



# PMH-3040 Plus

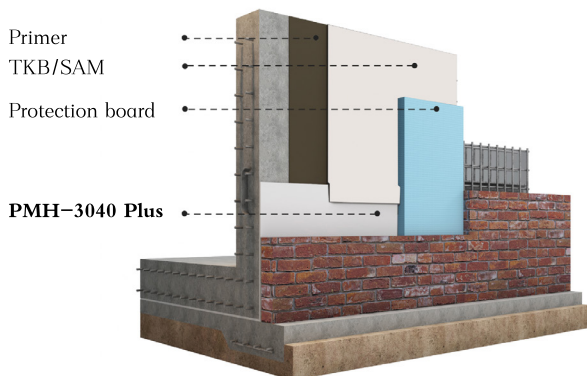
## High Density Polyethylene (HDPE) Pre-applied Waterproofing Membrane

### Product Description

PMH-3040 Plus is a pre-applied high density polyethylene (HDPE) Waterproofing membrane. It is a composite sheet comprised of thick HDPE film, pressure sensitive adhesive and weather resistant protective coating. It is designed with 80mm dual adhesive seams that allows a strong bond which creates a super strong adhesion and is unaffected by weather elements.

This integral bond is specifically designed to provide a robust barrier to water, moisture and gas and prevents both the ingress and lateral migration of water. PMH 3040 Plus membranes are release liner free and designed for efficient, reliable installation.

### System Structure



### Features & Benefits

- Unaffected by ground settlement.
- Easy application & reduced installation time.
- No lateral migration of water.
- White solar-reflective surface results in reduced temperature gain.
- Can be applied to permanent formwork – Allows maximum use of confined sites.
- High puncture resistance – Trafficable immediately after application.
- Unaffected by wet weather.
- Easy roll/kick out installation reduces installation time and cost.
- Release liner free design expedites installation and reduces construction site waste.
- Installed membrane is unaffected by freeze/thaw or wet/dry cycling.
- Chemical resistance – Designed to help protect the structure from salt or sulphate attack, and is effective in most types of soils and waters.
- Resistant to methane and radon gases.

### Packing and Specifications

Item	Description
Packaging	Roll
Width (m)	1.2 (can be customized)
Thickness (mm)	1.2 or 1.5
Length (m)	30m (can be customized)
Roll Size (m <sup>2</sup> /roll)	36m <sup>2</sup> (can be customized)

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### Auxiliary Components

Product No.	Specification	Application
PMH-T-D80 Double-sided tape	80mm x 0.4mm x 50m	End laps for of PMH-3040 Plus.
PMH-T-C120 Cover tape	120mm x 0.35mm x 50m	Reinforced sealing of PMH-3040 Plus overlap & repair.
PMH-S-600 HDPE Special Affiliated Sealant	600ml	Detailing areas such as pile terminations & pipe penetrations. Membrane termination.
GES-309 Anti-UV Aliphatic Single Component Polyurethane Waterproofing Coating	25kg/pail	Membrane terminations, detailing areas such as pile terminations and pipe penetrations.

### Typical Properties

Description	Test Methods	Values
Color	-	White
Thickness, mm	ASTM D3767	1.2mm
Tensile strength	ASTM D412	28 MPa
Elongation	ASTM D412	500%
Puncture resistance	ASTM E154	1000 N
Peel adhesion to concrete	ASTM D903	1800N/m
Resistance to hydrostatic head	ASTM D5385	71 m
Peel strength in lap	ASTM D1876	1800N/m
Crack cycling	ASTM C1305	Passed
Water vapour transmission	ASTM E96 Method B g/(m <sup>2</sup> .h )	0.0043
Water Absorption	ASTM 570	0.5%
Flexibility at low temperature	ASTM D1970	-29°C

Note:

All values are based in test results determined under laboratory conditions and with product samples taken from original stock. Independent laboratory test values available upon request.

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## Application Method

### Surface Preparation

It is essential to create a sound and solid substrate to eliminate movement during the concrete pour. Substrates must be regular and relatively even with no gaps or voids exceeding 12mm.

Horizontal substrate:

- The blinding / lean concrete must be relatively free of loose aggregates and sharp protrusion levelled as much as possible. The surface does not need to be dry, but standing water must be removed.

Vertical substrate:

- All surfaces to receive pre-applied waterproofing membrane must be sound and clean.
- The surfaces shall be relatively even, free of defects or irregularities that might damage the membrane.

### Application

- Do not lay membrane in temperature below 5°C.
- Where temperatures will exceed 38° C (100° F) for more than a total of 7 days, concrete should be placed within 42 days of installation of the membrane. Concrete must be placed and compacted carefully to avoid damage to the membrane. A sharp object is strictly forbidden to be used to consolidate the concrete during concrete pour.

Horizontal substrate:

- Place the membrane with the HDPE film side facing the prepared substrate and the

pressure sensitive adhesive surface facing towards the direction of concrete pour.

- Carefully unroll and position the adjacent rolls to overlap the side of the previous sheet 80mm along the pre-marked selvedge.
- Peel back the plastic release liner from between the overlaps and firmly press in with a heavy hand or roller to achieve a continuous bond.
- The end laps between two different rolls must be sealed using Accessory Tapes of minimum 80mm width.
- Peel back silicone release paper on tape and with heavy hand or roller, press both membranes together to achieve a continuous bond.
- Completely liner before placement of reinforcement bar on membrane. No protection screed is necessary.
- No protection screed is required.

Vertical substrate:

- Plan layout of PMH-3040 Plus Pre-applied membrane, ensuring installation starts from the bottom of the external basement wall and working upwards. That way water is always shed over the front edge of the lap.
- Roll out membrane into position ensuring side edge of material lines up with chalk lines and other reference marks.
- Ensure membrane overlaps adjacent rolls at least 80mm at edge of rolls and 80mm at end of laps.
- Ensure SAM/TKB self-adhesive sheet membrane overlaps PMH-3040 Plus membrane along external basement wall by at least 100mm.
- Ensure SAM/TKB self-adhesive sheet membrane has appropriate overlapping at edges, corners, etc.
- No protection board required.

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### Termination and Penetrations

Termination at penetrations (thru walls & slabs):

- PMH-3040 Plus membrane to be laid tight around the penetration and PMH Tape to secure membrane.
- To achieve waterproofing continuity seal penetration, using PMH-S-600 or GES-309.
- Apply a generous coat of PMH-S-600 or GES-309 using brush overlapping PMH-3040 Plus membrane by minimum 50mm and to turn up or down penetration by 50mm.

Termination at pile caps & CBP wall:

- PMH-3040 Plus membrane to be laid tight up to the edge of the pile caps or CBP wall and secure membrane to substrate with nails.
- Apply a generous coat of PMH-S-600 or GES-309 at edge of membrane using brush or roller, overlapping PMH-3040 Plus membrane by minimum 50mm and to turn up CBP wall by 50mm.

### Membrane Repair

- Inspect membrane for damage before installation of reinforcement steel, formwork and final placement of concrete .
- Clean by jet wash if required.
- Identify and mark damaged area, wipe the area clean with damp cloth to ensure it is free from dust and allow it to dry.
- Minor repairs: Apply PMH Tape over the damaged area and press in firmly.

- For larger repairs: Cut a patch of PMH-3040 Plus membrane to extend beyond edge of damaged area by 100mm and tape all edges of the patch. Place PMH-3040 Plus membrane patch over damaged area, remove silicone liner from tape and press firmly to ensure continuous bond.
- Where exposed selvedge has lost adhesion: clean the area, place PMH Tape along pre-marked selvedge. Position adjacent rolls over it, remove silicone liner and press the top membrane down with heavy hand or roller to form a continuous seal.
- Where laps are not sealed: ensure the area is clean; overlapped that area with PMH Tape. Press firmly in place with heavy hand press or roller.

### Inspection Procedure

- PMH-3040 Plus membrane should be inspected on completion of a specific area before placing any reinforcing steel.
- Any damage to the membrane should be made good as in section 4.
- During placing of reinforcing steel any damage should be identified and made good.

### Pouring Of Concrete

- It is recommended that concrete be poured within 42 days after application of the membrane.
- Concrete must be placed and compacted carefully. Never use a sharp object to compact the concrete.

## High Density Polyethylene (HDPE) Pre-applied Waterproofing Membrane

### Application Areas

- Grounds slabs.
- Areas in contact with earth such as slabs & walls.
- Caverns, tunnels, subways, municipal pipe corridors, etc.
- All underground structures.
- Permanent and removable formwork.

### Transportation & Storage

- Avoid extrusion and packing damaged. Be stored in well-ventilated and dry place. Storage temperature should be below 45 °C .
- It only can be put horizontally in five-level. Be away from direct sunlight, rain and high temperature.
- Avoid contact with acids, alkalis, oils and organic solvents.
- Prevent slope, tilt or lateral drift, stamped felt cloth when necessary.

### Precautions

- Read the product label and Material Safety Data Sheet (MSDS) before using it. Users should acquaint themselves with all risks & safety phrases.
- Conform to manufacturer' s recommendations, material handling and storage specifications.
- Protect all materials from extreme temperature.
- Store and transport rolls in such a manner to prevent bending of the inner core and membrane edge damages.
- To prevent work interruption, it is important to have all the necessary tools and equipment on the job-site when you begin.

### Product Liability

The above information and suggestions are based on our experience and are for reference only. Since Oriental Yuhong Company and its dealers cannot control the storage and handling conditions after delivery, Oriental Yuhong shall not be liable for any quality issues caused by improper use. No technical information shall be provided to any third parties without manufacturer' s consent.