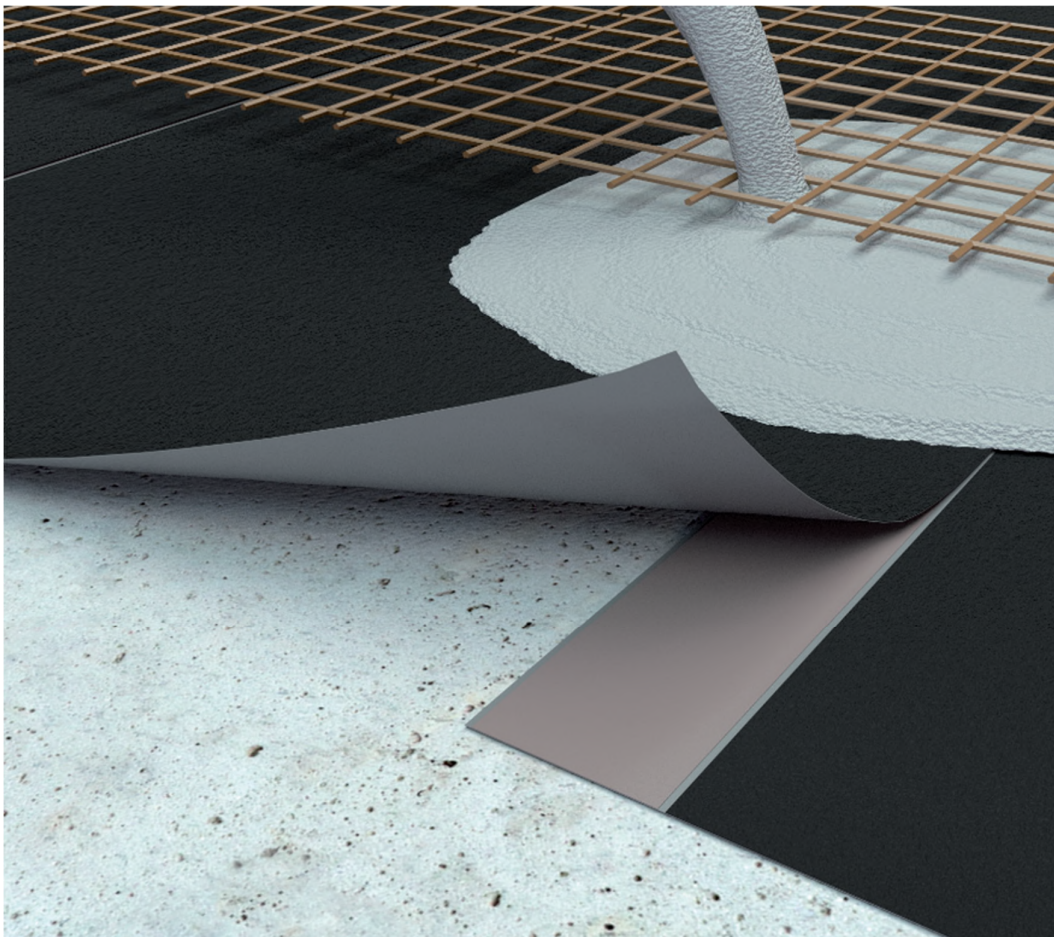


METHOD STATEMENT

MasterSeal 754 and MasterSeal 725HC



1 Scope

This document outlines the method for application and processing of pre-applied, fully bonded, FPO waterproofing membrane, **MasterSeal 754**, for below ground concrete structures in combination with **MasterSeal 725HC** SBS modified self-adhesive bituminous waterproofing membrane, for vertical application on open excavated construction.

2 Materials

The table below describes the system built-up material from Master Builder Solutions Construction Chemicals UAE and shall be supplied by the applicator and must be in accordance with the material approvals

Item	Description Of Material
MasterSeal 754	Pre-applied FPO waterproofing membrane, 1.6 mm thick
MasterSeal 754IC / MasterSeal 754OC	(OPTIONAL) Internal and external corner accessories with self-adhesive top layer
MasterSeal 934	Sealing tape: Butyl / FPO
MasterSeal 935	Double side butyl tape
MasterSeal 938	Repair tape: Butyl / FPO / Fleece
MasterSeal 914	Epoxy Grout
MasterFlow 980	High-strength micro concrete for pile head re-profiling
MasterSeal 725HC	SBS modified self-adhesive bituminous membrane
MasterSeal P 700	Solvent-based bitumen primer
MasterSeal 720PB	Asphaltic protection board

3. QUALIFICATIONS

- **Master Builder Solutions - Supplier's qualifications:** The supplier of the specified products shall offer a program for training, certifying, technically supporting and periodically re-certifying contractors Supplier's Site Representative should be capable of instructing successful methods for installation and also capable of explaining, technical aspects of correct material selection, mixing, use and application.
- **Applicator's qualifications:**
 - The applicator shall be experienced with both material application and surface preparation and shall supply all labour, materials, equipment and incidental equipment required to install **MasterSeal 754** system as specified in this method statement.
 - Work shall only be executed by trained and qualified employees certified by the supplier

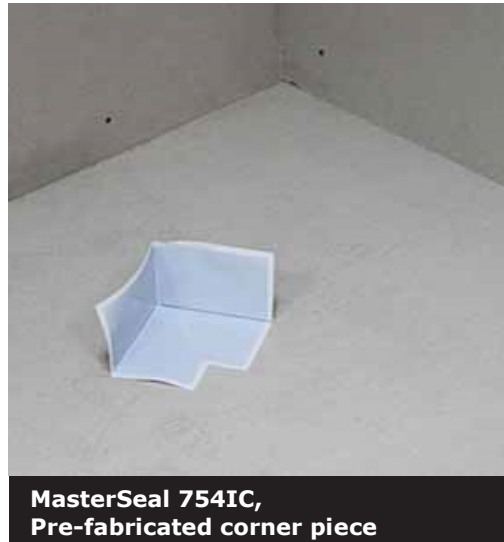
4. MasterSeal 754 – RAFT

4.1 Substrate Preparation

- Substrates must be regular and smooth, free of loose aggregate and sharp protrusions.
- All sharp corners / edges to be chamfered with minimum 30mm
- Surface should be sufficiently dry, standing water must be removed.
- Horizontal substrate requirement is a minimum of 100mm blinding poured over compacted ground or mass concrete layers.
- Vertical substrate should be either evenly smooth surface of shotcrete, reinforced concrete or concrete blocks.
- Piles should be re-profiled with **MasterFlow 980**.

4.2 Corner Installation

- Install the pre-fabricated corners **MasterSeal 754IC** and/or **MasterSeal 754OC** and remove protective foil prior to installation of the membrane sheets.



- If pre-fabricated corners are not available, corners can be formed using **MasterSeal 934** tapes as shown.





Cut and weld a protection disc from behind of the corner piece (approx. Ø 30 mm)

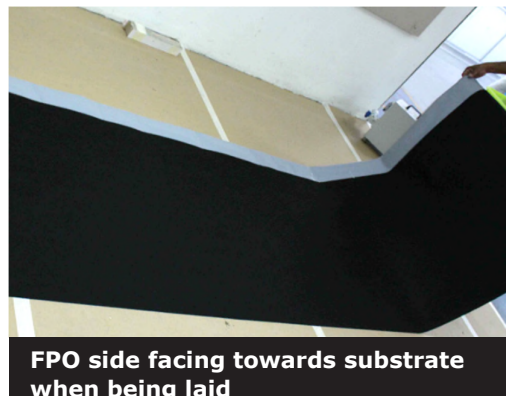
- Install **MasterSeal 934** tapes to seal vertical



Use MasterSeal 934 tapes to seal corners

4.3 Membrane Installation

- It is important to ensure that the FPO side is always faced towards any source of water ingress and that the black fleece coating is faced towards the inner side where concrete will be poured. Commence the membrane installation from a corner. Longitudinal joints are to be overlapped using the manufactured butyl strips or adhered in the corners with **MasterSeal 934** sealing tape.



FPO side facing towards substrate when being laid

- Start membrane installation from corners and adhere them to the pre-installed corner tapes.



Adhere membrane to the pre-installed corner tapes (Horizontal installation)

- Vertical membrane can be temporarily supported with a wooden batten and screw. Screw should be placed where overlapping is expected to ensure closure during overlapping. Number of fixation should be minimized as this could be a possible passage of water.



Adhere membrane to the pre-installed corner tapes (Vertical installation)

- Remove protective foil when adhering membrane overlaps together.



Adhere membrane to the pre-installed corner tapes (Vertical installation)

- Join succeeding membranes through the pre-manufactured overlaps.



Pre-manufactured overlap

- For the sides of membrane without the pre-manufactured overlaps, butt-jointing of membrane can be done using **MasterSeal 934** tapes.



Butt-jointing with self-adhesive tape

4.4 Pipe Penetration

- Cut a hole on the membrane slightly smaller than the pipe and insert the pipe through and fit snugly to the opening.



Pipe through the hole on membrane

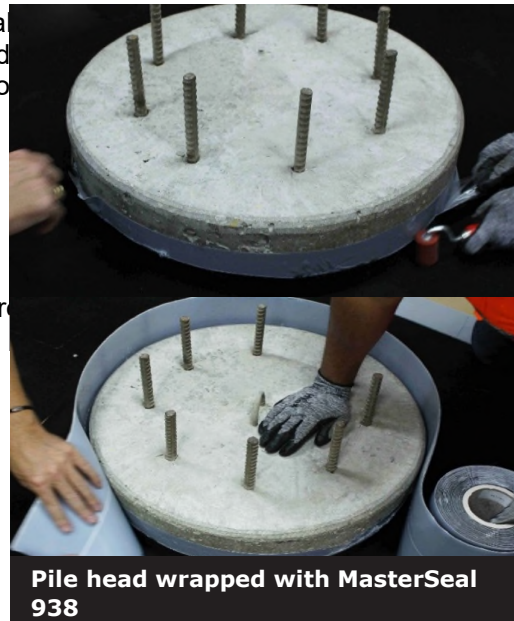


- Dress the pipe with **MasterSeal 938** repair tape. Remove the fleece on membrane at overlaps for bonding.



4.5 Pile Head Treatment

- Cut a hole on the membrane slightly smaller than the pile head and fit snugly to the opening. A strip of fleece can be placed at the base of the pile prior to pouring.
- Dress the pile using **MasterSeal 938** repair tape. Remove the fleece on membrane at overlaps for bonding.



- Cut the **MasterSeal 938** repair tape from top and fold down, then encapsulate the pile with **MasterSeal 914** epoxy grout.



5. MasterSeal 725HC (WALL)

- **MasterSeal 725HC** is used as a post installed vertical waterproofing membrane in conjunction with **MasterSeal 754**, generally for walls on open excavated construction.

5.1 Primer Application – MasterSeal P 700

- All concrete surfaces shall be primed by solvent based bitumen primer, **MasterSeal P 700**.
- Mix the contents of the pail/drum prior to the application to remove any sediment.
- Apply the primer @ 1 to 3 m²/liters depending on the porosity of the concrete by a brush, roller or an airless spray.
- Allow the primer to dry prior to the application of the waterproof membrane.
- If membrane application gets delayed for more than 24 hours after the primer has been applied on the concrete surface, then apply a fresh coat of the primer again.

5.2 Composite Membrane Connection

- **MasterSeal 754** would normally terminate at the upper end of the raft concrete. This termination should later be exposed after casting of concrete for overlapping and continuation with the self-adhesive membrane **MasterSeal 725HC**.
- Clean the overlapping area, removing dirt, concrete laitance, or any residues or contamination that may impair adhesion.
- Apply **MasterSeal 935** double-sided sealing tape on the edge of **MasterSeal 754** to improve adhesion on overlap.
- Do not remove the outer foil of **MasterSeal 935** until **MasterSeal 725HC** is ready for adhesion.

5.1 Membrane Application

- Dimension of the area, which needs to be waterproofed, shall be taken and the membrane is aligned accordingly.
- The membranes are then re-rolled and then un-rolled slowly and stuck to the surface by peeling off the silicone release film and exposing the self-adhesive side.

- Entrapped air shall be smoothed out from the centre to the sides by a wooden press followed by rolling with an iron roller to ensure a proper and strong adhesion of the bitumen compound with base surface.
- The membrane will be finished on the top by tucking into a groove cut in the concrete and sealed with a suitable mastic sealant.
- Protect the installed **MasterSeal 725HC**, using **MasterSeal 720PB** asphaltic protection board.

6. Repair and Maintenance

- **MasterSeal 754:** Patching of damage internally can be done by burning the fleece using a hot hair gun and scraping it off as much as possible, then cover the damage with **MasterSeal 938** repair tape. If the membrane is going to be exposed after removal of shutter, the damage can be once again patched with **MasterSeal 934** tape.
- **MasterSeal 725HC** can be repaired easily using a patch piece of the same material extending 100mm on all directions. Primer is required on the concrete substrate if it has been exposed on the damaged portion.

7. Inspection and Quality Control

- Work shall be visually inspected for damages before and after installation of steel reinforcements.

8. Material Storage

- Store materials under dry and shaded conditions. Do not expose to direct sunlight.

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

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