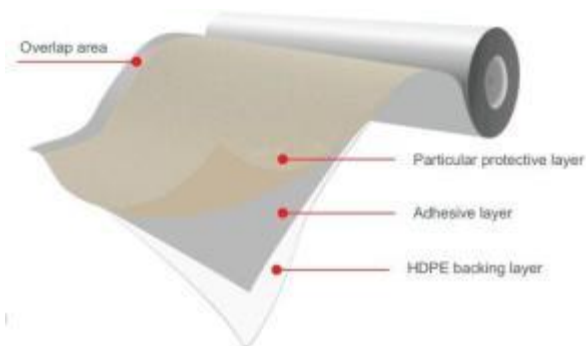


## am FLEXPROOF HDPE MEMBRANE (SAND/MINERAL FINISH) & (PLAIN FINISH) & (NON-SAND FINISH)

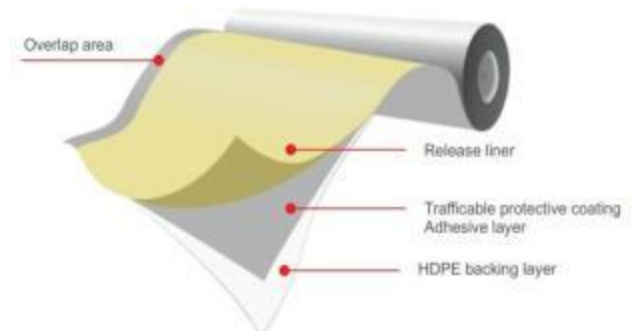
### DESCRIPTION

**am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (sand/mineral finish) consists of multi-layer composite waterproofing material for superior waterproofing performance, including a layer of high-density PE film, self-adhesive polymer layer and a unique particulate layer. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (sand/mineral finish) can be installed on uniform and regular concrete blinding, compacted sand-stone cushion for waterproofing of below ground surfaces and is also used for waterproofing of confined surfaces or blind side waterproofing. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (sand/mineral finish) is designed so as to bond fully and permanently with poured concrete against it after placing and tying reinforcement. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (sand/mineral finish) is supplied in multiple width of 1m, 2m to suit various site conditions.

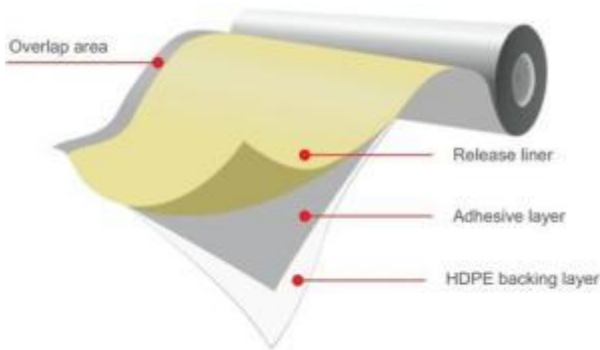


**am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (plain finish) consists of multi-layer composite waterproofing material for superior waterproofing performance, including a layer of high-density PE film, self-adhesive polymer layer and a unique particulate layer. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (plain finish) can be installed on uniform and regular concrete blinding, compacted sand-stone cushion for waterproofing

of below ground surfaces and is also used for waterproofing of confined surfaces or blind side waterproofing. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (plain finish) is designed so as to bond fully and permanently with poured concrete against it after placing and tying reinforcement. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (plain finish) is supplied in multiple width of 1m, 2m to suit various site conditions.



**am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (non-sand finish) consists of multi-layer composite waterproofing material for superior waterproofing performance, including a layer of high-density PE film, self-adhesive polymer layer and a unique particulate layer. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE compacted sand-stone cushion for waterproofing of below ground surfaces and is also used for waterproofing of confined surfaces or blind side waterproofing. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (non-sand finish) is designed so as to bond fully and permanently with poured concrete against it after placing and tying reinforcement. **am FLEXPROOF HDPE MEMBRANE** pre-applied, fully bonded HDPE membrane (non-sand finish) is supplied in multiple width of 1m, 2m to suit various site conditions.



## Main Application

Waterproofing of all below grade concrete structures

Protection of concrete foundations in contaminated and aggressive ground conditions

Waterproofing of cut and cover tunnels for MRT, Subway, Metro

Prevents coal gas, marsh gas, methane leakage in underground layers

## Product Features

- Forms a unique integral seal to concrete poured against it. This prevents lateral water migration and waterproofing performance is unaffected by ground settlement beneath slabs.
- Fully-bonded watertight seldge laps and detailing
- Provides complete barrier to water, moisture and gas
- Physically isolates the structure from the surrounding ground.
- Zero permeance to moisture
- Solar reflective, being white in colour thereby reduce temperature gain
- Very easy and efficient to install, does not require primer or fillet.
- Easy to install on permanent formwork – allowing efficient use of confined sites.
- Self protecting – reinforcement can start immediately after installation
- Unaffected by wet conditions - cannot activate prematurely.
- Being HDPE, highly chemically resistant, effective in all types of soils and waters - protects structure from chlorides, sulphates and aggressive ground conditions.

## Installation

### Substrate Preparation

#### All Surfaces

It is important to prepare sound and solid substrate for installation of membrane to eliminate movement during the concrete pour. Substrates must be uniform and smooth and there shall be no gaps or voids in surface greater than 12mm.

## Horizontal Concrete Blinding or PCC

The substrate must be smooth and uniform and shall be free of all unsound aggregate and sharp lumps.

Curved or rounded substrates should be avoided.

For installation of **am** FLEXPROOF HDPE MEMBRANE (plain finish), the surface does not need to be dry, but standing water must be removed.

## Vertical Sheet Piling

**am** FLEXPROOF HDPE MEMBRANE (plain finish) can be used for blind side waterproofing after either using guniting, concrete, or plywood or other suitable material to provide uniform surface for membrane installation.

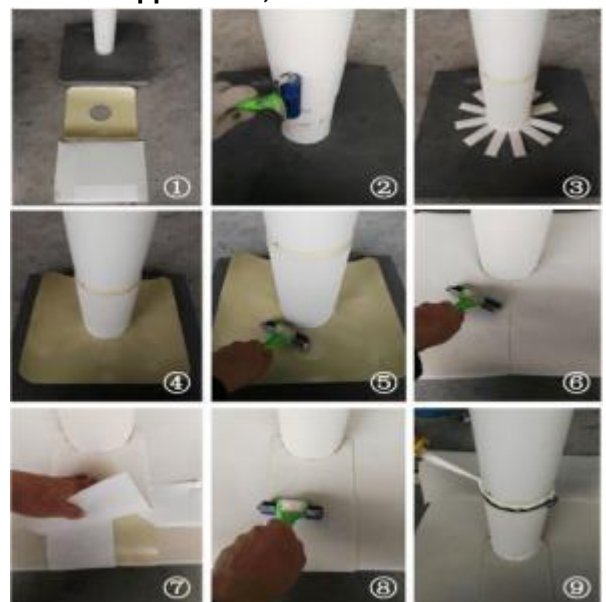
## Membrane Installation

**am** FLEXPROOF HDPE MEMBRANE, pre-applied fully bonded HDPE Membrane should be overlapped using steel roller to ensure complete bonding and to achieve continuity.

**am** FLEXPROOF HDPE MEMBRANE, pre-applied waterproofing membrane can be installed at temperatures of -5°C and above. When installing

**am** FLEXPROOF HDPE MEMBRANE (plain finish) waterproofing membrane in cold weather, care should be taken to pre-heat the bonding edge with appropriate means such as hot air gun or other similar means.

## Detailed Application, Pile hole



- ① Material preparation;
- ② Apply sealant tape at the pipe root;
- ③ Apply the membrane;
- ④ Apply the membrane of plain finish;
- ⑤ Bond the membrane together;
- ⑥ Apply **am** FLEXPROOF HDPE MEMBRANE;
- ⑦ Apply seal tape at the joint;
- ⑧ Apply the membrane at the sealed tape;
- ⑨ seal by metal hoop

## Pile base



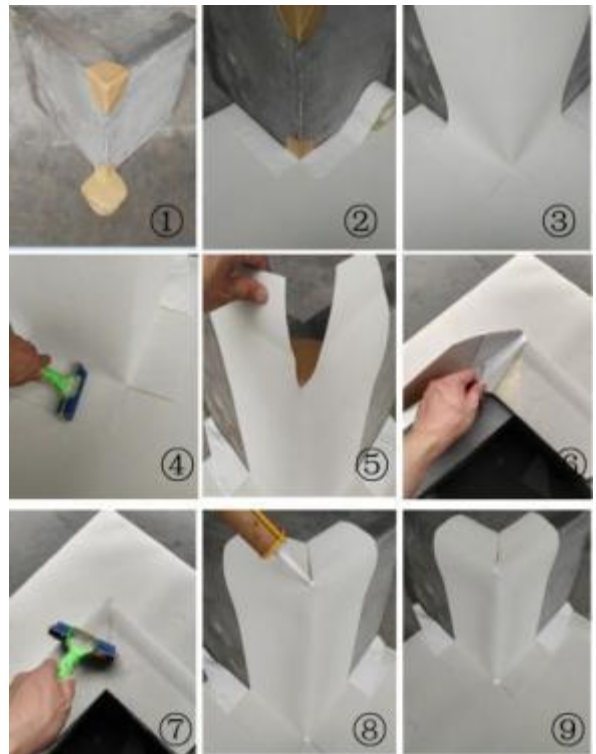
①Brush capillary crystalline coating; ②Apply waterstop, then apply **am FLEXPROOF HDPE MEMBRANE**; ③Apply sealed paste

## Internal Corner



①Apply trihedral corner tape ②Apply horizontal membrane ③Apply overlap tape ④Place membrane on vertical wall ⑤Cut, tape and overlap in the internal corner ⑥Cut line at the top ⑦Fasten the vertical extending membrane ⑧Apply sealed tape on sand surface ⑨Apply sealed tape on sand surface ⑩Press it firmly ⑪Seal the top by sealed paste ⑫Complete

## External Corner



①Apply corner tape at the external; ②Apply horizontal membrane; ③Apply sealed tape; ④Press the overlap position; ⑤Cut line at the top ⑥Apply sealed tape; ⑦Press it firmly; ⑧Seal the top by sealant paste; ⑨Complete

## Horizontal Substrate

- (i) Place the membrane HDPE sheet side to the substrate with sand finish side up facing towards the concrete pour.

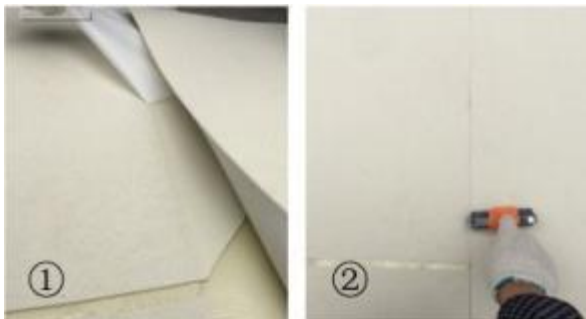


## (ii) Roll end overlap



- ① Cut a triangle sheet from multi-layer overlap;
- ② Apply sealed tape on the end edge; ③ Release the film of the tape;
- ④ Overlap; ⑤ Press the close-up firmly; ⑥ Press the lap

## (iii) Selvage overlap



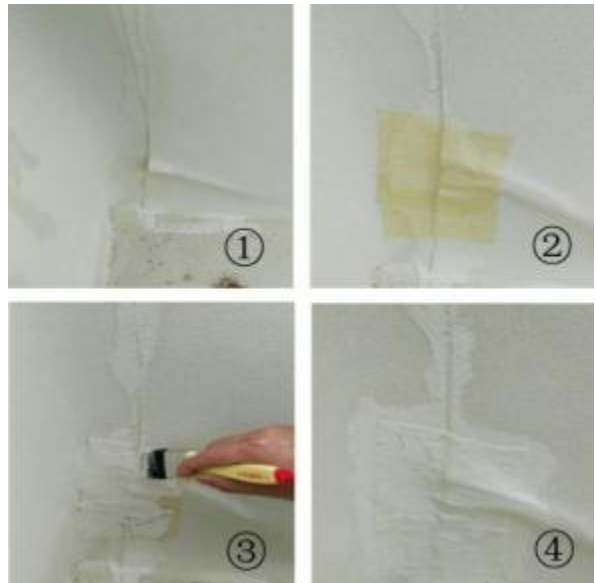
- ① Release the liner and overlap ② Press it hard

## Vertical Substrate



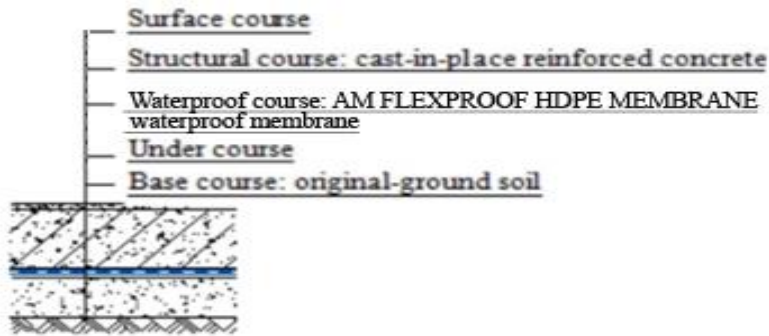
- ① Apply the first membrane and fasten by concrete nails ② Apply the sealed tape ③ Apply the second membrane ④ Release the liner and press it ⑤ Close up the membrane by trim stripe ⑥ Seal by the sealed paste

## Repairing



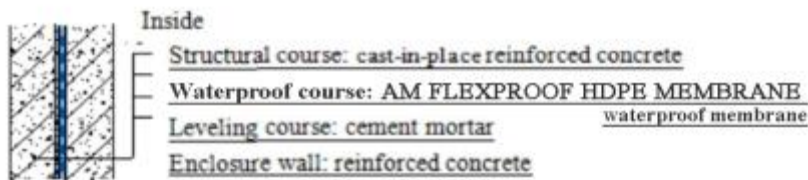
- ① Repairing treatment ② Apply the sealed tape ③ Brush the sealant paste around the tape ④ Complete

## Detail Drawings

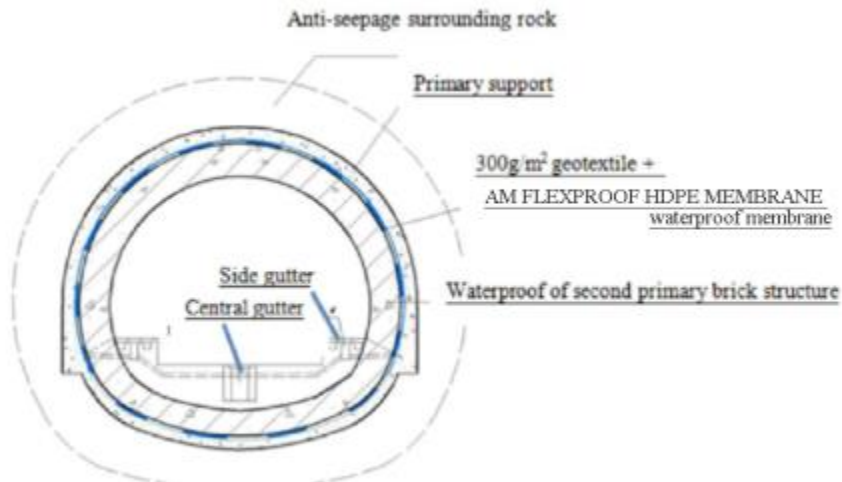


Basement bottom plate (pre-applied anti-adhesion)

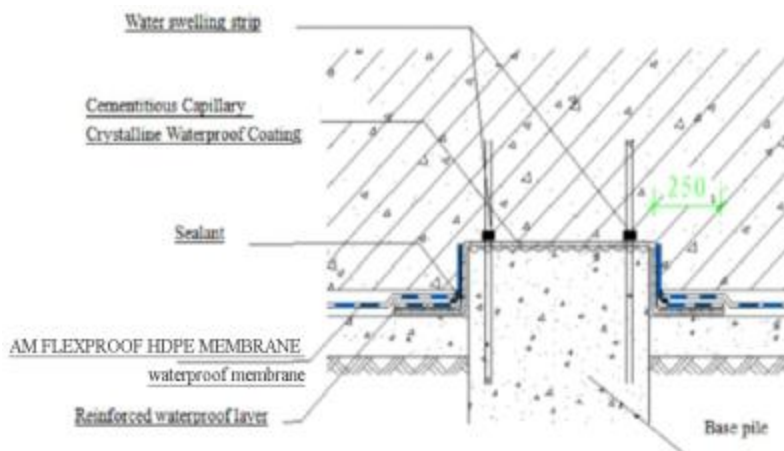
Outside



Basement side wall (pre-applied)



The sketch of tunnel waterproof system



The Waterproof structure of pile head

Physical Properties ASTM		
Item	Mean value	Test method
Tensile strength, MPa	25	ASTM D412, modified
Elongation at break, %	500	ASTM D412, modified
Peel Adhesion to concrete, N/mm	1.0	ASTM D903, modified
Puncture resistance, N	1000	ASTM E154
Hydrostatic pressure resistance	0.7MPa, 1h No water leakage	ASTM D5385-1993, modified
Water vapor transmission ng/(m <sup>2</sup> .S.Pa)	0.40	ASTM E 96/E 96M 6

Remark: the ASTM data is only for reference

**Complete System:** Sealed Tape, Sealant

### Supply

	am FLEXPROOF HDPE MEMBRANE	Sealed tape	Sealed Glue
Thickness (HDPE)	0.8mm/1.0mm		
Thickness (Membrane)	1.2mm/1.5mm	0.8mm	
Specification	1m, 2m x 20m	80mm x 20m	5kg/barrel

**Sealed Tape:** End overlapping & Repairing

**Sealed Glue:** Sealing the joints & Repairing

### Storage

Dry conditions below +40°C. Store indoors or under cover on pallets. Do not double stack pallet.



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