

Standard Specification for the application of the EQUUS SOPREMA DUO Two-Layer waterproofing membrane system to plywood surfaces with the use of timber battens to provide a rolled cap Liste finish.

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 plywood 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:

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 Plywood:

- .1 Plywood minimum 17 mm thick for roofs, and 21 mm thick for decks. Lay sheets tight butt jointed to maximise the use of whole sheets with sheet joints laid over framing members, in a staggered brick-bond pattern, running across the fall of the roof.
- .2 Fix plywood in accordance with the manufacturer's instructions using countersunk stainless-steel screws, with all sheets laid in a bead of construction adhesive. Screws fixed at 150 mm centres on sheet perimeter and 200 mm through the body of the sheet.



- Fix tongue and groove plywood to same specification.
- .3 The moisture content prior to installation of the membrane system must not exceed 20%. LOSP treated plywood must not be used.
- .4 **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
- .5 **Corners**
All leading edges of plywood shall be chamfered with a 5mm radius corner. All internal corners shall have minimum 20 x 20 H3.2-treated timber fillets or **Bitumen Fillets** installed.
- .6 **Outlets:**
Roof and deck outlets shall be installed as per clause 8.5.6 of E2 External Moisture of the New Zealand Building Code.
Outlets shall be sized in accordance with E1 Surface Water of the New Zealand Building Code.
Outlets shall be from the Aquaknight Industries range, sourced from Equus Industries, unless otherwise specified.
- .7 Existing substrates and structures must be thoroughly inspected to ensure that they will not compromise the performance of the membrane when applied.

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 m²/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.

3.5 Battens (to be done after basesheet installation)

.1 Type

To be treated timber of at least H3.

.2 Dimensions

Timber battens are to be configured with a base 100mm wide with the top face of the batten being 50mm wide. This gives a 50mm height of the batten. The sides are angled and all sharp edges are to be lightly sanded.

.3 Fixings

All fixings are to be stainless steel screws and are to be at least 75mm in length. Pre-drill all fixings with a smaller diameter than the screw; fill with **ALSAN MASTIC 2200** bitumen sealant prior to fixing through. Ensure the head of the screw is just below the top level of the batten.

.4 General

Consideration on site needs to be taken with regards to layout. The Duo capsheet is a 1 metre wide sheet with an 80mm selvedge edge. In this configuration the rolls can be laid length ways down the roof with the chipped edge of the capsheet beginning on one side of the batten which is then torched up, over and down the batten, then continued across the roof by 800mm where the selvedge edge meets the batten. This is then torched up and just on to the top of the next batten. The next roll is then torched onto the selvedged edge up, over and down the batten and continuing the sequence to the next batten.

This is but one method of applying Duo to battens. The installer must communicate with all parties concerned with respect to checking layout and dimensions prior to application of any works.

3.6 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.

3.7 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.

3.8 Sealant:

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

3.9 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.

3.10 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.

3.11 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.

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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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