

# Product Data Sheet

## FONDALINE® 500 GEO PP

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### Product Definition

FONDALINE® 500 GEO PP, is geocomposite HDPE high density polyethylene drainage membrane laminated to a geotextile fabric with semi-conical dimples characterised by high flexibility and tensile strength resistant to roots and chemical agents.

FONDALINE® 400 ●  
FONDALINE® 500 ●  
FONDALINE® 600 ●  
**FONDALINE® 500 GEO PP ●**

**Composition:** HDPE (high density polyethylene)+ PP polypropylene geotextile.

### Technical Data

Color	Black + Grey
Dimple density	> 1860 u/m <sup>2</sup>
Dimple height	8mm
Weight	500 gr/m <sup>2</sup> + 100 gr/m <sup>2</sup> = 600gr/m <sup>2</sup> ( ±%5)
Air-gap volume between dimples	~ 5,3 l/m <sup>2</sup>
Flow rate	1,9 l/ms
Tensile strength of geotextile	MD ≥6,6 kN/m(-0,7) ; CD≥6,6 kN/m (-0,7)
Puncture strength of geotextile (CBR)	950 N (-0,11)
Pore opening size of geotextile	150 micron (±30)
Permeability of geotextile	80 mm/s (-15)
Pressure strength	~ 200 kN/m <sup>2</sup>
Elongation	MD≥ 40% ; CD≥ 40%
Tensile strength	MD≥ 8 kN/m ; CMD≥ 8 kN/m
Temperature range	Between -40°C - +80°C

### Where to use and Properties

- Protects below grade foundation walls against infiltration of water on vertical or horizontal surfaces and channels water quickly for improved drainage towards the exterior of the structure.
- Breaks capillaries and directs water outside the structure.
- Can be used as a structurally independent layer for concrete slab replacement.
- Protects vertical surfaces like concrete shear walls heat and water insulation layers against backfill.
- Can be used as an infiltration layer in double shell applications of deep foundations. Evacuate runoff to drainage channels in tunnel applications.
- Quick and low cost application compare to concrete slab which requires additional digging, building and drying time
- The dimples in the membrane create a drainage space that allows the wall to breathe.
- Dimple pattern created by more than >1860 dimples per m<sup>2</sup> provides high compressive backfill
- Compare to time consuming brick or other masonry veneer walls, our HDPE membrane is easy to install and can be backfilled right away making it very cost effective.

### Other Properties:

Impervious to root penetration and rot proof. Drinking water neutral. Resistant to chemicals, fungal and bacterial infestation. They are permanent and insensitive to acids found in a natural state in soil or alkalinity which gives them a lifespan exceeding that of the works they protect.

### Accessories:

Fixing batten and self-adhesive galvanized fasteners

### Packaging:

Roll length:	: 20,00 m (±1%)
Roll width	: 2,00 m (±1%)
Roll coverage	: 40,00 m <sup>2</sup> (±2%)
Roll weight	: 24,00 kg (±3%)
Nr of rolls/pallet	: 5 pieces
Pallet quantity	: 200 m <sup>2</sup>

### Storage – Expiry Date

The rolls are to be stored in an upright position, preferably indoors in a dry and ventilated area, away from heat sources and avoiding to stack them one on top of the other to avoid possible deformations which may compromise the application. When storing with original packaging, pallets should not be stacked.

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### General Application Steps FONDALINE® 500 GEO PP

1. Unroll FONDALINE® 500 GEO PP, working from left to right, geotextile surface always facing the soil. FONDALINE® 500 GEO PP can be installed both in vertical applications and in horizontal applications.
2. Install membrane to finished grade height using flashing strips, battens or concrete nails and approved washers or plugs. Extend drainage membrane beyond existing footing and wrap around the base of the foundation wall. Water flows behind drainage membrane to drainage pipe. Drainage pipe at the perimeter of the foundation wall should be surrounded by a free draining granular material that is wrapped in filter fabric to prevent fines from filling in the porous spaces of the granular material. It must be connected carefully to the evacuation network.
3. FONDALINE® 500 GEO PP is a dimpled plastic membrane with a flat tab on one side. Roll end joints require the installation of the membrane with minimum 20 cm overlap. Pull back the geotextile fabric 50mm from one side of joint, and overlap the HDPE cores. Over lap the geotextile fabric . Geotextile should be laid in direction of flow to prevent ingress of fine material. Overlapping joints can be fully or partially torch-bonded or sealed by using a bitumen sealing tape at the edges of the sheets and across the joints.
4. Roll edge joints require the installation of the membrane along the length of the joints Butt the HDPE cores together with overlap of 30 cm and using the geotextile selvedge, overlap the geotextile a minimum of 40 mm. Overlapping joints can be partially torch-bonded or sealed by using a bitumen sealing tape at the edges of the sheets and across the joints. Where a fluctuating water table is encountered the drainage membrane must be fully bonded.
5. FONDALINE® 500 GEO PP should be tacked up before backfill. It is recommended to use our galvanized steel fasteners with a self-adhesive backside, allowing it to be fastened to a waterproofed wall surface without penetrating the waterproof membrane. Place fasteners every 50 cm. When there is no water leakage risk, the drainage membrane can be installed with concrete nails and approved washers or plugs..
6. Alternatively, (EPS) or (XPS) or rigid mineral wool could be used as insulation in below grade application; drain mat is installed on the insulation with self-adhesive galvanized steel fasteners (i.e., used as a drainage medium and capillary break between the insulation and the backfill).

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### FONDALINE® 500 GEO PP Warning – Health and Safety

1. Avoid application in temperatures below +5°C and above +30°C.
2. Covered with minimum 30 cm of soil thickness FONDALINE® 500 GEO PP can be used as a walkable, driveable, and planted roof surface.
3. FONDALINE® 500 GEO PP sheets should be covered within 1 week in order to protect them against prolonged exposure to direct sunlight; specially tropical sunlight can damage the product