ORIENTAL YUHONG

PMH-3080

High Density Polyethylene (HDPE) Pre-Applied Waterproofing Membrane

Product Description

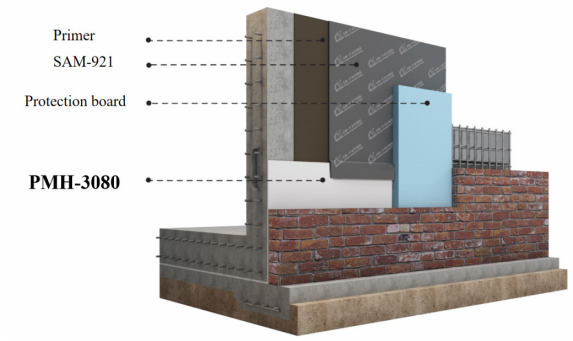
PMH−3080 is a HDPE Pre−applied Waterproofing Membrane which comprises of a proprietary HDPE film and a polymer pressure sensitive adhesive layer covered with weather resistance anti−stick particles. This is a pre−applied waterproofing membrane that bonds directly to concrete poured which prevents any water ingress or lateral migration of water around the structure.

Features & Benefits

- Simple & easy to install
- Excellent tensile & elongation strength
- Excellent impact resistance
- High puncture resistance − Trafficable immediately after installation
- Forms a unique permanent seal with concrete to prevent lateral water migration
- Unaffected by soil settlement
- Unaffected by wet weather
- Weather & UV resistance*
- Environmentally friendly and does not contain harmful chemical

*Footnote: not permanent UV resistance

System Structure



Packing and Specifications

Item	Description
Packaging	Roll
Width (m)	1.2 or 2.4
Thickness (mm)	1.2 or 1.5
Length (m)	20 (can be customized)
Roll Size (m2/roll)	24 (Can be customized)

Auxiliary Components

Product No.	Specification	Application
PMH−T−D80 Double−sided tape	80mm x 0.4mm x 50m	End laps for of PMH−3080 application method with sandy service
PMH−T−160 Single−sided Tape	160mmx1.2mmx20m	End laps for of PMH−3080 application method with sandy service
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 Membrane	25kg/pail	Membrane terminations, detailing areas such as pile terminations and pipe penetrations

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Main Technical Information

Items	Test Methods	Typical Value
Tensile strength	ASTM D412	25MPa
Elongation at break	ASTM D412	400%
Puncture resistance	ASTM E154	700N
Bond strength to concrete	ASTM D903	880 N/m
Resistance to hydrostatic head	ASTM D5385	70m head
Peeling strength at lapping	ASTM D1876	800 N/m

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

Application Areas

- Ground & basement structures
- Tunnels or caverns,
- Subways & metro stations
- All underground structures

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 degree 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.

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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 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 remove plastic liner before placement of reinforcement bar on membrane.
- No protection screed is required.

Vertical substrate

- Plan layout of PMH-3080 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-3080 membrane along external basement wall by at least 100mm.
- Ensure SAM/TKB self-adhesive sheet membrane has appropriate overlapping at edges, corners, etc.
- Remove the plastic liner to expose the protective coating. No protection board required.

Termination and Penetrations

Termination at penetrations (thru walls & slabs):-

- PMH-3080 membrane to be laid tight around the penetration and if necessary 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-3080 membrane by minimum 50mm and to turn up or down penetration by 50mm.

Termination at pile caps & CBP wall:

- PMH-3080 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-3080 membrane by minimum 50mm and to turn up CBP wall by 50mm.

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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-3080 membrane to extend beyond edge of damaged area by 100mm and tape all edges of the patch. Place PMH-3080 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-3080 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
- Check and make sure all plastic liners are removed prior to placing of reinforcing steels.
- 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.

Transportation & Storage

- Avoid extrusion and packing damaged. Be stored in well-ventilated and dry place. Storage temperature should be below 45 ℃ .
- 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.

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- 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.

BEIJING ORIENTAL YUHONG WATERPROOF TECHNOLOGY CO.,LTD.
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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.