

Standard Specification for the application of the EQUUS SOPREMA SOPRASUN PLUS Two-Layer waterproofing membrane systems to concrete surfaces

Project:
Prepared for:
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1.0 PREAMBLE:

This specification is for the application of the **EQUUS SOPREMA SOPRASUN PLUS** waterproofing membrane systems, in a two-layer configuration to prepared concrete surfaces.

The two-layer system consists of a base sheet of 3 mm thick, composite polyester/fiberglass reinforced **SOPRASUN PLUS 3** torched to a pre-primed concrete substrate, with the 4 mm-thick **SOPRASUN PLUS 4.5KG MINERAL** cap sheet torched over the base sheet to form a total thickness of 7 mm for the finished waterproofing system.

The **SOPRASUN PLUS 4.5KG MINERAL** cap sheet membrane provides a UV-resistant, flexible coating on the upper and underside of a polyester and glass fibre composite reinforcement carrier to act as a shrink-free and strong reinforcing agent.

These **EQUUS SOPREMA SOPRASUN PLUS** membrane systems have been assessed for the use on roofs, decks and gutters installed on concrete on buildings within the following scope:

- Buildings where the supporting structure and associated elements is designed and constructed within the scope of New Zealand Building Code E2/AS1 clause 1.1.
- Specifically designed buildings constructed to comply with the New Zealand Building Code.

2.0 SURFACE PREPARATION:

2.1 General - Responsibility:

Unless expressly agreed otherwise at the 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 roofing membrane sub-contractor.

2.2 Concrete:

- .1 Concrete structures must be specifically engineered to meet the requirements of the New Zealand Building Code.
- .2 Allow sufficient drying time after the concrete has been poured which is generally between 14 and 28 days
- .3 **Minimum Falls**

Ensure minimum falls for **EQUUS SOPREMA SOPRASUN PLUS** membrane systems are:

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



- .4 Ensure that all traces of curing compound are gone or removed before commencing installation and any holes or voids are patched.
- .5 Finish concrete to NZS3114:1987 U3, with a light trowel texture. Stone flush all ridges and protrusions. Depressions shall be flushed with Schomburg ASOCRET BIS 5/40 and allowed to cure at least 48 hours before overcoating.
- .6 Water blast to remove all detritus and allowed to dry.
- .7 Existing substrates and structures must be thoroughly inspected prior to specification.
- .8 A maximum relative humidity of 75% is required, measured at the time of membrane application.
- .9 Seams should be installed parallel with the fall, minimising ponding and flow restriction whenever possible. Roof, deck and gutter falls shall be installed in accordance with the New Zealand Building Code.
- .10 Shall have leading edges chamfered to 5 mm radius and minimum 20 x 20 cement mortar or H3.2 treated timber fillets or Bitumen Fillets installed in internal corners.

2.3 Expansion Joint Movements

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

2.4 Outlets:

- .1 Roof and deck outlets shall be installed as per clause 8.5.6 of E2 External Moisture of the New Zealand Building Code.
- .2 Outlets shall be sized in accordance with E1 Surface Water of the New Zealand Building Code.
- .3 Outlets shall be from the Aquaknight Industries range, sourced from Equus Industries, unless otherwise specified.

3.0 MEMBRANE APPLICATION:

A prestart meeting should be held on site with the Main Contractor and the Certified Equus Applicator prior to commencement of membrane works.

3.1 Primer:

To the dried and prepared surface apply one (1) full coat of **SOPRADERE QUICK** primer at a spreading rate of 5 to 6 m²/L. Allow to dry for minimum 1 hour depending upon prevailing weather conditions.

3.2 SOPRASUN PLUS 3 Base Sheet:

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

3.3 SOPRASUN PLUS 4.5KG MINERAL Cap Sheet:

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



Note: Where a black slate finish is required, **POLIBIT H-P MINERAL** (Black Diamond) can be substituted as the cap sheet following the same installation guidelines.

3.4 Detailing:

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

3.5 Sealant

Where sealant is required, **ALSAN MASTIC 2200** shall be used.

3.6 Membrane Termination

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

3.7 Completion:

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

Note: Damage caused to the completed installation by other trades working over the membrane after the initial inspection shall be the responsibility of the Main Contractor, who shall arrange appropriate protection for the finished membrane system as required.

3.8 Trafficability:

The **EQUUS SOPREMA SOPRASUN PLUS** waterproofing system is suitable for standard roof maintenance traffic. For high traffic roofs or decks use the **Equus FixPlus** pedestal deck jacks for concrete pavers or timber decking, or **KRAITEC STEP** rubber tiles.

The **EQUUS SOPREMA SOPRASUN PLUS** waterproofing system shall be protected using a temporary protection board before objects are placed on the roof to prevent damage to the waterproofing membrane.

3.9 Photovoltaic Panel Supports (if required):

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.

4.0 QUALITY ASSURANCE (QA):

The Equus Certified Applicator is responsible for onsite **QA**. The Equus project checklists outlining the required processes shall be completed and signed as each stage of installation is completed. Photographs of each stage shall be taken and submitted as part of the overall **QA**. A Warranty will not be issued unless a copy of the documentation has been filed with Equus Industries Ltd. Third party QA documentation is acceptable provided it is equivalent to the Equus issued QA.

5.0 MAINTENANCE AND WARRANTY:

5.1 Maintenance:

As normal maintenance, Equus Industries Limited recommends that the finished roof areas are inspected every six months for cleaning, and annually by an Equus Certified Applicator to



ensure weathertightness and durability.

Ensure all outlets are free of blockages and clear of unwanted debris and that all associated flashings and membrane cap flashings are sound. Check the general condition of the membrane and ensure it is free from surface moss, mould or lichen.

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

Higher risk areas such as sheet joints, substrate movement, edging, gutters, penetrations, corners, upstands, outlets and overflows require a thorough inspection for weathertightness on an annual basis.

5.2 Warranty:

The **EQUUS SOPREMA SOPRASUN PLUS** waterproofing system described in this specification may be warranted as to sheet integrity and to be waterproof for a period of up to twenty (20) years providing that:

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

The warranty period shall be determined for any contract in consultation with the Manufacturer or their representative prior to application.

The warranty is provided to the client by the Equus 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.

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