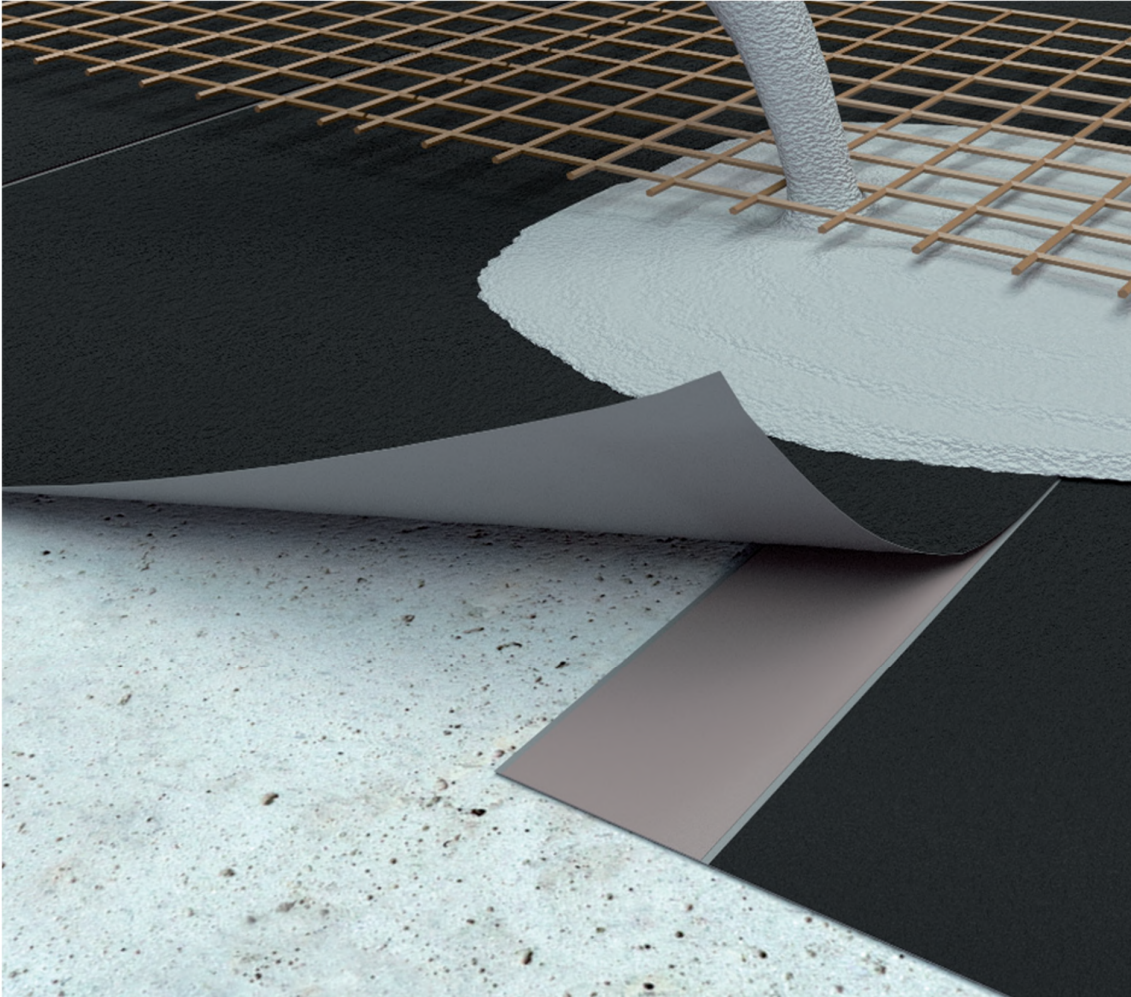


GENERAL METHOD STATEMENT

MasterSeal 754 with MasterSeal 754SB System



1 Scope




This document outlines the method for application and processing of fully bonded, FPO waterproofing membranes, **MasterSeal 754** pre-applied system and **MasterSeal 754SB** post-applied system for below ground concrete structures.

2 Materials

The table below describes the system built-up material from Master Builders Solutions Construction Chemicals LLC 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 754SB | Post-applied, self-adhesive HDPE waterproofing membrane |
| MasterTop P 650 or MasterTile P 302 | Primer for MasterSeal 730W self-adhesive membrane |

3 Tools

| Item | Equipment Description | Photo |
|------|-----------------------|---|
| 1 | Measuring tape |  |
| 2 | Utility knife |  |
| 3 | Lap roller |  |

| | | |
|---|---------------|---|
| 4 | Steel pipe 2" |  |
|---|---------------|---|

3 MasterSeal 754 Pre-applied System – General Application

3.1 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**.

3.2 Corner Installation

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



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

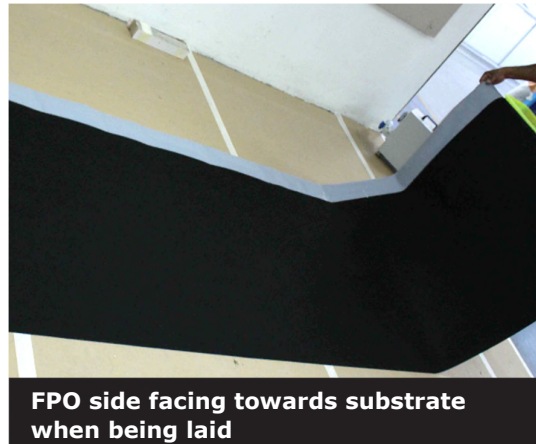


- Install **MasterSeal 934** tapes to seal vertical and horizontal corners.

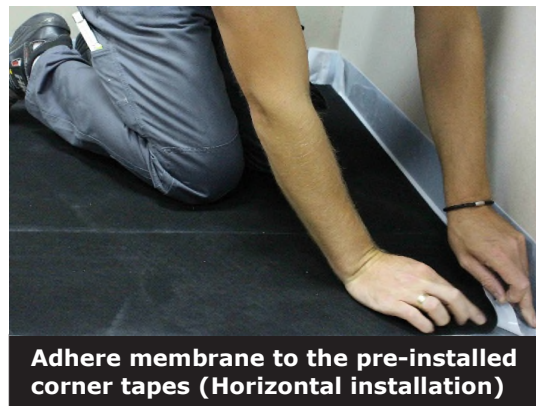


3.3 Membrane Installation

- 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.



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



- 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 fixations should be minimized as this could be a possible passage of water.



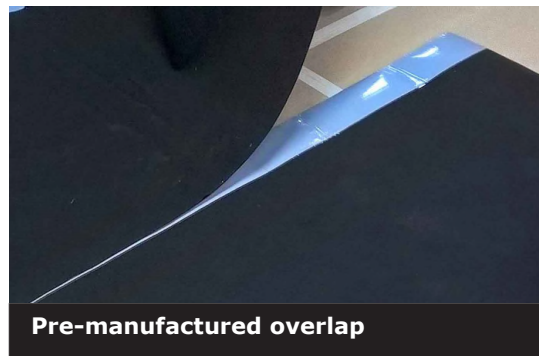
Adhere membrane to the pre-installed corner tapes (Vertical installation)

- 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.



3.4 Pipe Penetration

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



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



3.5 Pile Head Treatment

- Cut a hole on the membrane slightly smaller than the pile and insert the pile through and fit snugly to the opening. A strip of double sided sealing tape **MasterSeal 935** can be placed at the base of the pile prior to installation of membrane.



- Dress the pile using **MasterSeal 938** repair tape as shown. Remove fleece on membrane at overlaps for bonding.



4 MasterSeal 754SB Post-applied System – General Application

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 dry. Moisture content on concrete should not exceed 5%.

4.2 Primer Application

Option 1: MasterTile P 302

- Apply undiluted **MasterTile P 302** acrylic primer onto the prepared substrate using roller at an approximate rate of 0.1-0.2 kg/m². Coverage may highly vary depending on the porosity of substrate.
- Allow the primer to dry prior to membrane application.

Option 2: MasterTile P 650

- Where optimum sealing and substrate stabilization is required, use **MasterTop P 650** epoxy primer, applied using roller at an approximate rate of 0.15-0.30 kg/m².
- **MasterTop P 650** is a two-component primer. Mix A and B components on a dry and clean container until it is homogeneous and free of streaks
- Allow the primer to dry prior to membrane application.

4.3 MasterSeal 754 and MasterSeal 754SB 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 post-applied membrane **MasterSeal 754SB**.
- Clean the overlapping area, removing dirt, concrete laitance, or any residues or contamination that may impair adhesion. Use suitable cleaning solvent if required.
- Apply **MasterSeal 754SB** directly over the cleaned surface of **MasterSeal 754** with minimum 80mm overlap.

4.4 Membrane Installation

- Lay **MasterSeal 754SB** membrane according to the area of application and align the overlap of the sheets.
- The membranes are then re-rolled and then un-rolled slowly and stuck to the surface by peeling off the 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 proper and strong adhesion of the adhesive with base surface.
- Protect the vertically installed **MasterSeal 754SB** membrane, using geotextile or other suitable protection layer recommended by Master Builders Solutions based on actual conditions.
- Application over top of slabs shall be protected with 50mm screed.
- For ground level termination, the membrane will be finished on the top by tucking into a groove cut in the concrete and sealed with a suitable mastic sealant.

5 Visual Inspection and Quality Control

5.1 Before waterproofing installation

- Check suitability of substrate prior to installation.
- Rectify substrate defects if required.

5.2 After waterproofing installation

- Check if pipe penetrations and pile head are properly treated.
- Check for possible damages on membrane.

5.3 After steel reinforcement installation

- Check for possible damages on membrane during steel reinforcement installation.
- Rectify damages on waterproofing membrane if any.

5.4 Repair works

- **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 754SB** 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.

6 Material Storage

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

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