METHOD STATEMENT

iSTIK™ 100PE

PE BACKED BITUMINOUS SELF ADHESIVE MEMBRANE

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SECTION I: TOOLS AND GENERAL COMMENTS

A. Tools & Equipment

i. PPE: Fire resistant gloves, safety glasses, overalls.
ii. Slow speed drill machine with less than 500 rpm with a suitable spiral mixer
iii. Wooden press & lap rollers
iv. Brush /roller
v. Steel scrapper
vi. Cotton waste
vii. Solvent cleaner
viii. Measuring tape
ix. Cutting knife, scissors

B. Material Storage

i. Membrane rolls should always be kept in upright position and stored in a dry and shaded place especially during the summer months.
ii. Avoid stacking of membranes on pallets to avoid causing damage to the membranes.

C. General

i. Membrane application should be carried out when the ambient temperature is between 10°C to +45°C.
ii. Avoid application in extreme weather conditions like dust storm, rain, or snow.

SECTION II: Application Guidelines- Basements & Foundations

A. Surface Preparation

i. The surface shall be cleaned of all loosely adhering particles and contaminants which may affect the adhesion of the membrane. Remove all protrusions and nail heads which may damage the membrane. Any dew settled, or concrete dampness should be thoroughly cleaned using a dry cloth. Repair all potholes with a suitable and appropriate repair mortar.
ii. Prepare 25mm x 25mm angle fillets on all internal corners with a cement sand mortar which should have a 45-degree fillet. External corners shall have a 20mm chamfer.
iii. Prepare 20mm x 20mm groove on the up-stand and parapet wall for tucking and finishing the membrane.

B. Priming

i. Apply a coat of iPrime SB solvent-based primer on the prepared surface. Allow the primer to dry before membrane application. This enhances the adhesion of the membrane with the substrate.
ii. Apply a fresh coat of primer if the membrane application gets delayed for more than 12 hours.

C. Membrane Application

Horizontal Areas

i. 100PE membrane installing is recommended to start from the low point so the flow of water is over or parallel to the plies, but never against the laps. All overlaps at the membrane seams shall be installed to have “up” slope laps over “down” slope laps.

ii. Unroll only the required length of the membrane and cut the pieces to the desired length and shape.

iii. Re-roll the membrane for about half the length without changing its orientation. Then slowly unroll the membrane, peel off the release film, and carefully place the membrane on the surface. Smoothen out any entrapped air by pressing from the center to the sides by the wooden press.

iv. Furthermore, an iron roller shall be used for rolling on top of the applied membrane to ensure a proper and strong adhesion of the bitumen compound with base surface.

v. Subsequent rolls shall be installed to have a 50mm overlap on the side overlaps and 100mm on the end overlaps.

Vertical Areas

vi. Cut our strips of 200mm from the roll of the iStik 100PE membrane and apply the tape on all internal and external corners as reinforcing strips.

vii. Similar to the method followed for the horizontal area application, the membrane is unrolled and aligned with the area to be waterproofed. The membrane after rerolled is slowly un-rolled and stuck to the surface by peeling off the silicone release film and exposing the self-adhesive side. Entrapped air shall be smoothened out from the center to the sides by a wooden press followed by rolling with an iron roller to ensure proper and strong adhesion of the bitumen compound with base surface.

viii. The membrane shall be terminated on the top end by tucking into a groove cut in the concrete surface of the vertical wall and sealed with a suitable mastic sealant.

Membrane around Pipes

ix. A 50mm x 50mm fillet using an appropriate material is molded around the pipe. A 400 mm wide reinforcing strip will be laid all around the fillet after applying the primer. The joint of the membrane with the pipe will be sealed with a suitable mastic.

SECTION III: Protection & Damage repair

A. Protection of Membranes

All waterproofed areas shall be suitably protected from damage from external mechanical forces like steel reinforcements and sharp aggregates due to the ongoing site activities or during backfilling.

x. Horizontal areas will be protected by laying iShield 6mm protection boards.

xi. Vertical areas shall be protected by iShield 3.2mm protection boards. The protection boards can be fixed using the following methods:

Fixing by Double sided adhesive tape:

xii. Cut and paste small pieces of iTape TS in regular intervals on one side of BM Board. No of pieces to be fixed will depend on the thickness of the board. Fix the board on the membrane and press firmly. Supports/props can be used to keep the boards in place till the adhesive is strong enough to hold the board.

Fixing by Adhesive:

xiii. Apply the iBond N20 adhesive on the entire surface of the board. Press the board immediately onto the substrate. Supports/props can be used to keep the boards in place till the adhesive is strong enough to hold the board.

Note: A point to be noted is that due to the absorption of heat in the concrete, the water present will try to come out in the form of vapor, thus creating an upward pressure on the membrane. This leads to the formation of bubbles. To minimize the formation of these bubbles it is always recommended to cover up the membranes immediately after application (within 24 hours) with a protection board or cement sand screed.

Bubble formation will not in any way affect the water proofing property of the membrane unless it is physically damaged. However, it must be ensured that the lap joints are properly sealed and does not open, as these will be the weak points for water penetration.

Membrane Repair

Any damage to the membrane caused due to various factors during ongoing site activities or subsequent works shall be repaired immediately to maintain the waterproofing integrity. All repair works shall be carried out after consultation with the manufacturer or the supplier of the membrane. Due to the presence of SBS polymer in the modified bitumen compound, any minor damages which are less than 0.5mm diameter will be self-healed.

However, damages larger than 0.5mm diameter shall be patched with a piece of the same membrane which extends at least 2 inches from all the sides of the puncture. The area to be repaired should be primed with the bitumen primer and allowed to dry before carrying out the patching works.