

## **Standard Specification for the application of EQUUS SOPREMA COLPHENE 3000 below-ground, self-adhesive wall waterproofing membrane to concrete or masonry wall surfaces.**

*For low-risk areas of hydrostatic water pressure up to 3 metres deep.*

Project:  
Specification: P5300  
Date: February 2023  
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### **1.0 PREAMBLE:**

This specification is for the application of **EQUUS SOPREMA COLPHENE 3000** waterproofing membrane to below ground concrete structures and screed protected areas in construction.

**COLPHENE 3000** has been especially designed for waterproofing of foundation walls with low risk of hydrostatic water pressure with a standing head of water not more than 3 metres deep. **COLPHENE 3000** is BRANZ appraised as a waterproofing tanking material for below ground applications.

**Note:** *If existing ground water levels are higher than 3 metres above the floor of the basement, consult Equus Industries Ltd for a specific recommendation.*

The **COLPHENE 3000** self-adhered membrane uses a primer on in-situ concrete or block walls. Use a roller to ensure all overlaps are well sealed. Overlaps can also be carefully heated and sealed using hot-air welding, particularly in cold temperatures.

Standard details by Equus show all connections and junctions.

### **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 his 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.

For post-application of membranes, curing times may vary dependent on location, mixes and climate conditions. After the wall 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. This process is essential when installing **COLPHENE 3000**.

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:** Install **COLPHENE 3000** 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: Vertical wall application

All vertical areas such as foundation walls are fully primed with **Equus Peel and Stick Primer** at a spreading rate of 6 to 8 m<sup>2</sup>/L 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 75 mm and minimum end-lap of 150 mm.

#### 3.2 Insulation: (vertical against walls where required)

Install Equus supplied thermal insulation against **COLPHENE 3000** membrane, held in place with dots of **DOUBLESTICK** tape. **Equus drainage layer** will then be installed over top of the insulation.

#### 3.3 Repairs to damaged areas:

Should the **COLPHENE 3000** be damaged or perforated after installation such that its waterproofing qualities are affected, repairs can be made using a piece of **COLPHENE 3000** of suitable size to cover the damaged area. The patch shall have a minimum overlap extending out 150 mm on all sides of the damaged section.

**Note:** The main contractor shall immediately notify the waterproofing contractor if any such damage occurs, so it can be repaired before further construction works take place.

#### 3.4 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 **SOPRASEAL** 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 100 mm (incorporating a filter material) is 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.

### 3.5 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.

### 3.6 Sealant:

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

### 3.7 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, a certified installer inspect annually to ensure weather tightness and durability of the following areas;

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 3000** waterproofing membrane as detailed in this specification, the product may be warranted for the period of up to twenty (20) years from the date the application is completed.

- a) All specified work is carried out by the approved Equus Industries Ltd. Applicator.
- b) **EQUUS SOPREMA COLPHENE 3000** must be installed in accordance with the manufacturer's technical literature.
- c) The warranty is issued in conjunction with the 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.

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