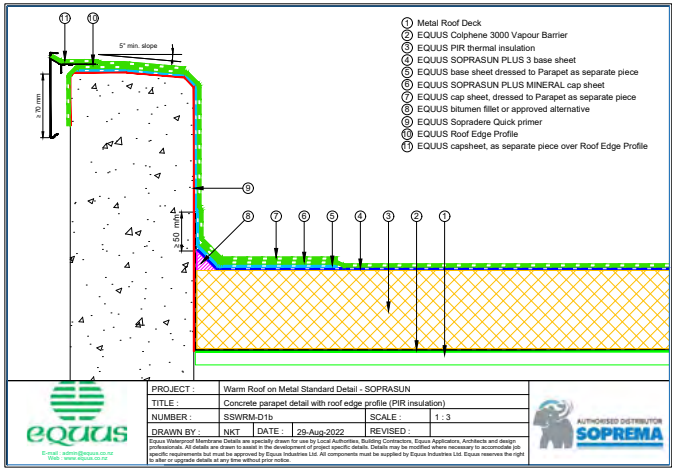
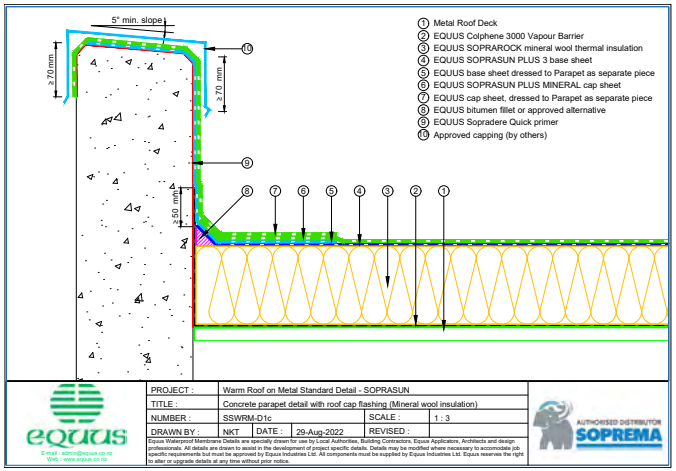
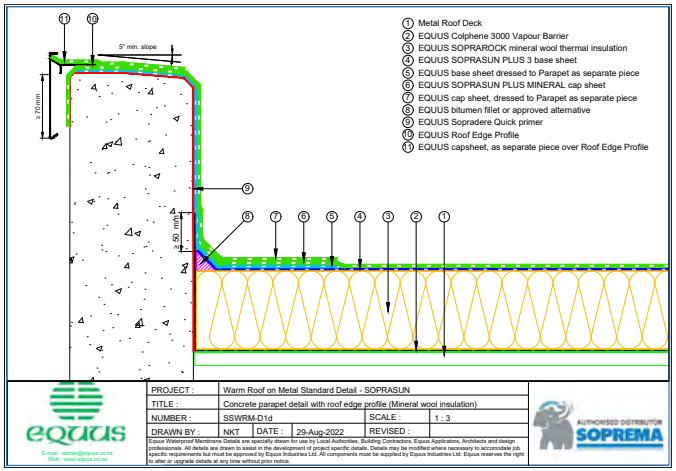
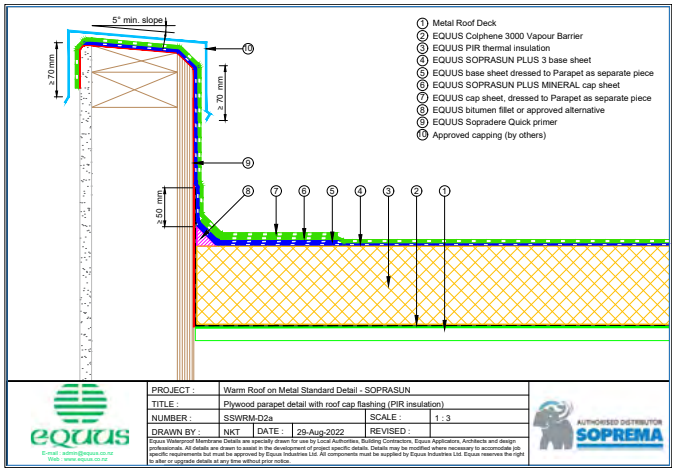


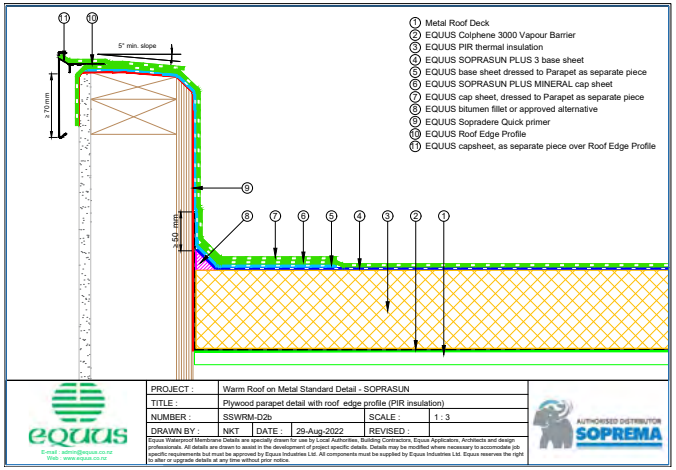


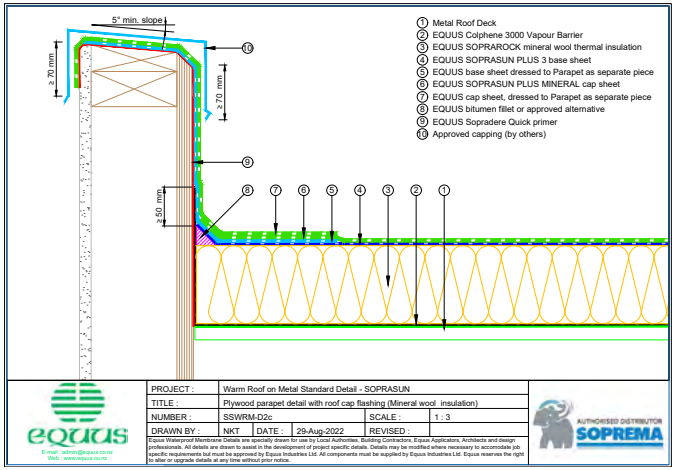


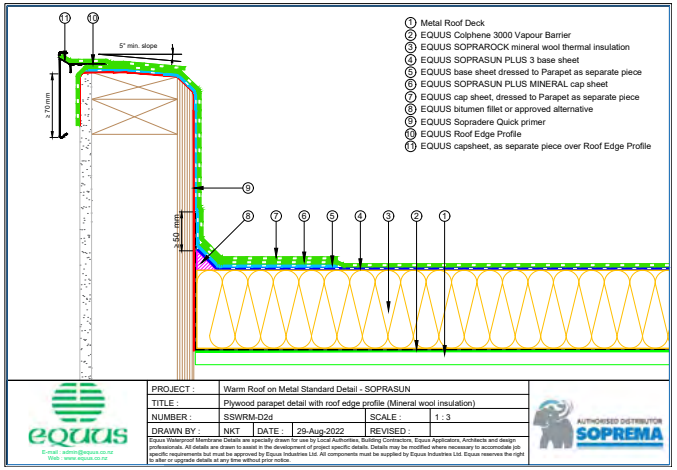






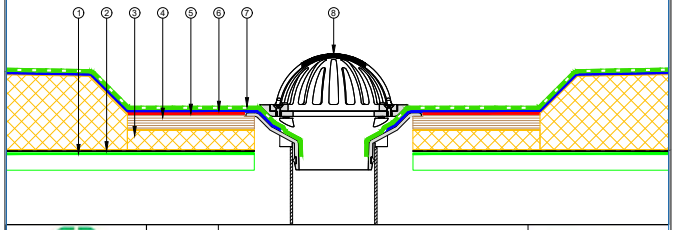






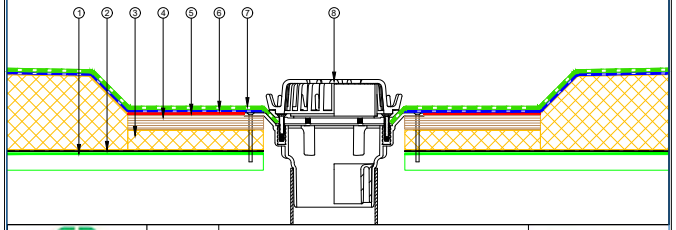
To see or download full size details click here

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. Plywood
5. EQUUS Sopradere Quick primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Allproof dome clamp ring drain



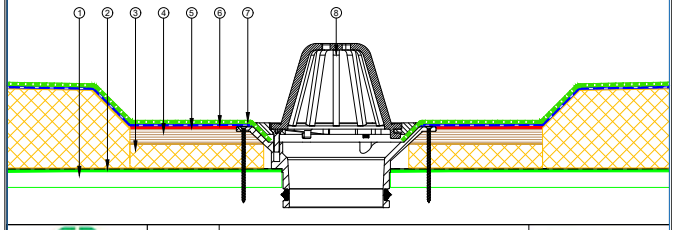
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Allproof dome clamp ring drain
NUMBER :	SSWRM-D3a
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. Plywood
5. EQUUS Sopradere Quick primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Aquaknight HiFlow roof drain



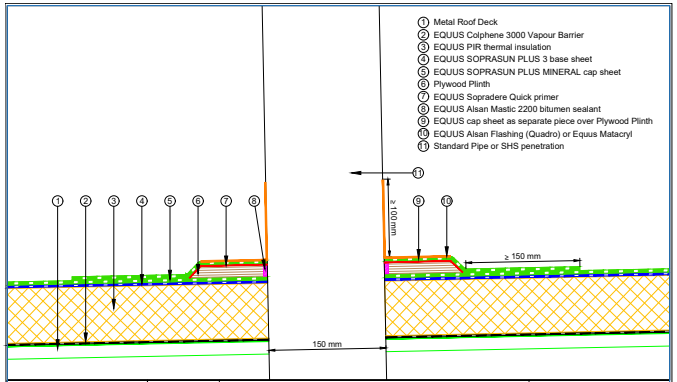
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Aquaknight HiFlow roof drain
NUMBER :	SSWRM-D3b
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. Plywood
5. Sopradere Quick or Aquadere bitumen primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Allproof dome clamp ring drain 168.80DCR



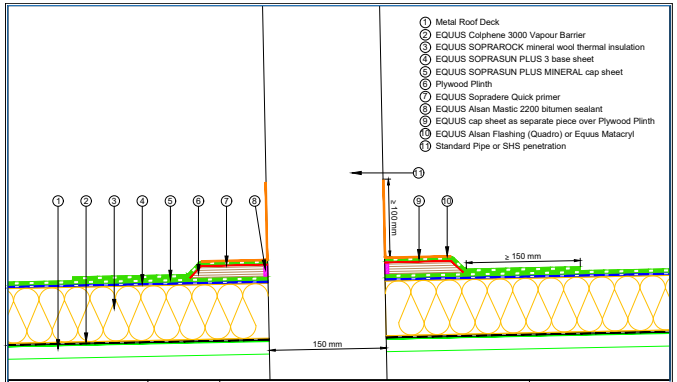
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Allproof dome clamp ring drain 168.80DCR
NUMBER :	SSWRM-D3c
SCALE :	NTS
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. Plywood Plinth
7. EQUUS Sopradere Quick primer
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
11. Standard Pipe or SHS penetration



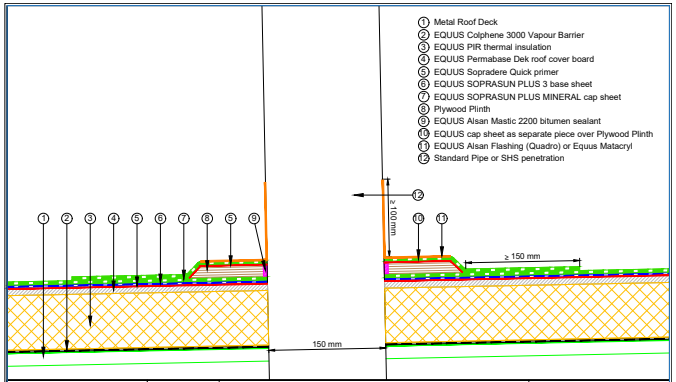
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration (PIR insulation)
NUMBER :	SSWRM-D5a
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. Plywood Plinth
7. EQUUS Sopradere Quick primer
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
11. Standard Pipe or SHS penetration



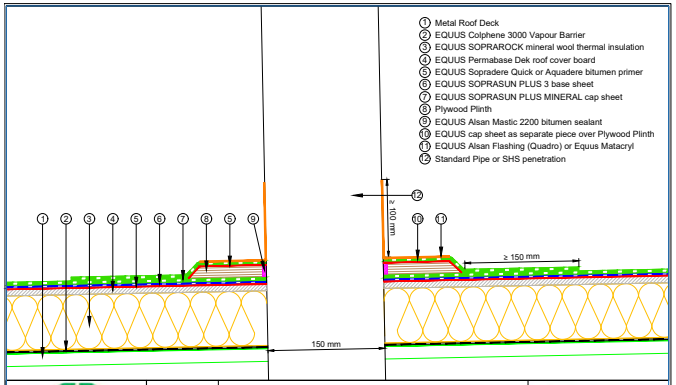
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration (Mineral wool insulation)
NUMBER :	SSWRM-D5b
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS Permabase Dek roof cover board
5. EQUUS Sopradere Quick primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Plywood Plinth
9. EQUUS Alsan Mastic 2200 bitumen sealant
10. EQUUS cap sheet as separate piece over Plywood Plinth
11. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
12. Standard Pipe or SHS penetration



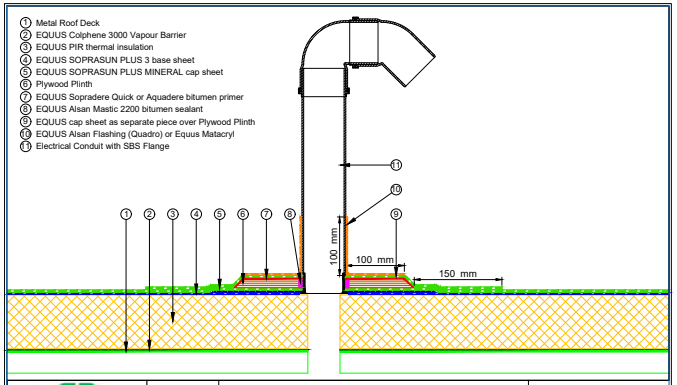
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration with cover board (PIR insulation)
NUMBER :	SSWRM-D5c
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS Permabase Dek roof cover board
5. EQUUS Sopradere Quick or Aquadere bitumen primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Plywood Plinth
9. EQUUS Alsan Mastic 2200 bitumen sealant
10. EQUUS cap sheet as separate piece over Plywood Plinth
11. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
12. Standard Pipe or SHS penetration



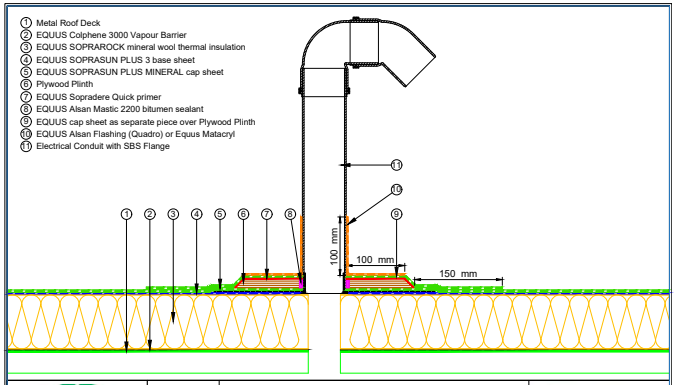
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Standard Pipe or SHS penetration with cover board (Mineral wool insulation)
NUMBER :	SSWRM-D5d
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. Plywood Plinth
7. EQUUS Sopradere Quick or Aquadere bitumen primer
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
11. Electrical Conduit with SBS Flange



PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Electrical conduit (PIR insulation)
NUMBER :	SSWRM-D6a
SCALE :	1 : 4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. Plywood Plinth
7. EQUUS Sopradere Quick primer
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
11. Electrical Conduit with SBS Flange



PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Electrical conduit (Mineral wool insulation)
NUMBER :	SSWRM-D6b
SCALE :	1 : 4
DRAWN BY :	NKT
DATE :	29-Aug-2022
REVISED :	

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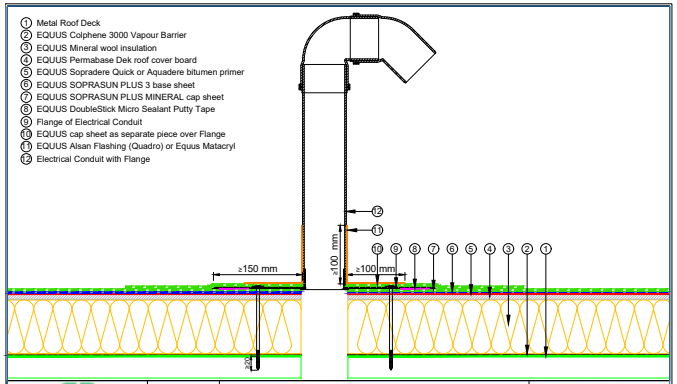
1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS Mineral wool insulation
4. EQUUS Permabase Dek roof cover board
5. EQUUS Sopradere Quick or Aquadere bitumen primer
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. EQUUS DoubleStick Micro Sealant Putty Tape
9. Flange of Electrical Conduit
10. EQUUS cap sheet as separate piece over Flange
11. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
12. Electrical Conduit with Flange

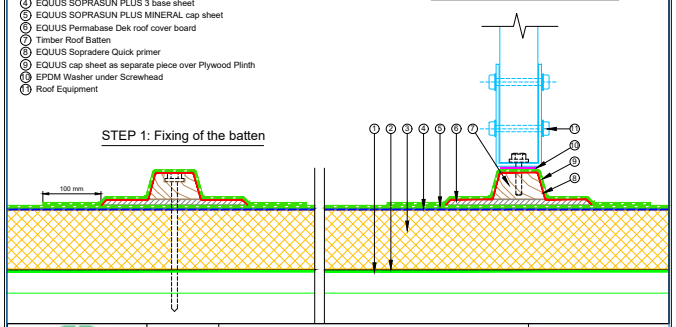


PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Electrical conduit with roof cover board (Mineral wool insulation)				
NUMBER :	SSWRM-D6c			SCALE :	NTS
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. EQUUS Permabase Dek roof cover board
7. Timber Roof Batten
8. EQUUS Sopradere Quick primer
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EPDM Washer under Screwhead
11. Roof Equipment

STEP 2: Fixing of the Equipment

STEP 1: Fixing of the batten

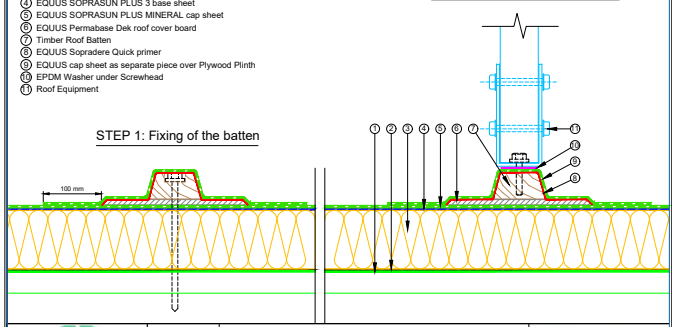


PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Roof Equipment Support Batten (PIR insulation)				
NUMBER :	SSWRM-D7a			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. EQUUS cap sheet as separate piece over Plywood Plinth
7. EQUUS Permabase Dek roof cover board
8. EQUUS Sopradere Quick primer
9. EQUUS Permabase Dek roof cover board
10. EPDM Washer under Screwhead
11. Timber Roof Batten
12. Roof Equipment

STEP 2: Fixing of the Equipment

STEP 1: Fixing of the batten

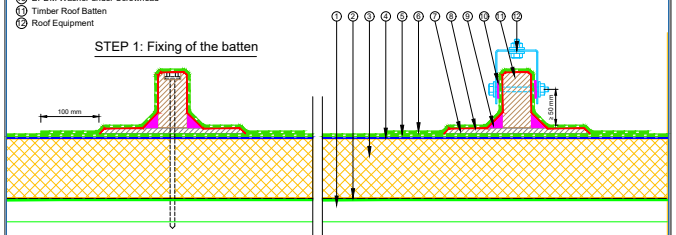


PROJECT :	Standard Detail				
TITLE :	Roof Equipment Support Batten (Mineral wool insulation)				
NUMBER :	SSWRM-D7b			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. EQUUS cap sheet as separate piece over Plywood Plinth
7. EQUUS Permabase Dek roof cover board
8. EQUUS Sopradere Quick primer
9. EQUUS bitumen fillet or approved alternative
10. EPDM Washer under Screwhead
11. Timber Roof Batten
12. Roof Equipment

STEP 2: Fixing of the Equipment

STEP 1: Fixing of the batten

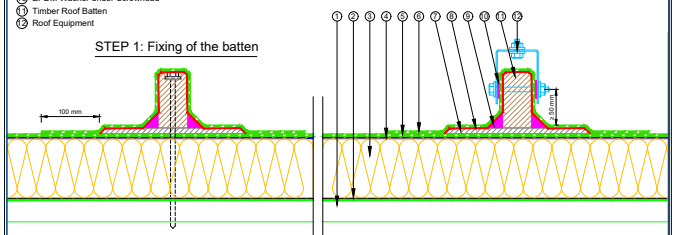


PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Roof Equipment Support Batten - optional (PIR insulation)				
NUMBER :	SSWRM-D7c			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. EQUUS cap sheet as separate piece over Plywood Plinth
7. EQUUS Permabase Dek roof cover board
8. EQUUS Sopradere Quick primer
9. EQUUS bitumen fillet or approved alternative
10. EPDM Washer under Screwhead
11. Timber Roof Batten
12. Roof Equipment

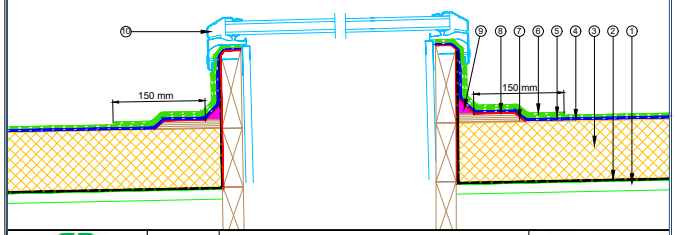
STEP 2: Fixing of the Equipment

STEP 1: Fixing of the batten



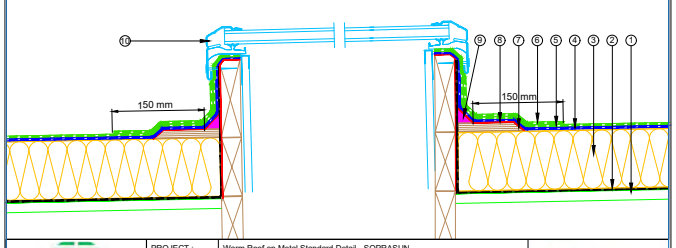
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Roof Equipment Support Batten - optional (Mineral wool insulation)				
NUMBER :	SSWRM-D7d			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. EQUUS cap sheet as separate piece over Plywood Plinth
7. Plywood Plinth
8. EQUUS Sopradere Quick primer
9. EQUUS bitumen fillet or approved alternative
10. Skylight Joinery



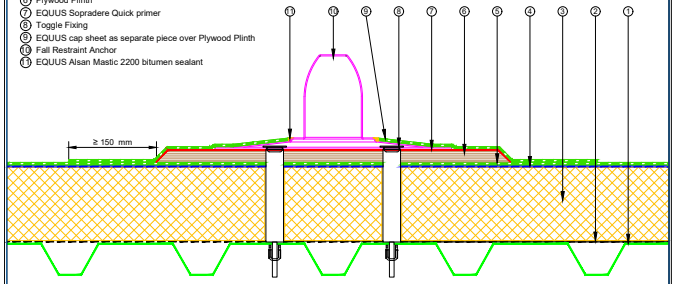
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Skylight (PIR insulation)				
NUMBER :	SSWRM-D8a			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. EQUUS cap sheet as separate piece over Plywood Plinth
7. Plywood Plinth
8. EQUUS Sopradere Quick primer
9. EQUUS bitumen fillet or approved alternative
10. Skylight Joinery



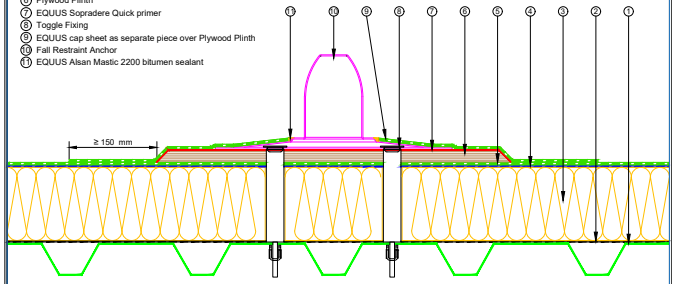
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Skylight (Mineral wool insulation)				
NUMBER :	SSWRM-D8b			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS PIR thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. Plywood Plinth
7. EQUUS Sopradere Quick primer
8. Toggle Fixing
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. Fall Restraint Anchor
11. EQUUS Alsan Mastic 2200 bitumen sealant



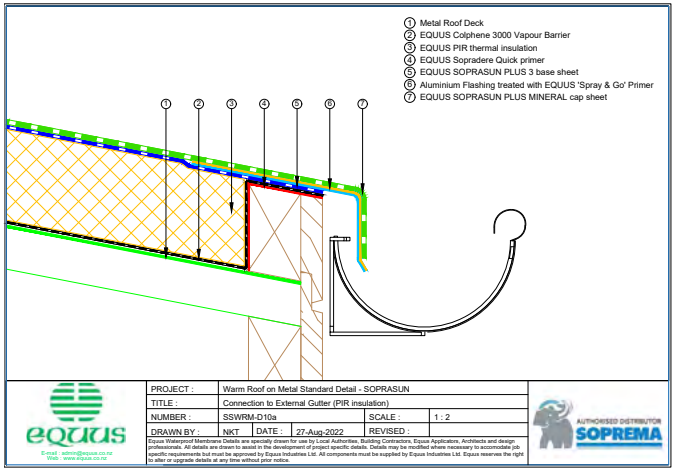
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Fall restraint (PIR insulation)				
NUMBER :	SSWRM-D9a			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

1. Metal Roof Deck
2. EQUUS Colphene 3000 Vapour Barrier
3. EQUUS SOPRAROCK mineral wool thermal insulation
4. EQUUS SOPRASUN PLUS 3 base sheet
5. EQUUS SOPRASUN PLUS MINERAL cap sheet
6. Plywood Plinth
7. EQUUS Sopradere Quick primer
8. Toggle Fixing
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. Fall Restraint Anchor
11. EQUUS Alsan Mastic 2200 bitumen sealant

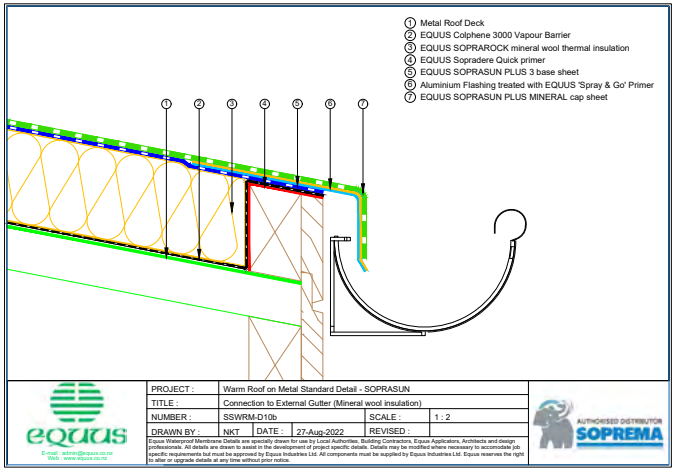


PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN				
TITLE :	Fall restraint (Mineral wool insulation)				
NUMBER :	SSWRM-D9b			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	29-Aug-2022	REVISED :	

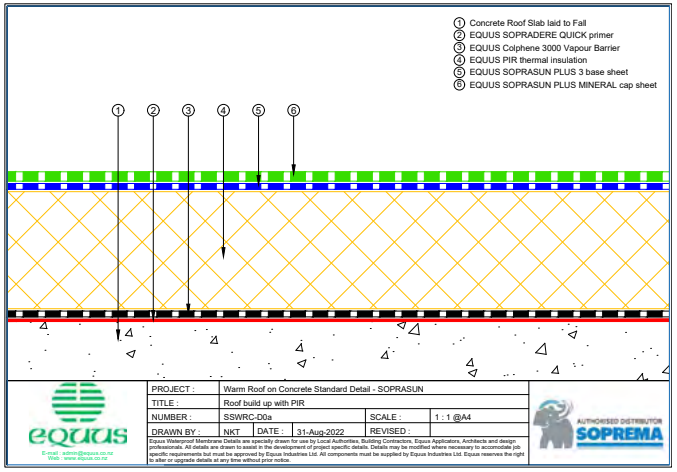
To see or download full size details click here



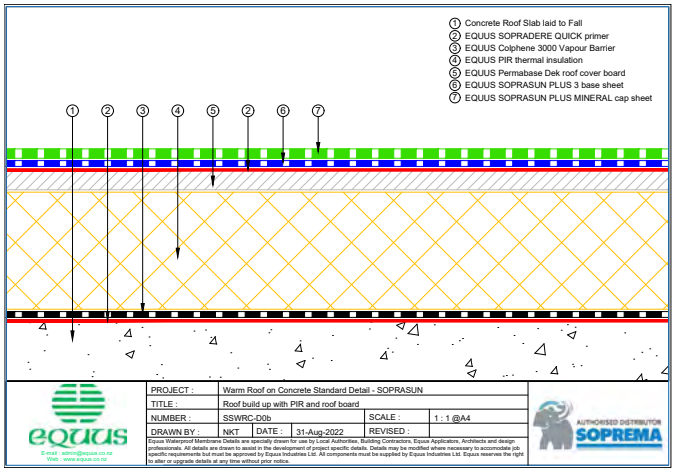
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Connection to External Gutter (PIR insulation)
NUMBER :	SSWRM-D10a
SCALE :	1 : 2
DRAWN BY :	NKT
DATE :	27-Aug-2022
REVISED :	



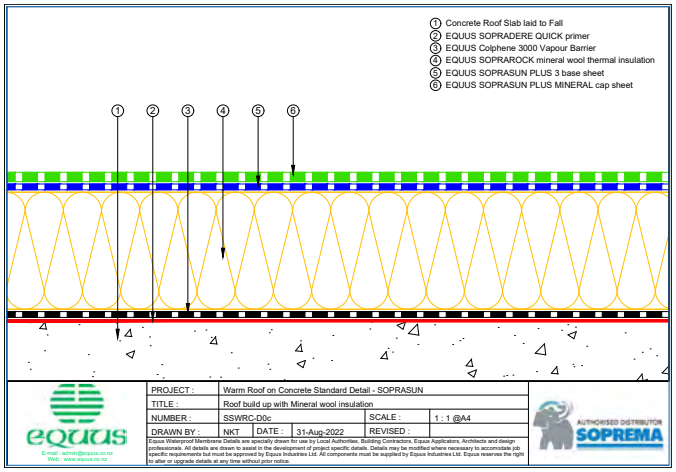
PROJECT :	Warm Roof on Metal Standard Detail - SOPRASUN
TITLE :	Connection to External Gutter (Mineral wool insulation)
NUMBER :	SSWRM-D10b
SCALE :	1 : 2
DRAWN BY :	NKT
DATE :	27-Aug-2022
REVISED :	



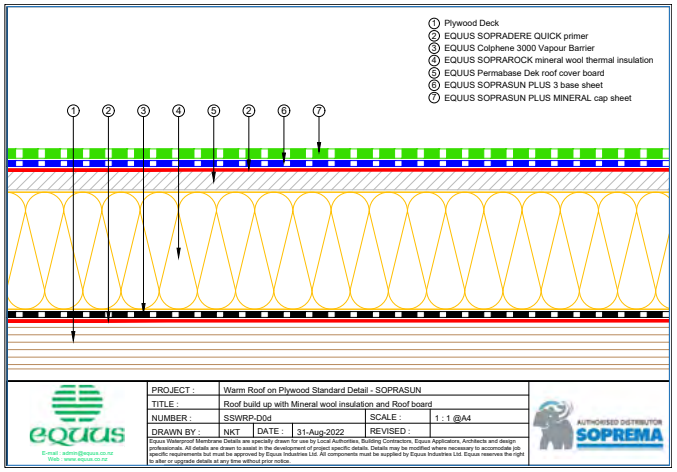
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN
TITLE :	Roof build up with PIR
NUMBER :	SSWRC-D0a
SCALE :	1 : 1 @A4
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	



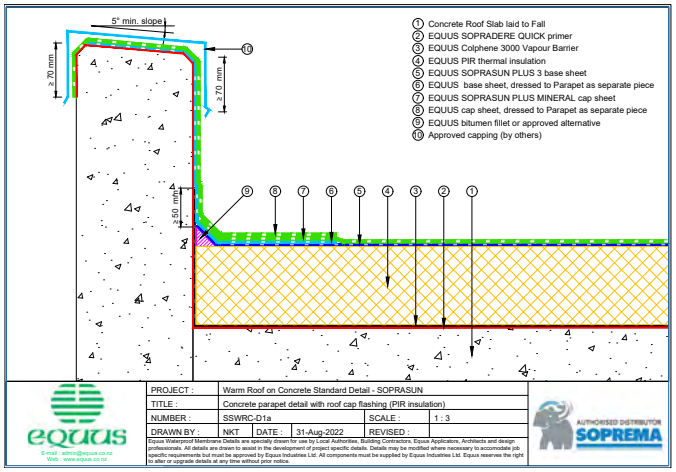
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN
TITLE :	Roof build up with PIR and roof board
NUMBER :	SSWRC-D0b
SCALE :	1 : 1 @A4
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	



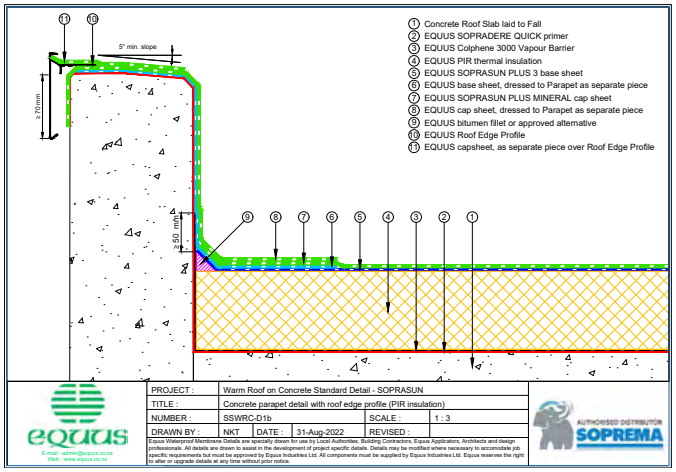
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN
TITLE :	Roof build up with Mineral wool insulation
NUMBER :	SSWRC-D0c
SCALE :	1 : 1 @A4
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	



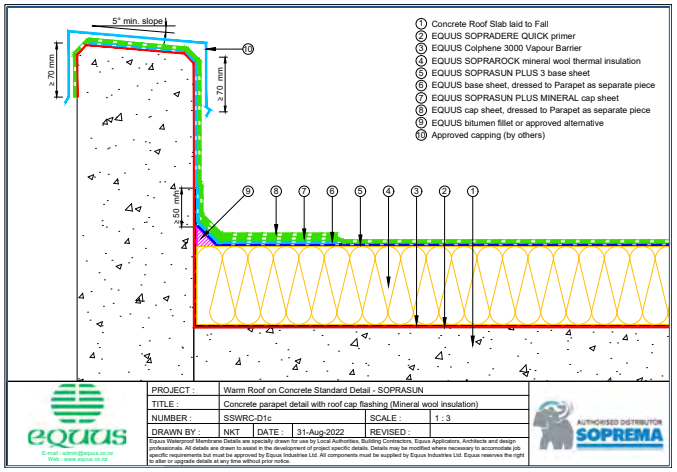
PROJECT :	Warm Roof on Plywood Standard Detail - SOPRASUN
TITLE :	Roof build up with Mineral wool insulation and Roof board
NUMBER :	SSWRP-D0d
SCALE :	1 : 1 @A4
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	



PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN
TITLE :	Concrete parapet detail with roof cap flashing (PIR insulation)
NUMBER :	SSWRC-D1a
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	

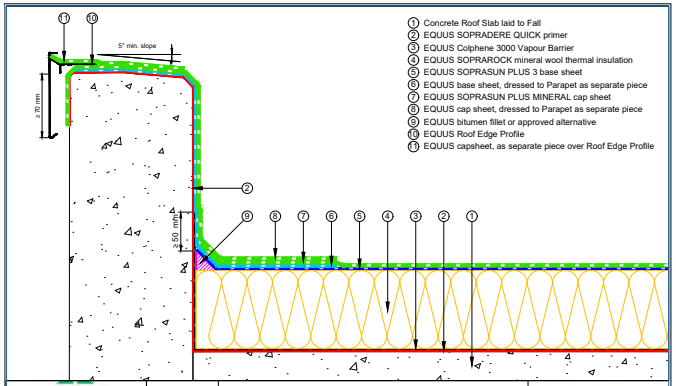


PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN
TITLE :	Concrete parapet detail with roof edge profile (PIR insulation)
NUMBER :	SSWRC-D1b
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	



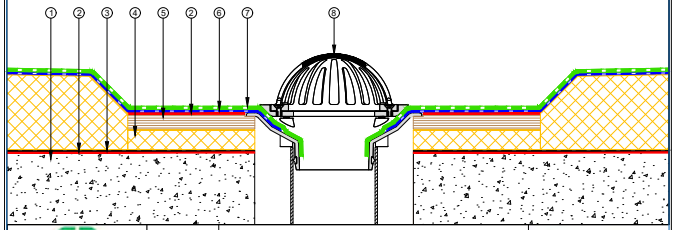
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN
TITLE :	Concrete parapet detail with roof cap flashing (Mineral wool insulation)
NUMBER :	SSWRC-D1c
SCALE :	1 : 3
DRAWN BY :	NKT
DATE :	31-Aug-2022
REVISED :	

To see or download full size details click here



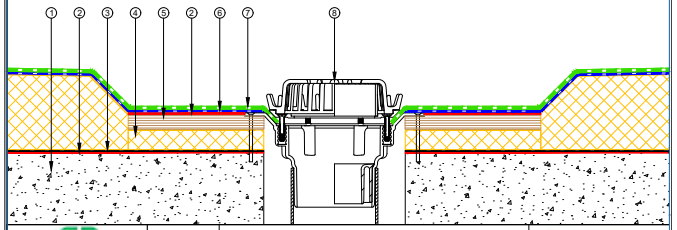
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS base sheet, dressed to Parapet as separate piece
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. EQUUS cap sheet, dressed to Parapet as separate piece
9. EQUUS bitumen fillet or approved alternative
10. EQUUS Roof Edge Profile
11. EQUUS capsheet, as separate piece over Roof Edge Profile

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Concrete parapet detail with roof cap flashing (Mineral wool insulation)				
NUMBER :	SSWRC-D1d			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



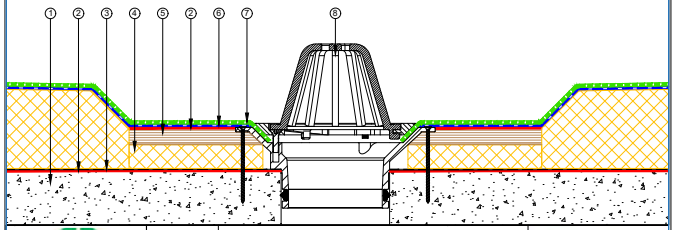
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. Plywood
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Allproof dome clamp ring drain

PROJECT :	Standard Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Allproof dome clamp ring drain				
NUMBER :	SSWRC-D3a			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



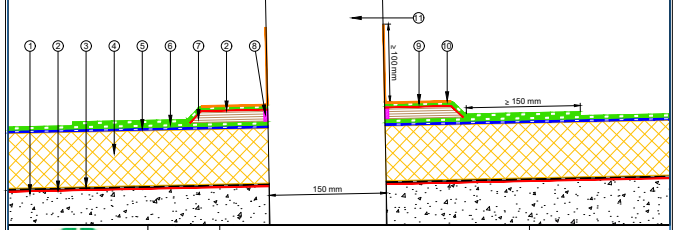
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. Plywood
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Aquaknight HiFlow roof drain

PROJECT :	Standard Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Aquaknight HiFlow roof drain				
NUMBER :	SSWRC-D3b			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



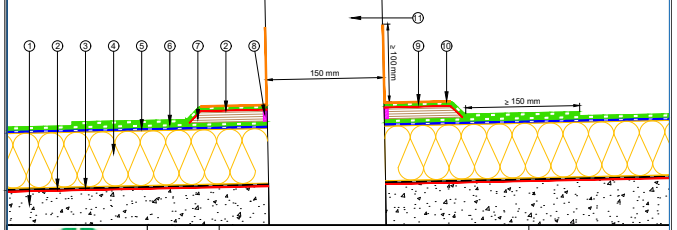
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. Plywood
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Allproof dome clamp ring drain 168.80DCR

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Allproof dome clamp ring drain 168.80DCR				
NUMBER :	SSWRC-D3c			SCALE :	NTS
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



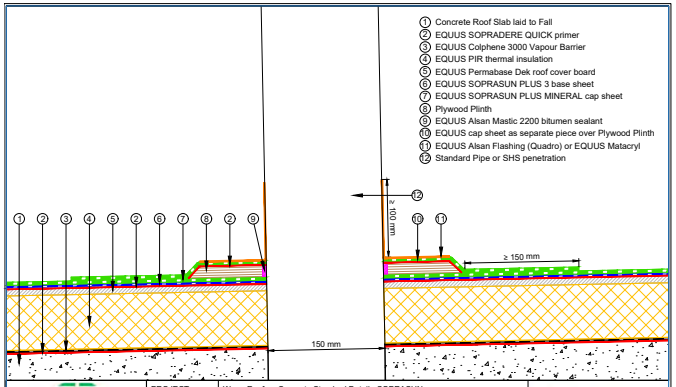
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
11. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Standard Pipe or SHS penetration (PIR insulation)				
NUMBER :	SSWRC-D5a			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



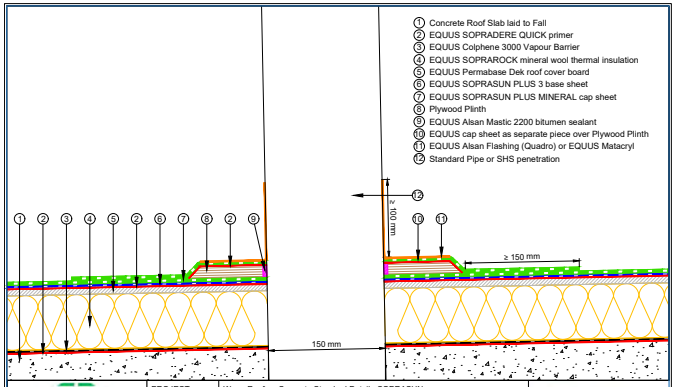
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Mastic 2200 bitumen sealant
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
11. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Standard Pipe or SHS penetration (Mineral wool insulation)				
NUMBER :	SSWRC-D5b			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



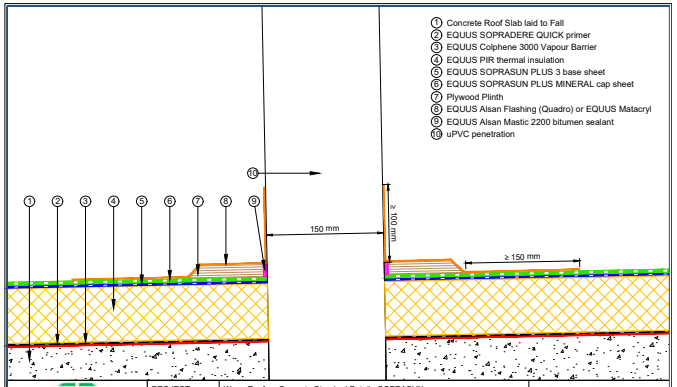
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS Permabase Dek roof cover board
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Plywood Plinth
9. EQUUS Alsan Mastic 2200 bitumen sealant
10. EQUUS cap sheet as separate piece over Plywood Plinth
11. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
12. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Standard Pipe or SHS penetration with cover board (PIR insulation)				
NUMBER :	SSWRC-D5c			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS Permabase Dek roof cover board
6. EQUUS SOPRASUN PLUS 3 base sheet
7. EQUUS SOPRASUN PLUS MINERAL cap sheet
8. Plywood Plinth
9. EQUUS Alsan Mastic 2200 bitumen sealant
10. EQUUS cap sheet as separate piece over Plywood Plinth
11. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
12. Standard Pipe or SHS penetration

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Standard Pipe or SHS penetration with cover board (Mineral wool insulation)				
NUMBER :	SSWRC-D5d			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	



1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Flashing (Quadro) or EQUUS Matacryl
9. EQUUS Alsan Mastic 2200 bitumen sealant
10. uPVC penetration

PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Standard uPVC penetration (PIR insulation)				
NUMBER :	SSWRC-D5e			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

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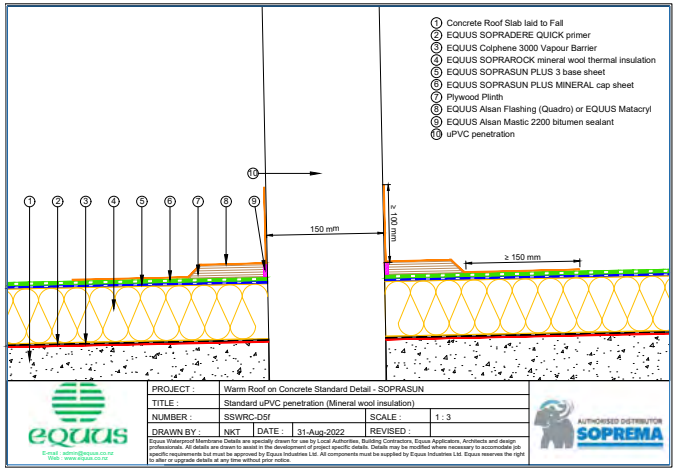
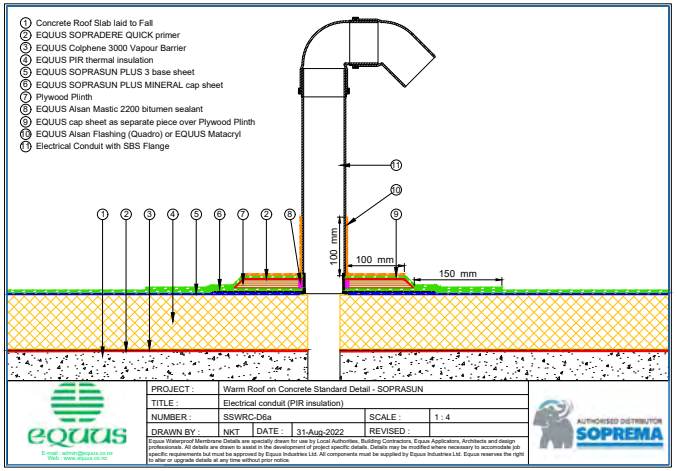
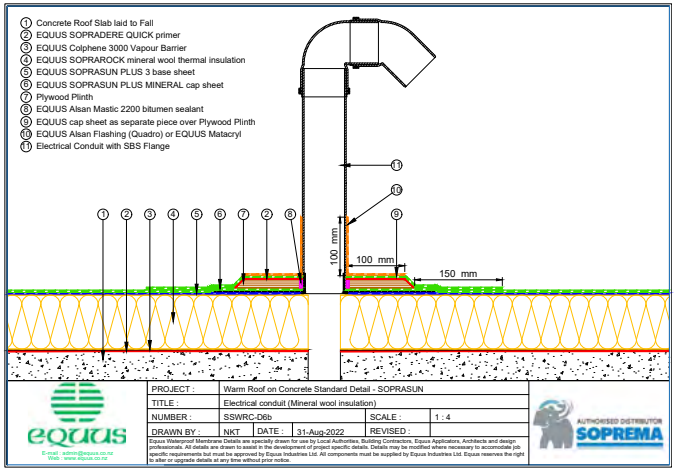
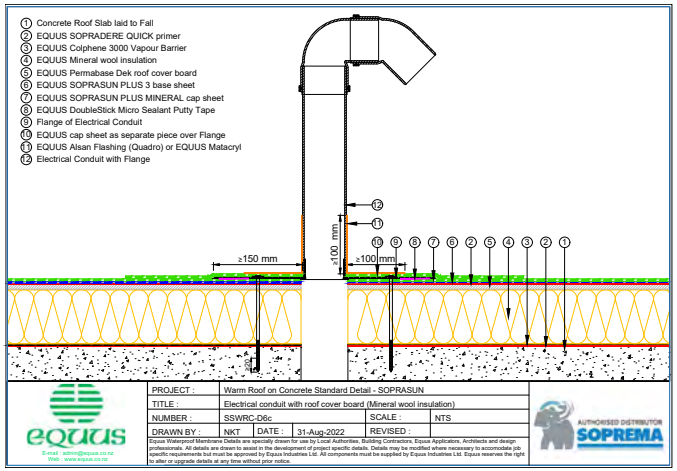
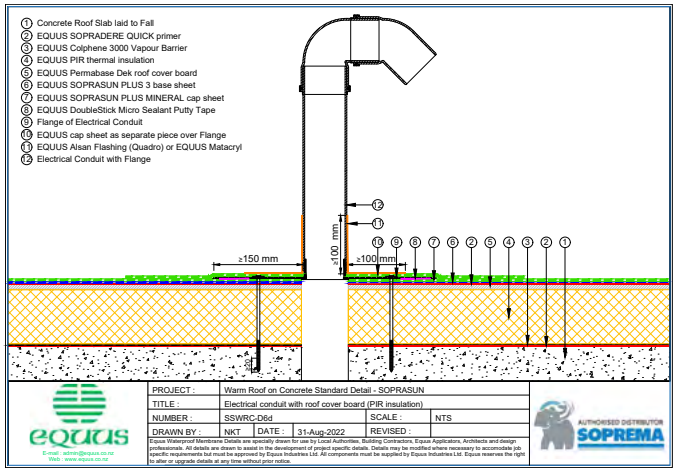
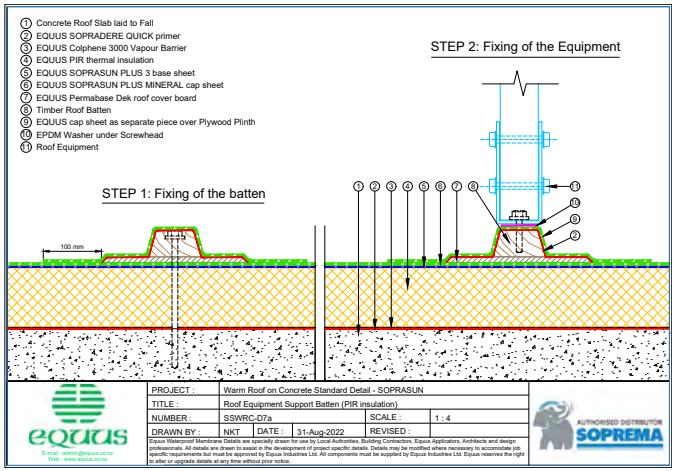


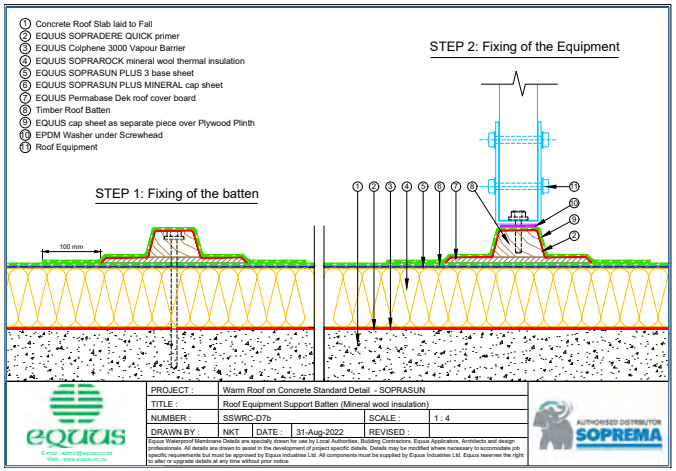


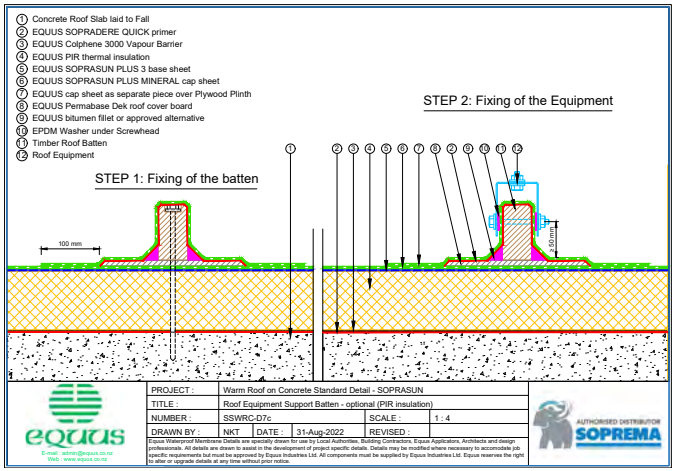


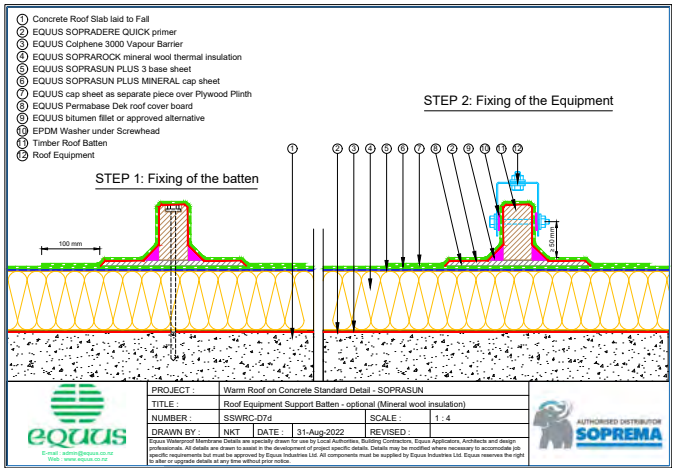






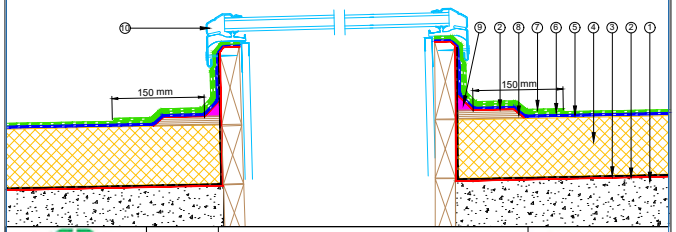






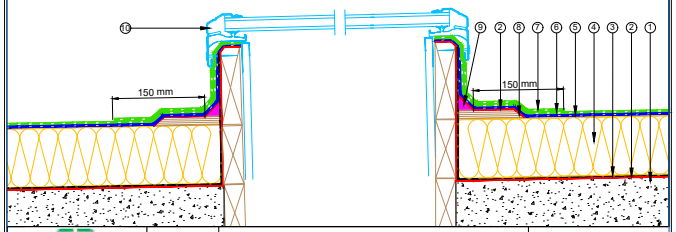
To see or download full size details click here

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS cap sheet as separate piece over Plywood Plinth
8. Plywood Plinth
9. EQUUS bitumen fillet or approved alternative
10. Skylight Joinery



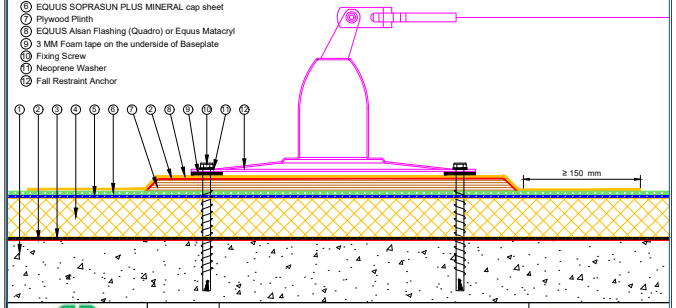
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Skylight (PIR insulation)				
NUMBER :	SSWRC-D8a			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS cap sheet as separate piece over Plywood Plinth
8. Plywood Plinth
9. EQUUS bitumen fillet or approved alternative
10. Skylight Joinery



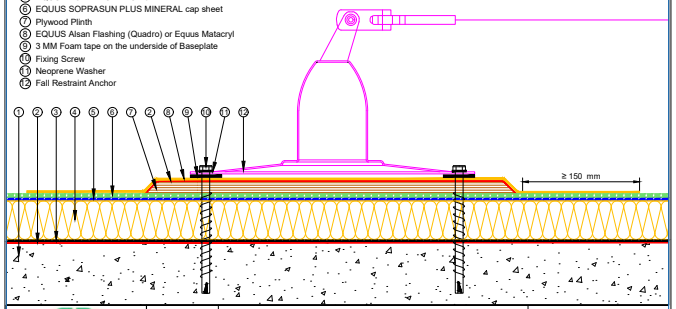
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Skylight (Mineral insulation)				
NUMBER :	SSWRC-D8b			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
9. 3 MM Foam tape on the underside of Baseplate
10. Fixing Screw
11. Neoprene Washer
12. Fall Restraint Anchor



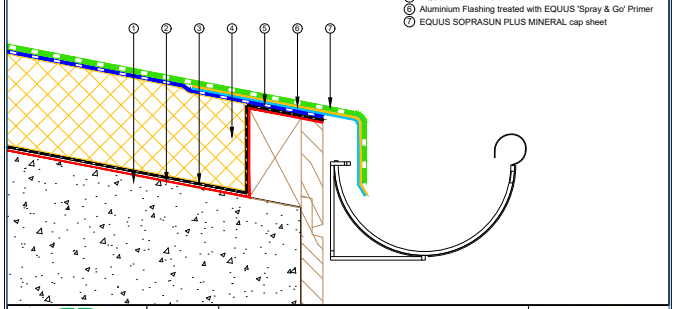
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Fall restraint (PIR insulation)				
NUMBER :	SSWRC-D9a			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. EQUUS Alsan Flashing (Quadro) or Equus Matacryl
9. 3 MM Foam tape on the underside of Baseplate
10. Fixing Screw
11. Neoprene Washer
12. Fall Restraint Anchor



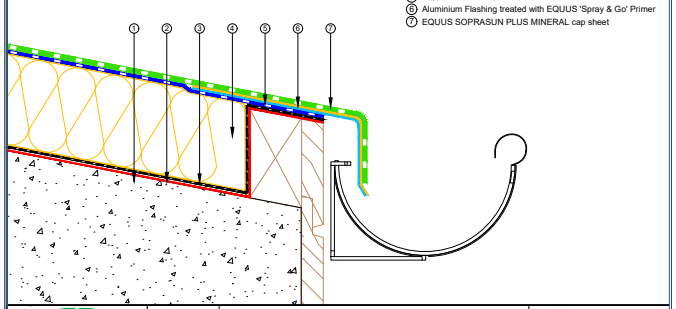
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Fall restraint (Mineral wool insulation)				
NUMBER :	SSWRC-D9b			SCALE :	1 : 3
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. Aluminium Flashing treated with EQUUS 'Spray & Go' Primer
7. EQUUS SOPRASUN PLUS MINERAL cap sheet



PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Connection to External Gutter (PIR insulation)				
NUMBER :	SSWRC-D10a			SCALE :	1 : 2
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. Aluminium Flashing treated with EQUUS 'Spray & Go' Primer
7. EQUUS SOPRASUN PLUS MINERAL cap sheet

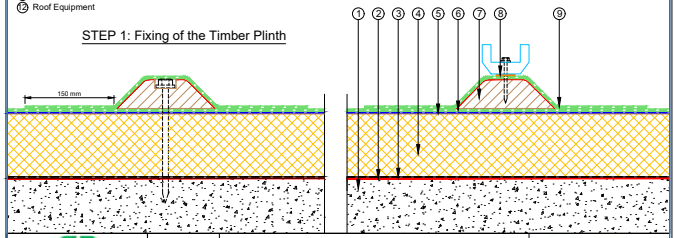


PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Connection to External Gutter (PIR insulation)				
NUMBER :	SSWRC-D10a			SCALE :	1 : 2
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. Monkey Toe Roof Profile Fixing with Neoprene Washer
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EPDM Washer under Screwhead
11. Timber Roof Batten
12. Roof Equipment

STEP 2: Fixing of the Monkey Toe Roof Profile

STEP 1: Fixing of the Timber Plinth

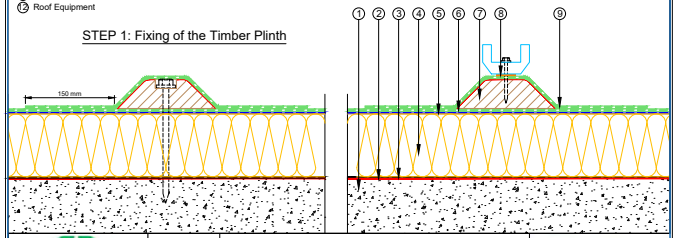


PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Roof Equipment Support Batten - optional (PIR insulation)				
NUMBER :	SSWRC-D11a			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS SOPRAROCK mineral wool thermal insulation
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. Plywood Plinth
8. Monkey Toe Roof Profile Fixing with Neoprene Washer
9. EQUUS cap sheet as separate piece over Plywood Plinth
10. EPDM Washer under Screwhead
11. Timber Roof Batten
12. Roof Equipment

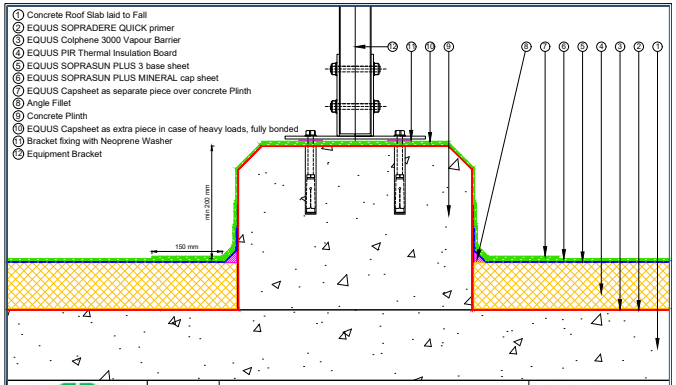
STEP 2: Fixing of the Monkey Toe Roof Profile

STEP 1: Fixing of the Timber Plinth



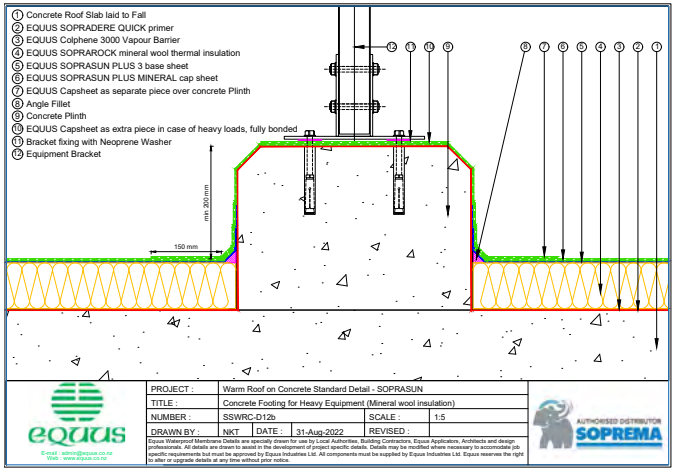
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Roof Equipment Support Batten - optional (Mineral wool insulation)				
NUMBER :	SSWRC-D11b			SCALE :	1 : 4
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

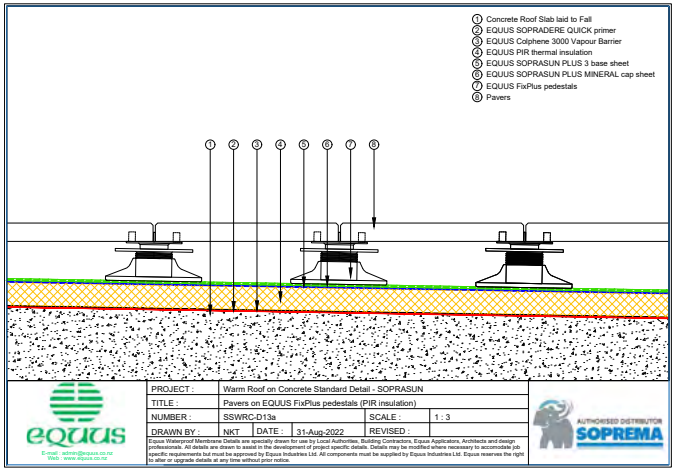
1. Concrete Roof Slab laid to Fall
2. EQUUS SOPRADERE QUICK primer
3. EQUUS Colphene 3000 Vapour Barrier
4. EQUUS PIR Thermal Insulation Board
5. EQUUS SOPRASUN PLUS 3 base sheet
6. EQUUS SOPRASUN PLUS MINERAL cap sheet
7. EQUUS Capsheet as separate piece over concrete Plinth
8. Angle Fillet
9. Concrete Plinth
10. EQUUS Capsheet as extra piece in case of heavy loads, fully bonded
11. Bracket fixing with Neoprene Washer
12. Equipment Bracket

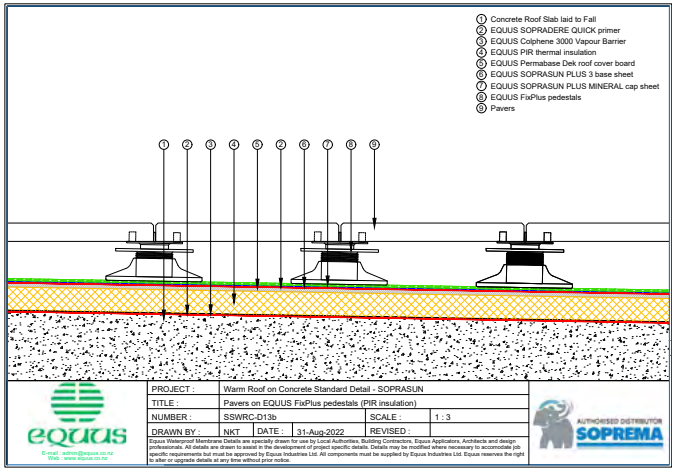


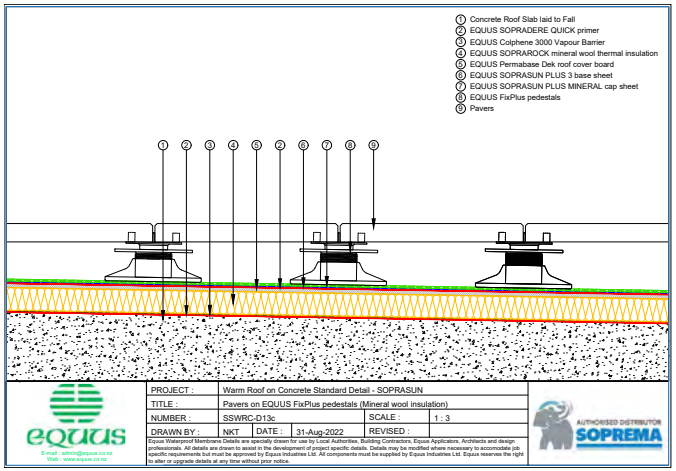
PROJECT :	Warm Roof on Concrete Standard Detail - SOPRASUN				
TITLE :	Concrete Footing for Heavy Equipment (PIR insulation)				
NUMBER :	SSWRC-D12a			SCALE :	1:5
DRAWN BY :	NKT	DATE :	31-Aug-2022	REVISED :	

To see or download full size details click here









WHO ARE WE?

Equus Industries provides technical waterproofing solutions for Architects, Engineers, Property Managers, and Contractors in the building industry. One system does not fit all.

Equus can provide complete solutions, systems, specifications, technical support and warranties.

Equus is the Authorised Distributor for SOPREMA in New Zealand. SOPREMA was founded in 1908 in France and has over 100 factories worldwide producing waterproofing materials and thermal insulation.

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