

**AQUAPRUFE**

**APF-C ADVANCED PRO**

**Pre-applied, Fully Bonded, Dual Lap, HDPE Waterproofing Membrane**



## Product Description

Aquaprufe APF-C Advanced Pro Waterproofing Membrane composites a multi-layer with high density polyethylene film, polymer layer, and a unique proprietary layer to develop a continuous adhesive-to-adhesive bond and forms a unique & integral seal to concrete poured against it. It is applied to concrete to provide an excellent barrier & long-lasting protection that is impervious to water between the waterproofing membrane and structures.



## Features & Advantages

- Directly to poured concrete forming a unique integral waterproofing overlap
- Adhesive-to-adhesive watertight overlap with flexibility & excellent elongation
- Not affected by the displacement of the basic layer beneath slab
- Simplified & reliable application without any primers, power, heats or equipment, and not affected by freeze/ thaw or wet/ dry cycling, even under the long-term water immersion.
- Resistant to ground water and protects concrete from ground salts, chlorides, sulphates and hydrocarbons in contaminated areas.

## Typical Applications

Basement Slab Waterproofing, Cut and Cover Tunnel & Subway Structures, R.C. Retaining Walls, Underground Construction.

## Product Data

### Specification

AQUAPRUFEE APF-C ADVANCED PRO is available in

- 1.2mm or 1.5mm thickness
- 1.0m x 25m/roll or 2.0m x 25m/roll

### Storage

12 months from the date of production if stored properly in original, unopened and undamaged sealed packaging in cool & dry conditions (5-35°C). And not stacking one above the others.

# AQUAPRUFEE APF-C ADVANCED PRO



## Application Procedure

### Products Required

#### Membrane

AQUAPRUFEE APF-C ADVANCED PRO (With Sand)---used for horizontal blinding sides. Mainly recommended for basement slab or on rafts, even for mud slabs.

AQUAPRUFEE APF-C (Without Sand)--used for vertical blinding sides after either using concrete, or plywood or other suitable material to provide uniform surface for membrane installation.

#### Ancillary Products

AQUAPRUFEE APF-C SEALED TAPE----For covering cut edges, roll ends, penetrations and detailing,also for the damaged area of AQUAPRUFEE APF-C ADVANCED PRO membrane.

AQUAPRUFEE APF-C SEALED GLUE---For sealing around penetrations, internal & external corner, repairing etc.

AQUASTOP – Waterstops for concrete construction joints.





## AQUAPRUFÉ APF-C ADVANCED PRO

### Surface Preparation

Horizontal installation of AQUAPRUFÉ APF-C ADVANCED PRO – Concrete blinding surfaces must be clean, dry, smooth, free from loose aggregates or any sharp protrusions and other contaminants. The surface does not need to be dry, but standing water must be removed. And it should be SSD (saturated surface dry) condition on site for application of membrane. Temporary diversion is recommended if there is running underground water prior installation.

Vertical installation of Aquaprufe APF-C (Without Sand) – The membrane will be installed on a smooth, clean and dry temporary or permanent formwork or adjoining structures prior reinforcement bar and concreting.

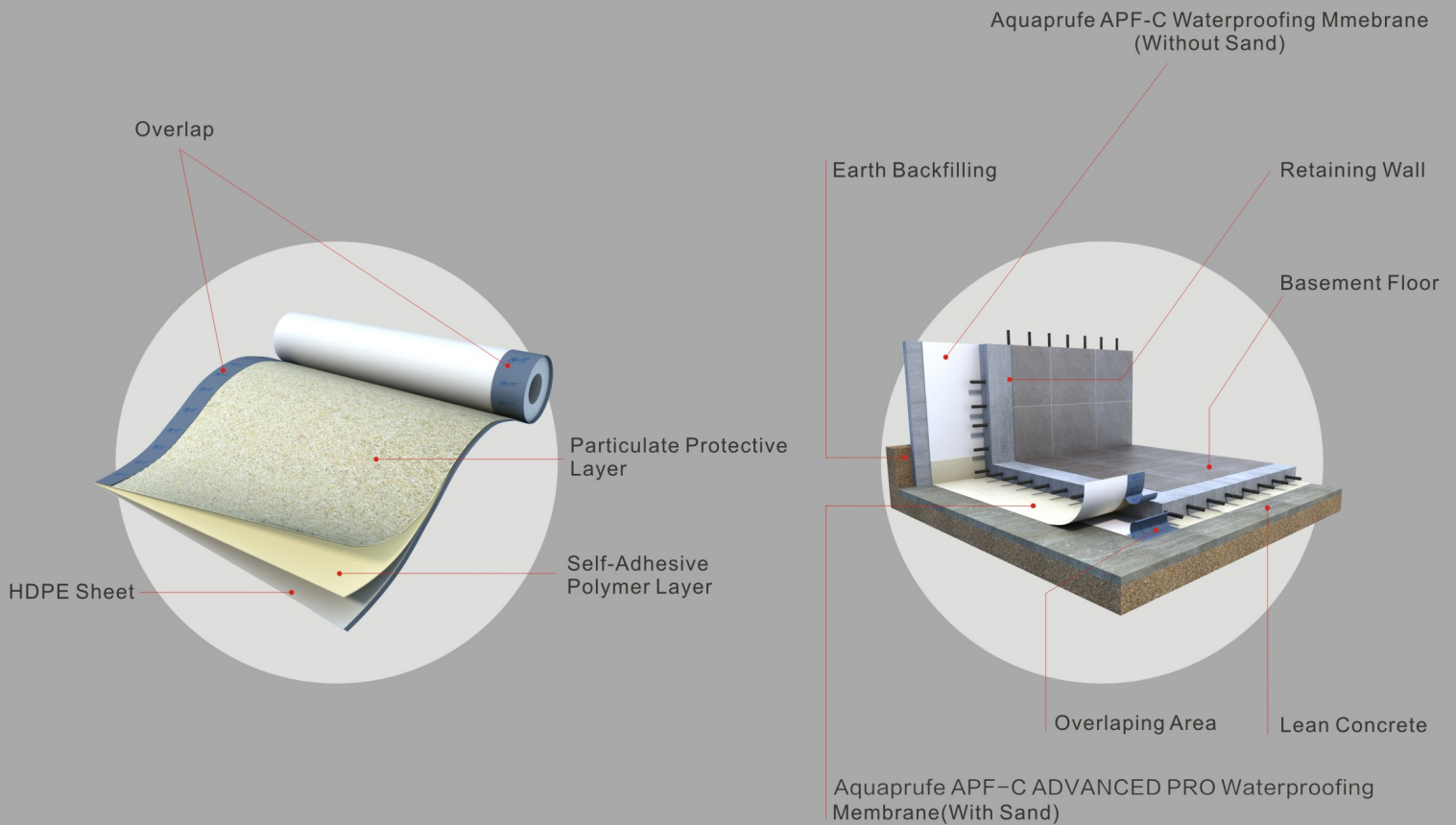
### Installation Procedures

Application of Fully bonded HDPE Membrane (AQUAPRUFÉ APF-C ADVANCED PRO) on blinded concrete surface for under raft slab & confined retaining wall. AQUAPRUFÉ APF-C ADVANCED PRO, removed the film on the top of the membrane (Sand Finish) and film on the bottom of the membrane, a strong adhesive-to-adhesive bond in the overlap area. Install materials carefully in accordance with the manufacturer's instructions.

### Laying of Membrane

Fully bonded HDPE Membrane are supplied in rolls with a selvedge on both sides to provide adhesive-to-adhesive laps for continuity. Align the membrane and unroll with the sandy surface facing the concrete pour. The unrolled membrane should be arranged in a stagger laying method to avoid a build up of end joints. Leave plastic release liner over selvedge area in position until overlap procedure is completed. Accurately position succeeding sheets to overlap the previous sheet 80mm along the adhesive-to-adhesive selvedge. The release liner of HDPE bottom & sand finish top should be clean, dry and free from contamination before attempting to bond overlap. Peel back and completely remove the plastic release liner progressively between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and then roll or press-down firmly. During damp conditions (e.g. water spillage), the selvedge can be gently warmed using a hot air gun or similar to remove moisture or condensation and improve initial adhesion.





## Vertical Blinding

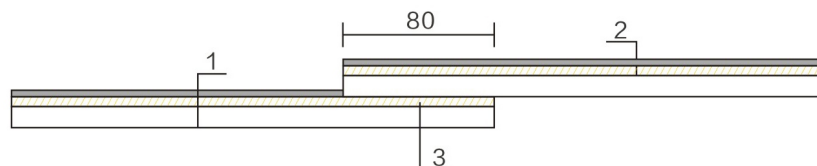
Apply the membrane with the thick white plastic face against the leveled substrate (flush pointed Block work, plum concrete wall or plywood shuttering). Mechanically fasten the membrane vertically using flat headed fixings appropriate to the substrate. The membrane may be installed in any convenient length. Secure the top of the membrane using a batten or fixing 50mm below the top edge. Use fixings at typically 600 mm centres to secure the membrane flat against the substrate. Fixings can be made through the selvedge; this allows firmly rolled overlaps, which are covered by the subsequent strip of Fully Bonded HDPE Membrane. Ensure the underside of the succeeding sheet is clean, dry and free from contamination before attempting to overlap. Peel back the plastic release liners from between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and roll firmly.



## Overlap Methods

### Selvedge Overlap

Leave plastic release liner over selvedge area in position until overlap procedure is completed. Accurately position succeeding sheets to overlap the previous sheet 80mm along the adhesive-to-adhesive selvedge. Peel back and completely remove the plastic release liner progressively between the overlaps as the two layers are bonded together. Ensure a continuous bond is achieved without creases and then roll or press-down firmly

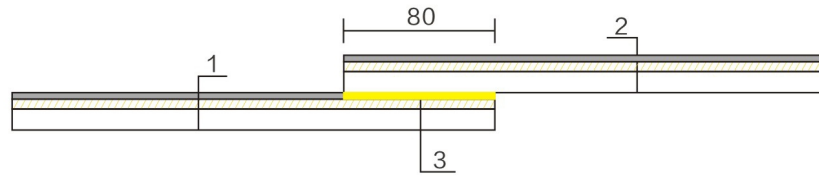


1. Aquaprufe APF-C Advanced Pro Membrane 2. Aquaprufe APF-C Advanced Pro 3. Adhesive-to-adhesive Selvedge



### Roll-End Overlap

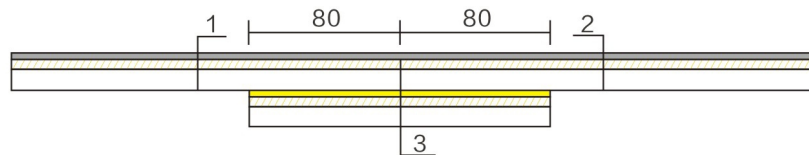
Overlap the roll ends by a minimum 80 mm and ensure the area is clean and free from contamination. Allow to apply Aquaprufe APF-C Tape ( Double Side) on the previous sheet along the 80 mm of non-selvedge joint. Use a metal spatula to move the sand surface on the other sheet along the 80 mm homogeneously. Peel back plastic release liner and accurately position succeeding two sheets to overlap 80 mm. Ensure a continuous bond is achieved without creases and then roll or press-down firmly.



1. Aquaprufe APF-C Advanced Pro Membrane 2. Aquaprufe APF-C Advanced Pro 3. Aquaprufe APF-C Tape( Double Side)

### Cut-Edges Overlap

Overlap the Cut-Edges by a minimum 160 mm and ensure the area is clean and free from contamination. Allow to apply Aquaprufe APF-C Tape ( Single Side) on the two previous sheets along the 160 mm of non-selvedge joint. Put two sheets in the aligned position and then peel back plastic release liner to overlap. Ensure a continuous bond is achieved without creases and then roll or press-down firmly.



1. Aquaprufe APF-C Advanced Pro Membrane 2. Aquaprufe APF-C Advanced Pro 3. Aquaprufe APF-C Tape( Single Side)





## Physical properties

No.	PROPERTIES	TEST RESULT	TEST METHOD
1	Total Thickness	1.2mm	ASTM D3767-03
2	Strength	≥28 Mpa	ASTM D412 Modified
3	Elongation at break	≥700%	ASTM D412 Modified
4	Puncture Resistant	≥1000N	ASTM E154
5	Peel Adhesion to Concrete	≥2N/mm	ASTM D903,modified
6	Low Temperature Flexibility	-30°C,2hrs No cracking	ASTM D1970-01

The typical testing results given above are subjected to laboratory testing Actual results differ from field applied samples.

## WORLDWIDE KEY PROJECT REFERENCES



MEDICAL UNIVERSITY OF CHONGQING



KINGLAND AVENUE JAKARTA, INDONESIA



PORTO DE MELAKA MELAKA, MALAYSIA



CHEERFUL BAY, PHNOM PENH, CAMBODIA



CCTV BUILDING



NATIONAL EXHIBITION AND CONVENTION CENTER



THE NATIONAL AQUATICS CENTRE - WATER CUBE (BEIJING)



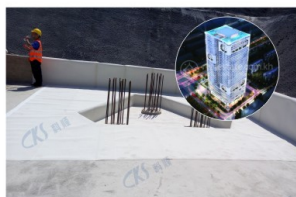
110 CAU GIAY HOTEL HANOI, VIETNAM



ICC DWARKA, NEW DELHI NEW DELHI, INDIA



GRAND MEMORIAL OF BHARAT RATNA DR. BABASAHEB AMBEDKAR DADAR MUMBAI, INDIA



BAOLI MANSION, PP, CAMBODIA



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