Standard Specification for the application of EQUUS SOPREMA ANTIROCK over concrete carparking decks and bridges with subsequent asphalt cover

Project:
Specification: P36701
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1.0 PREAMBLE:

This specification is for the application of an **EQUUS SOPREMA ANTIROCK** single-layer waterproofing membrane system to concrete carparking and bridge surfaces in a situation where it will act as a tanking membrane below new asphalt. It is understood that the minimum thickness of the asphalt cover is 40 mm after compaction for light vehicles, or 60 mm after compaction for heavy vehicles.

This specification incorporates a reinforcing system for ramps, if they are to be part of the scope of works, to reduce slump of the bitumen membrane in these areas.

Installation of the system shall only be carried out by an Equus Certified Applicator.

2.0 SURFACE PREPARATION

All surfaces shall be dry and free from ice, frost, oil, grease, curing compounds, shutter release oils, loose particles, moss, algae growth, laitance, friable matter, bitumen, asphalt, dirt and all other contaminants.
To obtain the good surface, concrete should be grit blasted on horizontal zones, or prepared on the others zones in order to get rid of all non-cohesive material and to make sure of its regularity.

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 EQUUS SOPREMA membrane sub-contractor.

2.2 New Concrete:

- **.1** Shall be correctly formed to falls where required and cured at least 21 days prior to coating application.
- **.2** No curing membranes shall be used. If a curing or parting membrane is used, the main contractor shall ensure all traces of curing/parting membranes are removed prior to the Equus Certified Applicator commencing work.
- **.3** Concrete slabs shall be finished to NZS 3114:1980 U3 finish, and concrete ex form work shall be finished to NZS 3114:1980F5X with no discontinuities allowed.
- **.4** All concrete surfaces shall have ridges, nibs and protrusions ground flush with adjacent surfaces.
- **.5** Depressions shall be flushed with the Schomburg **ASOCRET BIS** range and allowed to cure 48 hours before overcoating.
- **.6** All formed or sawn expansion joints shall be left uncaulked with neat edges, ready for joint sealing after primer application.

2.3 Existing Concrete

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.1 Shall be thoroughly cleaned by scrubbing with a hot solution of Basol 88 or similar strong alkaline cleaner.
.2 Shall then be high pressure water washed to remove all contaminants from the surface.
.3 Shall have the above steps repeated as necessary to ensure that all oil and contaminants are removed from the surface.
.4 Shall have any nibs, ridges or protrusions ground flush with the surrounding surface.
.5 Shall have any existing cracks construction joints or expansion joints saw cut to a correct profile and blown/vacuumed clean of all detritus.

2.4 Falls:
To be formed in the asphalt cover or engineered into the deck structure profile.

2.5 Outlet Types:
These are available in varying shapes and sizes in bronze, brass, or aluminium. Refer to Equus for further assistance.

3.0 MEMBRANE APPLICATION:

Installation of the waterproofing system shall only be carried out at a minimum air and substrate temperature of 4°C and rising.

3.1 Primer:
To the dried and prepared surface apply one (1) full coat of **SOPRADERE QUICK** applied by brush/roller at a spreading rate of 5-6 sqm/litre. Allow to dry for a minimum of one (1) hour depending upon prevailing conditions.

3.2 Manual membrane application:
In the main membrane application, the **ANTIROCK** is unrolled, all packaging removed, aligned correctly, cut to length as required and re-rolled for torching. Torching shall be from the middle to both ends, ensuring even heat is applied overall to the roll and to the substrate.

The **ANTIROCK** shall be applied to all nominated roof/deck areas, working in accordance with Manufacturer's instructions, and observing the following points:

.1 The application shall be periodically tested for bonding during laying on all surfaces, by pullback to check `stringing', and by trying to lift at laps.
.2 The bitumen must overflow 5mm to 10 mm on each side of the membrane sheet;
.3 Radial joints shall be offset, with all side laps 75mm, and all end laps 150mm.
.4 Laying shall generally commence at low sides of roof areas, and proceed to high sides, so that laps are sealed running with water flow.
.5 All laps shall be trowelled tight on the downhill (open) edge of the lap, using a margin trowel and/or roller and torching.

3.3 Semi-Automated membrane application with the Mini-MACADEN or Mini-MAMMOUTH:
The parameters of the Mini-MACADEN are controlled by the Certified Applicator. Temperature does not need to be changed, only the speed of the machine and its alignment may be changed during operations: faster if the bitumen is too liquid, or slower if the bitumen does not overflow each side of the membrane.
.1 The roller is mounted on the chassis machine and the membrane is engaged, the machine is pre-aligned.
.2 Turning on the Mini-MACADEN/Mini-MAMMOUTH: advancement and automatic guidance.
.3 Visual monitoring of welding for possible adjustment speed.
.4 Stop the burner at the end of roll.
.5 Manual welding the ends of the roll.

3.4 Detailing:
Detailing shall be carried out using **ALSAN FLASHING** or **Matacryl Thix** liquid applied membranes with sand blinding. This shall include all outlets, pipe penetrations, gutter stop ends, parapet upstands, machinery plinths and anything above or below the roof/deck surface. This is 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 recommended procedures. Where special detailing accessories and chase sealants are required, confirm with Equus.

3.5 Ramp Anti Slump Bars: (if applicable)
Fix 20mm x 75mm x4 mm Galvanized steel angles using Rawl plugs @ 600mm centres across the ramp and at 5 metre intervals down. Angles shall be fixed through the membrane and sealed with **ALSAN MASTIC 2200** ensuring all boltholes and up-hill edge of the bar is completely sealed. Reapply a strip of **ANTIROCK** over the surface flange of the galvanised steel angle.

3.6 Completion:
Upon completion of the system, it shall be inspected.

Note: Any 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 as required.

3.7 Asphalt installation:

.1 The overlay of the asphalt is carried out by another sub-contractor, but the **ANTIROCK** sub-contractor shall allow for attendance during laying of the asphalt topping. Ensuring that the integrity of the membrane is not compromised during this operation.
.2 The overlay has to be installed within one week after installation of the membrane **ANTIROCK**.
.3 The maximum temperature of the asphalt installation is 200°C.
.4 The thickness of the asphalt layer depends on the load and traffic that the asphalt concrete will have to withstand. Thus, the minimum thickness is 40 mm after compaction for light vehicles, (including areas occasionally accessible to fire vehicles and moving trucks), or 60 mm after compaction for heavy vehicles.
Dimensions on a case-by-case basis when the coating is used for the traffic of special vehicles such as forklifts.
Variation can be accepted when using high-performance asphalt. However, a minimum thickness of 40 mm must be applied.
.5 Asphalt shall be applied in two layers where possible.
.6 The evacuation of the water contained in the asphalt must be done with adequate drain systems and connected to main evacuation.

4.0 MAINTENANCE:

4.1 Maintenance:
As the finished membrane system is "buried" normal maintenance is not possible and should equally not be necessary. However, if major alteration is required, the Applicator who carried out the installation should be notified, so that he may attend on site to ensure that the integrity of the membrane system is maintained during and on completion of such works.

4.2 Warranty:
The **EQUUS SOPREMA ANTIROCK** membrane system described 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 an Equus Certified Applicator.

(b) All work is carried out 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 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 purpose of the materials supplied for the contract.

It should be noted that as the surface may be a wearing surface, certain provisions regarding mechanical damage and maintenance recoating may be incorporated within the warranty, depending entirely upon the declared intended use to which the surface is to be put.

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