

# PMH-3041

## Description

PMH-3041 PE based Self Adhesive Waterproof Membrane, is specially designed for side wall and deck of underground waterproofing with advanced technology, cold and post applied, fully stuck to the existing concrete construction.

The carrier of PMH-3041 is a special made polyethylene and high pressure sensitive adhesive as

bonding layer and covered with PET film as releasable layer. PMH-3041 is pre-applied for underground basement ,

PMH-3041 is used for wall and deck underground construction with cold self-adhesive applied method, which forms

an integrity waterproofing envelope.

PMH-3041 is executing enterprise standard 《HDPE self-adhesive waterproofing membrane》 (Q/JBRL001), in

which the Technique Data is at the same level or even higher than the same product abroad.

## Advantages

- High tensile strength, elongation, excellent impact resistance, tear resistance, chemical corrosion, thermal aging
- dimension stability ect.
- The adhesive layer can bond permanently with the precast concrete, prevent channeling water through the gap,
- even the sedimentation and deformation of substrate occurs, it will not influence the waterproofing, even the area
- damage of the membrane occurs, water will not flow everywhere.
- The under top of the membrane can bear the construction load on it, no additional protect needed.
- Excellent resistance to chemicals, especially the alkali water from concrete and the household garbage and microorganism corrosion.
- The overlapping area is quite stable and bonding strongly, no adhesion tapes and welding needed.
- Cold applied method, self-adheres to the concrete, simple and easy to install.
- Safe and eco-friendly, no pollution to the water and environment, and stable and no harmful substances release
- during production, storage, transportation and application.

## Specifications

Width / M	Thickness /MM	Lengh / M
1.2& 2.4	1.2& 1.5	≥20

PS: 1.0-1.8mm can be OEM according to the requirement of the project

## Typical properties

No.	Test Item		Specification	
			I Type	II Type
1	Tensile force, N/50mm $\geq$		500	800
2	Elongation strength, % $\geq$		400	450
3	Resistance to tearing, N $\geq$		400	500
4	Tear strength, N/mm $\geq$		60	
5	Resistance to impact		d (10 $\pm$ 0.1) mm, No leakage	
6	Resistance to static loading		20kg, no leakage	
7	Heat resistance		70°C, 2h No displacement, flow, dripping	
8	Flexibility at Low Temperature		-25°C, No cracking	
9	Anti-water flow between layers		0.6MPa, No water flow	
10	Peeling Strength, N/mm $\geq$		2.0	
11	Peeling Strength after soaking, N/mm $\geq$		2.0	
12	Mechanical property of joint between membranes	Shear strength, N/50mm	500 or body damage	
		Peel strength, N/mm	1.2	
13	Alkali resistance (Saturated Ca (OH) <sub>2</sub> solution, normal temperature 168h)	Tensile retention, % $\geq$	90	
		Elongation retention, % $\geq$	80	
		Flexibility at Low Temperature	-18°C, No cracking	
14	Heat aging (70°C, 168h)	Tensile retention, % $\geq$	90	
		Elongation retention, % $\geq$	80	
		Flexibility at Low Temperature	-18°C, no cracking	
15	Heat stability	Appearance	No wrinkles, sliding and flowing	
		dimensional change, % $\leq$	2.0	

## Application of PMH-3041 Polyethylene Self-Adhesive Waterproof Membrane

### Application System

Application preparation → substrate preparation  
→ primer → joints treatment → Set up the baseline → Apply on horizontal base → Exhaust compaction by steel roller → Compact the overlaps and seal up edges → Inspection → Backfill/ Concreting. (welding or hanging) → Overlaps process → joints (node) process → Take out the protection film → reinforcing bar installation → Cast concrete.

### Application method

Construction preparation: including the main material and auxiliary equipment; Technical solution, operation

condition and waterproof substrate .

Application equipment: shovel, broom, soot blower, hammer, steel chisel; special cutting knife, tapeline, scraper ,

### Substrate preparation:

- should be firm, dense, smooth and without bumps, cracks and holes. Irregularities and cracks should be filled up with polymer mortar. Inspection and acceptance are necessary before construction. Clear the base when it is qualified. Use vacuum cleaner or high pressure dust-blowing machine when necessary. Yuhong tailored substrate sealant may be needed according to flatness and moisture content.
- Construction on details of additional waterproof layer: It is necessary to process details of additional waterproof layer timely in line with design requirements after primer or sealing coating dried.
- Large-area construction
  - Horizontal substrate: Set up the baseline and adhere the membrane timely when primer dried. Spread the membrane from the fixed end, meanwhile take off the release linear; apply from the bottom to the top.
  - Vertical substrate: same as above, full bonding is necessary for membrane/base and membrane/membrane.

The overlap area along the length direction of each HDPE membranes is 70mm. Take the release liner off to make two membranes attach to each other. Then use a roller to press membranes, press the air out and bond membranes tightly to ensure overlap well.

Lap processing between membrane and pre-laid PHM-3040 membrane: Post the reversed edge of PMH-3040 over the side wall. Clean the concrete and dust and so on. 10 cm in width of lap between

### where to use

Waterproofing underground projects, such as caves, tunnels, subway.

Civil constructions side walls and

### Packing, transportation and storage

- The waterproof membrane is curled with hard core, packed by woven bag. It cannot be put in more than 5 layers.
- During transport and storage, pay attention to the package, store the membrane in a dry, ventilate, level place ,and prevent it from contacting acid, alkali, oil and organic solvent. Storage temperature should not exceed 45.°C
- The membrane should be prevented from the tilt or transverse pressure during transport. Cover with felt if necessary.
- Under normal condition, the shelf life is 1 year.

Protect the isolation when constructing: Take protection to surface of membrane and construct according to design requirement. Isolation could be PE film, polyphenylene plate, rib paper and so on.

### Notices during application

- Do not apply in rainy, snowy and five or above five grade windy days.  
The temperature for self-adhesive film and overlapping adhesive tape application should not be lower than 5°C. (The required temperature of membranes includes the temperature of storage, application and the 24 hours after application) .
- When joins are out of binding ability or not well sealed, cover the joints by adhesive tapes and tightly compress them or heat the joints to strengthen the bonding ability and compress them to form a whole entity.
- Protect the applied membranes when it rains or snows during application.
- Concrete filling or pouring should be quickly after membrane installation, avoid exposure for long time.
- Applicators should be trained before application.
- The builders are forbidden to enter in the application areas wearing spiked shoes.
- When doing the overlapping process along the length direction, adhesive layers should be clean and press should be tight to ensure good bonding abilities.