

# MC-Plan 312 PA Plus

Pre-applied, fully bonding HDPE waterproofing membrane with pressure sensitive adhesive layer.

## PRODUCT DESCRIPTION:

- **MC-Plan 312 PA Plus** is a 1.2 mm thick composite waterproofing membrane, consisting of a thick high-density Polyethylene (HDPE) layer, pressure sensitive adhesive and weather resistant protective coating.
- **MC-Plan 312 PA Plus** bonds extremely well and integrally to concrete poured against it, especially designed to prevent lateral water migration.

## PRODUCT PROPERTIES:

- Pre-applied HDPE membrane with total thickness of 1.2 mm.
- Forms an outstanding chemical bond to poured concrete due to the special adhesive in the contact layer.
- Eliminates migration of water between the membrane and concrete structure in any direction.
- Not affected by wet/dry cycling and ground settlement.
- Very high puncture-resistance, reinforcement installation can be carried on directly.
- Excellent resistance against ground chemicals, chlorides, sulphates, etc.
- High weather resistance allowing long exposure days.
- No primer requested, fully adhered and watertight at laps and detailing.

## AREAS OF APPLICATION:

- Underground construction, tunnels, subways, curtains and retaining structures.
- High-end waterproofing for the underground basement of the building as a pre-applied system.
- Protection of underground concrete from any subsoil contamination.

## APPLICATION ADVICE:

- **Substrate preparation:** The concrete substrate has to be sound in order to provide **MC-Plan 312 PA Plus** a solid base and to eliminate membrane movement when pouring of concrete over it. The surface should be smooth with no gaps or voids greater than 12 mm and free from sharp protrusions, as well as from running or ponding water.
- **Application:**
  - For horizontal areas, **MC-Plan 312 PA Plus** has to be unrolled and placed properly with proper alignment. Lay the membrane with the white HDPE side to the substrate. Overlap the membranes with each other by 80 mm, glue all roll ends, and cut edges by the double-sided pressure-sensitive HDPE tape. For better bonding on overlaps, peel back and completely remove the plastic release liner. Press and roll it with hand roller to ensure that there is no air bubble in between the overlap joint. Self-adhesive HDPE tapes are used to ensure proper continuation of the membrane through corners and upstands. It is very important to ensure proper adhesion of the membrane in these areas.
  - For vertical confined areas, apply **MC-Plan 312 PA Plus** with its white HDPE face against the leveled substrate like pointed block work, plum concrete wall or shuttering face. Fasten the membrane mechanically by using flat-headed fixings. All the fixings should be fixed 600 mm center to center in a zigzag manner to ensure 100% flatness of the membrane to the surface. Overlap the membrane by releasing the plastic to ensure void free bonding. For unconfined areas, self-adhesive SBS membranes (e.g. **MC-**

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**Nafuplan 15)** should be applied on the cured concrete surface with above-mentioned suitable overlapping.

- **Terminations:** Edge terminations should be carried out by using double-sided HDPE tapes or other suitable terminating accessories. To get site-specific termination details please contact MC-BIFI Bauchemie for more advice.
- **Damage repair:** In case, the membrane is subjected to any damage or puncture, it can be easily repaired by means of the self-adhesive HDPE cover strip which is patched on a clean and dry surface. It is always recommended to double-check the membrane once again after finishing the installation of the reinforcement cage in order to identify and rectify any punctures or damages before concrete pouring.
- **Special instructions: MC-Plan 312 PA Plus** can be installed at temperature of -5°C and above. Installation of membrane in cold weather requires pre-heating of the adhesive edges during overlapping by using a hot air gun. **MC-Plan 312 PA Plus** has an increased UV resistance. However, concrete casting should be finished within 45 days after membrane lying.

#### TECHNICAL DATA:

Characteristic	Unit	Value	Comments
Thickness	mm	≥ 1.2 ≥ 0.9	Total HDPE-sheet
Tensile strength	MPa	≥ 27	ASTM D412
Elongation at break	%	≥ 500	ASTM D412
Nail shank resistance	N	≥ 400	EN 12310-1
Puncture resistance	N	≥ 1200	ASTM E154
T – peeling strength	N/m	≥ 1000	ASTM D1876
Resistance to hydrostatic head		No leakage	ASTM D5385-93
Flexibility at low temperature (-35°C)		No change	ASTM D1970

*Property specifications are based on laboratory tests and may vary in practical application. To determine the individual technical suitability, preliminary suitability tests should be carried out under the application conditions.*

#### PRODUCT CHARACTERISTICS:

<b>Shelf-life and Storage</b>	Always store the rolls in a vertical position. Can be stored for at least 24 months in original unopened packs under dry and cool conditions. Please protect from heat and frost!
<b>Internal production supervision</b>	In accordance with ISO 9001
<b>Form of delivery</b>	Roll: 1.2 m x 20 m Pallet: 25 x 10 m/roll
<b>Accessories</b>	- Double sided HDPE tape, roll: 80 mm x 0.4 mm x 50 m - But adhesive HDPR tape, roll: 160 mm x 1.2 mm x 20 m - Self –adhesive HDPE cover strip with sand surface, roll: 80 mm x 0.8 mm x 15 m

**Note:** The information provided here is based on our experience and correct to the best of our knowledge. It is, however, not binding. It will need to be adapted to the requirements of the individual building projects, to the specific application and to non-standard local conditions. Our data refers to the accepted engineering rules, which have to be observed during application. Given these preconditions we shall be liable for the accuracy of the information given as outlined in our sales and delivery terms and conditions. Recommendations by our employees that deviate from this information are only binding for us if they have been confirmed in writing. In all cases, the generally accepted rules and practices reflecting the current state of the art must be adhered.

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