

## Standard Specification for the application of the EQUUS SOPREMA DUO Two-Layer waterproofing membrane system to concrete surfaces.

Project:  
Prepared for:  
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### 1.0 PREAMBLE:

This specification is for the application of the **EQUUS SOPREMA DUO** roll-roofing membrane system to prepared concrete surfaces.

The two-layer system consists of a base sheet of 2.5 mm thick polyester-reinforced **DEBOFLEX 2.5 T/F C175** or **SOPRASUN PLUS 3** (torched application) or **SOPRASTICK** (self-adhesive application) to the pre-primed substrate, with the 4 mm-thick **DUO HT 4 SLATES/F C180 FC** cap sheet torched over the selected base sheet to form a total thickness of 6.5 mm for the finished waterproofing system.

**EQUUS SOPREMA DUO** roofing membrane provides a hard UV-resistant but flexible coating on the upper side and an elastic adhesive mass on the underside. Both are then supported by a polyester and glass fibre combination carrier to act as a shrink-free and strong reinforcing agent.

The base sheet can be laid overall to provide temporary waterproofing and protection, while other trades carry out their tasks over the surface. Upon completion of other trade access, the base sheet is checked, repaired as required, and then the mineral cap sheet is applied as the final installation on the roof surface. This reduces the likelihood of presenting a patched new roof.

The **EQUUS SOPREMA DUO** waterproofing membrane system described has been assessed for the use on roofs, decks and gutters installed on prepared substrates on buildings within the following scope:

- Buildings where the supporting structure and associated elements are 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:

- .1 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 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 DUO** waterproofing 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.

### 2.3 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 onsite with the Main Contractor and the Equus Certified 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 m<sup>2</sup>/L. Allow to dry for minimum 1 hour depending upon prevailing weather conditions.

#### 3.2 Base Sheet: DEBOPLAST 2.5 T/F C175 or SOPRASUN PLUS 3 (torch-applied option)

*Torch-applied, APP bitumen membrane base sheet option*

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 100 mm.

#### 3.3 Base Sheet: DEBOFLEX 2.5 T/F C175 (torch-applied option)

*Torch-applied, SBS bitumen membrane base sheet option*

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 100 mm.

#### 3.4 Base Sheet: SOPRASTICK (self-adhesive option)

*(Previously known as DEBOTACK 2.5 T/F C175)*

Decide the most suitable direction to follow. Unroll and align the first roll. Cut to length as required. Remove the siliconized film and press the membrane into place on the surface. The self-adhesive properties are automatically activated during installation. Light heating is



recommended at the edges to ensure all laps are fully closed. Full adhesion is advanced when the **DUO HT 4 SLATES/F C180 FC** Cap sheet is finally torched over it. Repeat in sequence with all rolls, maintaining minimum laps of 100 mm. Offset end laps in adjacent runs.

*Note: SOPRASTICK VENTI TACK PLUS (previously known as DEBOTACK 2.5 T/F C175 AERO) can be used where required for vapour distribution.*

### 3.5 Cap Sheet: DUO HT 4 SLATES/F C180 FC (or variant)

Decide the most suitable direction to follow. Unroll the roll and discard packaging. Align and cut to length as required. Re-roll both ends to the middle, then torch evenly to the base sheet as the membrane is unrolled. Ensure even heat application. Repeat in sequence with all rolls, maintaining laps of minimum 100 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.

If required, during the back-sealing operation, **DUO MINERAL CHIP** may be carefully scattered over the joint to provide a uniform appearance. This may also be carried out on areas of detailing to provide protection and uniformity of finish.

### 3.6 Detailing:

Detailing shall be carried out using **DUO HT 4 SLATES/F C180 FC** cap sheet and/or in combination with **ALSAN FLASHING QUADRO** liquid detail coating or **MATACRYL THIX** liquid membrane (where **MATACRYL THIX** is used, all metal elements shall be primed with **MATACRYL 107 CM PRIMER**), 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.

### 3.7 Sealant:

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

### 3.8 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.

### 3.9 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.

### 3.10 Trafficability:

The **EQUUS SOPREMA DUO** waterproofing system is suitable for standard roof maintenance traffic. For high traffic roofs or decks use the **EQUUS FIXPLUS** tile supports, duckboards and roofwalk, or **KRAITEC STEP** rubber tiles.

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

### 3.11 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 DUO** Two-Layer waterproofing system described in this specification may be warranted as to sheet integrity and to be waterproof for a period of up to twenty-five (25) years providing that:

- (a) All work is carried out by an Equus Certified Applicator.
- (b) The **EQUUS SOPREMA DUO** membrane system is installed in accordance with the manufacturer's technical literature and the DuO Application Manual 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 Certified 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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