



EQUUS SOPREMA COLPHENE BSW TANKING SYSTEM

Standard Building Consent Package



CELEBRATING

40 YEARS
1982-2022

MARCH 2023



AUTHORISED DISTRIBUTOR

SOPREMA

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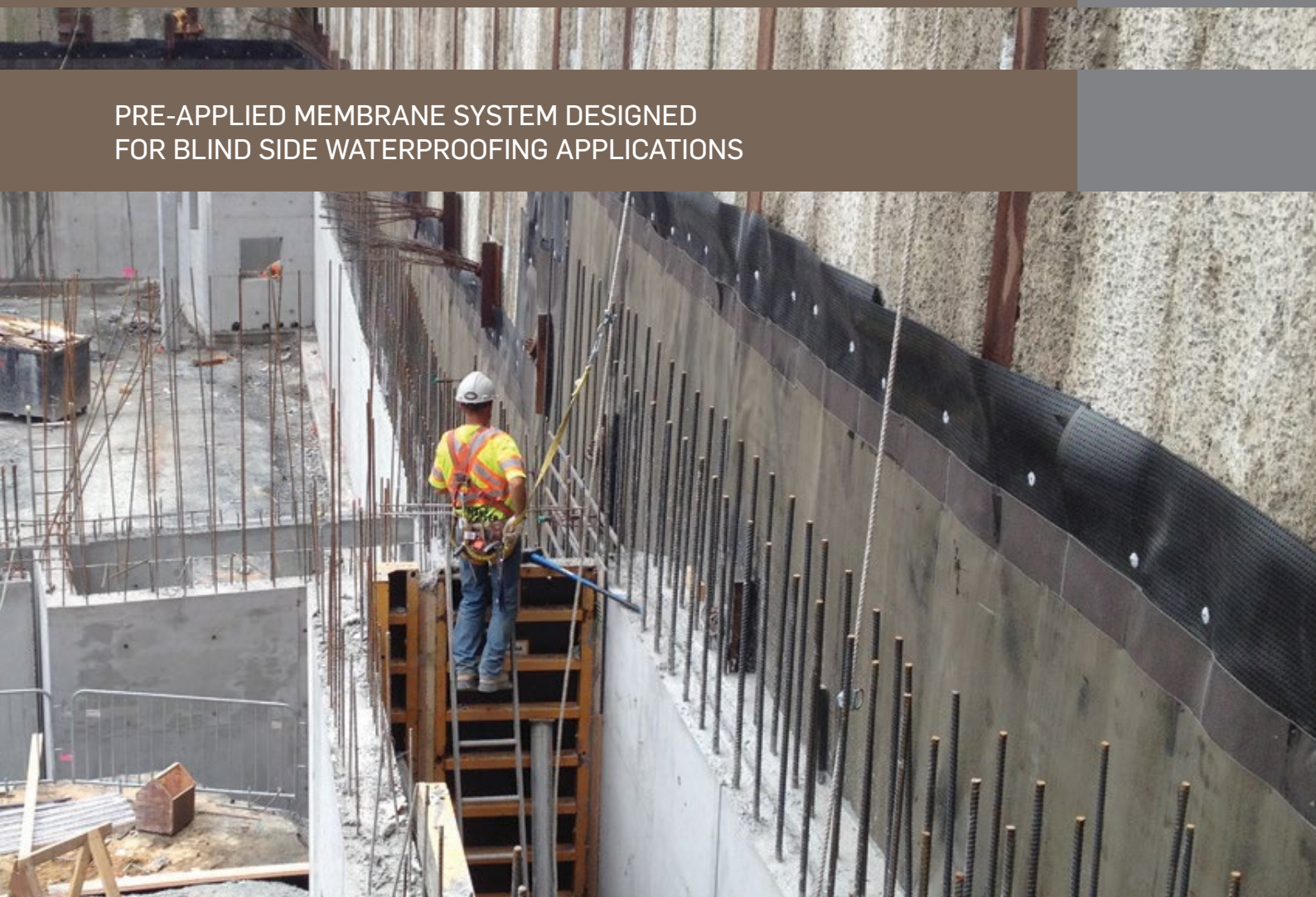
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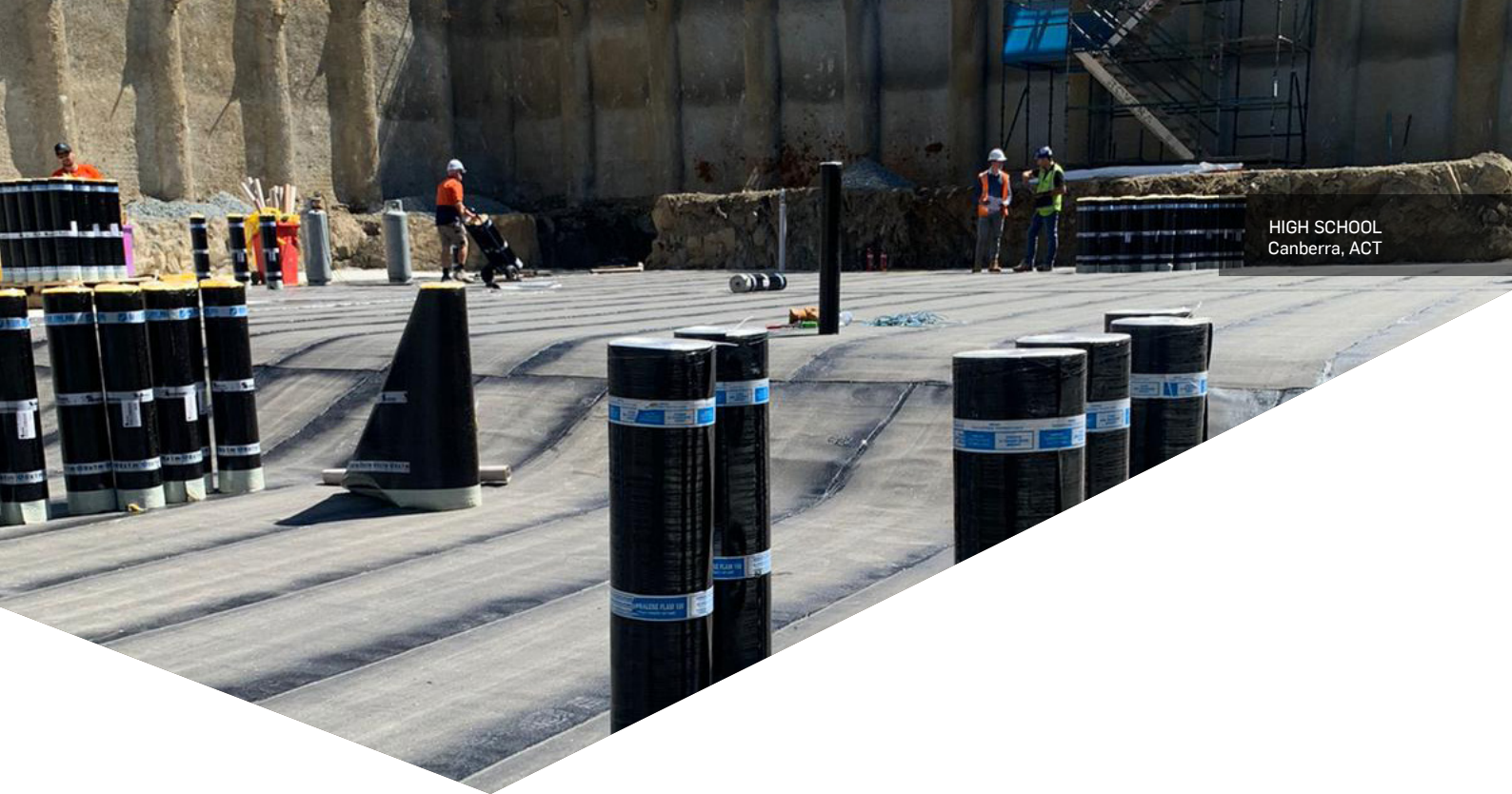


WATERPROOFING

COLPHENE[®] BSW FOUNDATIONS

PRE-APPLIED MEMBRANE SYSTEM DESIGNED
FOR BLIND SIDE WATERPROOFING APPLICATIONS





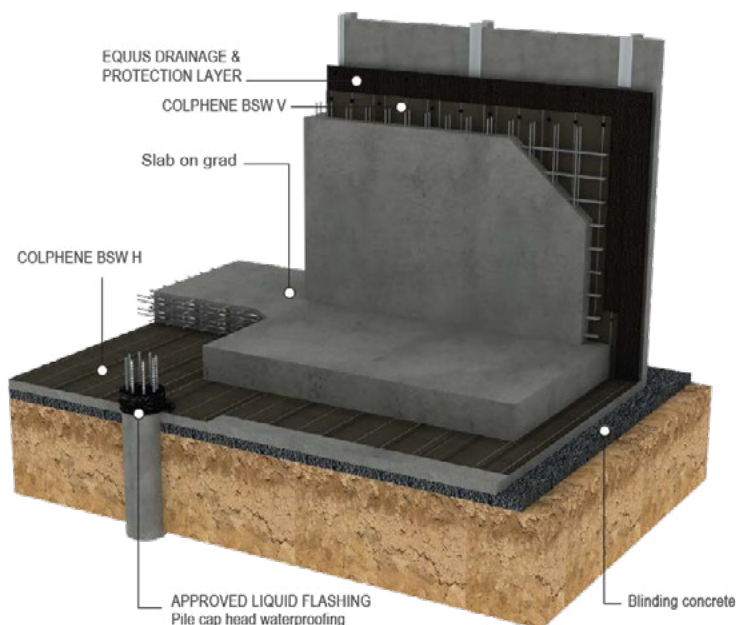
HIGH SCHOOL
Canberra, ACT

COLPHENE® BSW

PRE-APPLIED SYSTEM

COLPHENE BSW is a fully reinforced pre-applied membrane system designed for horizontal and vertical external blind side waterproofing applications. With its unique design, it can be used near buildings that limit access and excavation.

The membranes are composed of a select blend of high performance SBS-modified bitumen, an ultra-high-strength reinforcement, and a specially designed surface.



TESTING AND APPROVALS

SOPREMA's COLPHENE BSW membranes have been tested according to EN and ASTM Standards, and are BRANZ appraised, meeting the requirements of NZBC.



BENEFITS

- Excellent adhesion to poured concrete
- Increased resistance to hydrostatic pressure
- Superior resistance to tears and punctures
- Increased protection thanks to DUO SELVEDGE technology



QUALITY

COLPHENE BSW V

COLPHENE BSW V is designed for vertical blind side waterproofing applications. It is composed of high-performance SBS modified bitumen combined with an ultra-high-strength composite reinforcement. The surface is sanded and the self-adhesive underface is protected with a silicone release film. COLPHENE BSW V features DUO SELVEDGE technology.



COLPHENE BSW H

COLPHENE BSW H is designed for waterproofing applications under horizontal concrete slabs. It is composed of high-performance SBS modified bitumen and a polyester reinforcement. The surface is sanded and the underface is protected with a thermofusible plastic film. Its unique design, including DUO SELVEDGE technology, allows side laps to be heat-welded using a torch or a heat gun.



DIMENSIONS

10 x 1 m (33 x 3.3 ft)

THICKNESSES

3.0 mm (120 mil)

3.5 mm (140 mil)

APPLICATION METHOD

Self-adhesive with heat-welded laps

Loose-laid with heat-welded laps



SUPERIOR ADHESION

The system benefits from the effects of the exothermic reaction that occurs during concrete's curing process, and thus has superior adhesion due to a chemical and mechanical bond between the membrane and structural concrete. It features:

- CONTINUOUS BOND

Continuous and homogeneous bond to structural concrete

- ADHESIVE STRENGTH

Excellent adhesion to the poured structural concrete surface according to ASTM D903 standard

The top face of the membrane is made of SBS modified bitumen and covered with sand. The specially formulated surface softens slightly as the concrete begins to cure, releasing heat. This contributes to the adhesion of the membrane to the concrete, and prevents the ingress or migration of water around the structure.



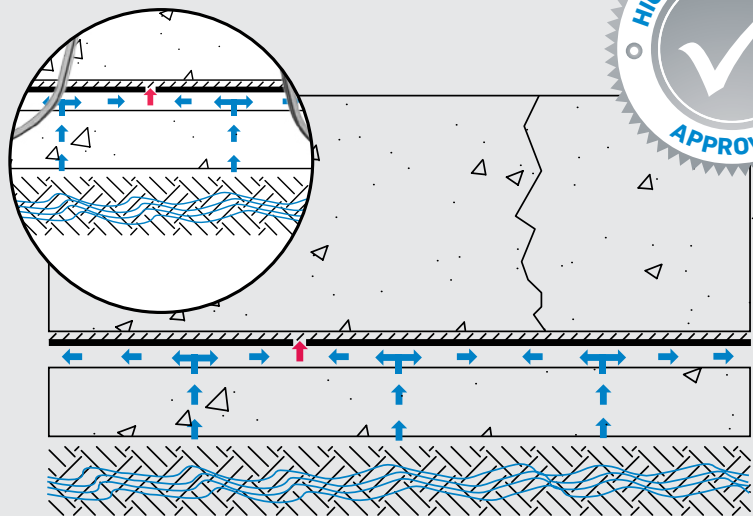
CONCEPTS



SOPREMA's SOLUTION:

COLPHENE BSW Concept
(pre-applied membrane system
that is **fully bonded** to the
structural concrete)

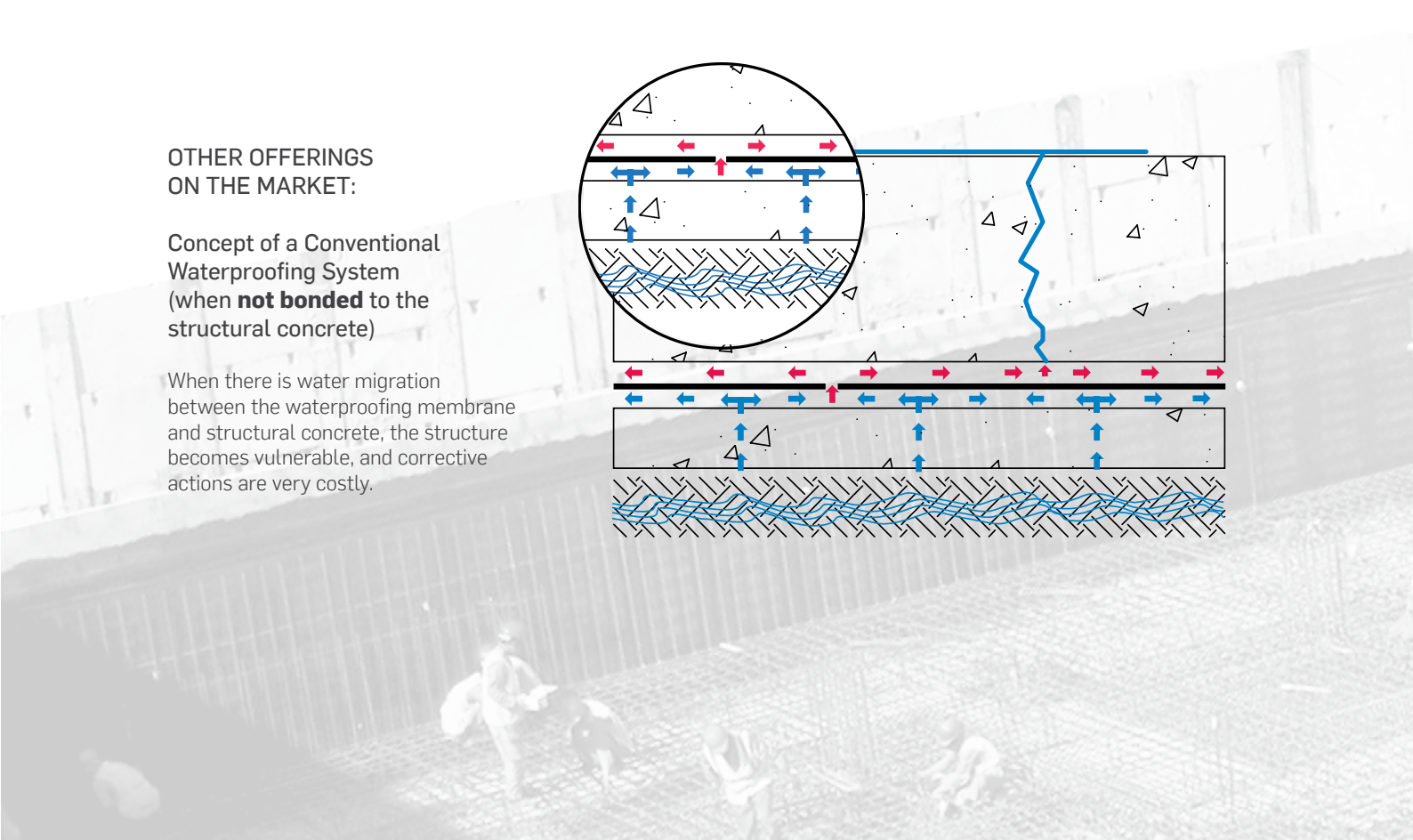
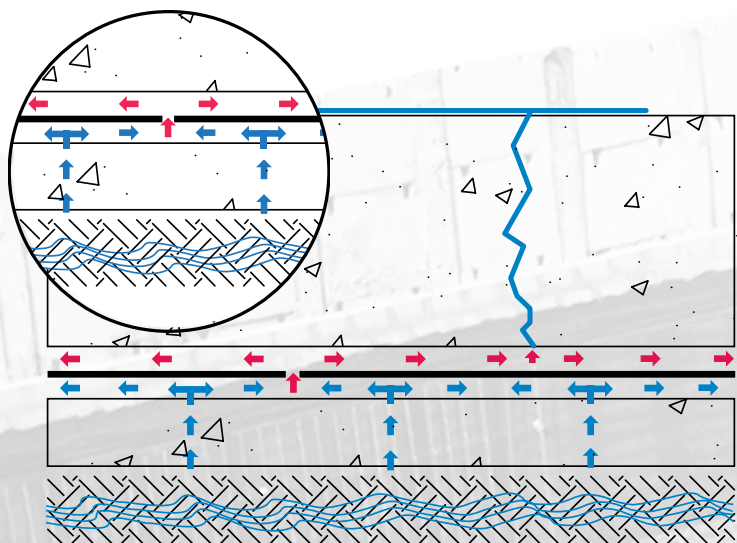
As it is natural for concrete to crack,
it is important to protect it from
water infiltration. The technology and
concept of COLPHENE BSW ensure
the full adhesion of a waterproofing
system to the foundation.



OTHER OFFERINGS
ON THE MARKET:

Concept of a Conventional
Waterproofing System
(when **not bonded** to the
structural concrete)

When there is water migration
between the waterproofing membrane
and structural concrete, the structure
becomes vulnerable, and corrective
actions are very costly.



ACCESSORIES



EQUUS PEEL & STICK PRIMER
Is a rubber based adhesive solvent solution.



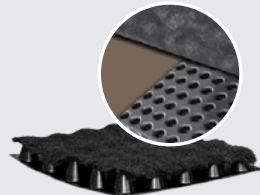
SOPRADERE QUICK PRIMER
Cold applied fast drying primer based on bitumen, solvents and adhesion-improving additives.



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



ALSAN FLASHING QUADRO
Single-component, root resistant polyurethane resin for waterproofing junctions between horizontal surfaces, up-stands and various roof details.



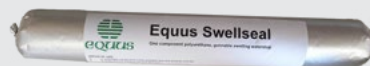
EQUUS APPROVED DRAINAGE LAYER
High-density drainage panel with a factory-laminated geo-textile. It is used on vertical surfaces before COLPHENE BSW installation.



AQUAFIN®-CJ6
Thermoplastic expansive waterstop for waterproofing construction joints.
AQUAFIN®-CJ4
Bentonite joint waterstop with patented rain protection coating.



ALSAN MASTIC 2200
Flexible mastic based on bitumen and synthetic rubber. Used for sealing small tears, cracks, joints and local repairs.



SWELLSEAL
Equus Swellseal is a specially formulated, high performance, swellable, single-component, polyurethane based waterstop.



TERMINATION BAR
A pre-manufactured profile that terminates the waterproofing membrane at the wall in a professional and watertight, wind-peel resistant manner with the addition of 50 mm flange for securing drainage board.



CELEBRATING
40
YEARS
1982-2022

Specification

WATERTIGHT TECHNOLOGY

COATINGS & SILICATE SYSTEMS

FLOORING TECHNOLOGY

Standard Specification for the application of the EQUUS SOPREMA COLPHENE BSW below-ground waterproofing system to concrete or masonry structures.

For areas with risk of hydrostatic water pressure

Project:
Specification: P5100
Date: February 2023
Page 1 of 5

1.0 PREAMBLE:

This specification is for the application of the **EQUUS SOPREMA COLPHENE BSW** waterproofing membrane system to below-ground concrete structures, concrete floors, and screed-protected areas in construction. The membrane system can be pre-applied or post-applied giving the designer installation options which are crucial to the success of below-ground waterproofing systems.

EQUUS SOPREMA COLPHENE BSW membranes have been specifically designed to adhere to freshly poured concrete due to the chemical and mechanical bond between the waterproofing membrane and structural concrete, which not only prevents water infiltration inside the building but also prevents lateral water migration between the membrane and concrete. The membrane resists underground soil settlement and is designed for use in areas where a risk of hydrostatic water pressure is present.

The system is applicable on moist and dusty areas. After installation the system is not dependent on the weak lean concrete but forms one part with the reinforced concrete floor slab or wall.

The **EQUUS SOPREMA COLPHENE BSW** membrane can be loose laid on lean site concrete or compacted hardfill. All overlaps, vertical elements and corners are welded by gas torch.

The **COLPHENE BSW H** and **COLPHENE BSW V** membranes have a unique advantage in that they are finished with DUO SELVEDGE lap technology. The first section of the of the DUO SELVEDGE lap is self-adhesive, which is pressed closed initially. This protects components under the membrane such as polystyrene or other foam insulation from melting during the heat welding process. The remaining section of the lap area can then be closed safely.

Note: Refer to the WMAI Code of Practice for Below-Grade Tanking Membranes for further information.

2.0 SURFACE PREPARATION:

2.1 General - Responsibility:

Unless expressly agreed otherwise at time of contract pricing, all work in this section shall be the responsibility of the main contractor, whether carried out by their own staff, other sub-trades, or the membrane sub-contractor.

2.2 Concrete Preparation:

Concrete structures must be specifically engineered to meet the requirements of the New Zealand Building Code.

When applying to existing substrates and structures, they must be thoroughly inspected to ensure that they will not affect the performance of the membrane when applied.

The information contained in this Specification is based on our experience and testing and represents the latest information available at the date of production. No responsibility is taken for uses to which this information may be put, but we advise that where application of products and processes is in complete conformity with this Specification an appropriate warranty may be available. We reserve the right to alter or update information parameters and formulations at any time without prior notice.
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Specification

WATERTIGHT TECHNOLOGY

COATINGS & SILICATE SYSTEMS

FLOORING TECHNOLOGY

Curing times may vary dependent on location, mixes and climate conditions. After the slab has been poured allow sufficient drying time, generally between 14 – 28 days. To verify concrete has sufficiently dried, a measurement can be taken using a hygrometer. A maximum relative humidity of 75% is required, measured at the time of membrane application.

It is recommended that concrete curing compounds are not used. Consult Equus Industries Ltd for a recommendation prior to use if specified by others. Any traces of such compound must be gone or removed before membrane work begins.

The concrete shall be finished to NZS3114:1987 U3, with a light trowel texture.
The concrete shall have all ridges and protrusions stoned flush.

3.0 MEMBRANE APPLICATION:

Note: A prestart meeting should be held onsite with the Main Contractor and the Equus Certified Applicator prior to commencement membrane installation.

Note: Install **COLPHENE BSW V** only in fair weather conditions with a substrate temperature above 10°C. In conditions where the temperature may be lower, the use of hot air against the membrane may be required for detailing and edge laps to ensure watertightness.

3.1 Tanking – Beams, Pile Caps and Lift Pits – Pre-applied into formwork:

Loose lay **COLPHENE BSW H** to fit inside the formwork with the crystals facing upwards. The sheets laps are closed in accordance with the DUO SELVEDGE lap technology (see section 3.8.1). Ensure all joins are well sealed, with a minimum lap of 100mm. This is indicated by the presence of a thin bead of extruded bitumen at all sheet joins after torching. End laps shall have a width of 150mm and be offset in adjacent runs.

Pile caps shall be finished using a non-shrink mortar to a smooth finish with no nibs or protrusions. The vertical areas and corners of beams, piles and pillar-caps receive a primer of **SOPRADERE QUICK**. All corners (internal and external) are reinforced with an additional strip of **COLPHENE BSW H**.

In some cases, the liquid detail membrane **EASY FLASHING, ALSAN FLASHING QUADRO**, or **MATACRYL THIX** can be used to overflash the membrane onto the pile.

3.2 Insulation: (under-slab when required)

Install Equus supplied thermal insulation in a brick bond pattern against hardfill or site concrete using full boards where possible.

3.3 Tanking – Horizontal floor applications – Loose-laid:

Where **COLPHENE BSW H** is installed as a loose laid waterproofing membrane under concrete floor slabs, concrete curing times are not applicable. **COLPHENE BSW H** can be loose laid over compacted hardfill or site concrete.

Loose lay **COLPHENE BSW H** to fit inside the formwork with the crystal facing upwards. The sheets joints are closed in accordance with the DUO SELVEDGE lap technology (refer to section 3.8.1). Ensure all joins are heat welded and well sealed, with a minimum lap of 100mm. This is indicated by the presence of a thin bead of melted bitumen at all sheet joins after torching. End laps shall be a width of 150mm and be offset in adjacent runs.

When laying **COLPHENE BSW H** as a water-proof membrane under a concrete slab, the maximum non-specific design of hardfill shall be up to 600mm in depth. Granular fill, sand blinding and compaction shall comply with the requirements of NZS 3604-99.

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Granular fill buildups greater than 600mm will require specific design by the Geotechnical Engineer.

Special attention must be paid when placing reinforcing steel to avoid unnecessary puncture or damage to the **COLPHENE BSW H**. While the membrane is tough and resistant, care is necessary.

Note: The main contractor shall immediately notify the waterproofing contractor if any such damage occurs so it can be repaired before the concrete is finally placed.

3.4 Tanking – Vertical wall application – Pre-applied against lost formwork:

Install **Equus drainage layer** to the lost formwork by means of **EQUUS SOPREMA Fixings**. The filter cloth of the drainage layer shall face the lost formwork. Apply **COLPHENE BSW V** to the drainage board by self-adhesive application. Seal all DUO SELVEDGE laps. Mechanically fasten the **COLPHENE BSW V** at the top to keep it in place during concrete installation.

Creasing of the membrane is not permitted as it may be damaged during the concrete pour.

Note: Where thermal insulation is required, install Equus thermal insulation against the lost formwork before installing the **Equus drainage layer**. Insulation can be held in place with **DOUBLESTICK** tape or **EQUUS SOPREMA fixings**.

3.5 Tanking – Vertical wall application – Post-applied by torch-on application:

All concrete wall areas are fully primed with **SOPRADERE QUICK** bitumen primer, applied by brush or roller to a dried and prepared surface at a spreading rate of 5 m²/L. Allow to dry for 4-24 hours depending upon prevailing weather conditions.

COLPHENE BSW H sand-finished membrane is used as a reinforcement strip in all internal and external corners, connections between floor and wall, and cold joints. The reinforcement strip is fully torch welded in the corner, followed by torching the full rolls of **COLPHENE BSW H** membrane onto the wall. The sheets joints are closed in accordance with the DUO SELVEDGE lap technology. Ensure all laps are well sealed with a minimum cover of 100mm.

Where required for detailing liquid membrane **EASY FLASHING**, **ALSAN FLASHING QUADRO**, or **MATACRYL THIX** can be used.

3.6 Tanking – Vertical wall application – Post applied: self-adhesive application:

All vertical areas such as foundation walls are fully primed with **Equus Peel and Stick Primer**, applied by brush and/or roller at a spreading rate of 6 to 8 m²/L, depending on the porosity of the substrate. Allow to dry for a minimum 1 hour depending upon prevailing weather conditions.

COLPHENE BSW V membrane is used as a reinforcement strip in all internal and external corners, connections between floor and wall, and cold joints. The reinforcement strip is fully pressed in place. The **COLPHENE BSW V** self-adhesive membrane is installed by removing the siliconized film and pressing the membrane into place on the primed surface. Use a soft broom or roller to ensure there are no trapped air bubbles under the membrane and that it is well bonded to the surface.

The sheets joints are closed with the DUO SELVEDGE lap technology. Ensure all joints are well sealed with a minimum lap of 100mm by torch or hot-air.

Where required for detailing liquid membrane **EASY FLASHING**, **ALSAN FLASHING QUADRO**, or **MATACRYL THIX** can be used.

3.7 Insulation: (vertical against walls where required)

Install Equus supplied thermal insulation against **COLPHENE BSW V** membrane, held in

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place with dots of **DOUBLESTICK** tape. **Equus drainage layer** will then be installed over top of the insulation.

3.8 Tanking – Vertical wall application – Post applied:

Alternative option where there is a low risk of hydrostatic pressure up to 3m deep.

All vertical areas such as foundation walls are fully primed with **Equus Peel and Stick Primer** at a spreading rate of 6 to 8 m²/L by brush and/or roller depending on the porosity of the substrate. Allow to dry for a minimum 1 hour depending upon prevailing weather conditions.

Extra strips of **COLPHENE 3000** membrane shall be used to reinforce all internal and external corners. These are also required at floor and wall junctions to connect to the DPM extending up from below the floor slab where required. **COLPHENE 3000** self-adhesive membrane is installed by removing the siliconized film and pressing the membrane into place on the primed surface. Use a soft broom or roller to ensure there are no trapped air bubbles under the membrane and that it is well bonded to the surface. Heat, preferably by hot air, is used on all connections and laps to ensure they are fully waterproof. Ensure all membrane laps are well sealed with a minimum side lap of 75mm and minimum end-lap of 150mm.

3.9 Tanking – General Application:

.1 Sheet Joints:

Decide the most suitable direction to follow. Unroll and discard packaging. Align the first roll, cut to length as required and re-roll both ends to the middle. In case of fully bonded applications, torch or press evenly as the membrane is unrolled into place.

Ensure even heat application. Repeat in sequence with all rolls, maintaining minimum side laps of 100mm and end laps of 150mm.

The **COLPHENE BSW H** and **COLPHENE BSW V** membranes have a unique advantage in that they are finished with DUO SELVEDGE lap technology. The first section of the of the DUO SELVEDGE lap is self-adhesive, which is pressed closed initially. This protects components under the membrane such as polystyrene or other foam insulation from melting during the heat welding process. The remaining section of the lap area can then be closed safely.

.2 Detailing

Detailing shall be carried out using **EASY FLASHING** or **ALSAN FLASHING QUADRO** liquid membrane.

.3 Repairs to damaged areas:

Should the **COLPHENE BSW** be damaged or perforated so that its waterproofing qualities are affected, repairs can be made by heat-welding a piece of **COLPHENE BSW** membrane of suitable size to cover the damaged area with a minimum overlap of 150mm on all sides of the damaged area.

.4 Backfilling: (Walls)

The membrane must be protected from damage by abrasive materials and expansive soils in the ground over its lifetime and especially during back filling. It is also useful to reduce excessive hydrostatic pressure on the membrane itself. This can be achieved by installing Equus thermal insulation and Equus approved protection and drainage layer after membrane installation.

The drainage layer is installed over the finished membrane prior to backfilling and shall be kept in place using Equus **termination bars** and **ALSAN MASTIC 2200 sealant** to spot stick the drainage layer to the membrane and seal the top of the termination bar.

Ensure a drain coil with a minimum diameter of 100mm (incorporating a filter material) is

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installed at the base of the foundation prior to backfilling. The drain is required to discharge to an approved outlet. Installation shall be in accordance with E2/AS1 External Moisture of the New Zealand Building Code with provision for cleaning.

Free draining granular backfill is required behind the tanked wall and around the drain coil to allow the free flow of water to the drain. An impervious ground cover is required above the backfilled area to redirect surface water away from the building. Minimum fall shall be 1:30.

Equus Industries Limited must be consulted regarding the design and suitability of membrane protection layers.

3.10 Penetrations:

This shall include all outlets and pipe penetrations through the wall. This can be carried out before, during or in some cases after laying of the membrane depending on the detail type. All detailing shall be done in accordance with the manufacturer's technical literature.

3.11 Sealant:

ALSAN MASTIC 2200 and/or **SOPRASEAL** shall be used for detailing membrane edges and termination bars

3.12 Waterstops:

For cold joints and floor /wall junctions where required, **Equus Swellseal, Aquafin CJ4 or Aquafin CJ6** waterstops can be used. Consult Equus Industries Ltd for a recommendation if required.

4.0 MAINTENANCE AND WARRANTY:

4.1 Maintenance:

Equus Industries Limited recommends, as normal maintenance, that a certified installer inspect the following areas to ensure weathertightness and durability of the system:

- The top edge of the membrane sheet
- Sheet protection at that top edge
- The subsoil drainage is not blocked and is free draining to an approved outlet.

Check all associated building elements that can impact on the durability of the membrane.

4.2 Warranty:

The **EQUUS SOPREMA COLPHENE BSW** waterproofing membrane, as detailed in this specification, may be warranted as waterproof for a period of up to twenty (20) years provided that:

- (a) All work is carried out by a Certified Equus Applicator.
- (b) The **EQUUS SOPREMA COLPHENE BSW** is installed in accordance with the manufacturer's technical literature and the Application Manual current at the time of design, use, installation, and maintenance.
- (c) The Warranty is issued in conjunction with an appropriate Maintenance Statement.

The period of warranty is determined by the situation of the installation. The warranty period shall be determined for any contract in consultation with the Manufacturer or his representative.

The warranty is provided to the client by the Equus Certified Applicator carrying out the work and is backed by the Manufacturer as to the fitness for the purpose of the materials supplied for the contract.

--oo0oo--

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EQUUS SOPREMA COLPHENE BSW

Below-ground single layer waterproofing

Specification No: P5100

Date Prepared: February 2023

Project & Address: _____

Certified Applicator: _____

Building Contractor: _____

Building Owner/Property Manager: _____

1. Statement of Intent

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

2. Areas Treated

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

3. Sign Off

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

For: _____ (Signature)
(Building Contractor)

Date: ____ / ____ / ____ (Name)

For: _____ (Signature)
(Equus Applicator)

Date: ____ / ____ / ____ (Name)



4. Checklist And Method Statement

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

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
1.	Concrete and other surfaces satisfactory for installation of COLPHENE BSW by Equus Certified Applicator.				
2.	Loose-lay COLPHENE BSW H to lift pits Ensure sheet joints are closed using DUO SELVEDGE lap technology (over thermal insulation where required).				
3.	Ensure all pile caps, beams, piles, and pillar caps are reinforced with a strip of COLPHENE BSW H over SOPRADERE QUICK Primer.				
4.	Install thermal insulation where required in a brick bond pattern.				
5.	HORIZONTAL: Loose lay COLPHENE BSW H to fit inside the formwork, compacted hardfill covered with sand or site concrete with sanded surface facing upwards.				
6.	HORIZONTAL: Sheet joints are closed using DUO SELVEDGE lap with a minimum 100mm ensure all are well sealed. Minimum end laps shall be 150mm				
7.	Any details shall be carried out using EASY FLASHING, ALSAN FLASHING QUADRO or Matacryl Thix .				
8.	VERTICAL PRE-APPLIED against lost formwork: Install drainage layer within mechanical fixings and apply COLPHENE BSW V to the drainage layer. (Where thermal-insulation is required, install against lost formwork before drainage layer. Held in place with DOUBLE-STICK tape or EQUUS SOPREMA Fixings.)				
9.	VERTICAL PRE-APPLIED against lost formwork: Sheet joints are closed using DUO SELVEDGE lap with a minimum 100mm ensure all are well sealed by torch or hot air.				
10.	VERTICAL POST-APPLIED: Install COLPHENE BSW H (for torched on applications) or COLPHENE BSW V (for self-adhered applications) reinforcement strip in all internal and external corners, connections between the floor and wall and all cold joints.				
11.	VERTICAL POST-APPLIED: Install the COLPHENE BSW H (for torched on applications) or COLPHENE BSW V (for self-adhered applications) membrane against the wall.				
12.	VERTICAL POST-APPLIED: Sheet joints are closed using DUO SELVEDGE lap with a minimum 100mm ensure all are well sealed with torch or (<i>BSW V only</i>) hot air.				

Equus Industries Ltd
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4. Checklist And Method Statement

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

No.	Process	Completed On	Building Contractor	Equus Contractor	Notes
13.	Any details shall be carried out using EASY FLASHING, ALSAN FLASHING QUADRO or Matacryl Thix .				
14.	Install vertical Equus Thermal Insulation against COLPHENE BSW V membrane, held in place by dots of DOUBLESTICK tape.				
15.	Install Equus drainage layer against vertical COLPHENE membrane, and secure with Equus Termination Bar and sealant.				
16.	VERTICAL POST APPLIED (Alternative options for areas with low risk of hydrostatic water pressure up to 3m deep): Install a COLPHENE 3000 self-adhesive reinforcement strip in all internal and external corners and connections between the floor and wall. Followed by application of COLPHENE 3000 self-adhered to the wall. Hot air is used to ensure laps are well sealed.				
17.	Installation of Steel work by others.				
18.	Areas that have been perforated or damaged to be repaired by heat welding a piece of COLPHENE BSW H including a minimum 150mm overlap.				
19.	Concrete pour by others.				
20.	Precast panels or blockwork stood by others.				
21.	Waterstops placed where required. Cold joints and stitch joints.				
22.	Any loose areas on the upper edge of the membrane can be torched into place or sealed with the Equus Termination Bar and bead of ALSAN MASTIC 2200 sealant.				
23.*	System to be inspected on completion.				

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BRANZ Appraised

Appraisal No. 1037 [2018]

**DEBOFLEX SPECIAL
TANKING AND DPM
MEMBRANE**

*[previously known as DeboBase
3.5 CS/F K180 Special]*

Appraisal No. 1037 [2018]

Amended 22 April 2021



BRANZ Appraisals

Technical Assessments of
products for building and
construction.



Soprema NV

Bouwelven

5B - 2280

Grobbentank

Belgium

Tel: +64 021 800 407

Web: www.soprema.com

Marketed by:



Equus Industries Ltd

PO Box 601

Blenheim

Ph: +64 3 578 0214

Fax: +64 3 578 0919

Web: www.equus.co.nz

Product

1.1 Deboflex Special Tanking and DPM Membrane is a pre-applied or torch applied DPM and tanking membrane for basement retaining walls and floors. It is applied under floor slabs and foundations and to the exterior face of basement retaining walls to prevent liquid water or water vapour penetrating to the interior face in spaces where moisture may cause damage.

Scope

- 2.1 Deboflex Special Tanking and DPM Membrane has been appraised as a DPM for use:
 - on buildings subject to non-specific design under floor slabs complying with NZS 3604 and behind concrete masonry basement walls and under floor slabs complying with NZS 4229; and,
 - in buildings subject to specific design with substrates of in-situ or precast concrete complying with NZS 3101 or concrete masonry complying with NZS 4230 and 4210; and,
 - where subsoil drainage and free draining granular backfill has been placed behind basement walls.
- 2.2 Deboflex Special Tanking and DPM Membrane has also been appraised as a pre applied tanking membrane for use:
 - on buildings subject to specific design with substrates of in-situ or precast concrete complying with NZS 3101; and,
 - where the membrane is subject to hydrostatic pressure with the pressure not to exceed 2 bar [20 metres head of water].
- 2.3 Deboflex Special Tanking and DPM Membrane must be adequately protected against damage during backfilling and in service.
- 2.4 The product must be installed by Equus Industries Ltd certified applicators.



BRANZ

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BRANZ Appraised
Appraisal No. 1037 [2018]

BRANZ Appraisal
Appraisal No. 1037 [2018]
12 November 2018

DEBOFLEX 3.5 CS/F K180
SPECIAL/ COLPHENE BSW
TANKING AND DPM MEMBRANE

Building Regulations

New Zealand Building Code (NZBC)

3.1 In the opinion of BRANZ, Deboflex Special Tanking and DPM Membrane 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 (a) not less than 50 years. Deboflex Special Tanking and DPM Membrane meet this requirement. See Paragraph 11.1.

Clause E2 EXTERNAL MOISTURE: Performance E2.3.3. Deboflex Special Tanking and DPM Membrane meet this requirement. See Paragraphs 13.1 – 13.3.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. Deboflex Special Tanking and DPM Membrane meet this requirement and will not present a health hazard to people.

Technical Specification

4.1 Materials supplied by Equus Industries Ltd are as follows:

- Deboflex 3.5 CS/F K180 Special/ Colphene BSW H- is a post applied or pre-applied, torch on, SBS modified bitumen based membrane. It is supplied in a roll 3.50 mm thick, 1.00 m wide and 10 m long.
- Colphene Self Adhesive - is a post-applied SBS modified bitumen-based membrane combined with a tri-laminated woven polyethylene facer or cross laminated HDPE film. It is 1.5 mm thick and 1.00 m wide and 18.7 m long.
- DeboVix 3 T/F P180/ Colphene BSW V - is an SBS-modified bitumen based membrane. It is supplied in a roll of 3.00 mm thick, 1.00 m wide and 10 m long.
- DuO Primer/ Sopradere Quick - is a solvent-based bitumen coating. It may be used on a dry and porous surface. It is supplied as a black liquid in 4 and 25 litre pails.
- DuO Kit Sealant/ Alsan Mastic 2200 and De Boer Ultra Seal sealant - are black bituminous sealants with permanent flexibility to seal penetrations, terminations and other details. It is supplied as a black paste in 310 ml cartridges.
- Soprema Drainage layer - a drainage and filter layer used to protect the membrane prior to backfill. It is supplied in rolls of 7.3 mm thick, 2.10 m wide and 20 m long.
- Aquafin® - 2 K/M is a two-component waterproofing coating used for detailing the top edge termination of the Deboflex above ground. It is supplied as a Part A - Powder and Part B - polymer.
- Matacryl® Manual - is a highly elastic heavy duty seamless waterproofing membrane used for detailing the top edge termination of the Deboflex above ground. It is supplied in 30kg units.
- Aquadere Stick/ Aquaprimer FD - is a water-based, bitumen varnish. It is used to prime dry and porous substrates. It is supplied in 25 litre cans.
- Bitumen Angle Fillets - are pre-manufactured triangular angle fillets used between horizontal vertical transitions.
- Shrink Sleeves - are PVC accessories for sealing penetrations. They are supplied in various diameters from 18mm to 128mm.
- Danodren H15 Plus - is a nodular sheet composed of high density polyethylene (HDPE) and joined to a non-woven geotextile of calendared polypropylene used as a drainage and protection for the Deboflex. It is supplied in rolls, 20m long and 2.1m wide.
- Alsan Flashing Quadro - Polyurethane/bitumen liquid waterproofing membrane used in combination with alsan fleece reinforcement for sealing around penetrations.

Handling and Storage

5.1 Handling and storage of all materials whether on or off site is under the control of the installer. Dry storage must be provided for all products and the membranes must be protected from sunlight and UV radiation. Rolls of membrane must be stored on end.



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Technical Literature

- 6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for Deboflex Special Colphene BSW Tanking and DPM Membrane. The Technical Literature must be read in conjunction with this Appraisal. 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 Deboflex Special/ Colphene BSW Tanking and DPM Membrane is a waterproofing membrane that can be pre-applied or post applied

Substrate Design - Pre-Applied Tanking and DPM

- 7.2 Deboflex Special/ Colphene BSW Tanking and DPM Membrane is pre-applied to surfaces before fixing of reinforcing steel and before concreting. For floors the membrane is applied to site concrete. For walls it is applied to either permanent formwork or removable double faced formwork.

Substrate Design - Post Applied Tanking and DPM

Walls

- 8.1 Substrate design must be in accordance with the NZBC to a relevant standard, such as NZS 3101 for concrete, and NZS 4229 or NZS 4230 for concrete masonry.
- 8.2 The substrate must have a surface finish that is smooth, clean and free from defects or irregularities which may damage the membrane or allow water to trap behind the membrane.

Control Joints

- 8.3 Where control or construction joints are formed in the substrate, Soprema must be consulted for use of the membrane over these joints.

Concrete Slab-on-ground

- 8.4 The membrane must be laid on a minimum of 75 mm thickness of site concrete or well compacted sand. The structural concrete slab placed over the membranes must be a minimum of 100 mm thick.

Backfilling and Drainage

- 9.1 The membrane must be protected against damage by the placement of a protection material between the membranes and the granular fill.
- 9.2 The minimum requirement for backfilling is that a granular, free-draining material is used with the top of the backfill capped with an impervious clay fill that may be covered with topsoil if required. The impervious capping and topsoil must slope away from the wall.
- 9.3 A minimum 100 mm diameter subsoil perforated drainage pipe must be installed at the bottom of the wall. The pipe must be covered with a geotextile filter fabric, be laid at a minimum 1:200 fall and discharge to a drainage outlet. Provision for cleaning the pipe must also be provided.
- 9.4 Backfilling should begin as soon as possible.
- 9.5 As Deboflex Special/ Colphene BSW Tanking and DPM Membrane is also a pre-applied DPM/tanking membrane, on specifically designed substrates, when the pre-applied option is used there is no backfilling required.

Durability

Serviceable Life

- 10.1 As Deboflex 3.5 CS/F K180 Special/ Cophene BSW Tanking and DPM Membrane is also a suitable DPM and tanking material therefore they are expected to have a serviceable life of at least 50 years provided they are installed and maintained in accordance with this Appraisal and are continually protected from sunlight and ultra-violet [UV] radiation.



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Maintenance

- 11.1 Annual inspections must be made of the membranes' top edge seal and protection, the backfill capping, and the drainage pipe to ensure all are functioning as originally designed.
- 11.2 If required, the drainage pipe must be cleared to remove any sediment or silt build-up. The slope of the backfill capping must be maintained at all times.

External Moisture

- 12.1 Deboflex 3.5 CS/F K180 Special/ Colphene BSW Tanking and DPM Membrane, when installed in accordance with this Appraisal and the Technical Literature, will prevent water vapour [DPM] and water [tanking] from penetrating to the interior face of basement retaining walls and floors in spaces where moisture may cause damage. The membrane has a vapour flow resistance of not less than 90 MN s/g.
- 12.2 The membrane can be used to form sealed joints and to seal penetrations. The top edge of the membrane must be sealed to the wall as set out in the Technical Literature and protected.
- 12.3 Building designers must ensure junctions with other membranes, such as at the floor/wall junction, form a waterproof joint. These junctions have not been assessed and are outside the scope of this Appraisal.

Installation Information

Installation Skill Level Requirement

- 13.1 Installation of the membranes must be completed by Equus Industries Ltd certified applicators.

System Installation – Post Applied

Substrate Preparation

- 14.1 All vertical surfaces must be checked to ensure they are dry, clean, smooth and free from sharp edges, loose or foreign materials, oil, grease or other deleterious material that may affect adhesion or may damage the membranes.

Priming

- 14.2 All substrates must be primed before application of the membranes. The supplier of the membranes, Equus Soprema, should be contacted to confirm the most suitable primer. Application instructions for the primers are contained in the technical data sheets.

Membrane Installation – Walls

- 14.3 Starting at the lowest point, the membrane must be installed in accordance with the Technical Literature. Sheet edges must be overlapped a minimum of 100 mm. End laps must be a minimum of 200 mm, with upper sheets lapped over lower sheets. Internal and external corners must be reinforced with an extra layer of membrane 300 mm wide. Protection material must be installed before backfilling. Backfilling must commence immediately after the membranes are installed to ensure the membranes are not left exposed to sunlight or UV radiation.

Membrane Installation – Floors

- 14.4 The membrane must be installed in accordance with the Technical Literature. Sheet edges must be overlapped a minimum of 130 mm and end laps must be a minimum of 150 mm. The membrane must be inspected for damage and any damage must be repaired in accordance with the Technical Literature. The membrane must not be exposed to UV radiation for any longer than two months before the structural concrete slab is placed.

System Installation – Pre-Applied

Site Preparation

- 15.1 All surfaces are to be sound and solid to eliminate movement during concrete placement. Substrate must be regular and smooth with no gaps or voids greater than 12 mm. Grout must be used around all penetrations such as utility conduits for stability.



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Membrane Installation

- 15.2 Deboflex 3.5 CS/F K180 Special/ Cophene BSW Tanking and DPM Membrane must be installed to all areas required to achieve a waterproof finish in accordance with Equus Industries Ltd Technical Data. Temperatures must be greater than -4°C or above during installation.
- 15.3 The granular surface must face the new concrete. The end laps must be staggered to avoid buildup of layers.
- 15.4 The end laps must be accurately positioned to avoid buildup of layers. Sheets must overlap the previous sheet by a minimum of 130 mm for side laps and a minimum of 150 mm for end laps. The underside of the sheet must be clean, dry and free from contamination before making the overlaps. All laps are torched together.
- 15.5 Concrete must be placed within 60 days.

Inspections

- 16.1 The Technical Literature and the installation company's Quality Control sheets must be referred to during the inspection of the membrane installation.

Health and Safety

- 17.1 Safe use and handling procedures for the membrane is provided in the Technical Literature.

Basis of Appraisal

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

Tests

- 18.1 The following testing of Deboflex 3.5 CS/F K180 Special /Colphene BSW Tanking and DPM Membrane has been undertaken:
 - Watertightness, tensile strength, elongation, resistance to static load, resistance to impact, joint strength (peel & shear), flow resistance at elevated temperature after heat aging, flexibility at low temperature [-15oC], flexibility at low temperature [-5oC] after heat ageing, water vapour flow resistance, peel adhesion to concrete, resistance to hydrostatic head (sample incorporated a joint) and load strain tear strength.

Test methods and results have been reviewed by BRANZ and found to be satisfactory.

Other Investigations

- 19.1 A durability opinion has been given by BRANZ technical experts.
- 19.2 Practicability of installation has been assessed by BRANZ and found to be satisfactory.
- 19.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

- 20.1 The manufacture of the membrane and primers have 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.
- 20.2 The quality of materials supplied to the market is the responsibility of Equus Industries Ltd.
- 20.3 Quality of installation on site is the responsibility of the Equus Industries Ltd certified applicator.
- 20.4 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.
- 20.5 Building owners are responsible for the maintenance of the membrane systems in accordance with the instructions of Equus Industries Ltd.



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Sources of Information

- NZS 3101: 2006 Concrete structures standard.
- NZS 3604: 2011 Timber-framed buildings.
- NZS 4229: 2013 Concrete masonry buildings not requiring specific engineering design.
- NZS 4230: 2004 Design of reinforced concrete masonry structures.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, Dated 22 April 2021

This Appraisal has been amended to change the Appraisal Holder, add new products and amend product names.



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TANKING AND DPM MEMBRANE



In the opinion of BRANZ, **Deboflex 3.5 CS/F K180 Special/ Colphene BSW Tanking and DPM Membrane** is fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided it is used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to **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 workmanship;
 - b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
 - c) any guarantee or warranty offered by **Soprema 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, guarantee, indemnity or warranty, to **Soprema NV** or any third party.

For BRANZ



Chelydra Percy

Chief Executive

Date of Issue:

12 November 2018

COLPHENE BSW H



Description:

COLPHENE BSW H is a high-performance waterproofing membrane composed of SBS modified bitumen and a non-woven polyester reinforcement. The surface is sanded, while the underface is covered with a thermofusible plastic film. **COLPHENE BSW H** is designed for horizontal blindside waterproofing applications.

Application:

HEAT-WELDED

COLPHENE BSW H membrane is installed loose laid on the concrete work slab or on a protection board over prepared and well compacted soil. To prevent overly thick membranes, stagger the end laps by a minimum of 300 mm. Side lap joints must be a minimum of 100 mm and end lap joints must be a minimum of 150 mm. Membrane overlaps are sealed, by heat welding, with a propane torch or using an electric hot-air welder. All angle changes (inside and outside corners) and other details must be reinforced by heat-welding an additional 300 mm piece of **COLPHENE BSW H** centred on the angle.

It is recommended to install **COLPHENE BSW PROTECT'R**, as a protection layer, over the **COLPHENE BSW H** prior to placement of the reinforcement steel bars and pouring of the concrete slab.

DUO SELVEDGE

Over the entire width of **DUO SELVEDGE**, 50% of the surface is covered with exposed sticky bitumen. The remaining surface of the selvedge (50%) is covered by a thermofusible plastic film to seal overlap by heat-welding with a propane torch or with the **SOPRAMATIC** automatic hot-air welder.

UV exposure: up to 60 days.

Storage & Handling:

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

Packaging:

Specifications	COLPHENE BSW H
Thickness	3.5 mm
Reinforcement	Non-woven polyester
Dimensions	1 m x 10 m
Weight	4.3 kg/m ²
Selvedge width	100 mm
Surface	Sanded
Underface	Thermofusible plastic film
Rolls per skid	25

Properties:

Properties	Standards	COLPHENE BSW H
Tensile strength at peak load, MD/XD	ASTM D5147	17 / 11.5 kN/m
Elongation at break, MD/XD	ASTM D5147	60 / 65 %
Tear strength, MD/XD	ASTM D5147	600 N / 400 N
Low temperature flexibility	ASTM D5147	Unaffected at - 20°C
Puncture resistance	ASTM E154	1050 N
Water vapour permeance	ASTM E96 (Method B)	<2.5 ng / Pa•s•m ²
Water absorption	ASTM D570 @ 24 hours	<0.5 %
Adhesion to poured concrete, 22 °C	ASTM D903 modified (Peeled at 50 mm/min)	3400 N/m
Resistance to hydrostatic head	ASTM D5385	>110 m
Lateral water migration	ASTM D5385 modified	> 100 m



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March 2022

COLPHENE BSW V



Description:

COLPHENE BSW V is a high-performance waterproofing membrane composed of SBS modified bitumen and a composite reinforcement.

The topside is covered with specially engineered carbon dioxide crystals and the underside is covered by a silicone release film. **COLPHENE BSW V** is designed for vertical blind side waterproofing applications.

Field of Application:

COLPHENE BSW V is a pre-applied membrane designed for vertical blind side waterproofing applications (below grade and tanking works).

COLPHENE BSW V can be used for the following general applications:

- Retaining walls
- Foundations

Application Method:

COLPHENE BSW V is a self-adhered 'peel and stick' membrane installed over a prepared substrate using Equus Peel & Stick Primer and neoprene roller.

DUO SELVEDGE

Over the entire width of DUO SELVEDGE, 60% of the surface is covered with exposed sticky bitumen. The remaining surface of the selvedge (40%) is covered by a thermofusible plastic film to seal overlap by heat-welding with a propane torch or with the SOPRAMATIC automatic hot-air welder.

Installation Procedure:

SUBSTRATE

- No work should be started until all surfaces are smooth, dry and free of ice, snow or any other substance that may prevent the membrane from adhering properly.
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator.
- The use of Equus Peel & Stick Primer is required before installation of COLPHENE BSW V membrane if the adhesion is not enough.

INSTALLATION

- COLPHENE BSW V is installed in vertical strips of 5 m maximum onto acceptable substrate.
- COLPHENE BSW V membrane is adhered to substrate by peeling off the silicone release film.
- Side lap joints must be a minimum of 100 mm and end lap joints must be a minimum of 150 mm.
- Once installed, pressure must be applied over the whole surface using a membrane roller to ensure good contact.
- Membrane overlaps are sealed, by heat welding, with a propane torch or using an electric hot-air welder.
- The uppermost edge of each strip must be mechanically fastened to substrate using round plates of 50 mm diameter and appropriate fasteners for base material every 300 mm on center.

For complete installation specification and information please contact your local Equus Representative.

Packaging:

Roll dimensions: 1 m x 10 m
Roll weight: 35 kg
Rolls per pallet: 30

Storage & Handling:

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



The information in this product data sheet is based on our experience and testing. It represents the latest information available at the time of printing, but no guarantee of its accuracy is made or implied, nor responsibility taken for use to which this information may be put. We reserve the right to alter or up-date information parameters and formulations at any time without notice.

Properties:

Property	Standards	COLPHENE BSW V
Tensile strength at peak load, MD/XD	ASTM D5147	15.3 / 11.5 kN/m
Elongation at break, MD/XD	ASTM D5147	60 / 56 %
Tear strength, MD/XD	ASTM D5147	575 N / 500 N
Low temperature flexibility	ASTM D5147	Unaffected at -20 °C
Puncture resistance	ASTM E154	1100 N
Water vapour permeance	ASTM E96 (Method B)	<2.1 ng / Pa•s•m ²
Water absorption	ASTM D570 @ 24 hours	<0.5 %
Adhesion to poured concrete, 22 °C	ASTM D903 modified (Peeled at 50 mm/min)	4200 N/m
Resistance to hydrostatic head	ASTM D5385	> 110 m
Lateral water migration	ASTM D5385 modified	> 110 m
Gas permeability (methane) - (cm ² / s @ 1 atm) - (cm ³ x cm / cm ² x s s Pa)	ASTM D1434	4.12 x 10 ⁻⁷ 4.06 x 10 ⁻¹²
Volume resistivity (ohms-cm)	ASTM D257	1.57 x 10 ¹⁴
UV exposure	-	Up to 60 days

Statement of Responsibility:

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative and/or the contractor are responsible for checking the suitability of products for their intended use.

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June 2022

COLPHENE 3000



Description:

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

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

Recommended Substrates:

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

Surface Preparation:

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

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

Installation:

SELF-ADHESIVE

COLPHENE 3000 membrane must be adhered to substrate by peeling off the silicone release film. Side lap joints must be a minimum of 75 mm and end lap joints must be a minimum of 150 mm.

Once installed, pressure must be applied over the whole surface using a membrane roller to ensure good contact with the substrate.

The upper most edge of the membrane shall be mechanically fastened using termination bars and sealed with a compatible SOPREMA sealant.

Contact Equus for suitable sealant.

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

UV exposure: up to 60 days

Restriction:

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

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

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

Packaging:

(All values are nominal)

Storage and Handling:

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

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

Properties:

(All values are nominal)

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July 2021



SOPRADERE QUICK

Cold applied fast drying primer

Description:

Cold applied fast drying primer based on bitumen, solvents and adhesion-improving additives. Impregnation to ensure good adhesion to substrate (concrete, metal and wood) before welding (torch-on or hot-air method) or gluing bituminous waterproofing membranes.

It is also suitable on old/weathered bituminous waterproofing membranes with a slate or granulated finish.

Properties:

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

Packing & Storage:

Cans of 5 and 25 l.

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

Installation:

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

Cleaning tools:

- wet product - white spirit

Certifications:



Special Indications:

Hygiene, Health and Environment

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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February 2022

Equus Peel and Stick Primer

Product Description:

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

Uses:

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

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

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

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

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

Application:

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

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

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

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

Safety, Storage & Handling Information:

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

Transport Classification:

IMDG Class 3.1
UN No. 1294

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June 2017

EASY FLASHING

Description:

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

Field of Application:

EASY FLASHING is used:

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

Excellent adhesion on the following surfaces:

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

Advantages:

- Excellent elasticity
- Waterproofs and protects from atmospheric agents and from UV rays
- Resistance against corrosive action of many acids
- Encourages the cold laying
- Perfect grip on different materials
- Compatible with cementitious adhesives
- Long-lasting product

- Odourless and non-flammable product
- Non-toxic, solvent free
- Does not crack at low temperatures and does not pour at high temperatures.

Standards & Certifications:

EASY FLASHING is CE marked in accordance with:

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

Method of Use:

Operating conditions

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

Surface preparation

Before applying the product, make sure that the non-coherent parts, or non-adherent parts, paints, rust, dust, disarming oils are removed and carefully clean surfaces that need to be solid and dry.

The efficiency of the water outflow must be ascertained (slopes, positioning and size of the drains).

This product can also be applied on wet surfaces, but it is necessary there is no water stagnation.

Preparation

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

Application

EASY FLASHING can be applied by roller, brush, spray, spatula or notched squeegee.

It is generally applied in two coats. To facilitate the application on large surfaces it is advisable to dilute up to a maximum of 10% water. Apply the second coat fresh on fresh if the first has been reinforced, otherwise after complete drying of the first, after 24-48 hours.

On surfaces larger than 10 sqm or stressed supports, we recommend reinforcing EASY FLASHING with the special Alsan Voile-P fabric embedded in the first still fresh coat.

Cleaning tools

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

Consumption:

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

Additional Information:

- It is recommended to apply the product with an ambient temperature no lower than +5 °C and when there are no weather conditions of fog, rain and frost, avoiding in any case extreme situations of cold and heat and high humidity.
- Particular attention should be paid to the application of the product on some new bituminous surfaces so as to avoid the risk that hydrocarbons still present in the support may compromise the correct adhesion of the product.
- In the realisation of waterproof protections executed with EASY FLASHING, or in any case in applications between materials of different nature, structural joints, or in the presence of important cracks it is recommended to use the Voile-P reinforcement impregnating it completely in the first coat still fresh.
- Do not exceed the quantity and drying times recommended for each coat in order to guarantee the correct drying of the product in all its thickness.

- Temperatures over 35 °C could accelerate the drying of the product, compromising its workability.
- In the case of waterproofing walls against the ground with EASY FLASHING, suitable mechanical protection must be provided mainly for backfill operations.
- EASY FLASHING can be walked on occasionally in the case of occasional maintenance.
- To improve the durability of EASY FLASHING it is recommended painting with suitable protective paints.
- Do not use EASY FLASHING on supports subject to counter-thrust or strong water pressure.

For more information, ask for the Safety Data Sheet.

General Warnings:

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

Packaging & Storage:

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

Technical Characteristics:

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

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

Technical Characteristics:

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

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

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

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September 2022

ALSAN FLASHING QUADRO

Description:

ALSAN FLASHING QUADRO is a single-component, root resistant polyurethane resin for waterproofing junctions between horizontal surfaces, up-stands and various roof details in compliance with the highest solicitation category according to ETAG 005.

Application Areas:

ALSAN FLASHING QUADRO is a root and rhizome resistant resin used for flame-free waterproofing junctions between horizontal surfaces, up-stands and various roof details of heat sensitive substrates of roofs and buildings.

Properties:

- ETAG 005
- Working life: W3; Load class: P1-P4
- Climate zones: M, S; Roof slope: S1-S4
- Surface temperature: TL4/TH4
- Single-component
- Easy to apply
- Contains solvents
- Can be applied without using a primer on wood, most metals, rigid PVC and mineral surfaces
- Use ASLAN 103 on the FPO/TPO membranes¹
- Root and rhizome resistant according to FLL test method

Conditions for Application:

Substrate and ambient temperature: min. +5°C up to max +35°C.

Moisture content mineral substrates: max. 5% m/m.

Moisture content of wood: 16% v/v.

Air humidity: max. 80%

The substrate temperature must be at least 3°C above the dew point during application and curing.

Installation:

Substrate Preparation:

The substrate must be free of non adherent parts and substances affecting the adherence.²

Mixing:

Mix the contents thoroughly before use.

Application:

ALSAN FLASHING QUADRO is applied with a suitable roller or brush.

Rule of thumb: apply approx. 2/3 of the resin under the reinforcement fleece and 1/3 wet on wet on top of the reinforcement fleece.

Fleece overlaps must be at least 5 cm wide. Resin must also be applied in between the overlaps.

System:

System according to ETAG 005:

With **ALSAN FLEECE 165 P** with properties W3, P4, TH4, TL4: execution with 3.0 kg/m² **ALSAN FLASHING QUADRO**.

Cleaning:

When work is interrupted or completed, clean the tools thoroughly with **ALSAN 076** or **ALSAN DILUTANT V** cleaning agent, within the potlife of the material.

Consumption:

3.0 kg/m²

Reaction Times(23°C):

Rainproof: ± 4 hours

Walkable after ± 6 hours

The maximum overlaying time is 72 hours. Beyond, the substrate must be re-prepared with ALSAN 076 cleaner.

Technical Characteristics:

Density (23°C): 1.19 g/cm³

Viscosity (23°C): 7500 mPa.s

Solids Content: 85%

Shore A hardness: 42

Water vapour permeability μ: 8022

Sd (3.0 kg/m²): 20 m

System Components:

ALSAN FLEECE 165 P

Packing:

5 kg bucket

Colour:

RAL 7012

On demand: RAL 7022, RAL 7040, RAL 9005

Storage, Transport & Shelf Life:

In original unopened package stored in a cool, dry and frost-free place, the unmixed product has a minimum shelf life of 12 months.

Avoid, also on site, exposure of the containers to direct sunlight. Opened packaging has a shortened shelf life.

Safety Information & Risks:

Refer to the relevant safety data sheet for more information.

Pay attention to the personal protective equipment.

GIS Code: PU 50

¹ See "Installation guidelines: "Surface preparation"

² See "Installation guidelines: "Surface preparation"

Elimination:

Cured material may be disposed of as construction waste. Containers and uncured material must be disposed of as a hazardous waste.

General Information:

The information in this document is applicable to the corresponding product, provided by SOPREMA.

Please note that this may vary from country to country.

The above information, in particular the product application information, is based under normal circumstances and is provided to the best of our knowledge.

The wide variety of requirements and conditions on site requires that the product must be tested under the specific conditions to ensure that it is suitable for the intended use. We reserve the right to make changes that reflect the technological process and improvements to our products.

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ALSAN MASTIC 2200

Description:

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

Properties:

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

Packing & Storage:

Cartridge 310 ml
20 cartridges/box

Minimum 12 months in original unopened packaging, 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



Special Indications:

Hygiene, Health and Environment

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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July 2021

DANODREN H15 PLUS

Drainage layer

Product Information

Description:

DANODREN H15 PLUS is a nodular sheet composed of high density polyethylene (HDPE) and joined to a non-woven geotextile of calendered polypropylene of 115 g/m². Nodule height is 7.3 ± 0.2 mm. It is specially designed as a drainage layer and for protection of underground walls and slabs in contact with the ground.

Packaging:

Rolls: 15 x 2.1m
Nodule height: 7.3mm
Roll surface: 42m²
Rolls/pallet: 6

Standards & Certification:

CE Marking: 2008 Certificate Number CPF: 0099/CPD/A42/0053
European standard EN 13252
The product fulfills the requirements established on the above mentioned norms, for the following applications: "F+S+R+D"
Filtration, Separation, Resistance and Drainage.



Warning:

The information that appears in this document makes reference to the uses and utilities of Danosa's products and systems, and it is based on the knowledge that has been learnt until present, by Danosa. This is only possible if products have been stored and used in an appropriate way.

Danosa is not responsible for unsuitable uses of the products or any other factors, such as meteorological facts, so Danosa is only responsible for the quality related to the provided products. Danosa reserves the right to carry out modifications without previous notice.

The values that appear in this technical sheet are the results of the tests that have been performed in our laboratory as at March 2007.

Technical Data	Value	Unit	Standard
Longitudinal tensile strength	15.0, -2.0	kN/m	UNE EN ISO 10319
Transversal tensile strength	14.0, -2.0	kN/m	UNE EN ISO 10319
Longitudinal elongation at break	100, ±20	%	UNE EN ISO 10319
Transversal elongation at break	70, ±20	%	UNE EN ISO 10319
Puncture resistance (CBR)	2.5, -0.5	kN	UNE EN ISO 12236
Dynamic perforation test	16, +3	mm	UNE EN 918
Water permeability	0.0614, -0.00921	m/s	UNE EN ISO 11058
Drainage capacity (i=0.1) in the plane of the geocomposite (at 100Kpa compression)	0.44	l/m.s	UNE EN ISO 12958
Opening size (geotextile)	160, ±30	µm	UNE EN ISO 12956
Compression resistance	180, ±20%	KN/m ²	UNE EN ISO 604
Modules of elasticity	1500	N/mm ²	ISO 178
Water absorption	1	mg/4d	DIN 53495
Temperature range in use	-30 a 80	°C	-
Air volume between nodules, approx.	5.9	l/m ²	-

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August 2021

SOPRADRAIN 10-G



Description:

SOPRADRAIN 10-G is a high-strength drainage panel consisting of a polypropylene core with a factory-laminated geotextile for installation over waterproofing membranes in most vertical and horizontal commercial drainage applications.

Reduced structural loading: **SOPRADRAIN 10-G** weighs less than 1kg/m² compared to 145kg/m² for a 10 cm drainage layer of gravel.

Reduced thickness: **SOPRADRAIN 10-G** is only 1 cm thick compared to 10 cm for gravel drainage, allowing better clearance at doors and a reduction in heights of upstands and curbs.

Installation:

When used in below grade applications always install **SOPRADRAIN 10-G** filter fabric towards backfill.

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

DRAINAGE CORE		
Properties	Standards	SOPRADRAIN 10-G
Roll dimensions	-	1.83 m x 15.25 m
Gross Coverage	-	27.9 m ²
Thickness	-	10 mm
Compressive Strength	ASTM D 1621	550 kPa
Maximum In-Plane Flow Rate	ASTM D 4716 (Hydraulic gradient of 1)	223 L/min/m

(ALL values are nominal)

GEOTEXTILE PROPERTIES		
Properties	Standards	SOPRADRAIN 10-G
Apparent Opening Size	ASTM D 4751	0.21 mm
Water Flow Rate	ASTM D 4491	5690 L/min/ m ²
Grab Tensile	ASTM D 4632	450 N
Grab Elongation	ASTM D 4632	50%
Puncture Resistance	ASTM D 4833	300 N

(ALL values are nominal)



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July 2021

The information in this product data sheet is based on our experience and testing. It represents the latest information available at the time of printing, but no guarantee of its accuracy is made or implied, nor responsibility taken for use to which this information may be put. We reserve the right to alter or up-date information parameters and formulations at any time without notice.

Equus Termination Bar

Description:

The **Equus Termination Bar** is a pre-manufactured profile that terminates the waterproofing membrane at the wall in a professional and watertight, wind-peel resistant manner with the addition of 50 mm flange for securing drainage board.

The **Equus Termination Bar** is used at concrete or wooden walls and curbs.

General Use:

Tanking situations where backfill covers membrane and termination bar.

Characteristics:

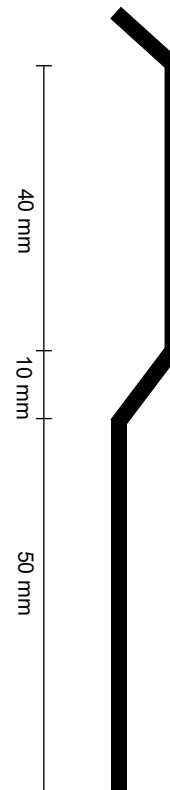
Material:	Extruded aluminium profile (Al Mg Si 0.5 F22 quality)
Tensile strength:	215 N/mm ²
Yield point:	160 N/mm ²
Elongation:	10%
Hardness:	70 brinell
Length:	2400 mm
Width:	110 mm
Colour:	Metallic
Thickness:	2 mm
Predrill:	200 mm

Advantages:

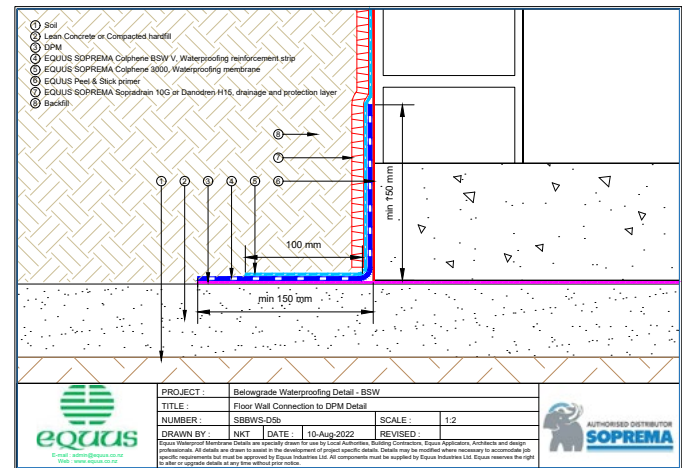
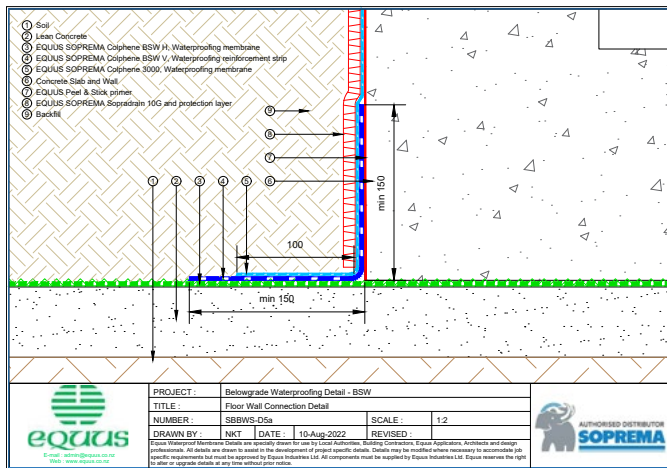
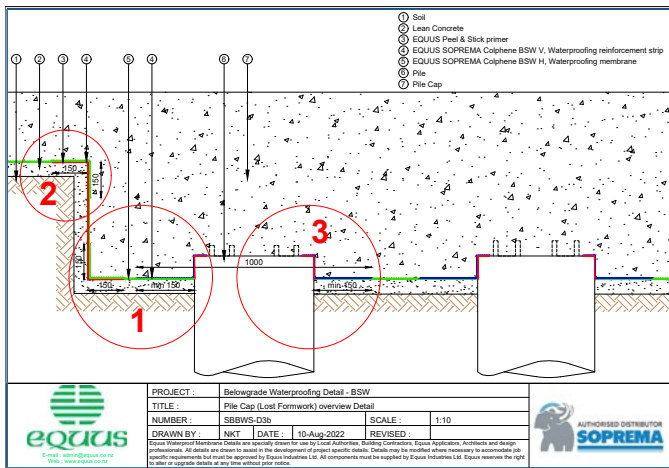
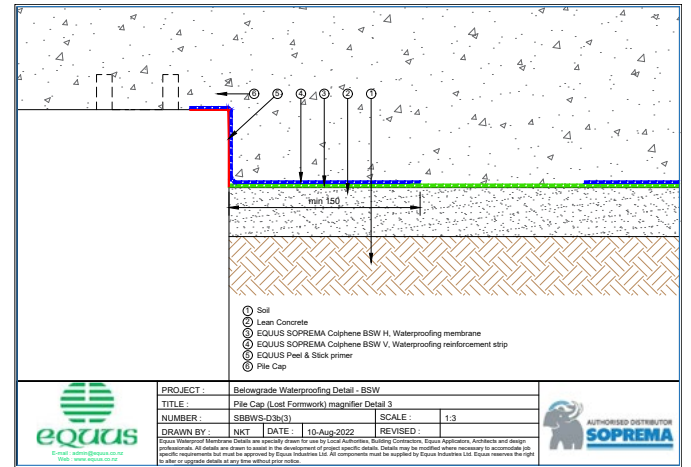
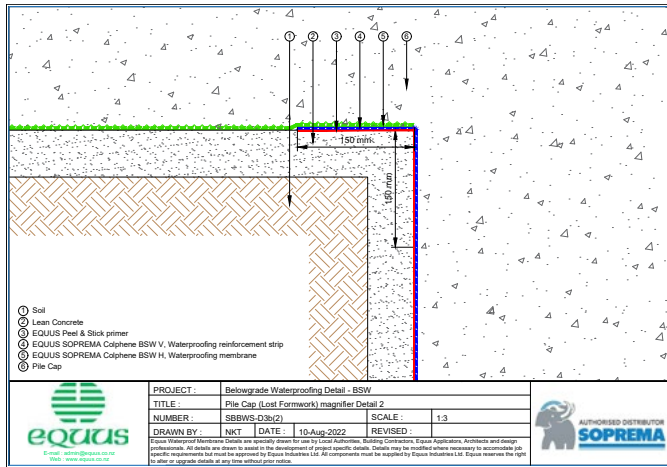
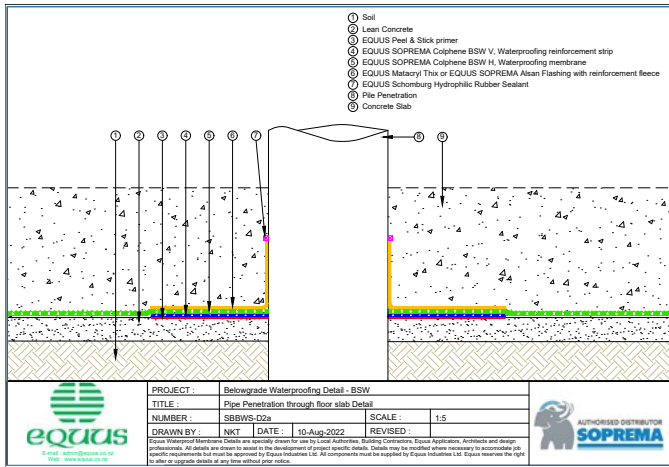
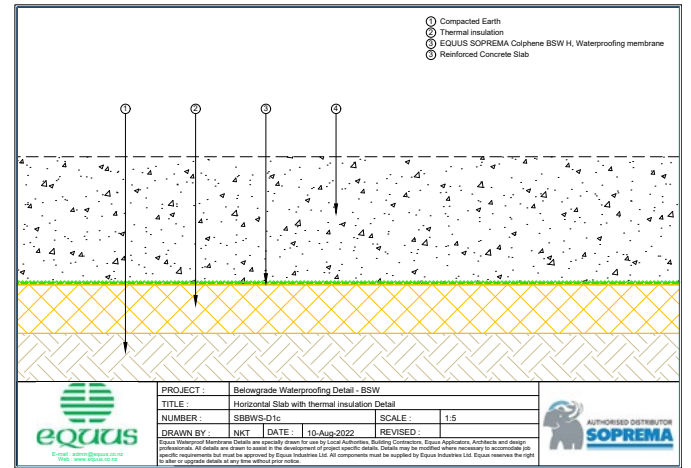
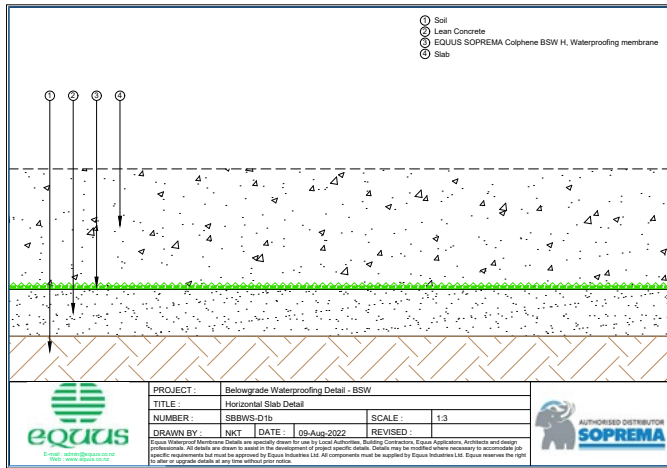
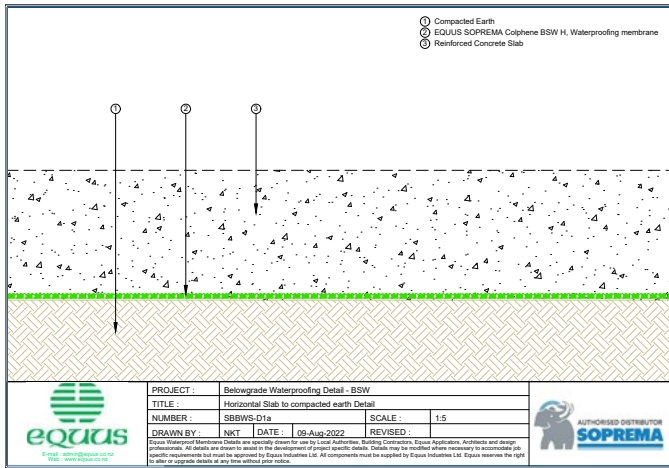
- Increases the durability of the waterproofing system.
- Increases the bonding of the waterproofing to the wall or curb.
- Wind-peel resistant.
- Corrosion resistant.
- Continuous quality.
- Provides an aesthetical, straight finishing.
- Provides a dripping point off the wall.
- Predrilled holes
- Lip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

Installation:

- The waterproofing is installed according to manufacturers details.
- The **Equus Termination Bar** is fastened at the edge of the waterproofing membrane into the wall.
- The space created at the top of the **Equus Termination Bar** is filled with a sealant compatible to the wall's material, bitumen and aluminium. **Equus** recommends **Alsan Mastic 2000**.



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July 2021



- EQIUS Peel & Stick primer
- EQIUS SOPREMA Colphene 3000, Waterproofing membrane
- EQIUS SOPREMA Sopradrain 10G, drainage and protection layer
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- EQIUS Mataryn Thix or EQIUS SOPREMA Alsan Flashing with reinforcement fleece

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Wall and Footing Detail
 NUMBER: SBBWS-D6a
 SCALE: 1:10
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- EQIUS Peel & Stick Primer
- EQIUS SOPREMA Colphene 3000, Waterproofing membrane
- XPS insulation
- EQIUS SOPREMA Sopradrain 10G and protection layer
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- EQIUS Waterstop
- EQIUS Mataryn Thix or EQIUS SOPREMA Alsan Flashing with reinforcement fleece
- EQIUS Termination Profile

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Wall and Footing Detail (Optional)
 NUMBER: SBBWS-D6b
 SCALE: 1:10
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- Concrete Floor Slab
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- EQIUS SOPREMA Colphene BSW V, Waterproofing reinforcement strip
- EQIUS Peel & Stick primer
- EQIUS SOPREMA DuO HT 4 States/F C180 FireCare

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Floor Slab waterproofing Detail
 NUMBER: SBBWS-D7a
 SCALE: 1:4
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- Site concrete or sand blinded compacted hardfill
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- EQIUS SOPREMA Colphene BSW V, Waterproofing reinforcement strip
- EQIUS Schomburg waterstop
- EQIUS SOPREMA Colphene BSW V attached to top of formwork
- EQIUS Peel & Stick primer
- Compatible permanent or sacrificial formwork

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Turn Up detail to Compatible permanent formwork Detail
 NUMBER: SBBWS-D8a
 SCALE: 1:3
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- Site concrete
- EQIUS SOPREMA Colphene BSW H, 1st layer (heat-welded)
- EQIUS SOPREMA SOPRAJOINT (heat-welded)
- EQIUS SOPREMA Colphene BSW H, (reinforcement, heat-welded)
- EQIUS SOPREMA Colphene BSW H, 2nd layer (heat-welded)
- Rigid support, 300 mm cover board
- EQIUS SOPREMA Colphene 3000, 500 mm
- EQIUS SOPREMA Colphene BSW V
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- Waterstop
- Roof foam
- EQIUS Alsan Mastic 2200 sealant

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Seismic joint detail
 NUMBER: SBBWS-D9a
 SCALE: 1:5
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Lift Pit Detail - LRF Pit Waterproofing Detail - Overview
 NUMBER: SBBWS-D10a
 SCALE: 1:16
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- Site concrete
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- EQIUS SOPREMA Colphene BSW V, Waterproofing reinforcement strip
- Concrete Lift Pit
- EQIUS Peel & Stick primer
- EQIUS SOPREMA Colphene 3000, Waterproofing membrane
- EQIUS SOPREMA Sopradrain 10G and protection layer
- EQIUS SOPREMA Self-adhesive membrane Colphene 3000
- Backfill

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Lift Pit Detail - Floor Wall connection
 NUMBER: SBBWS-D10a(1)
 SCALE: 1:3
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- Chamfered corner
- EQIUS Peel & Stick primer
- EQIUS SOPREMA Colphene BSW V, Waterproofing reinforcement strip
- EQIUS SOPREMA Colphene 3000, Waterproofing membrane
- EQIUS SOPREMA Sopradrain 10G and protection layer
- Backfill
- EQIUS Termination profile
- EQIUS SOPREMA Alsan Mastic 2200 bitumen sealant

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Lift Pit Detail - Membrane Termination
 NUMBER: SBBWS-D10a(2)
 SCALE: 1:5
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
 EQIUS reserves the right to alter or upgrade details at any time without prior notice.

- Concrete Floor
- Site concrete
- EQIUS SOPREMA Self-adhesive membrane Colphene 3000, positioned upside down
- EQIUS SOPREMA Colphene BSW H, Waterproofing membrane
- EQIUS SOPREMA Self-adhesive membrane Colphene 3000
- DPM

PROJECT: Belowgrade Waterproofing Detail - BSW
 TITLE: Lift Pit Detail - Membrane and DPM
 NUMBER: SBBWS-D10a(3)
 SCALE: 1:5
 DRAWN BY: NKT DATE: 10-Aug-2022 REVISED:
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Legend:

- ① Concrete L/R Pit Wall
- ② EQUUS SOPREMA Colphene BSW H, Waterproofing membrane
- ③ EQUUS SOPREMA Sopradrain 10G and protection layer
- ④ Concrete Floor
- ⑤ Site-concrete

PROJECT : Belowgrade Waterproofing Detail - BSW
 TITLE : L/R Pit Detail - Membrane connection
 NUMBER : SBBWS-D10a(4) SCALE : 1:2
 DRAWN BY : NCT DATE : 10 Aug 2022 REVISED :
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Equus Industries provides technical waterproofing solutions for Architects, Engineers, Property Managers, and Contractors in the building industry. One system does not fit all.

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

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



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