

# **EQUUS SOPREMA DUO ROOF AND DECK MEMBRANE**

**Standard Building Consent Package** 







# **CONTENTS**

| Brochure                                           | 3  |
|----------------------------------------------------|----|
| Specifications                                     |    |
| 4421EB DUO Roof & Deck Membrane                    | 5  |
| Quality Assurance                                  |    |
| P3402 DUO on Plywood                               | 15 |
| P3401 DUO on Concrete                              | 17 |
| Compliance                                         |    |
| CodeMark Certificate No. CMNZ70151                 | 19 |
| BRANZ Appraisal No. 685                            | 25 |
| DUO Durability Study                               | 33 |
| DUO HT 4 SLATES/F C180 - Environmental Certificate | 35 |
| Reference Sheets                                   | 36 |
| System Techincal Data Sheet                        | 42 |
| Technical Data Sheets                              | 44 |
| Standard Details on Plywood Substrate              | 72 |
| Standard Details on Concrete Substrate             | 75 |



# **EQUUS SOPREMA DUO & DUOTHERM ROOFING**

Two-layer roofing membrane





The EQUUS SOPREMA DUO two-layer waterproofing system consists of a 4.3mm DUO capsheet torched to a 2.5mm basesheet, to form a 6.8mm thick roofing system manufactured by a worldwide leader in waterproofing products, Soprema. DUO roofing membrane provides a hard, stable, UV-resistant, and flexible modified bituminous product, finished with pressed coloured natural slates to provide an aesthetically pleasing finish. It is used for waterproofing old and new, flat and near flat roofs and decks. The system has been assessed and complies with the New Zealand Building Code. This system can be used on plywood and concrete substrates to form a standard cold roof system.

The DUOTHERM warm roof system consists of a vapour barrier, a rigid thermal PIR or a mineral wool thermal insulation board with the DUO waterproofing system. This guarantees a continuous and efficient thermal resistance as per the NZ Building code.

# **Available Colours:**

GW (Grey White)







NOIR (Black)



# **Key Benefits:**

- CodeMark Certified
- **BRANZ Apprasied**
- SOPREMA is the largest supplier of waterproofing products around the world
- 6.8mm thick
- Guaranteed R-value
- Proven UV resistance
- Excellent durability and easy maintenance
- Life expectancy of at least 35 years in NZ climates
- No Flame and mechanically fixed solutions available
- Green roof systems available
- Complete roofing solutions available
- Compatible with Equus FixPlus pedestals for decks

# **Technical Support:**

- Project Specific specifications and details
- Condensation risk analysis for warm roof concepts
- Wind uplift study for warm roof concepts
- On-site quality assurance
- Approved/licensed installation nationwide
- Extended Warranties available
- Total System Warranties available up to 25 years



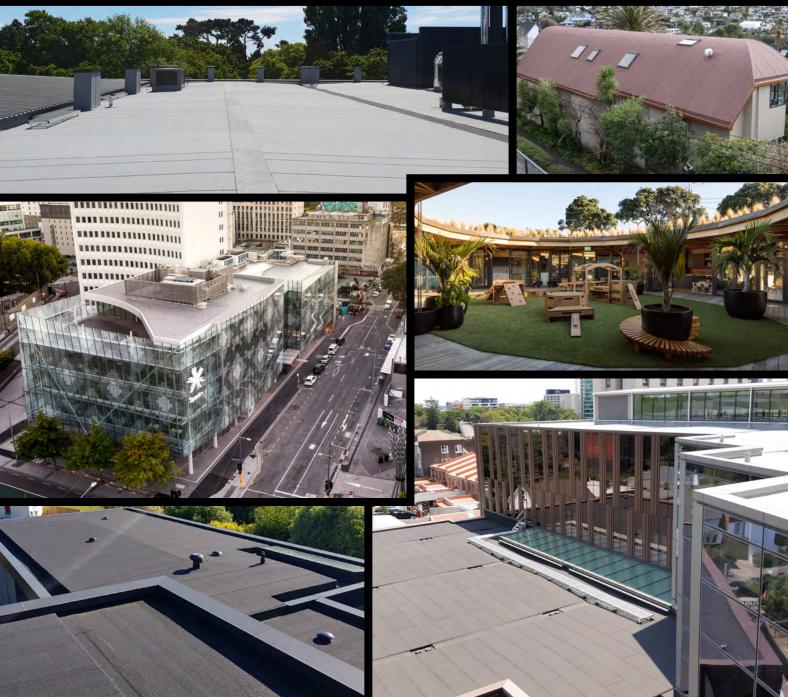




# **EQUUS SOPREMA DUO & DUOTHERM ROOFING**

Two-layer roofing membrane





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# 4421EB EQUUS DUO ROOF & DECK MEMBRANE BY SOPREMA

#### 1 GENERAL

NOTE: Formally known as Equus De Boer Duo Waterproofing Membrane

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

It includes:

- Soprema Duo waterproofing membranes
- All required components and accessories to complete installation

## 1.1 RELATED WORK

Refer to ~ for ~

# 1.2 ABBREVIATIONS AND DEFINITIONS

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

The following abbreviations apply specifically to this section:

PIR Polyisocyanurate

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

The following definitions apply specifically to this section:

SBS modified bitumen Elastomer modified bitumen which are more elastic and

have a better adhesion compared to APP modified bitumen. Ideal for colder climate application.

Plastomer modified bitumen which have a higher

melting point and are harder compared to SBS

modified bitumen. Ideal for warmer climate application

TPO modified bitumen Thermoplastic Polyolefin modified bitumen which have

membrane an excellent UV-resistance.

# **Documents**

APP modified bitumen

#### 1.3 DOCUMENTS

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

NZBC B2/AS1 Durability

NZBC E2/AS1 External moisture

NZS 1170.2:2011 Structural design actions - Wind actions NZS 3114 Specification for concrete surface finishes

NZS 3604 Timber-framed buildings

BS 476-3 Fire tests on building materials and structures. Classification and

method of test for external fire exposure to roofs

EN 1350.5 Fire classification of construction products and building elements.

Classification using data from external fire exposure to roof tests

WMAI COP Waterproofing Membrane Association New Zealand – Reinforced

Waterproofing Membrane Association New Zealand – Reinforced Modified Bitumen Membrane Systems for Roofs and Decks Code

of Practice

CodeMark CMNZ70151 Soprema NZ Ltd Waterproofing Membrane Systems

# 1.4 MANUFACTURER/SUPPLIER DOCUMENTS

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

SOPREMA Roofer's Guide Bituminous Membranes 2021 Product Technical Data Sheets and Safety Data Sheets

BRANZ Appraisal 685 - Soprema Duo Roof and Deck Membrane Systems

BRANZ Appraisal 1169 - Equus Soprema Warm Roof System

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

Membranes

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Manufacturer/supplier contact details

Company: **Equus Industries Ltd**Web: https://equus.nz/

Email: tech.support@equus.co.nz

Telephone: +64 (0)3 353 2434

## Warranties

# 1.5 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

20 years For Equus Soprema Duo range of membranes and proprietary

products. It includes an appropriate Maintenance Statement and

schedule.

- Provide this warranty on the Equus Industries Ltd standard form (if unavailable use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

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

#### 1.6 WARRANTY - INSTALLER/APPLICATOR

Provide an **Equus** certified applicator warranty:

10 years For application of Equus Soprema Duo membrane systems

- Provide this warranty on the applicator standard form (if unavailable use the standard form in the general section 1237WA WARRANTY AGREEMENT)
- Commence the warranty from the date of Practical Completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

# Requirements

# 1.7 NO SUBSTITUTIONS

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

# 1.8 QUALIFICATIONS WORKERS - MANUFACTURER / SUPPLIER REQUIREMENTS

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

## 1.9 PRE-INSTALLATION MEETING

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

# 1.10 SPECIAL DETAILS

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

# 1.11 INFORMATION FOR OPERATION AND MAINTENANCE

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

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

Provide this information prior to Practical Completion.

# **Compliance information**

# 1.12 INFORMATION REQUIRED FOR CODE COMPLIANCE

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Provide the following compliance documentation: -

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

#### **Performance**

# 1.13 PERFORMANCE

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

## 1.14 PERFORMANCE - DURABILITY

Equus Soprema Duo membrane roof system complies with NZBC B2/AS1 when maintained to Equus Industries Limited requirements.

## 1.15 PERFORMANCE - FIRE SAFETY

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

#### Performance - Wind

#### 1.16 WIND DESIGN PARAMETERS - NON-SPECIFIC DESIGN

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

Suitable for design wind pressures up to and including Extra High Wind Zone to NZS 3604.

# 1.17 WIND DESIGN PARAMETERS - SPECIFIC DESIGN

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

# Quality control and assurance

# 1.18 QUALITY CONTROL

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

# 1.19 TESTING - FLOOD

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

# 1.20 TEST - ELECTRONIC LEAK DETECTION

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

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

# 2 PRODUCTS

# **Materials**

# 2.1 BASE SHEET - FULLY BONDED, FOR COLDER CLIMATES

Equus Soprema DeboFlex 2.5mm T/F C175 is a flexible waterproofing membrane consisting of elastomer (SBS) modified bitumen and reinforced with a layer of  $175g/m^2$  non-woven polyester with glass scrim. The membrane has an overlap of 80mm. It is used as a base sheet on plywood, cross laminated timber and concrete substrates in colder climates. Installed by torch-on application. Supplied in 1m x 10m rolls.

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# 2.2 BASE SHEET - FULLY BONDED, FOR WARMER CLIMATES

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

# 2.3 BASE SHEET – SELF ADHERED, FULLY BONDED

Equus Soprema Soprastick (formerrly known as DeboTack T/F C175) is a flexible waterproofing membrane consisting of elastomer (SBS) modified, self-adhesive bitumen and reinforced with a layer of  $175g/m^2$  non-woven polyester with glass scrim. The membrane has an overlap of 80mm. It is used as a base sheet on plywood , cross laminated timber and concrete substrates. Supplied in  $1m \times 10m$  rolls.

# 2.4 BASE SHEET – SELF ADHERED, PARTIALLY BONDED

Equus Soprema Soprastick Venti Tack Plus (formerrly known as DeboTack T/F C175 Aero) is a flexible waterproofing membrane consisting of elastomer (SBS) modified, self-adhesive bitumen and reinforced with a layer of  $175g/m^2$  non-woven polyester with glass scrim. The membrane has a pattern of self-adhesive stripes at the back. The membrane is partially bonded to the concrete substrate and allows vapor distribution under the waterproofing membrane system. Supplied in 1m x 11.25m rolls.

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

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

# 2.6 CAP SHEET - SINGLE LAYER SYSTEM, MECHANICALLY FASTENED

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

# 2.7 CAP SHEET - ROOT RESISTANT FOR GREEN ROOFS AND PLANTERS

Equus Soprema Duo HT 4 Slates/F C180 Firecare Landscape (FC LC), a 4mm thick flexible waterproofing membrane system in a two-layer configuration, comprised of a cap sheet with a TPO modified bitumen upper coating with mechanically pressed-in coloured slates, a SBS modified bitumen under coating and a composite reinforcement of  $180g/m^2$  polyester and glass scrim. The membrane has an overlap of 80mm. This cap sheet is installed on top of the base sheet by fully bonded torch-on application. The membrane is root-resistant according to European Norm EN13948. Supplied in 1m x 8m rolls. Standard colour available is White/Grey/Green (WGG). Refer to SELECTIONS for options.

# Components

# 2.8 PRIMER - SOPRADERE QUICK PRIMER

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

## 2.9 PRIMER - EQUUS PEEL & STICK

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

# 2.10 EQUUS SOPREMA FASTENERS

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

# 2.11 BITUMINOUS SEALANT

Equus Alsan Mastic 2200 by SOPREMA bitumen sealant

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# 2.12 MINERAL CHIP DRESSING

Equus Duo Mineral Chip scattered as needed to form uniform appearance.

# 2.13 EQUUS SOPREMA TERMINATION PROFILE

Equus Soprema C-profile to terminate the cap sheet to the wall or upstand.

# 2.14 EQUUS SOPREMA ROOF EDGE PROFILE

Equus Soprema roof edge profile to terminate the cap sheet at roof edges.

#### 2.15 EQUUS LIQUID WATERPROOFING

Equus Matacryl liquid applied waterproofing for penetrations and other details as per detail drawings.

# 2.16 BITUMEN ANGLE FILLET

Equus Bitumen Angle Fillet is used instead of plywood angle fillet for increased flexibility and compatibility with bituminous waterproofing membranes.

#### 2.17 DRAINAGE CELL - GREEN ROOF

Equus drainage & filter layer to ensure retention of soil and provide sufficient water to support plant growth while draining excess water.

#### **Accessories**

#### 2.18 ROOF VENT

Equus Short Roof Vent domed vent 250mm  $\emptyset$  x 100mm high.

#### 2.19 OUTLETS - ROOF DRAINS AND OVERFLOWS

Allproof roof drains and overflows. Refer to SELECTIONS.

# 2.20 OUTLETS - SCUPPER

Equus Stainless Steel Scupper 200mm wide x 75mm high aperture.

# 2.21 FLOATING DECK AND PAVER SUPPORT SYSTEM

Refer to 4381EF EQUUS FIXPLUS DECK & TILE SUPPORT SYSTEM for Equus Fixplus range of pedestals and tile supports. Pedestals are customisable to be compatible with a range of flooring materials.

# 2.22 EQUUS SOPREMA KRAITEC STEP RUBBER TILE

Rubber tiles 500mm x 500mm x 30mm thick with integrated drainage pattern for balconies, terraces or walkways for roof maintenance.

Standard colour: Grey with black, green and red available on request. Refer to SELECTIONS.

# 2.23 EQUUS SOPREMA SOPRASOLAR FIX EVO TILT

Non-penetrating support system for solar photovoltaic panels.

# 3 EXECUTION

### **Conditions**

# 3.1 DELIVERY, STORAGE & HANDLING OF PRODUCTS

Refer to the general section 1270 CONSTRUCTION for requirements relating to delivery, storage and handling of Equus Industries Limited product.

Take delivery of rolls of Equus Soprema Duo membrane and accessories undamaged. Include for site handling facilities where required. Store, on a level surface, off floors, out of direct sunlight and with the required accessories under conditions that ensure no deterioration or damage. Rolls should be stored upright to maintain roll shape.

# 3.2 ROUTINE MATTERS

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

# 3.3 PRE-INSTALLATION REQUIREMENTS

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

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Ensure moisture content is:

Timber substrate: 20% maximum

Concrete substrate: 75% maximum Relative Humidity

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

#### 3.4 WEATHER

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

#### 3.5 EQUIPMENT

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

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

# **Application**

# 3.6 GENERALLY

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

# 3.7 STANDARDS AND TOLERANCES

Refer to the general section 1270 CONSTRUCTION for general requirements.

## 3.8 PRELIMINARY WORK

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

# 3.9 MINIMUM FALLS

Ensure minimum falls for SOPREMA DUO membrane systems are:

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

# Installation requirements - plywood substrate

# 3.10 PLYWOOD SUBSTRATE - GENERAL

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

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

# 3.11 PLYWOOD CORNERS

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

# Installation Requirements - Concrete substrate

# 3.12 CONCRETE SUBSTRATE - GENERALLY

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

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

#### 3.13 CONCRETE CORNERS

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

## Installation Requirements - Cross Laminated Timber (CLT)

#### 3.14 CROSS LAMINATED TIMBER SUBSTRATE GENERALLY

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

# 3.15 CROSS LAMINATED TIMBER CORNERS

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

# Installation Requirements - Existing membrane substrates

# 3.16 EXISTING MEMBRANE SUBSTRATE GENERALLY

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

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

#### 3.17 INSTALL ELECTRONIC LEAK DETECTION CONDUCTIVE SURFACE

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

# Installation - Equus Soprema Duo membrane

#### 3.18 CONTROL AND EXPANSION JOINTS

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

# 3.19 APPLY PRIMER - EQUUS SOPRADERE QUICK PRIMER

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

# 3.20 APPLY PRIMER - EQUUS PEEL & STICK PRIMER

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

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

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

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

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

# 3.23 APPLY BASE SHEET - SELF-ADHESIVE APPLICATION





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

# 3.24 APPLY BASE SHEET - SELF-ADHESIVE APPLICATION TO CONCRETE

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

#### 3.25 APPLY CAP SHEET - TORCH-ON APPLICATION

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

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

# 3.26 APPLY CAP SHEET - MECHANICALLY FIXED

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

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

## 3.27 DETAILING

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

# **Finishing**

#### 3.28 COMPLETION INSPECTION

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

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

#### 3.29 INSTALL PHOTOVOLTAIC PANEL SUPPORTS

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

# 3.30 INSTALL KRAITEC STEP RUBBER TILES

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

# 3.31 DRAINAGE - GREEN ROOF







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

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

#### 3.32 GROWING MEDIUM AND PLANTING - GREEN ROOF

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

#### **Testing Procedure**

# 3.33 FLOOD TESTING

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

# Completion - general

## 3.34 ACCEPTANCE

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

#### 3.35 COMPLETION MATTERS

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

#### 4 SELECTIONS

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

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

# **Materials**

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

Location: ~

Supplier: Equus Industries Ltd

Substrate:

Type: Soprema Duo Firecare

Primer: ~

Base sheet: ~

Cap sheet: Duo HT4 Slates/F C180 Firecare (FC)

Colour: ~

4.2

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

Location:

Supplier: Equus Industries Ltd

Substrate:

Type: Soprema Duo Firecare Mecano
Base sheet: No base sheet (single layer system)
Cap sheet: Duo HT4 Slates/F C180 Firecare Mecano

Colour: ~

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

Location: ~

Supplier: Equus Industries Ltd.

Substrate: ~

Type: Soprema Duo Firecare Landscape (FC LC)

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Primer: ~
Base sheet: ~

Cap sheet: Duo HT4 WGG/F C180 Firecare Landscape (FC LC)

Colour: White/Green/Grey (WGG)

Drainage layer: Equus drainage cell complete with integrated geotextile filter fabric

of 140gsm

Growing medium: ~

# Accessories

### 4.4 ROOF VENT

Location:

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

# 4.5 ROOF DRAIN

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

#### 4.6 OVERFLOW

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

Grill: Overflow

# 4.7 OUTLETS - STAINLESS STEEL SCUPPERS

Location:

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

# 4.8 EQUUS SOPREMA KRAITEC STEP RUBBER TILES

Location:

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

Colour: ~

# 4.9 EQUUS SOPREMA SOPRASOLAR FIX EVO TILT SOLAR PANEL SUPPORTS

Location: ~

Type/brand: Equus Soprasolar

# **Electronic Leak Detection**

# 4.10 ELECTRONIC LEAK DETECTION SYSTEM

Location: ~
Substrate: ~
System: ~







Quality Assurance

# **EQUUS SOPREMA DUO**

Two layer membrane system applied to plywood surfaces

| Spe               | cincation No: P340                                                                                    | 02                                                                                   |                                                                               | Date Prepared: November 202                                                                                                                                                                                            | :3    |
|-------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| Proj              | ect & Address:                                                                                        |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
|                   |                                                                                                       |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| Cert              | ified Applicator:                                                                                     |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| Buil              | ding Contractor:                                                                                      |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| Buil              | ding Owner/Property M                                                                                 | anager:                                                                              |                                                                               |                                                                                                                                                                                                                        |       |
| 1. St             | tatement of Intent                                                                                    |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| (a)<br>(b)<br>(a) | step record of comp<br>requirements of the Ma<br>A copy of this checklist<br>Warranty will not be iss | liance with both<br>anufacturers for Wart<br>t must be forwarde<br>sued by Equus Ind | the Equus Specit<br>arranty.<br>ed to the nearest Re<br>lustries Ltd. without | ator and the Building Contractor, as a ste<br>fication provided for the contract, and<br>gional Office of Equus Industries Ltd. A<br>a copy of this Checklist being filed.<br>ocumentation filed with the Property Man | the   |
| 2. A              | reas Treated                                                                                          |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| The               | areas to which Membran                                                                                | ne is applied are de                                                                 | etailed below, with r                                                         | eference to plans (where appropriate).                                                                                                                                                                                 |       |
|                   |                                                                                                       |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| 3. Si             | ign Off                                                                                               |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| We each           | confirm that all applicable<br>n stage has been made b                                                | e processes listed<br>by a person with the                                           | in Section 4 have e authority to do so.                                       | been correctly completed and that sign-o                                                                                                                                                                               | ff or |
| For:              |                                                                                                       |                                                                                      |                                                                               | (Signature)                                                                                                                                                                                                            |       |
|                   | (Building Contractor)                                                                                 |                                                                                      |                                                                               |                                                                                                                                                                                                                        |       |
| Date              | e: <u>/ /</u>                                                                                         |                                                                                      |                                                                               | (Name)                                                                                                                                                                                                                 |       |
| For:              |                                                                                                       |                                                                                      |                                                                               | (Signature)                                                                                                                                                                                                            |       |
| Doto              | (Equus Applicator)                                                                                    |                                                                                      |                                                                               | (Name)                                                                                                                                                                                                                 |       |
| Date              | ;. <i> </i>                                                                                           |                                                                                      |                                                                               | (INAILIE)                                                                                                                                                                                                              |       |







# 4. Checklist And Method Statement

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

| No.  | Process                                                                                                                                                                                                                                                                                                        | Completed<br>On | Building<br>Contractor | Equus<br>Contractor | Notes                |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|---------------------|----------------------|
| 1.*  | Plywood shall be a minimum 17mm C-D structural plywood for roof areas, and a minimum of 20mm for trafficable deck areas.                                                                                                                                                                                       |                 |                        |                     |                      |
| 2.*  | All sheets laid out to maximize use of whole sheets. All sheet joints to be laid over framing members.                                                                                                                                                                                                         |                 |                        |                     |                      |
| 3.*  | Sheets laid tight butt jointed. Where condensation likely, prepare edges with <b>Chevaprime PBT</b> .                                                                                                                                                                                                          |                 |                        |                     |                      |
| 4.*  | Screw fixing using countersunk corrosion resistant screws. All sheets laid in a bead of construction adhesive.                                                                                                                                                                                                 |                 |                        |                     |                      |
| 5.*  | For two layer plywood installation the first layer maybe power nailed but second layer screw fixed.                                                                                                                                                                                                            |                 |                        |                     |                      |
| 6.*  | Falls to be incorporated as per plans:  ☐ Specified falls: or standard minimum falls: ☐ Cuttors 1:400 ☐ Reaf 1:80 ☐ Reak 1:80                                                                                                                                                                                  |                 |                        |                     |                      |
|      | ☐ Gutters 1:100 ☐ Roof 1:80 ☐ Deck 1:80                                                                                                                                                                                                                                                                        |                 |                        |                     |                      |
| 7.   | Plywood surface satisfactory for installation of Duo membrane by Equus Applicator.                                                                                                                                                                                                                             |                 |                        |                     |                      |
| 8.   | Apply one full coat of <b>SOPRADERE QUICK</b> by brush/roller at spreading rate 5 sqm/litre. Allow to dry 4 - 24 hours, depending on prevailing conditions.                                                                                                                                                    |                 |                        |                     |                      |
| 9.   | (Nominate SOPREMA Basesheet) Unroll <b>DuO</b> basesheet, align and cut to length, discard packaging. Re-roll each end back to center. Torch evenly to both basesheet and primer as unrolled. Maintain side laps of approx. minimum 80mm and head laps of 100mm.                                               |                 |                        |                     |                      |
| 10.  | (Nominate SOPREMA Capsheet) Unroll <b>DuO</b> capsheet, align and cut to length, discard packaging. Re-roll each end back to center. Torch evenly and off-set laps to not coincide with basesheet. All joints back sealed separately ensure correctly closed. Maintain a minimum 80mm side and 100mm head lap. |                 |                        |                     |                      |
| 11.  | Detailing shall occur using <b>DuO</b> capsheet and/or <b>EASY FLASHING or Matacryl Thix/ Dexx Topcoat</b> on all outlets, pipe penetrations, gutter stops ends, parapet upstands, machinery plinths and anything above or below roof surface.                                                                 |                 |                        |                     |                      |
| 12.* | System to be inspected on completion.                                                                                                                                                                                                                                                                          |                 |                        |                     |                      |
| 13.  | Re-inspection of work after 2–3 weeks.                                                                                                                                                                                                                                                                         |                 |                        |                     | Equus Industries Ltd |

PO Box 601, Blenheim Phone: 03 578 0214 Email: admin@equus.nz www.equus.nz







Quality Assurance

# **EQUUS SOPREMA DUO**

Two layer membrane system applied to concrete surfaces

| Specification No: P3401                                                                                                                                                        | Date Prepared: November 2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project & Address:                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Certified Applicator:                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Building Contractor:                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Building Owner/Property Man                                                                                                                                                    | ager:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 1. Statement of Intent                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| step record of compliar requirements of the Manu (b) A copy of this checklist m Warranty will not be issue (a) A copy of this checklist s on job completion.  2. Areas Treated | impleted by both the Equus Applicator and the Building Contractor, as a step by nce with both the Equus Specification provided for the contract, and the ufacturers for Warranty.  Insust be forwarded to the nearest Regional Office of Equus Industries Ltd. A led by Equus Industries Ltd. without a copy of this Checklist being filed. Should form part of the Contract Documentation filed with the Property Manager is applied are detailed below, with reference to plans (where appropriate). |
|                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                | processes listed in Section 4 have been correctly completed and that sign-off on a person with the authority to do so.                                                                                                                                                                                                                                                                                                                                                                                 |
| For: (Building Contractor)                                                                                                                                                     | (Signature)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Date: / /                                                                                                                                                                      | (Name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| For: (Equus Applicator)                                                                                                                                                        | (Signature)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Date: / /                                                                                                                                                                      | (Name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |







# 4. Checklist And Method Statement

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

| No       | Process                                                                                                                                                                                                                                                                                     | Completed<br>On | Building<br>Contractor | Equus<br>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 Chevacryl Admix Plasterand 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 Duo membrane by Equus Applicator.                                                                                                                                                                                                         |                 |                        |                     |       |
| 8.       | Apply one full coat of <b>SOPRADERE QUICK</b> by brush/roller at spreading rate 5-6 sqm/litre. Allow to dry minimum 1 hour, depending on prevailing conditions.                                                                                                                             |                 |                        |                     |       |
| 9.       | (Nominate SOPREMA Basesheet) Unroll <b>DUO</b> basesheet, align and cut to length, discard inner roll packaging, re-roll each end back to center. Torch evenly to both basesheet and primer as unrolled. Maintain laps of approx. minimum 80mm.                                             |                 |                        |                     |       |
| 10.      | (Nominate SOPREMA Capsheet) Unroll <b>DUO</b> capsheet, align and cut to length, re-roll each end back to center. Torch evenly and off-set laps to not coincide with basesheet. All joints back sealed separately ensure correctly closed. Maintain a minimum 80mm side and 100mm head lap. |                 |                        |                     |       |
| 11.      | Detailing shall occur using <b>DUO</b> capsheet and/or <b>EASY FLASHING</b> or <b>Matacryl Thix/ Dexx Topcoat</b> on all outlets, pipe penetrations, gutter stops ends, parapet upstands, machinery plinths and anything above or below roof surface.                                       |                 |                        |                     |       |
| 12.<br>* | System to be inspected on completion.                                                                                                                                                                                                                                                       |                 |                        |                     |       |
| 13.      | Re-inspection of work after 2 – 3 weeks.                                                                                                                                                                                                                                                    |                 |                        |                     |       |

Equus Industries Ltd PO Box 601
Blenheim
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Email: admin@equus.nz
www.equus.nz



# **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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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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**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  $\bar{\text{to}}$  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

Mund-

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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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),
   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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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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**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

#### 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



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# **BRANZ Appraised**

Appraisal No. 685 [2021]

# SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

#### Appraisal No. 685 (2021)

This Appraisal replaces BRANZ Appraisal No. 685 (2016)

Amended 13 November 2023



#### **BRANZ Appraisals**

Technical Assessments of products for building and construction.



#### Soprema nv

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#### **BRANZ**

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# **Product**

1.1 Soprema DuO Roof and Deck Membrane Systems are modified bitumen waterproofing membranes for roofs and decks.

# Scope

- 2.1 Soprema DuO Roof and Deck 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; or,
  - the scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1 with regard to building height and floor plan area when subject to specific structural design; and,
  - with substrates of plywood or suspended concrete slab; and,
  - with minimum falls for roofs of 1:30, plywood decks of 1:40 and suspended concrete slabs of 1:60; and,
  - with minimum falls for decks of 1:40; and,
  - · with deck size limited to 40 m2; and,
  - situated in NZS 3604 Wind Zones up to, and including, Extra High.
- 2.2 Soprema DuO Roof and Deck Membrane Systems have also been appraised as roof and deck waterproofing membrane on buildings within the following scope:
  - · subject to specific structural and weathertightness design; and,
  - with substrates of plywood or suspended concrete slab; and,
  - situated in specific design wind pressures up to a maximum design differential ultimate limit state [ULS] of 4.5 kPa; and,
  - with the weathertightness design of junctions for each specific structure being the responsibility
    of the building designer.
- 2.3 Roofs and decks waterproofed with Soprema DuO Roof and Deck Membrane Systems must be designed and constructed in accordance with the following limitations:
  - nominally flat roofs and decks and pitched roofs 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 discharging directly to decks; and,
  - with the deck membrane continually protected from physical damage by a pedestal protection system
- 2.4 The design and construction of the substrate and movement and control joints is specific to each building, and therefore is the responsibility of the building designer and building contractor and is outside the scope of this Appraisal.
- 2.5 The membranes must be installed by Equus Industries Ltd approved applicators.

Readers are advised to check the validity of this Appraisal by referring to the Valid Appraisals listing on the BRANZ website, or by contacting BRANZ.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

# **Building Regulations**

# New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Soprema DuO Roof and Deck 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 DuO Roof and Deck Membrane Systems meet this requirement. See Paragraph 10.1.

**Clause E2 EXTERNAL MOISTURE:** Performance E2.3.1 and E2.3.2. Soprema DuO Roof and Deck Membrane Systems meets these requirements. See Paragraphs 13.1–13.9.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Soprema DuO Roof and Deck Membrane Systems meet this requirement.

# **Technical Specification**

- 4.1 Materials supplied by Equus Industries Ltd are as follows:
  - DeboPlast 2.5 mm T/F C175 a 2.5 mm thick, APP 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.
  - DeboFlex 2.5 mm T/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 2.5 mm T/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 a self-adhesive underlayer 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 2.5 mm T/F C175 Aero a 2.5 mm thick, SBS modified bitumen-based sheet
    waterproofing membrane with a mixture of talcum and sand on the upper surface and the
    under-layer of heat resistant polypropylene fleece with self-adhesive bitumen strips 55 mm wide
    to create partial bonding to the substrate. It is used as a base layer in multi-layer systems. It has
    a composite reinforcement of 175 g/m² and is supplied in 1 m x 10 m rolls.
  - DuO HT 4 Slates/F C180 Firecare a nominal 4 mm thick TPO/SBS composite bitumen torchapplied sheet waterproofing membrane with a coloured slate granule upper surface finish and
    a polyethylene under-finish used as a cap sheet in a multi-layer system. It has a composite
    reinforcement of polyester and glass of 180 g/m². It is supplied in 1 m x 8 m rolls.
  - DuO HT 4 Slates/F C180 Aero Firecare a nominal 4 mm thick TPO/SBS composite bitumen torch-applied sheet waterproofing membrane with a coloured slate granule upper surface finish and an under layer of pure SBS strips with polyethylene foil finish to allow vapour distribution under the waterproofing, used as a cap sheet in a single-layer system. It has a composite reinforcement of polyester and glass of 180 g/m². It is supplied in 1 m x 8 m rolls.
  - DuO HT 4 Slates/F C180 Firecare Mecano a nominal 4 mm thick TPO/SBS composite bitumen sheet waterproofing membrane with a coloured slate granule upper surface finish and an underfinish of polyethylene foil which is designed to be mechanically fastened to the roof, used as a single layer system on concrete, or as a cap sheet in a multi-layer system. It has a composite reinforcement of polyester and glass of 180 g/m². It is supplied in 1 m x 8 m rolls.
  - Du0 HT 4 Slates/PP C180 Firecare No Flame a nominal 4 mm thick TPO/SBS composite
    bitumen sheet waterproofing membrane with a coloured slate granule upper surface finish and
    an under-finish of polypropylene fleece which can be partially or fully bonded without heat, used
    as a cap sheet in a multi-layer system. It has a composite reinforcement of polyester and glass
    of 180 g/m². It is supplied in 1 m x 8 m rolls.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

- Antirock a nominal 5 mm TPO/SBS composite bitumen, torch-applied sheet waterproofing
  membrane with a grey granule upper surface finish and an under-finish of polyethylene foil. It has
  a composite reinforcement of polyester and glass of 250 g/m² to provide a higher reinforcement
  level for greater heat resistance, elongation and strength used as a cap sheet under hot applied
  asphalt mixes. It is supplied in 1 m x 8 m rolls.
- DuO HT 4 Slates/ F C180 Firecare Landscape a nominal 4 mm TPO/SBS composite bitumen, torch-applied sheet waterproofing membrane with a coloured slate upper surface finish and an under-finish of polyethylene foil. It has a composite reinforcement of polyester and glass of 180 g/m². It is root-resistant according to EN13948 and applicable for green roofs. It is used as a cap sheet in multi-layer systems. It is supplied in 1 m x 8 m rolls.
- Du0 HT 4 Slates/ F C180 Firecare a nominal 4 mm TPO/SBS composite bitumen, torch-applied sheet waterproofing membrane with a coloured slate granule upper surface finish and an underfinish of polyethylene foil. It has a composite reinforcement of polyester and glass of 180 g/m². It is designed for fire resistant applications and used a cap sheet in multi-layer systems. It is supplied in 1 m x 8 m rolls.
- DuO Primer, Sopradere Quick a solvent-based, bituminous varnish used to prime dry and porous surfaces. It is supplied in 25 L containers.
- DuO Primer, Aquadere a water-based, bituminous primer used to prime dry and porous surfaces. It is supplied in 25 L containers.
- DuO Kit Sealant, Aslan Mastic 2200 a bituminous adhesive/sealant used for cold bonding and sealing when necessary. It is a black paste, supplied in 310 ml cartridges.
- DuO Fix PU Cold Adhesive a PU cold adhesive for adhering DuO No Flame waterproofing membranes.
- · Equus Fix Plus Pedestals adjustable pedestal protection system.
- DuO Cold Glue a bituminous cold adhesive for adhering DuO No Flame waterproofing membranes. It is supplied in 25 kg cans.
- Permabase Deck Roof Cover Board is a lightweight cement roof cover board for modified bitumen waterproofing membranes. It is supplied as a 2,400 mm x 1,200 mm x 9 mm thick 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 approved applicators. 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 DuO Roof and Deck Membrane, BRANZ Appraisal No. 685 Technical Literature, dated January 2023.
- 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 DuO Roof and Deck Membrane Systems are for use on roofs, decks, gutters and parapets 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 DuO Roof and Deck Membrane Systems.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

- 7.2 Soprema DuO Roof and Deck Membrane Systems are normally applied as double layer systems, with a base layer and cap layer. There are a number of different options available, Equus Industries Ltd should be consulted for the best option depending on performance requirements.
- 7.3 The effective control of internal moisture must be considered at the design stage because of the impermeability of the membranes. Refer to the BRANZ Good Practice Guide: Membrane Roofing.
- 7.4 Where regular foot traffic on the roof is envisaged i.e. maintenance of lift equipment, a walkway should be installed to ensure the membrane is protected. The Soprema DuO Roof and Deck Membrane Systems are designed for limited, irregular pedestrian access only.
- 7.5 Soprema DuO Roof and Deck Membrane Systems can be used exposed or covered with a ballast layer. Equus Industries Ltd should be consulted for ballast options.
- 7.6 Soprema DuO Roof and Deck Membrane Systems, when used on decks, require a pedestal protection system. Equus Industries Ltd should be contacted for the best system to meet design requirements.
- 7.7 NZBC Acceptable Solution E2/AS1 limits the size of decks to 40 m². Soprema DuO Roof and Deck Membrane Systems are suitable for use on decks larger than 40 m². These decks are subject of specific design, in accordance with Paragraph 2.2.

# Structure

- 8.1 Timber framing systems must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. In all cases framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and that all sheet edges are fully supported.
- 8.2 Soprema DuO Roof and Deck Membrane Systems fully bonded double layer systems are suitable for use in areas subject to maximum wind pressures of 4.5 kPa ULS.

# **Substrates**

# Plywood

9.1 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. Where specific design is used (i.e. outside the scope of E2/AS1), the plywood thickness and fixing size may increase and centres may decrease to meet specific wind loadings. Timber framing must comply with NZS 3604, or where specific engineering design is used, the framing shall be of at least equivalent stiffness to the framing provisions of NZS 3604, or comply with the serviceability criteria of AS/NZS 1170. In all cases, framing must be provided so that the maximum span of the substrate as specified by the substrate manufacturer is met and all sheet edges are fully supported.

# 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.

# **Existing Construction**

- 9.3 A thorough inspection of the substrate must be made to ensure it is in fit condition and does not contain any materials that will adversely affect the performance of the membrane.
- 9.4 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.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

# Durability

#### Serviceable Life

10.1 Soprema DuO Roof and Deck Membrane Systems will have a durability of at least 15 years and an expected serviceable life of over 25 years, provided they are 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 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

- 11.1 Soprema DuO Roof and Deck Membrane Systems must be regularly (at least annually) checked for damage, rubbish or debris. Damage, such as small punctures and tears, must be repaired as recommended by Equus Industries Ltd.
- 11.2 Special care must be taken when inspecting the membrane roof systems 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 Soprema DuO Roof and Deck 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 Acceptable Solution C/AS2 provide methods for separation and protection of combustible materials from heat sources.

#### **External Moisture**

- 13.1 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.
- 13.2 When installed in accordance with this Appraisal and the Technical Literature, Soprema DuO Roof and Deck 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 or deck.
- 13.3 Roof and deck falls must be built into the substrate and not created with mortar screeds applied over the membrane.
- 13.4 The minimum fall to plywood roofs or decks is 1 in 30, concrete is 1 in 60, and gutters is 1 in 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.]
- 13.5 Allowance for deflection and settlement of the substrate must be made in the design of the roof or deck to ensure falls are maintained and no ponding of water can occur.
- 13.6 Soprema DuO Roof and Deck 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.
- 13.7 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 or deck does not drain to an external gutter or spouting.
- 13.8 Penetrations and upstands of the membranes must be raised above the level of any possible flooding caused by the blockage of roof or deck drainage.
- 13.9 The design of details not covered by the Technical Literature is subject to specific weathertightness design and is outside the scope of this Appraisal.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

# Water Supplies

- 14.1 Water is not contaminated by Soprema DuO Roof and Deck Membrane Systems.
- 14.2 The first 25 mm of rainfall from a newly installed Soprema DuO Roof and Deck Membrane Systems roof must be discarded before water collection starts. This is to remove residues which may have developed in the processes involved in the production of a Soprema DuO Roof and Deck Membrane Systems roof.
- 14.3 Though Soprema DuO Roof and Deck Membrane Systems 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.

# Installation Information

# Installation Skill Level Requirement

15.1 All design and building work must be carried out in accordance with the Soprema DuO Roof and Deck Membrane Systems Technical Literature and this Appraisal. All building work must be undertaken by Equus Industries Ltd approved applicators. Where the work involves Restricted Building Work this must also be completed by, or under the supervision of, a Licensed Building Practitioner (LBP) with the relevant License Class.

# Preparation of Substrates

- 16.1 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.
- 16.2 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.
- 16.3 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. This will generally require plywood sheets to be covered until just before the membrane is laid, to prevent rain wetting.
- 16.4 All substrates must be primed with DuO Primer and left to dry before the membrane is installed.

# Membrane Installation

- 17.1 The membranes must be installed in accordance with the Technical Literature.
- All roof and wall junctions must have a 20 mm x 20 mm wooden fillet installed at the junction. Concrete substrate junctions must have a 20 mm x 20 mm cement mortar fillet installed. All external edges must be chamfered to a 5 mm radius to remove sharp edges. Alternatively, bitumen fillets of 25 mm x 25 mm can be used.
- 17.3 The membrane is installed from the lowest point allowing 80 mm side overlap and a 100 mm end overlap. The cap sheet layer must be offset against the base sheet layer. (Note: These are minimum overlap widths. Refer to the Technical Literature for the specific overlap widths for the product being specified.)

# Inspections

- 18.1 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 manufacturer's instructions.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS

# **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 DuO Roof and Deck Membrane Systems:
  - · Physical properties included tensile strength, elongation, tear strength, dimensional stability.
  - Service performance testing included low temperature flexibility, heat resistance, static and dynamic indentation, fatigue cycling and peel resistance.
  - Testing by SGS for dimensional stability, tear resistance, tensile strength, elongation at break, low temperature flexibility, heat resistance and tensile shear at joints.
  - British Board of Agrément No. 98/3537.

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 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.
- 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 approved applicators.
- 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 Good Practice Guide: Membrane Roofing, October 2015.
- NZS 3101:2006 The design of concrete structures.
- · 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 27 April 2022

This Appraisal has been amended to clarify the Appraisal scope.

# Amendment No. 2, dated 13 November 2023

This Appraisal has been amended to update the membrane name from DuO B&T Gran/F C250 to Antirock.







SOPREMA DUO ROOF AND DECK MEMBRANE SYSTEMS



In the opinion of BRANZ, Soprema DuO Roof and Deck 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 nv, 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 nv:
  - 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 quality of work;
  - 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 nv.
- 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, quarantee, indemnity or warranty, to Soprema nv or any third party.

For BRANZ

Chelydra Percy Chief Executive

Date of Issue:

07 July 2021







# DuO membrane durability study in NZ climate conditions - Introduction

The development of DuO as a new concept for a high value, bituminous waterproofing membrane dates back to 1989. The first substantial DuO roofs were installed in 1990.

In 2000, after DuO had been launched as a revolutionary new roof membrane concept for over 10 years, De Boer nv (now Soprema nv) decided to do an objective, international investigation of the quality of this waterproofing membrane. This happened in coordination with SGS and BBRI (Belgian Building research Institute) and evaluated samples form roofs in Western & Northern Europe and Asia.

In 2005, another DuO durability test was performed and test roofs from other countries were added to the list. (Netherlands, Sweden, Japan and Singapore) In 2011, De Boer nv (now Soprema nv) instructed SGS and BBRI to test the ageing DuO membranes again and two more roofs located in Germany and New Zealand were added. In 2018, another large scale durability investigation took place.

This document provides you a conclusion of the general test results and a summary of the results of the DuO membrane installed on the roof of Wellington Railway

# Location DuO roof : New Zealand

#### **WELLINGTON RAILWAY STATION - NEW ZEALAND**

Roof area 7000 m2 Height >5 m Wind zone Ш Installation year

Concrete roof + DuO primer + Built-up

DeboFlex 2.5 T/F K180 basesheet (fully bonded) + DuO HT 4 BO/F C180

installation method : DuO cap sheet fully bonded

Construction · refurbishment

**DESCRIPTION OF TESTS:** 

#### **GENERAL CONCLUSION OF ALL THE TEST RESULTS:**

- The samples indicate that there is no significant reduction regarding longitudinal tensile strength but a 10% decrease in transversal tensile strength which is still within the declared value.
- The elongation of the DuO membrane decreased by 25% over time which is still within the declared value range for a new DuO membrane.
- The nail tear resistance of DuO is high for the new membrane. Test results show that the resistance didn't deteriorate over time.
- The tests indicate that the tear resistance of DuO does not diminish through
- Maximum allowed shrinkage according to the norm is 0.3%. The test result of 0.1% for the older DuO membranes clearly score below that maximum allowance for new membranes. This indicates that DuO is a very stable waterproofing membrane.
- The cold flexibility of DuO stays within the norm for artificially aged membranes. It even stays within the norm for new membranes.
  - The results show us that the cold flexibility of DuO stays very good in NZ climate
- The flow resistance of DuO stays within the norm for new and artificially aged membranes. Results of membranes installed show good temperature resistance of 150°C after ageing in NZ.
- The shear resistance of the DuO joint connection is still well above the norms that are stipulated for new membranes.
- The butterfly tests are related to the tear resistance of a waterproofing system. This test is also used to determine the tear initiation and tear propagation.

# Dimensional stability - Laboratory SP (Sweden)

This test method checks the free shrinkage in longitudinal direction. The minimum result as declared by the manufacturer corresponds to good practice.

# Flexibility at low temperature - Laboratory BDA (The Netherlands)

Resistance to tearing (Rivestyrke) - Laboratory TUM (Germany)

This test method determines the flexibility of the membrane at low temperature.

# Flow resistance at elevated temperature - Laboratory Soprema nv (Belgium)

This test method determines the flow resistance (melting) of the membrane

The minimum demanded result as declared by the manufacturer is more stringent compared to good practice.

# Shear resistance of the joint - Laboratory BDA (The Netherlands)

This test method determines the shear resistance of the joint connection between two waterproofing membranes.



#### Observations during visual inspection:

- The general condition of the roof is visually in good condition with 'satisfactory' result by SGS New Zealand.
- · Roof maintenance is not sufficient. Roof drains were blocked. Some accumulation of dirt was noticed and significant lichen growth.
- The samples were taken at different areas of the roof surface and were repaired in a professional and watertight manner.

| TESTS                                                                                 |               | OFFICIAL LABORATORY VALUES - 2018 samples |             |  |  |
|---------------------------------------------------------------------------------------|---------------|-------------------------------------------|-------------|--|--|
|                                                                                       | specification | LONGITUDINAL                              | TRANSVERSAL |  |  |
| TENSILE STRENGTH<br>lest method (UEAtc – 1984 en EN 12311-1)                          | 880N ± 20%    | 1065N                                     | 790N        |  |  |
| ELONGATION<br>proefmethode (UEAtc – 1984 en EN 12311-1)                               | 50 ± 15%abs   | 38                                        | 37          |  |  |
| RESISTANCE TO TEARING (NAIL SHANK) proefmethode (EN 12310-1)                          | >250N         | 292N                                      | 326N        |  |  |
| RESISTANCE TO TEARING (BUTTERFLY TEST) proefmethode (DIN 53515 en ISO 34-1 Methode B) | >110N         | 129N                                      | 117N        |  |  |
| RESISTANCE TO TEARING (NAIL SHANK) proefmethode (DIN 53515 en ISO 34-1 Methode B)     | >50N          | 50N                                       | 53N         |  |  |
| DIMENSIONAL STABILITY proefmethode (SP 2187 en EN 1107-1 Methode B)                   | <0,30%        | 0,1 %                                     |             |  |  |

|                                                                         | specification |      |
|-------------------------------------------------------------------------|---------------|------|
| SHEAR RESISTANCE OF THE JOINT proefmethode (UEAtc – 1982 en EN 12317-1) | >500N         | 811N |

|                                                                       |                     |                    |                    |                       |                                                   | OFFICIAL LABORATO | RY VALUES - 2018 sai | mples             |
|-----------------------------------------------------------------------|---------------------|--------------------|--------------------|-----------------------|---------------------------------------------------|-------------------|----------------------|-------------------|
|                                                                       | n                   | ew                 | after aging 6 i    | months at 70°C        |                                                   |                   |                      |                   |
| FLOW RESISTANCE AT ELEVATED                                           | TOT. MEM-<br>BRANE  | TOP<br>COATING     | TOT. MEM-<br>BRANE | TOP<br>COATING        | TOTAL MEMBRANE                                    |                   | TOP COATING          |                   |
| TEMPERATURE proefmethode (UEAtc - 1984 en EN 1110)                    | >100°C              | >140°C             | >100°C             | >150°C                | 115                                               |                   | 150                  |                   |
|                                                                       |                     |                    |                    |                       |                                                   |                   |                      |                   |
|                                                                       | n                   | ew                 | after aging 6 i    | months at 70°C        | at 70°C OFFICIAL LABORATORY VALUES - 2018 samples |                   |                      |                   |
|                                                                       | L & T<br>topcoating | L & T undercoating | L & T topcoating   | L & T<br>undercoating | L<br>topcoating                                   | L<br>undercoating | T<br>topcoating      | T<br>undercoating |
| FLEXIBILITY AT LOW TEMPERATURE proefmethode (UEAtc - 1982 en EN 1109) | -15°C               | -20°C              | -5°C               | -5°C                  | -30                                               | -34               | -26                  | -29               |

#### Final conclusion:

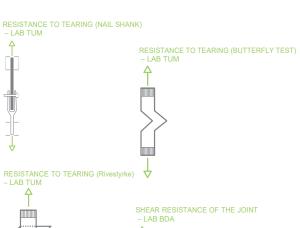
The laboratory tests of existing DuO roof samples show that the results can still be compared to the characteristics that are declared for new membranes.

The results also show that DuO keeps its achievements in the New Zealand climate.

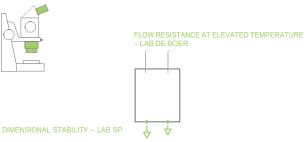
This durability report shows a bright future for the expected serviceability of DuO in the Oceania region.

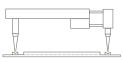
We can conclude that the DuO membrane, installed on roofs in different continents and as a part of different roof concepts, still performs very well after an extra 5 years of natural ageing.

General conclusion: Taking into account that the oldest roofs in Europe are currently more than 30 years old, we can state today that, with a correct roof and roof detail maintenance, the previous expected lifetime can be confirmed, meaning that a lifetime expectancy of 35 years is achievable.













TENSILE STRENGTH & ELONGATION – LAB BDA







DATE: Feb 2008 ISSUE: no. 2



# **DuO HT 4 Slates-F C180**

#### **COMPANY**

SOPREMA has a production unit for the manufacturing of bituminous-based water-proofing materials in Schoten Belgium

#### **Environmental occupation within SOPREMA**

SOPREMA has an environmental policy and has a certified environmental management system according to ISO14001: 2004.

As a member of the "Foundation for Roof & Environment" in the Netherlands, SOPREMA has been certified to meet the all the emission requirements and leaking aspects stipulated in the building materials decree. (NL –BSB BD 007)

SOPREMA has a certified quality system according to ISO 9001:2000, audited by accredited European Audit companies.

# **PRODUCT**

DuO HT 4 Slates/F C180 is a flexible waterproofing membrane. The upper coating consists of APAO (Amorphous Poly Alfa Olefins) modified bitumen resulting in a hard, protective and UV-resistant surface. The under coating consists of an SBS (Styrene-Butadiene-Styrene) modified bitumen for high elasticity and strong adhesion. The material is reinforced with a composite (po-lyester/glass scrim) inlayer. The upper side is finished with mineral slates; the under side is finished with a polyethylene film.

Products do not contain substances listed in the European Directive of dangerous substances.

#### Product weight: ca 4600 g/m²

| Product contents (weight %): |        |
|------------------------------|--------|
| APAO modified bitumen        | 20-30% |
| SBS modified bitumen         | 44-55% |
| Filler                       | 0%     |
| Slates                       | 15-25% |
| Reinforcement                | 2-6%   |
| Polvethylene film            | <0.3%  |

# **Packaging**

Every roll is wrapped with three tapes. The rolls are stored upright on a wooden pallet and are wrapped with shrink foil of polyethylene film. The pallet can be locally recycled and the shrink foil is collected and disposed according to local regulations.

Packaging amount: ca 3 g per kg of pro-duct ( excl. pallet).

SOPREMA fulfils producer liability for packaging as a member of IVC ('Inter-regionale Verpakkingscommissie' or Inter-regional Packaging Commission) and the organisation 'Val-I-Pac' which controls and overviews the handling of waste and recyclable material by our industry in Belgium.

# Transport

Products are transported by container and by truck to the building site or warehouse of the distributor, directly from the production unit in Belgium.

This product is not classified as a dangerous good.

# Application

DuO HT 4 Slates/F C180 is applied to ex-posed flat and pitched roofs. It can be used for new construction or as a renovation solution.

DuO HT 4 Slates/F C180 is primarily applied in a double layer system consisting of a base sheet and a cap sheet. Appli-cation by welding and / or by mechanical fastening. (Welding method: torch-on application with gas or hot air warmed by electricity.) Welding fumes are proven non-toxic.

#### **PRODUCTION**

# Energy

Natural gas

#### Discharge in water/air

At the production no discharge in water occurs. Outgoing air streams contain carbon oxide, small quantity of dust, volatile hydrocar-bons and diluted nitrogen and sulphur compounds whose levels are additionally reduced with help of filters.

#### Influence on the soil

At the production no discharge on the soil happens.

#### **Rest substances**

Inflammable rest substances containing energy are extracted by incineration Mineral rest substances are deposited as filling material. Waste oil is treated as dangerous waste and disposed according to government regulations.

#### Noise

Equipment and fans in the production give noise. Sound values are below the current limits and are regularly monitored and controlled.

# **RENOVATION**

The cap sheet does not need to be re-moved. A new layer can be mechanically fastened or torched on top of the existing layer.

In case of demolition, the membrane can be treated according to conditions for rest substances respective the instructions of the local environmental authority.

#### **REST SUBSTANCES**

Left over material and un-used product can be applied according to the current conditions at the actual point of time

#### Recycling of material

Rest substances can be recycled by re-processing or interference with an alternative building product. (For example in road works)

# Energy-recuperation

The energy contents of the product can be recuperated by incineration in approved installations

## Waste products

Rest substances cannot shall be disposed off in an approved site and in accordance with the instructions of the local environmental authority.

Metropoolstraat 33 BE 2900 Schoten Tel. +32 (0)3 6410801 Fax +32 (0)3 6410809 www.soprema.com







# **EQUUS PRODUCT SYSTEM REFERENCE SHEET**











**Project Name:** Clifftop House **Location:** Remuera, Auckland

Project: Residential

Project Size: 520 sqm

System: Duo Roofing

Certified Applicator: MPM Waterproofing Ltd

Main Contractor: PSL Construction

Architects: Xsite Architects

**Completion Date: 2010** 

Equus Industries Ltd
Email: info@equus.nz
Website: www.equus.nz







Preparation of the DuO mock roof



Installation of the DuO basesheet over plywood



Installation on the DuO capsheet



Finished top roof



Finished Project

Project Type: Community Facility

Project Size: 800 sqm

Project Name: Sumner Surf Lifesaving Club

**System:** Equus SOPREMA DuO Two-Layer

Membrane System

Location: Christchurch

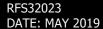
Certified Applicator: Gunac Christchurch Ltd

Main Contractor: Hawkins Construction Ltd

Architect: Wilson and Hill
Completion Date: 2015

#### **Equus Industries Ltd**

Email: info@equus.nz Website: www.equus.nz







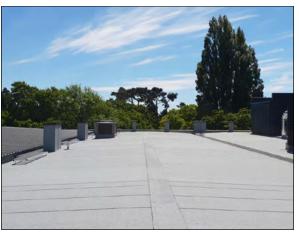
Primer application on plywood substrate



DuO Capsheet installation



Finished detailing



Finished roof



Finished roof

Equus Industries Ltd

Email: info@equus.nz
Website: www.equus.nz

Project Name: Christchurch Hospital Acute

Services Building

Location: Christchurch

Project: Healthcare

Project Size: 9000 sqm

System: Equus SOPREMA Two-Layer Membrane

on plywood

Certified Applicator: Canterbury Waterproofing Ltd

Main Contractor: CPB Constructors

Architects: Warren and Mahoney

**Completion Date: 2018** 







New build underway



Deboplast Basesheet installed over plywood roof



DuO AGR Capsheet installed over basesheet



Finished DuO capsheet application



Finished project

Project Name: Private Residence - Waipu Cove

Location: Northland

Type: Residential Membrane Roof Project Size: approx. 500 sqm

System: Equus SOPREMA DuO Two-Layer Membrane System with AGR Capsheet to

Plywood Substrate

**Certified Applicator:** Total Waterproofing (2005)

Ltd.

**Architect:** Jessop Architects

Main Contractor: Coastal Construction Projects

Completion Date: 2019

#### **Equus Industries Ltd**

Email: info@equus.nz Website: www.equus.nz







Wellington Railway Station Entrance



Preparation of area, primer and basesheet application



Completed roof refurbishment

#### **Equus Industries Ltd**

Email: info@equus.nz
Website: www.equus.nz



Existing roof before renovation



De Boer DuO capsheet application

Project Name: Wellington Railway Station

Location: Wellington

Project Type: Public Transport Infrastructure

Project Size: 7000 sqm

**System:** Equus De Boer Duo Two Layer Membrane

System — Roof Renovation

Certified Applicator: SWP Commercial Ltd

Main Contractor: Fletcher Construction

**Architect:** Interact Architects

**Completion Date: 2004** 







Basesheet application



DuO Landscape membrane ready for planting



Finished project

#### **Equus Industries Ltd**

Email: info@equus.nz Website: www.equus.nz



DuO Landscape Casheet application



Vegetation planted over DuO Landscape

Project Name: College of Creative Arts, Massey

University

Location: Wellington

Project Type: Education

Project Size: 230 sqm

System: Equus SOPREMA DuO Landscape

Two-Layer Membrane System

**Certified Applicator:** Builders Plastics

Architect: Athfield Architects

Completion Date: 2012



SYSTEM SDCR 2 Pages

TECHNICAL DATA SHEET

Page 1 of 2

### **DUO ROOF & DECK MEMBRANE SYSTEM**

Two-layer bitumen membrane waterproofing

March 2024

#### **PURPOSE AND SCOPE OF USE:**

The DUO Roof & Deck Membrane system is a torch-applied waterproofing system, consisting of two-layers of modified bitumen membrane forming a 6.5 mm thick layer. DUO provides a fire-retardant, UV-resistant, flexible waterproofing membrane designed for exposed flat roofs and decks, and other areas such as podiums, balconies and terraces.

The system has a range of base sheets and cap sheets suitable for different building requirements, including self-adhesive membranes, making it a customisable solution with UV and weather resistance suitable for any location and wind zone in New Zealand. With the correct primer, DUO can be applied over concrete, plywood and CLT substrates.

Suitable for new builds and refurbishments, residential and commercial construction.

DUO Roof & Deck Membrane can be overlaid with Fixplus or other approved pedestals, pavers and decking, Kraitec Step walkway tiles, or SOPRASOLAR non-penetrative solar panel supports or other approved supports.

Suitable for other waterproofing applications with written approval by Equus Industries Ltd.

#### PRODUCTS:

The system encompasses a selection of the products below. Refer to standard specifications for full specification details. Technical datasheets and specifications can be found on https://www.equus.nz.

| SOPRADERE QUICK             | SOPRASTICK                             |
|-----------------------------|----------------------------------------|
| EQUUS Peel and Stick Primer | SOPRASTICK VENTI TACK PLUS             |
| DEBOFLEX 2.5 T/F C175       | DUO HT 4 Slates/F C180 FC (or variant) |
| SOPRASUN PLUS 3             |                                        |

#### **SPECIFICATIONS:**

| P3401 DUO on concrete substrate                             |
|-------------------------------------------------------------|
| P3402 DUO on plywood substrate                              |
| Masterspec 4421EB Equus DUO Roof & Deck Membrane by SOPREMA |

#### **COLOUR**

Standard Cap Sheet Colours: GW (Grey White), AGR (Black), WGG (White Grey Green), BO (Brown Oxide). Colour availability is stock dependant and may need to be specially ordered.

#### **CONDITIONS OF USE:**

In areas of regular foot traffic, higher than for normal maintenance traffic, the membrane must be overlaid with Fixplus pedestals and pavers or decking, Kraitec Step walkway tiles or other approved protection.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

Equus Industries Ltd. 4 Sheffield St, Blenheim 7274 | Phone: 03 578 0214 | Email: info@equus.nz | Web: www.equus.nz



SYSTEM
SDWR
2 Pages
TECHNICAL
DATA
SHEET

Page 2 of 2

### **DUO ROOF & DECK MEMBRANE SYSTEM**

Two-layer bitumen membrane waterproofing

March 2024

#### **BUILDING CODE COMPLIANCE:**

**B2 Durability** - B2.3.1 (b), DUO Roof & Deck Membrane has a durability of at least 15 years, and a life expectancy of 35 years, when installed with the correct specification, installation and maintenance. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**E2 External moisture** - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed DUO Roof & Deck Membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See BRANZ Appraisal 685, DUO Durability Study.

**F2 Hazardous building materials** - F2.3.1 Well known experience with the type of materials used together with in-service history, show that DUO Roof & Deck Membrane complies with this performance requirement. Refer to SDS at <a href="https://www.equus.nz">www.equus.nz</a>

#### SUPPORTING DOCUMENTATION:

The following additional documentation supports the above statements:

| Title (type)                                                        | Version       | URL                                                                           |
|---------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------|
| Codemark Certificate CMNZ70151                                      | 30 June 2023  | https://equus.nz/content/reports/codemark-soprema-waterproofing-membranes.pdf |
| BRANZ Appraisal No. 685                                             | 27 April 2022 | https://www.equus.nz/content/reports/branz-appraisal-duo-685.pdf              |
| DUO Durability Study                                                | 2018          | https://www.equus.nz/content/reports/durability-study-duo.pdf                 |
| Technical Datasheets for products listed on page 1 of this document |               | Technical datasheets can be found on https://equus.nz.                        |

#### WARNINGS AND BANS:

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |  |
|--------------------------------------------------------------------------------------------------------------------|----|--|
|                                                                                                                    |    |  |

#### MANUFACTURER CONTACT DETAILS:

| Manufacture location                   | New Zealand                       |
|----------------------------------------|-----------------------------------|
| Legal and trading name of manufacturer | Equus Industries Ltd.             |
| Manufacturer address for service       | 4 Sheffield Street, Blenheim 7274 |
| Manufacturer website                   | www.equus.nz                      |
| Manufacturer email                     | info@equus.nz                     |
| Manufacturer phone number              | 03 578 0214                       |
| Manufacturer NZBN                      | 9429032000306                     |

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344

3 Pages

TECHNICAL DATA SHEET

Page 1 of 3

### **DUO HT 4 Slates/F C180 FC**

Fire-resistant waterproofing membrane

February 2024

#### **DESCRIPTION & APPLICATION:**

A flexible waterproofing membrane with a dual reinforcement and a double polymeric bitumen coating. The upper coating consists of TPO (Thermoplastic PolyOlefins) modified bitumen, resulting in a high mechanical resistance and is UV resistant. The undercoating consists of SBS (Styrene Butadiene Styrene) - modified bitumen with high elasticity and strong adhesion properties.

The composite reinforcement of polyester and glass scrim, (180 g/m²) combine to provide strength and stability. The upper side is finished with optimally pressed in coloured slates and the underside is finished with a sacrificial film. The selvedge with a width of 8 cm is coated with SBS modified bitumen to ensure a SBS-SBS seal. This provides and easy application technique and perfectly sealed joints.

This membrane has been especially designed for fire-resistant applications and meets the requirements of the class Broof(t1)+(t2) following ENV 1187 and achieved an Ext.F.AA rating in accordance with BS 476-3. It is especially used as cap sheet for single or multi-layer torched applications.

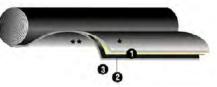


Roll size: 8 m, Roll weight: 37 kg, Number of rolls on a pallet: 23.









- Coloured states
   Upper coating in TPO-plastomer modified bitumen
   Composite reinforcement 180 g/m² of polyester
- and glass scrim
  3. Under coating in SBS elastomer bitumen
  \*\* sacrificial film

#### **TECHNICAL DATA:**

| Characteristics                                                          | Test Method | Units   | Expression of Result          | Value            |
|--------------------------------------------------------------------------|-------------|---------|-------------------------------|------------------|
| Length x width                                                           | EN 1848-1   | m x m   | MLV≥                          | 8 x 1            |
| Thickness                                                                | EN 1849-1   | mm      | MDV ± 5%                      | 4                |
| Visual defects                                                           | EN 1850-1   | -       | Pass/No Pass                  | Pass             |
| Straightness                                                             | EN 1848-1   | -       | Pass/No Pass                  | Pass             |
| External fire performance (1) (2) (3)                                    | ENV 1187    | -       | In accordance with EN 13501-5 | Broof(t1,t2,t4)  |
| Reaction to fire                                                         | EN 13501-1  | -       | In accordance with EN 13501-1 | F                |
| Tensile strength (L/T)                                                   | EN 12311-1  | N/50 mm | MDV ± 20%                     | 880/880          |
| Elongation (L/T)                                                         | EN 12311-1  | %       | MDV ± 15                      | 50               |
| Resistance to static loading                                             | EN 12730    | kg      | MLV≥                          | L25              |
| Resistance to impact                                                     | EN 12691    | mm      | MLV ≤                         | l10              |
| Dimensional stability                                                    | EN 1107-1   | %       | MLV ≤                         | 0.3              |
| Flexibility at low temperature TPO/SBS - initial - after aging (EN 1296) | EN 1109     | °C      | MLV≤                          | -15/-20<br>-5/-5 |





NL-BSD-BD 007







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3 Pages TECHNICAL

344

DATA SHEET

Page 2 of 3

### **DUO HT 4 Slates/F C180 FC**

Fire-resistant waterproofing membrane

February 2024

#### **TECHNICAL DATA continued:**

| Characteristics                                                           | Test Method | Units   | Expression of Result | Value      |
|---------------------------------------------------------------------------|-------------|---------|----------------------|------------|
| Flow resistance at elevated temperature - initial - after aging (EN 1296) | EN 1110     | °C      | MLV≥                 | 110<br>100 |
| Joint strength: shear resistance                                          | EN 12317-1  | N/50 mm | MDV ± 250            | 750        |
| Water tightness                                                           | EN 1928     |         | Pass/No Pass         | Pass       |
| Adhesion of granules                                                      | EN 12039    | %       | MDV ± 5%             | 10         |

(1) Test report ATG 1924 from UBAtc

(2) Test report (3) EXT.F.AA rating in accordance with BS 476-3

MDV: Manufacturer's Declared Value MLV: Manufacturer's Limiting Value NPD: No Performances Declared

#### SCOPE OF USE:

DUO HT 4 Slates/F C180 FC is used as a UV and weather resistant cap sheet in the DUO Roof & Deck, and Duotherm Warm Roof waterproofing systems. The product is torch-applied over an approved system base sheet to form a two-layer waterproof membrane designed for roofs, decks, balconies, terraces and podiums. It is suitable for new builds and refurbishments, residential and commercial construction, in any location and wind zone in New Zealand.

DUO HT 4 Slates/F C180 FC can be overlaid with Fixplus or other approved pedestals, pavers and decking, Kraitec Step walkway tiles, and Soprasolar or other approved solar panel supports.

Suitable for other waterproofing applications with written approval by Equus Industries Ltd.

#### **CONDITIONS OF USE:**

In areas of regular foot traffic, higher than for normal maintenance traffic, the membrane must be overlaid with pedestals and pavers or decking, Kraitec Step walkway tiles or other approved protection.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

#### **BUILDING CODE COMPLIANCE:**

B2 Durability - B2.3.1 (b), DUO HT 4 Slates/F C180 FC has a durability of at least 15 years, and a life expectancy of 35 years, when installed with the correct specification, installation and maintenance. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**E2 External moisture** - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed DUO HT 4 Slates/F C180 FC membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

F2 Hazardous building materials - F2.3.1 Well known experience with the type of materials used together with in-service history, show that DUO HT 4 Slates/F C180 FC complies with this performance requirement. Refer to SDS at www.equus.nz

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344
3 Pages
TECHNICAL
DATA
SHEET

Page 3 of 3

### **DUO HT 4 Slates/F C180 FC**

Fire-resistant waterproofing membrane

February 2024

#### SUPPORTING DOCUMENTATION:

The following additional documentation supports the compliance statements:

| Title (type)                   | Version       | URL                                                                           |
|--------------------------------|---------------|-------------------------------------------------------------------------------|
| CodeMark Certificate CMNZ70151 | 30 June 2023  | https://equus.nz/content/reports/codemark-soprema-waterproofing-membranes.pdf |
| BRANZ Appraisal No. 685        | 27 April 2022 | https://www.equus.nz/content/reports/branz-appraisal-duo-685.pdf              |
| DUO Durability Study           | 2018          | https://www.equus.nz/content/reports/durability-study-duo.pdf                 |

#### STORAGE:

Membrane rolls shall be stored in a dry area, always in an upright (vertical) position. Do not lay rolls flat (horizontal) when storing.

#### **HEALTH & SAFETY:**

SOPRADERE QUICK primer is solvent-based and must be used with adequate ventilation. Remove all naked flames and sources of ignition. Adequate ventilation is required to minimise exposure to bitumen fumes during the torching process. Safety Data Sheet (SDS) must be read and understood prior to use of product.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |  |
|--------------------------------------------------------------------------------------------------------------------|----|--|
|                                                                                                                    |    |  |

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                          |
|----------------------------------------|--------------------------------------------------------------------------------------------------|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                      |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay,<br>Auckland 0630, New Zealand |
| Manufacturer website                   | www.soprema.com.au                                                                               |
| Manufacturer email                     | info@soprema.com.au                                                                              |
| Manufacturer phone number              | +61 3 9221 6230                                                                                  |
| Manufacturer NZBN                      | 9429050312962                                                                                    |

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342 3 Pages

TECHNICAL SHEET

Page 1 of 3

### **DUO HT 4 Slates/F C180 FC LANDSCAPE**

Fire-resistant waterproofing membrane

February 2024

#### **DESCRIPTION & APPLICATION:**

A flexible waterproofing membrane with a dual reinforcement and a double polymeric bitumen coating. The upper coating consists of TPO (Thermoplastic PolyOlefins) modified bitumen, resulting in a high mechanical resistance and is UV resistant. The undercoating consists of SBS (Styrene Butadiene Styrene) - modified bitumen with high elasticity and strong adhesion properties.

The composite reinforcement of polyester and glass scrim, (180 g/m²) combine to provide strength and stability. The upper side is finished with optimally pressed in coloured slates and the underside is finished with a sacrificial film. The selvedge with a width of 8 cm is coated with SBS modified bitumen to ensure a SBS-SBS seal. This provides and easy application technique and perfectly sealed joints.

This membrane has been especially designed for fire-resistant applications and meets the requirements of the class Broof(t1) following ENV 1187. The coating is enriched with root resistant additives and the membrane is therefore especially used as a cap sheet for root resistant waterproofing systems (green roofs) for single or multi-layer torched applications.

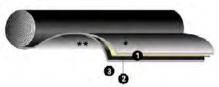


Roll size: 8 m, Roll weight: 37 kg, Number of rolls on a pallet: 23.









- coloured slates
- coloured slates

  1. Upper coating in TPO-plastomer modified bitumen

  2. Composite reinforcement 180 g/m² of polyester and glass scrim

  3. Under coating in SBS elastomer bitumen

  \*\* sacrificial film
- sacrificial film

#### **TECHNICAL DATA:**

| Characteristics                                                          | Test Method | Units    | Expression of Result          | Value            |
|--------------------------------------------------------------------------|-------------|----------|-------------------------------|------------------|
| Length x width                                                           | EN 1848-1   | m x m    | MLV ≥                         | 8 x 1            |
| Thickness                                                                | EN 1849-1   | mm       | MDV ± 5%                      | 4                |
| Visual defects                                                           | EN 1850-1   | -        | Pass/No Pass                  | Pass             |
| Straightness                                                             | EN 1848-1   | -        | Pass/No Pass                  | Pass             |
| External fire performance (1) (2) (3)                                    | ENV 1187    | -        | In accordance with EN 13501-5 | Broof(t1)        |
| Reaction to fire                                                         | EN 13501-1  | -        | In accordance with EN 13501-1 | F                |
| Resistance to root penetration (*)                                       | EN 13948    | -        | Pass/No Pass                  | Pass             |
| Tensile strength (L/T)                                                   | EN 12311-1  | N/50 mm  | MDV ± 20%                     | 880/880          |
| Elongation (L/T)                                                         | EN 12311-1  | %        | MDV ± 15                      | 50               |
| Resistance to static loading                                             | EN 12730    | kg       | MLV ≥                         | L25              |
| Resistance to impact                                                     | EN 12691    | mm       | MLV ≤                         | I10              |
| Dimensional stability                                                    | EN 1107-1   | %        | MLV ≤                         | 0.3              |
| Flexibility at low temperature TPO/SBS - initial - after aging (EN 1296) | EN 1109     | °C<br>°C | MLV≤                          | -15/-20<br>-5/-5 |











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342
3 Pages
TECHNICAL
DATA
SHEET

Page 2 of 3

### **DUO HT 4 Slates/F C180 FC LANDSCAPE**

Fire-resistant waterproofing membrane

February 2024

#### **TECHNICAL DATA continued:**

| Characteristics                                                                 | Test Method | Units   | Expression of Result | Value      |
|---------------------------------------------------------------------------------|-------------|---------|----------------------|------------|
| Flow resistance at elevated temperature<br>- initial<br>- after aging (EN 1296) | EN 1110     | °C      | MLV≥                 | 110<br>100 |
| Joint strength: shear resistance                                                | EN 12317-1  | N/50 mm | MDV ± 250            | 750        |
| Watertightness                                                                  | EN 1928     |         | Pass/No Pass         | Pass       |
| Adhesion of granules                                                            | EN 12039    | %       | MDV ± 5%             | 10         |

(\*) ATG 2825 from UBAtc (1) Test report

MDV: Manufacturer's Declared Value MLV: Manufacturer's Limiting Value NPD: No Performances Declared

#### SCOPE OF USE:

DUO HT 4 Slates/F C180 FC Landscape is used as root-resistant cap sheet in the DUO & DUOTHERM Green Roof & Deck waterproofing systems. The product is torch-applied over an approved system base sheet to form a two-layer waterproof membrane designed for green roofs, roof gardens, planter boxes and courtyards. It is suitable for new builds and refurbishments, residential and commercial construction, in any location and wind zone in New Zealand.

Suitable for other waterproofing applications with written approval by Equus Industries Ltd.

#### **CONDITIONS OF USE:**

The membrane shall be used overlaid with an Equus approved drainage mat, loose laid to ensure no penetrations to the membrane, that ensures free water drainage and adds protection to the membrane.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries Ltd. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

#### **BUILDING CODE COMPLIANCE:**

**B2 Durability** - B2.3.1 (b), DUO HT 4 Slates/F C180 FC Landscape has a durability of at least 15 years, and a life expectancy of 35 years, when installed with the correct specification, installation and maintenance. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**E2 External moisture** - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed DUO HT 4 Slates/F C180 FC Landscape membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**F2 Hazardous building materials** - F2.3.1 Well known experience with the type of materials used together with in-service history, show that DUO HT 4 Slates/F C180 FC complies with this performance requirement. Refer to SDS at <a href="https://www.equus.nz">www.equus.nz</a>

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342
3 Pages
TECHNICAL DATA SHEET

Page 3 of 3

### **DUO HT 4 Slates/F C180 FC LANDSCAPE**

Fire-resistant waterproofing membrane

February 2024

#### SUPPORTING DOCUMENTATION:

The following additional documentation supports the compliance statements:

| Title (type)                   | Version       | URL                                                                           |
|--------------------------------|---------------|-------------------------------------------------------------------------------|
| CodeMark Certificate CMNZ70151 | 30 June 2023  | https://equus.nz/content/reports/codemark-soprema-waterproofing-membranes.pdf |
| BRANZ Appraisal No. 685        | 27 April 2022 | https://www.equus.nz/content/reports/branz-appraisal-duo-685.pdf              |
| DUO Durability Study           | 2018          | https://www.equus.nz/content/reports/durability-study-duo.pdf                 |

#### STORAGE:

Membrane rolls shall be stored in a dry area, always in an upright (vertical) position. Do not lay rolls flat (horizontal) when storing.

#### **HEALTH & SAFETY:**

SOPRADERE QUICK primer is solvent-based and must be used with adequate ventilation. Remove all naked flames and sources of ignition. Adequate ventilation is required to minimise exposure to bitumen fumes during the torching process. Safety Data Sheet (SDS) must be read and understood prior to use of product.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|
|                                                                                                                    | 1  |

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |  |
|----------------------------------------|-----------------------------------------------------------------------------------------------|--|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |  |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |  |
| Manufacturer website                   | www.soprema.com.au                                                                            |  |
| Manufacturer email                     | info@soprema.com.au                                                                           |  |
| Manufacturer phone number              | +61 3 9221 6230                                                                               |  |
| Manufacturer NZBN                      | 9429050312962                                                                                 |  |

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349

3 Pages TECHNICAL

SHEET Page 1 of 3

### **DEBOFLEX 2.5 T/F C175**

Flexible waterproofing membrane

February 2024

#### **DESCRIPTION & APPLICATION:**

A flexible 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. The upper side is finished with a mixture of talcum and sand and the underside is covered with a sacrificial film. It is used as an underlay or a vapour control layer for torched or mechanically fixed application.

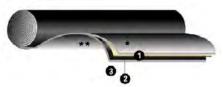
#### PACKAGING:

Roll size: 25 kg Roll weight: Number of rolls on a pallet: 30









- mixture of talcum and sand
- mixture of talcum and sand
   1. Upper coating: SBS-elastomer modified bitumen
   2. Composite reinforcement 175 g/m² of polyester and glass
   3. Under coating in SBS-elastomer bitumen
   \*\* sacrificial film

#### **TECHNICAL DATA:**

| Characteristics                                  | Test Method | Units   | Expression of Result          | Value   |
|--------------------------------------------------|-------------|---------|-------------------------------|---------|
| Length x width                                   | EN 1848-1   | m x m   | MLV ≥                         | 10 x 1  |
| Thickness                                        | EN 1849-1   | mm      | MDV ± 5%                      | 2.5     |
| Visual defects                                   | EN 1850-1   | -       | Pass/No Pass                  | Pass    |
| Straightness                                     | EN 1848-1   | -       | Pass/No Pass                  | Pass    |
| Reaction to fire                                 | EN 13501-1  | -       | In accordance with EN 13501-1 | F       |
| Tensile strength (L/T)                           | EN 12311-1  | N/50 mm | MDV ± 20%                     | 780/650 |
| Elongation (L/T)                                 | EN 12311-1  | %       | MDV ± 15                      | 30/30   |
| Water vapour properties (µ)                      | EN 13707    | -       | MLV ≥                         | 20000   |
| (μ)eq                                            |             | m       | MLV≥                          | 50      |
| Resistance to tearing (nail shank) (L/T)         | EN 12310-1  | N       | MLV ± 50                      | 300/300 |
| Flexibility at -initial                          | EN 1109     | °C      | MLV ≤                         | -15     |
| Flow resistance at elevated temperature -initial | EN 1110     | °C      | MLV≥                          | 110     |
| Watertightness                                   | EN 1928     | -       | Pass/No Pass                  | Pass    |

MDV: Manufacturer's Declared Value MLV: Manufacturer's Limiting Value NPD: No Performances Declared











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SHEET

349

3 Pages

Page 2 of 3

### **DEBOFLEX 2.5 T/F C175**

Flexible waterproofing membrane

February 2024

#### SCOPE OF USE:

DEBOFLEX 2.5 T/F C175 is used as a flexible base sheet the Soprema range of bitumen membrane systems; primarily DUO Roof & Deck Membrane System and the DUOTHERM Warm Roof System. The product can be torch-applied over concrete, plywood, cross-laminated timber (CLT), and roof cover board substrates, or mechanically fastened over PIR or mineral wool roofing insulation. Along with a cap sheet the membrane forms a two-layer waterproof membrane designed for roofs, decks, balconies, terraces and podiums. It is suitable for new builds and refurbishments, residential and commercial construction, in any location and wind zone in New Zealand.

Suitable for other waterproofing applications with written approval by Equus Industries Ltd.

#### **CONDITIONS OF USE:**

Written approval is required for this membrane to be used on a substrate or in a waterproofing system not outlined in the standard Equus specifications. The membrane shall always be over laid with a bitumen membrane cap sheet, as out lined in an Equus standard specification.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries Ltd. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

#### **BUILDING CODE COMPLIANCE:**

B2 Durability - B2.3.1 (b), DEBOFLEX 2.5 T/F C175 has a durability of at least 15 years, and a life expectancy of 35 years, when installed with the correct specification, installation and maintenance. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

E2 External moisture - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed DEBOFLEX 2.5 T/F C175 membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

F2 Hazardous building materials - F2.3.1 Well known experience with the type of materials used together with in-service history, show that DEBOFLEX 2.5 T/F C175 complies with this performance requirement. Refer to SDS at www.equus.nz

#### SUPPORTING DOCUMENTATION:

The following additional documentation supports the compliance statements:

| Title (type)                   | Version       | URL                                                                           |
|--------------------------------|---------------|-------------------------------------------------------------------------------|
| CodeMark Certificate CMNZ70151 | 30 June 2023  | https://equus.nz/content/reports/codemark-soprema-waterproofing-membranes.pdf |
| BRANZ Appraisal No. 685        | 27 April 2022 | https://www.equus.nz/content/reports/branz-appraisal-duo-685.pdf              |
| DUO Durability Study           | 2018          | https://www.equus.nz/content/reports/durability-study-duo.pdf                 |

#### STORAGE:

Membrane rolls shall be stored in a dry area, always in an upright (vertical) position. Do not lay rolls flat (horizontal) when storing.

#### **HEALTH & SAFETY:**

Sopradere Quick primer is solvent-based and must be used with adequate ventilation. Remove all naked flames and sources of ignition. Adequate ventilation is required to minimise exposure to bitumen fumes during the torching process. Safety Data Sheet (SDS) must be read and understood prior to use of product.

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349
3 Pages
TECHNICAL
DATA
SHEET

Page 3 of 3

## **DEBOFLEX 2.5 T/F C175**

Flexible waterproofing membrane

February 2024

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|
|                                                                                                                    |    |

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |  |
|----------------------------------------|-----------------------------------------------------------------------------------------------|--|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |  |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |  |
| Manufacturer website                   | www.soprema.com.au                                                                            |  |
| Manufacturer email                     | info@soprema.com.au                                                                           |  |
| Manufacturer phone number              | +61 3 9221 6230                                                                               |  |
| Manufacturer NZBN                      | 9429050312962                                                                                 |  |

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339
3 Pages

TECHNICAL DATA SHEET

Page 1 of 3

### SOPRASTICK TF

Formally known as DeboTack 2.5 T/F C175

February 2024

**CodeMark**>>>

CMNZ70151

#### **DESCRIPTION:**

Self-adhesive membrane composed of self-adhesive elastomer SBS 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 waterproofing 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.

#### **PACKAGING:**

Roll size: 10 m, Roll weight: 27 kg, Number of rolls on a pallet: 30.

#### **TECHNICAL DATA:**

| Composition                              | Standard   | Unit    | Value                                    | Tolerance |
|------------------------------------------|------------|---------|------------------------------------------|-----------|
| Reinforcement                            |            |         | Composite polyester                      |           |
| Finish upper side                        |            |         | Talcum/sand                              |           |
| Finish lower side                        |            |         | Silicon 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/m²   | 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%     |

NPD: No Performance Declared











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TECHNICAL DATA SHEET

339

3 Pages

Page 2 of 3

### **SOPRASTICK TF**

Formally known as DeboTack 2.5 T/F C175

February 2024

#### **SCOPE OF USE:**

SOPRASTICK is used as a self-adhesive base sheet the SOPREMA range of bitumen membrane systems; primarily the DUO Roof & Deck Membrane System and the DUOTHERM Warm Roof System. The product glued via a self-adhesive 'peel and stick' application and can be used over plywood, cross-laminated timber (CLT), and roof cover board substrates. Along with an approved cap sheet the membrane forms a two-layer waterproof membrane designed for roofs, decks, balconies, terraces and podiums. This membrane can also be used as a self-adhered vapour barrier in an Equus Warm Roof system. It is suitable for new builds and refurbishments, residential and commercial construction, in any location and wind zone in New Zealand.

Suitable for other waterproofing applications with written approval by Equus Industries Ltd.

#### **CONDITIONS OF USE:**

Written approval is required for this membrane to be used on a substrate or in a waterproofing system not outlined in the standard Equus specifications. The membrane shall always be over laid with a bitumen membrane cap sheet, as out lined in an Equus standard specification.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries Ltd. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

#### **BUILDING CODE COMPLIANCE:**

**B2 Durability** - B2.3.1 (b), SOPRASTICK has a durability of at least 15 years, and a life expectancy of 35 years, when installed with the correct specification, installation and maintenance. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**E2 External moisture** - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed SOPRASTICK membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**F2 Hazardous building materials** - F2.3.1 Well known experience with the type of materials used together with in-service history, show that SOPRASTICK complies with this performance requirement. Refer to SDS at <a href="https://www.equus.nz">www.equus.nz</a>

#### SUPPORTING DOCUMENTATION:

The following additional documentation supports the compliance statements:

| Title (type)                   | Version       | URL                                                                           |
|--------------------------------|---------------|-------------------------------------------------------------------------------|
| CodeMark Certificate CMNZ70151 | 30 June 2023  | https://equus.nz/content/reports/codemark-soprema-waterproofing-membranes.pdf |
| BRANZ Appraisal No. 685        | 27 April 2022 | https://www.equus.nz/content/reports/branz-appraisal-duo-685.pdf              |
| DUO Durability Study           | 2018          | https://www.equus.nz/content/reports/durability-study-duo.pdf                 |

#### STORAGE:

Membrane rolls shall be stored in a dry area, always in an upright (vertical) position. Do not lay rolls flat (horizontal) when storing.

#### **HEALTH & SAFETY:**

#### 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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339
3 Pages
TECHNICAL
DATA
SHEET

Page 3 of 3

## **SOPRASTICK TF**

Formally known as DeboTack 2.5 T/F C175

February 2024

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|
|                                                                                                                    |    |

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |  |
|----------------------------------------|-----------------------------------------------------------------------------------------------|--|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |  |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |  |
| Manufacturer website                   | www.soprema.com.au                                                                            |  |
| Manufacturer email                     | info@soprema.com.au                                                                           |  |
| Manufacturer phone number              | +61 3 9221 6230                                                                               |  |
| Manufacturer NZBN                      | 9429050312962                                                                                 |  |

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335
3 Pages

TECHNICAL DATA SHEET

Page 1 of 3

### **SOPRASTICK VENTI TACK PLUS TF**

Formerly known as DeboTack 2.5 T/F C175 Aero

November 2023

#### **DESCRIPTION & APPLICATION:**

Self-adhesive membrane with a vapour-pressure and tension dispersion system, composed of elastomer SBS 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.

#### **PACKAGING:**

|                  | Testing Method | SOPRASTICK VENTI TACK PLUS TF |
|------------------|----------------|-------------------------------|
| Roll size        | EN 1849-1      | 11.25 m x 1 m                 |
| Roll weight      | EN 1941-1      | 43 kg                         |
| Rolls per pallet | -              | 30                            |

#### **TECHNICAL DATA:**

| Composition                              | Standards  | Units             | Value                                        | Tolerance |
|------------------------------------------|------------|-------------------|----------------------------------------------|-----------|
| Reinforcement                            |            |                   | Composite polyester                          |           |
| Finish upper side                        |            |                   | Talcum/sand                                  |           |
| Finish lower side                        |            |                   | Silicon release film                         |           |
| Coating mass                             |            |                   | Self-adhesive elastomer SBS modified bitumen |           |
| Technical Characteristics                |            |                   |                                              |           |
| Thickness                                | EN 1849-1  | mm                | 2.5                                          | ± 5 %     |
| Mass (indicative)                        | EN 1849-1  | kg/m <sup>2</sup> | 3.8                                          |           |
| 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) | EN12310-1  | 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             | NPD                                          |           |

NPD = no performance determined

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TECHNICAL DATA SHEET

335

3 Pages

Page 2 of 3

### SOPRASTICK VENTI TACK PLUS TF

Formerly known as DeboTack 2.5 T/F C175 Aero

November 2023

#### **SCOPE OF USE:**

SOPRASTICK VENTI TACK PLUS is used as a self-adhesive base sheet the Soprema range of bitumen membrane systems in areas where vapour distribution under the membrane is required; primarily the DUO Roof & Deck Membrane System and the DUOTHERM Warm Roof System over concrete substates or directly over PIR thermal insulation. The product is glued via a self-adhesive 'peel and stick' application. Along with an approved cap sheet the membrane forms a two-layer waterproof membrane designed for roofs, decks, balconies, terraces and podiums. This membrane can also be used as a self-adhered vapour barrier in an Equus Warm Roof system. It is suitable for new builds and refurbishments, residential and commercial construction, in any location and wind zone in New Zealand.

Suitable for other waterproofing applications with written approval by Equus Industries Ltd.

#### **CONDITIONS OF USE:**

Written approval is required for this membrane to be used on a substrate or in a waterproofing system not outlined in the standard Equus specifications. The membrane shall always be over laid with a bitumen membrane cap sheet, as out lined in an Equus standard specification.

The product must be installed by a Certified Equus Applicator. Verification of their status can be confirmed by a current applicator certificate or by contacting Equus Industries Ltd. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval by Equus Industries Ltd.

#### **BUILDING CODE COMPLIANCE:**

**B2 Durability** - B2.3.1 (b), SOPRASTICK VENTI TACK PLUS has a durability of at least 15 years, and a life expectancy of 35 years, when installed with the correct specification, installation and maintenance. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**E2 External moisture** - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed SOPRASTICK VENTI TACK PLUS membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See CodeMark CMNZ70151, BRANZ Appraisal 685, DUO Durability Study.

**F2 Hazardous building materials** - F2.3.1 Well known experience with the type of materials used together with in-service history, show that SOPRASTICK VENTI TACK PLUS complies with this performance requirement. Refer to SDS at <a href="https://www.equus.nz">www.equus.nz</a>

#### SUPPORTING DOCUMENTATION:

The following additional documentation supports the compliance statements:

| Title (type)                   | Version       | URL                                                                           |
|--------------------------------|---------------|-------------------------------------------------------------------------------|
| CodeMark Certificate CMNZ70151 | 30 June 2023  | https://equus.nz/content/reports/codemark-soprema-waterproofing-membranes.pdf |
| BRANZ Appraisal No. 685        | 27 April 2022 | https://www.equus.nz/content/reports/branz-appraisal-duo-685.pdf              |
| DUO Durability Study           | 2018          | https://www.equus.nz/content/reports/durability-study-duo.pdf                 |

#### **CERTIFICATIONS:**

- BENOR (B)

#### STORAGE:

Pallets may not be placed on to each other during storage and rolls need to be stacked so they won't bend. Direct sunlight and temperatures above  $\pm$  30 °C should be avoided at all times.

#### **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.

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335 3 Pages TECHNICAL DATA SHEET

Page 3 of 3

## SOPRASTICK VENTI TACK PLUS TF

Formerly known as DeboTack 2.5 T/F C175 Aero

November 2023

**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.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |  |
|--------------------------------------------------------------------------------------------------------------------|----|--|
|                                                                                                                    |    |  |

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |
| Manufacturer website                   | www.soprema.com.au                                                                            |
| Manufacturer email                     | info@soprema.com.au                                                                           |
| Manufacturer phone number              | +61 3 9221 6230                                                                               |
| Manufacturer NZBN                      | 9429050312962                                                                                 |

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624 2 Pages

TECHNICAL DATA SHEET

Page 1 of 2

### **ALSAN MASTIC 2200**

Flexible mastic

March 2024

#### **DESCRIPTION:**

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









#### **TECHNICAL DATA:**

| Properties              | ALSAN MASTIC 2200            |
|-------------------------|------------------------------|
| Composition             | Bitumen and synthetic rubber |
| Temperature resistance  | -20/+80°C                    |
| Application temperature | +5/+35°C                     |
| Consumption             | 15-20 m/cartridge            |

#### **PACKING AND STORAGE:**

310 ml cartridge.

20 cartridges/box.

Minimum 12 months in original unopened packaging, stored 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.

#### **HEALTH AND SAFETY:**

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

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |  |
|--------------------------------------------------------------------------------------------------------------------|----|--|
|                                                                                                                    |    |  |

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624 2 Pages

TECHNICAL DATA SHEET

Page 2 of 2

## **ALSAN MASTIC 2200**

Flexible mastic

March 2024

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |
| Manufacturer website                   | www.soprema.com.au                                                                            |
| Manufacturer email                     | info@soprema.com.au                                                                           |
| Manufacturer phone number              | +61 3 9221 6230                                                                               |
| Manufacturer NZBN                      | 9429050312962                                                                                 |

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376

1 Page TECHNICAL DATA SHEET

Page 1 of 1

### **SOPRADERE QUICK**

**Cold applied fast drying primer** 

February 2024











#### **PURPOSE AND AREAS OF USE:**

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.

#### STANDARD PACK:

Can of 5 and 21 L.

#### PROPERTIES:

| Composition             | Bitumen, solvents and adhesion-improving additives. |
|-------------------------|-----------------------------------------------------|
| Curing time             | 530 min.                                            |
| Consumption (I/m²)      | 0.15-0.25                                           |
| Application temperature | Min +5°C                                            |

#### **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:**

Wet product - white spirit.

#### **HEALTH AND SAFETY:**

For more information, please refer to the relevant Safety Data Sheet (SDS).

SOPREMA has always attached the highest importance to the quality of the products, the environment and safety. For this reason, they operate independently monitored Quality and Environment Assurance Systems in line with EN ISO 9001 and EN ISO 14001.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |
| Manufacturer website                   | www.soprema.com.au                                                                            |
| Manufacturer email                     | info@soprema.com.au                                                                           |
| Manufacturer phone number              | +61 3 9221 6230                                                                               |
| Manufacturer NZBN                      | 9429050312962                                                                                 |

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839 <sup>2 Pages</sup>

TECHNICAL DATA SHEET

Page 1 of 2

## **DUO C-PROFILE**

#### Aluminium bar for terminating waterproofing membranes

January 2024

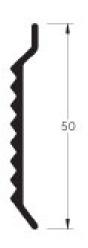
#### **DESCRIPTION:**

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.

#### **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.





#### **TECHNICAL DATA:**

| Technical Characteristics                               | C-PROFILE                                             |
|---------------------------------------------------------|-------------------------------------------------------|
| Material                                                | Extruded aluminium profile (AI Mg Si 0.5 F22 quality) |
| Tensile strength                                        | 215 N/mm <sup>2</sup>                                 |
| Yield point                                             | 160 N/mm <sup>2</sup>                                 |
| Elongation                                              | 10%                                                   |
| Hardness                                                | 70 brinell                                            |
| Length                                                  | 2500 mm                                               |
| Width                                                   | 50 mm                                                 |
| Colour                                                  | Metalic                                               |
| Characteristics tested according to German DIN 1748 sta | andard.                                               |

#### **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 50 mm. 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.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|
| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |

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839 2 Pages

TECHNICAL DATA SHEET

Page 2 of 2

## **DUO C-PROFILE**

Aluminium bar for terminating waterproofing membranes

January 2024

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Belgium                                                                                       |
|----------------------------------------|-----------------------------------------------------------------------------------------------|
| Legal and trading name of manufacturer | Soprema New Zealand Limited                                                                   |
| Manufacturer address for service       | Level 3, Candida Building 4, 61 Constellation Drive, Mairangi Bay, Auckland 0630, New Zealand |
| Manufacturer website                   | www.soprema.com.au                                                                            |
| Manufacturer email                     | info@soprema.com.au                                                                           |
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841 1 page

# Roof Edge Profile Classic Plus

### 110/60

#### **Description:**

The Classic Plus roof edge profile is a pre-manufactured profile that terminates the waterproofing membrane at the highest edge of the roof in a professional, watertight and wind-uplift resistant manner.

The profile is used on top of roof edge curbs of wooden and concrete flat roofs.

#### **Technical Characteristics:**

Material: Aluminium
Length per profile: 2500 mm
Width (visible, outside): 110 mm
Fastening zone 45 mm
Dripping edge: 15mm from wall

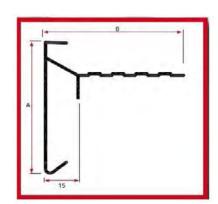
#### Advantages:

- Strong, stable and durable profile that increases the durability of the waterproofing system.
- Increases the bonding of the waterproofing to the edge of the roof deck
- Special corner design to prevent penetration by horizontal driven rain.
- Available with connection plates, internal and external premanufactured welded corners.
- Wind uplift resistant.
- Corrosion resistant.
- Continuous aesthetical finish.
- Provides a dripping point of 15 mm off the wall to prevent water stains to the wall.



#### Installation:

- The waterproofing cap sheet is installed on the top of the roof edge curb.
- The profile is fastened at the roof edge on top of the cap sheet.
- The profile and its fixings are covered by another piece of cap sheet.
- Always refer to the manufacturer's detail drawing.



| Туре   | A   | В  |
|--------|-----|----|
| 110/60 | 110 | 60 |

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June 2021





Excellent crack bridging characteristics

Very high impact and puncture resistance

Good chemical and abrasion resistance

Fully cured one hour after application

Excellent waterproofing properties

**KEY BENEFITS:** 

Highly flexible

Easy to apply

312 2 Pages

TECHNICAL SHEET

Page 1 of 2

### **MATACRYL THIX**

#### A thixotropic version of Matacryl Manual

April 2024

#### **PRODUCT:**

Matacryl Thix is a viscous, urethane-modified, prereacted 100% solid membrane system based on acrylic monomers. To initiate curing, just add Matacryl Catalyst.

#### **USAGE:**

Matacryl Thix is designed as a simple to apply, highly elastomeric liquid waterproofing membrane and coating, for vertical and inclined substrates. The cured product is a very flexible crack-bridging membrane that retains its flexibility and crackbridging performance in service even when the temperature reaches -20°C

The areas of application for Matacryl Thix include:

- As a Bridge Deck waterproofing membrane, on to which asphalt at temperatures up to 250°C can be directly applied.
- For sub-grade waterproofing of Buildings and Civil Engineering Structures, including below-grade Slabs.
- Waterproofing of concrete and metal Railway bridges including directly under track ballast.
- Waterproofing of Pedestrian and Vehicular trafficable areas (Balconies, Car Parks etc.)
- Protection and waterproofing of Tunnels, Channels and Dam structures.
- Waterproofing of containment structures including Reservoirs and waste and contaminated material storage structures.
- Offshore platforms.

Matacryl Thix can be applied at a wide range of ambient and substrate temperatures (-10°C to +35°C) onto cementitious based screeds, concrete, metal, and ceramic tile substrates, and filled bitumen/asphalt under specific conditions.

#### **STANDARD PACKS:**

30 kg units.

#### **PROPERTIES:**

| Liquid State                     |                 |           |  |  |
|----------------------------------|-----------------|-----------|--|--|
| Viscosity, 25°C                  | 4000 mPa*s      | DIN 53018 |  |  |
| Density, 25°C                    | 1.36 g/ml       | ISO 2811  |  |  |
| Pot life/processing time at 20°C | 15 min.         |           |  |  |
| Curing time at 20°C              | approx. 60 min. |           |  |  |
| Flash Point                      | +11.5°C         | ISO 1516  |  |  |

| Cured State tested at 20°C |                       | Cured State samples conditioned at -20°C for 24hrs before testing |                        |                       |         |
|----------------------------|-----------------------|-------------------------------------------------------------------|------------------------|-----------------------|---------|
| Tensile strength           | 6.7 N/mm <sup>2</sup> | ISO 527                                                           | Tensile strength       | 7.1 N/mm <sup>2</sup> | ISO 527 |
| Elongation                 | 320%                  | ISO 527                                                           | Elongation             | 340%                  | ISO 527 |
| Modulus of elasticity      | 65 MPa                | ISO 527                                                           | Modulus of elasticity  | 460 MPa               | ISO 527 |
| Abrasion 1000 cycles       | 64 mg                 | ISO 7784-2                                                        | Dynamic crack-bridging | >5 mm                 | BPG     |
| Dynamic crack-bridging     | >5 mm                 | BPG                                                               |                        |                       |         |
| Shore A hardness           | >85 IRHD              | NFP 98285                                                         | _                      |                       |         |
| Shore D hardness           | 55                    | DIN 53505                                                         |                        |                       |         |

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312 2 Pages

TECHNICAL SHEET

Page 2 of 2

### **MATACRYL THIX**

#### A thixotropic version of Matacryl Manual

April 2024

#### SUBSTRATE PREPARATION:

The area to be waterproofed must be dry, firm, solid and free of dust, fat and oil. Laitance and loose particles must be removed thoroughly, e.g. by shot blasting. Fats or oils as well as humidity can be removed by flame blasting for example. Before application of Matacryl Thix, a suitable Matacryl Primer, including sand-blinding when appropriate, must be first applied. For further details, see our general preparation and application guidelines for Matacryl waterproofing systems.

#### MIXING:

Prior to use, Matacryl Thix must be carefully stirred to achieve a uniform distribution of agents contained in the product. Matacryl Thix is then thoroughly mixed together with the Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the following guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the substrate temperature.

| At 30°C:    | Add 200 grams of catalyst to a pail of 30 kg                                                                                                           |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| At 20°C:    | Add 350 grams of catalyst to a pail of 30 kg                                                                                                           |
| At 10°C:    | Add 700 grams of catalyst to a pail of 30 kg                                                                                                           |
| At 0°C:     | Add 1200 grams of catalyst to a pail of 30 kg                                                                                                          |
| Below -5°C: | Add 1200 grams of catalyst to a pail of 30 kg and additionally add Matacryl Accelerator. Please contact your Equus Representative for further details. |

Note: Weight to Volumetric conversion of Catalyst. 1 cc of Matacryl Catalyst weighs 0.64gm. 1gm of Matacryl Catalyst = 1.57 cc

#### APPLICATION:

Matacryl Thix is designed to be manually applied using a brush, roller or squeegee.

#### CONSUMPTION:

For product consumption per m<sup>2</sup>; please consult the System Build-up Sheets.

Per layer of membrane; a minimum thickness of 1mm (=1.23kg/m²) should always be applied per coat.

SIx months when stored in a cool and dry place and in originally closed packaging. The optimal storage temperature is 15-20°C.

#### **HEALTH AND SAFETY:**

Protective clothing, gloves and safety goggles must be worn when filling, mixing or handling of Matacryl Thix. When the product is applied in enclosed areas without natural ventilation, forced ventilation must be arranged. Avoid strong concentration of vapour as well as direct contact with skin or eyes. For further information see our Safety Data Sheet.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|
|                                                                                                                    |    |

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | Australia                                                  |
|----------------------------------------|------------------------------------------------------------|
| Legal and trading name of manufacturer | Tremco CPG Pty Ltd.                                        |
| Manufacturer address for service       | 12/4 Southridge Street, Eastern Creek, NSW 2766, Australia |
| Manufacturer website                   |                                                            |
| Manufacturer email                     | orders@tremco.com.au                                       |
| Manufacturer phone number              | +61 2 4648 0397                                            |

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306
3 Pages
TECHNICAL
DATA
SHEET

Page 1 of 3

### **CHEVALINE DEXX TOPCOAT**

UV resistant finishing coat for the Chevaline Dexx waterproofing membrane

February 2024

#### **PURPOSE AND AREAS OF USE:**

A highly durable glossy finishing coat for use as an integral part of the Chevaline Dexx System on walkout decks and similar trafficable areas.

#### **PRODUCT:**

Chevaline Dexx Topcoat is a tough; flexible; gloss-finish, pigmented polyurethane/acrylic finishing coat. Waterborne for ease of use and formulated for maximum exterior durability, ease of cleaning, water resistance, excellent adhesion and UV resistance.

A highly durable Gloss or Satin finishing coat for use as an integral part of the Chevaline Dexx System on roofs, decks, balconies and similar traffcable areas.

Chevaline Dexx Topcoat is the topcoat in the Chevaline Dexx Membrane System with approved body coats and primers.

#### PROCESS COMPATIBILITY:

Formulated as a finishing coat for the Chevaline Dexx Flexible Reinforced Roof and Deck Membrane System.

#### **COLOUR:**

Available in all standard Equus Keim and BS5252 colours. May also be matched with other colours but a tinting charge may be applicable.

NB: The use of deep colours in exterior situations is not recommended because of the stress that may be imparted to the building's fabric through excessive heat absorption. Advice should be sought regarding this and special colour matching through your Equus Representative.

#### STANDARD PACK:

5 litre and 15 litre plastic pail.

#### **PHYSICAL PROPERTIES:**

| Liquid Material      | Dexx Bodycoat                                                              |
|----------------------|----------------------------------------------------------------------------|
| Solids (% by volume) | 39% approx.                                                                |
| Specific Gravity     | 1.1-1.2                                                                    |
| Flash Point (°C)     | None - water-based product                                                 |
| Shelf Life           | 3 years in original sealed container, when stored in cool, dry conditions. |

| Applied Film          | Standard System                                                                                                                                      |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flexibility           | Passes 3 mm mandrel                                                                                                                                  |
| Durability            | Excellent long term service can be expected. The coating has been specially formulated for maximum UV resistance and weatherability.                 |
| Chemical Resistance   | Good resistance against general atmospheric pollutants, domestic cleansers and normal household pollutants. Limited resistance to solvents and oils. |
| Fungus Resistance     | Chevaline Dexx Topcoat contains a highly effective anti-fungal preparation which does not contain toxic metals or phenols.                           |
| Normal Film Thickness | 25-35 microns dft per coat.                                                                                                                          |

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306

3 Pages

TECHNICAL DATA SHEET

Page 2 of 3

### **CHEVALINE DEXX TOPCOAT**

UV resistant finishing coat for the Chevaline Dexx waterproofing membrane

February 2024

#### **SCOPE OF USE:**

Chevaline Dexx Topcoat can be used on roofs, decks and other specified areas in existing or new residential or commercial buildings in accordance with the standard Dexx specification.

Suitable as a finished coating or can be overlaid with tiles, pedestals & decking materials.

#### **CONDITIONS OF USE:**

Chevaline Dexx Topcoat is not suitable for public high foot traffic or vehicular traffic areas.

The installation must be done by a Certified Equus Applicator. Verification of Applicator status can be confirmed by a current Applicator Certificate or by contacting Equus Industries. Any installation must be done in accordance with the latest specifications and technical documentation, or with written approval from Equus Industries.

#### **SURFACE PREPARATION:**

| Previously coated Dexx<br>surfaces (old or new):                                                                                                                                          | Dexx surfaces overcoated with Chevaline Colourglaze, Traxx Colourseal or Chevaline Dexx Topcoat, or presently not overcoated. Ensure the surface is clean and dry. If necessary use medium pressure water to ensure the surface is thoroughly clean. Old surfaces, repair any existing mechanical damage with the Dexx process prior to recoating. |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2. All other surfaces  Clean as in 1 above and apply a test area of Chevaline Dexx Topcoat to determine adhesion before proceeding with the complete treatment.                           |                                                                                                                                                                                                                                                                                                                                                    |
| Priming:                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                    |
| 1.                                                                                                                                                                                        | New Dexx, or existing Dexx Membrane finished with Chevaline Colourglaze, Chevaline Dexx Topcoat. No priming required.                                                                                                                                                                                                                              |
| 2. On other deck membrane surfaces. If a test patch, or obvious surface conditions indicate the refer to the nearest Equus Office or your Equus Representative for primer recommendation. |                                                                                                                                                                                                                                                                                                                                                    |

#### **APPLICATION METHOD:**

| Brush or Roller:                 | hinning generally not required.                      |  |
|----------------------------------|------------------------------------------------------|--|
| Spray: (Airless or Air Assisted) | hin up to 30% by volume with clean water, as needed. |  |
| Spreading rate:                  | 9-12 sqm/litre.                                      |  |
| Dry time:                        | Touch dry 1-2 hours. Through dry 2-4 hours.          |  |
| Clean up / Thinning:             | Clean tap water.                                     |  |

#### **MAINTENANCE:**

Chevaline Dexx Topcoat is a low maintenance finish. It is recommended that it be washed at least every three months with a weak (0.1%) neutral detergent and well rinsed with clean water.

As the purpose of Chevaline Dexx Topcoat is to protect the underlying membrane and maintain its overall finish, recoating should be timed to occur before damage is caused to the underlying surface. Simply wash with a weak (0.1%) neutral detergent solution, rinse and dry before recoating with Chevaline Dexx Topcoat.

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306

3 Pages

TECHNICAL DATA SHEET

Page 3 of 3

### **CHEVALINE DEXX TOPCOAT**

UV resistant finishing coat for the Chevaline Dexx waterproofing membrane

February 2024

#### **WARRANTY:**

Chevaline Dexx Topcoat is an integral component of the Chevaline Dexx Reinforced Roof and Deck Membrane System and the Warranty applicable is that of the Chevaline Dexx System it is an integral part of.

When Chevaline Dexx Topcoat is used to recoat an existing Chevaline Dexx Membrane surface; any existing Process Warranty may be reviewed and possibly extended.

#### **HEALTH AND SAFETY:**

Wear barrier cream when handling this product, and cartridge mask and goggles when spraying. It is a waterborne material and therefore is non flammable. However, it is recommended NOT TO SMOKE when handling or applying the material. No special storage conditions are required other than protection from frost and prolonged heat.

#### **WARNINGS AND BANS:**

| Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004? | No |
|--------------------------------------------------------------------------------------------------------------------|----|
|--------------------------------------------------------------------------------------------------------------------|----|

#### **MANUFACTURERS CONTACT DETAILS:**

| Manufacture location                   | New Zealand                       |
|----------------------------------------|-----------------------------------|
| Legal and trading name of manufacturer | Equus Industries Ltd.             |
| Manufacturer address for service       | 4 Sheffield Street, Blenheim 7274 |
| Manufacturer website                   | www.equus.nz                      |
| Manufacturer email                     | info@equus.nz                     |
| Manufacturer phone number              | 03 578 0214                       |
| Manufacturer NZBN                      | 9429032000306                     |

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840 1 page

PRODUCT DATA SHEET

### **Shrink Sleeve**

#### **Description:**

The **Shrink Sleeve** is a professional and innovative accessory to make flat roof penetrations watertight.

The **Shrink Sleeve** combines a sleeve, a flange and a base.

The base is made of high-quality, weather-resistant PVC. The **Shrink Sleeve** is made of UV-resistant Polyolefin. It shrinks when heated by hot air or flame and forms a closed, watertight sleeve around the round object that penetrates your flat roof. It has a special flange of elastomer SBS-modified bitumen for an optimal connection to all SOPREMA membrane systems. The flange diameter is 480mm.

#### Applications:

For watertight finish of round objects that penetrate the flat roof such as pipes and cables.

#### Instructions:

- Slide the Shrink Sleeve over the round object.
- Weld the flange in between waterproofing base and cap sheet.
- Bring the cap sheet up to the PVC base.
- Heat the sleeve with a torch or hot-air gun to make it shrink.



#### Penetration diameter info:

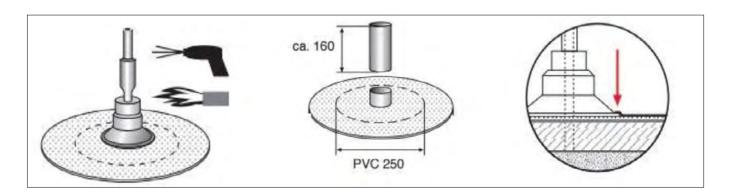
 PVC diameter
 Shrinks to:

 22mm
 12mm

 55mm
 42mm

 88mm
 66mm

 110mm
 88mm



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June 2022



# **Equus Short Roof Vent**

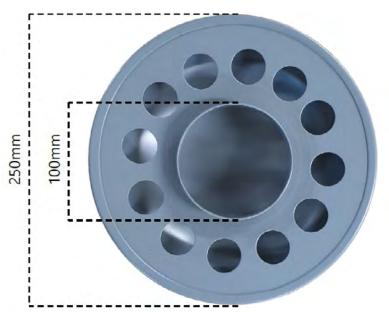
#### Purpose & Areas of Use:

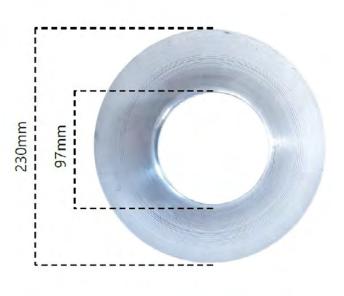
The Equus Short Roof Vent is designed primarily to vent the ceiling cavity and is normally located near or on the ridgeline. This vent is to be either glued or screwed into place. If screwed, they are to be stainless steel and counter sunk.

All flashing of penetration is to be done as per specifications set out in  ${\sf E2/AS1}$ .

- Standard colours grey or black.
- Project specific detailing available to meet individual service requirements.



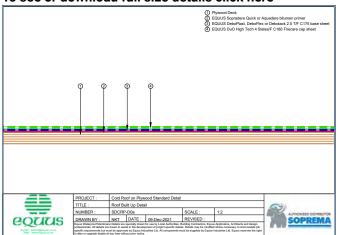


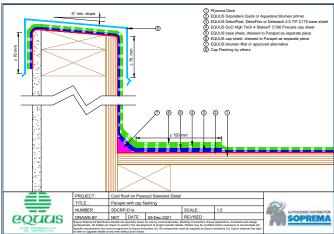


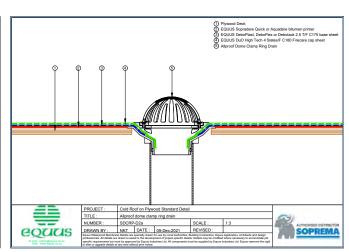


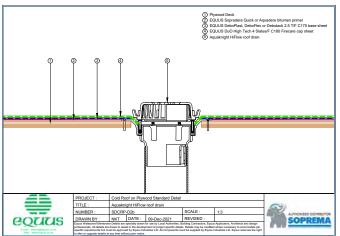


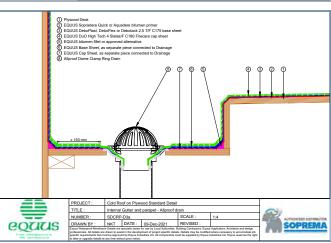
Equus Industries Ltd PO Box 601 Blenheim Phone: 03 578 0214 Email: admin@equus.nz Web: www.equus.nz May 2019

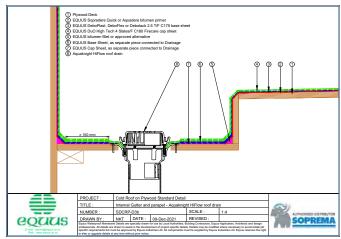


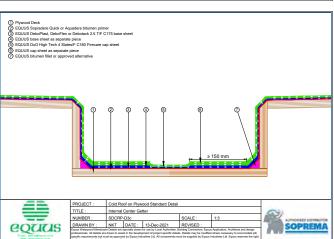


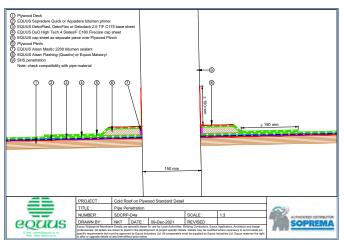


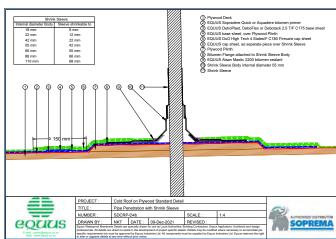


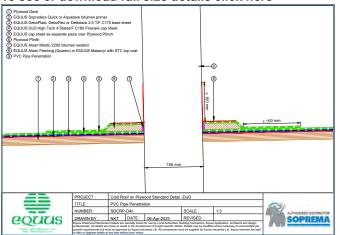


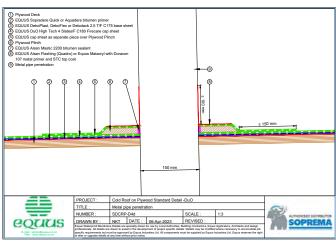


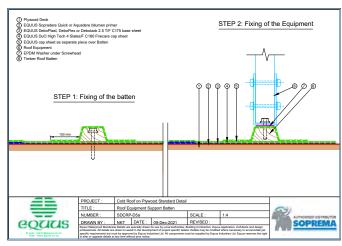


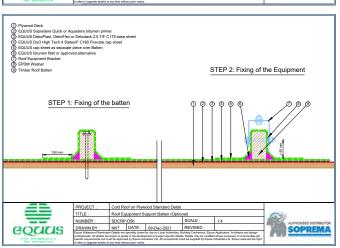


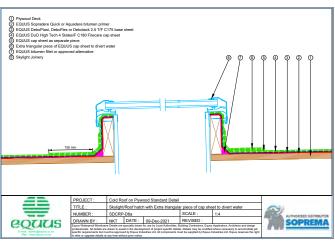


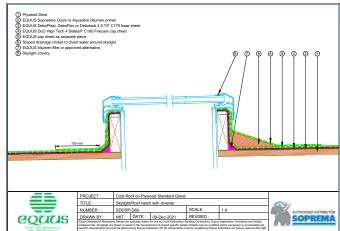


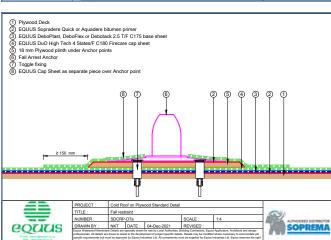


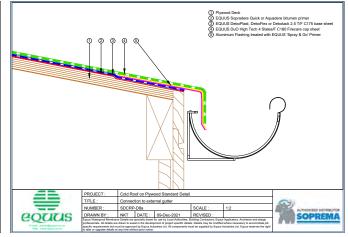


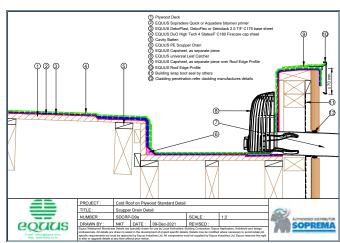


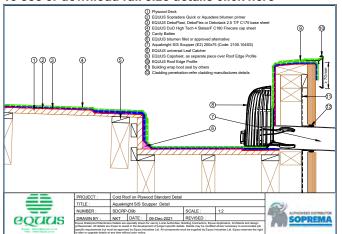


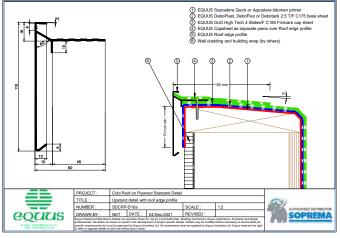


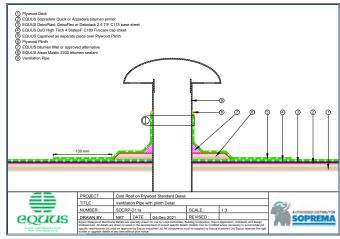


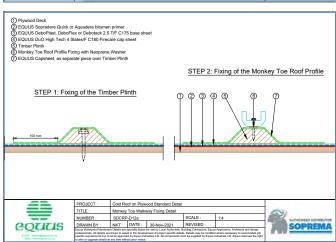


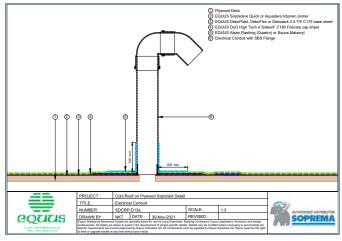


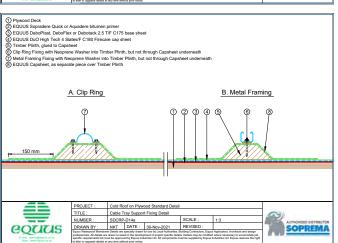


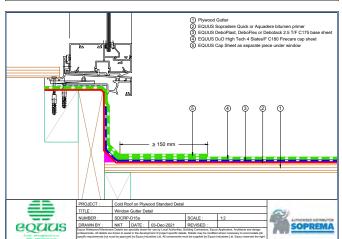


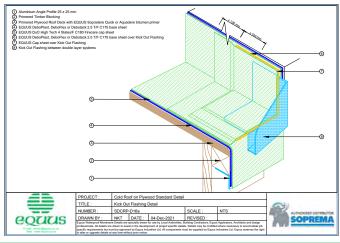


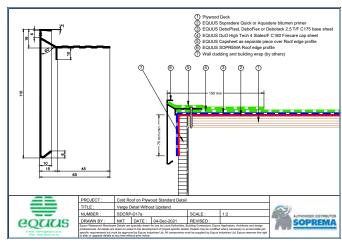


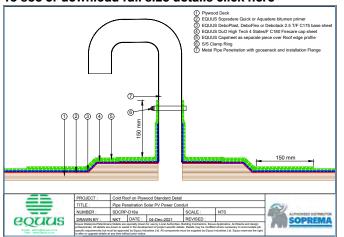


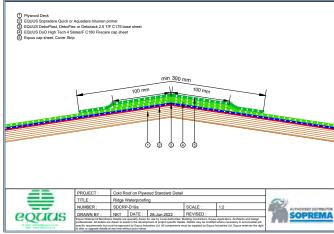


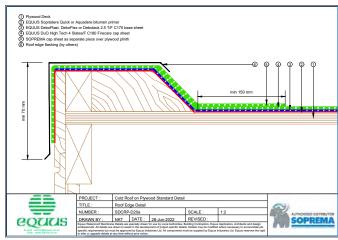


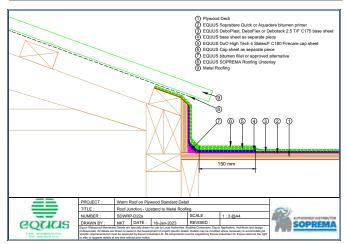


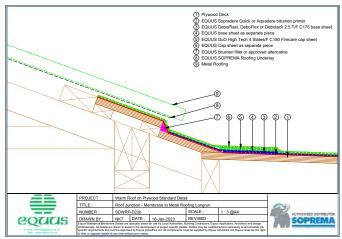


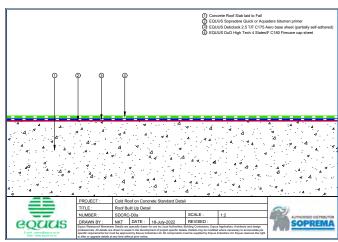


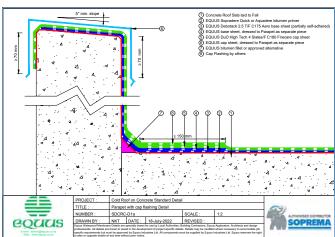


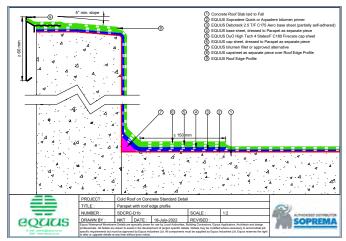


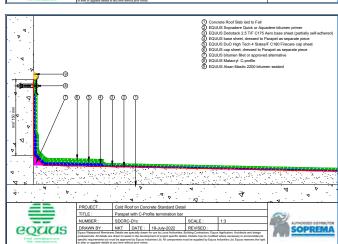


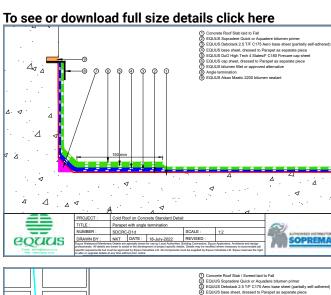


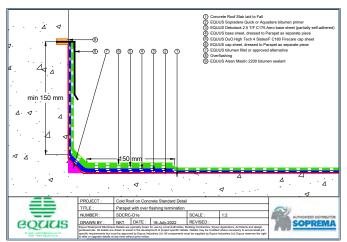


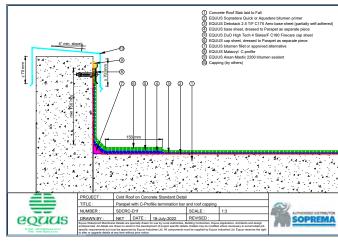


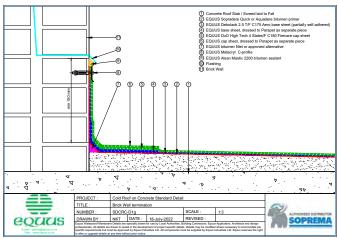


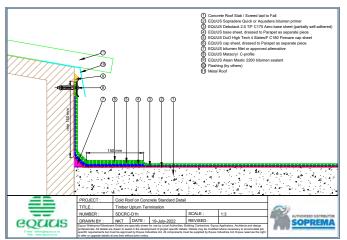


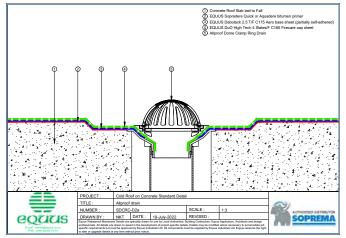


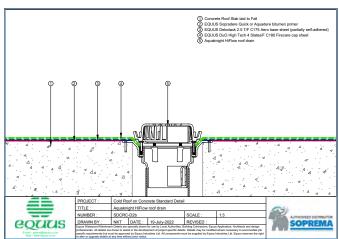


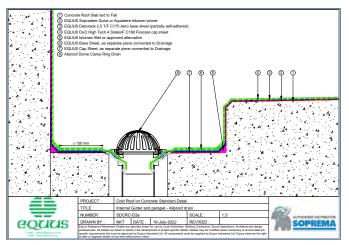


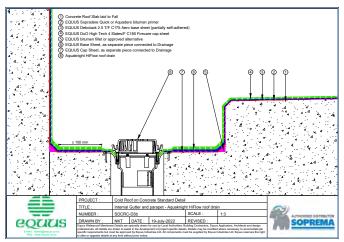


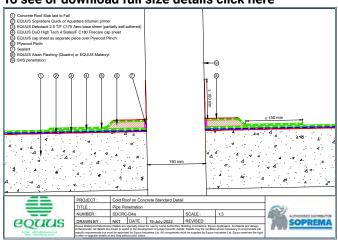


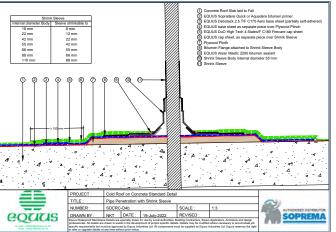


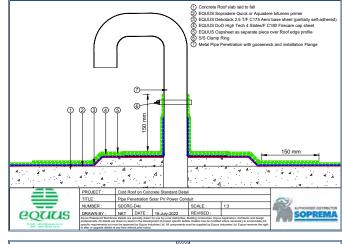


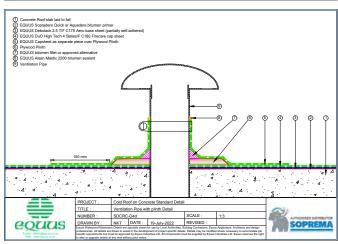


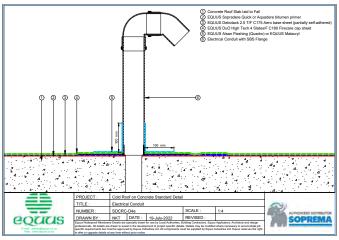


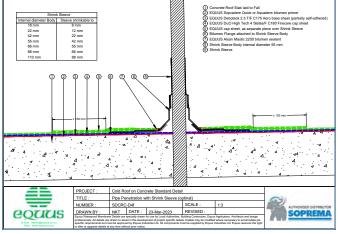


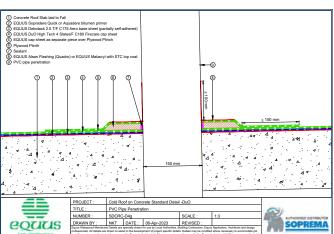


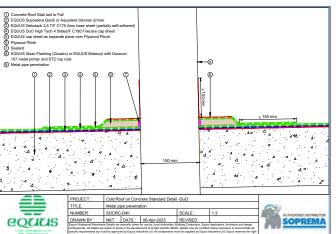


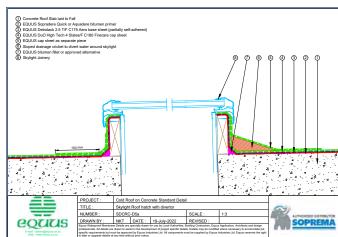


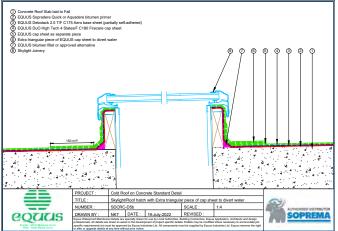


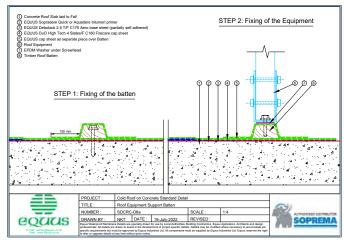


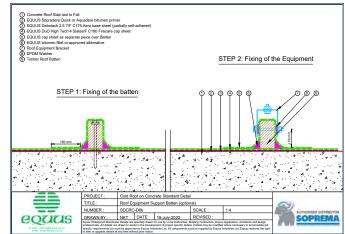


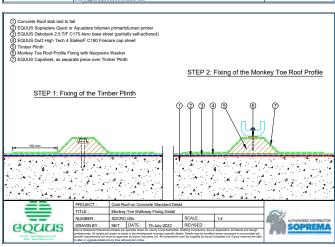


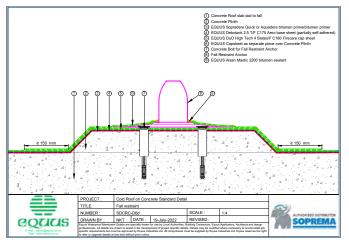


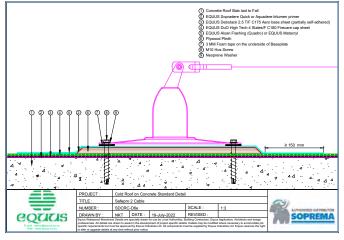


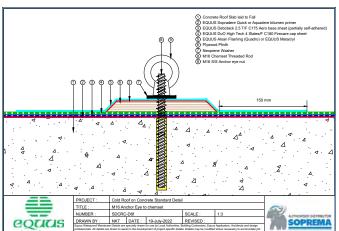


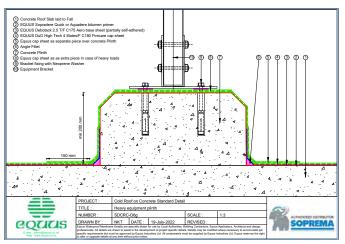


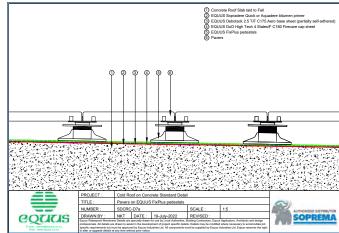


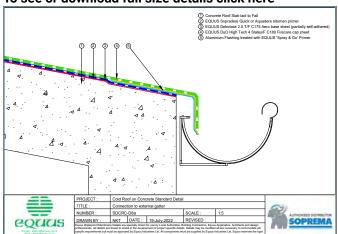


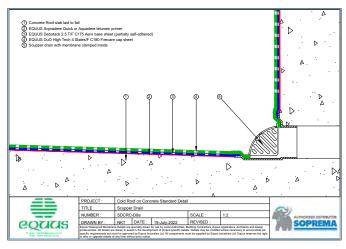


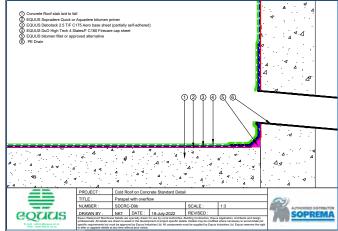


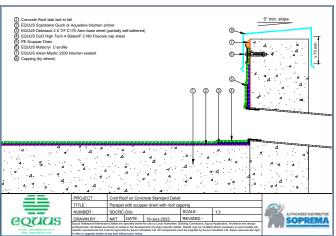


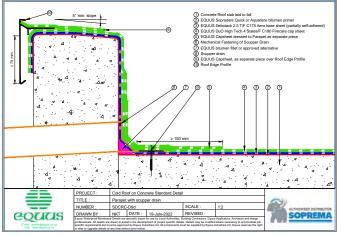


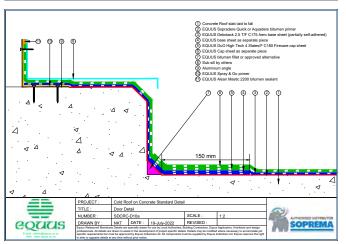












## **WHO ARE WE?**

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

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