

## DRENTEX PROTECT PLUS

DRENTEX PROTECT PLUS is a sheet drain made up of a three-dimensional high density polyethylene (HDPE) structure with a polypropilene geotextile mat on one side.

### ADVANTAGES

- The non-woven propylene textile acts as a water filter to prevent soil from blocking drainage, while the polyethylene dimples guide and drain off water. The entire system drains off water and protects the waterproofing on walls.
- A stable and reliable, rot, root and fungi-proof drainage system
- Because all the dimples of the structure are connected directly to the geotextile mat, high compressive strength is provided to ensure the drainage volume is not reduced by pressure from the soil.
- Easy to transport and install



### APPLICATION

- Wall drainage, low water collection.

### REGULATIONS

- Quality Management System according to the requirements of ISO 9001:2008 standard.

### Drainages Protection Membranes HDPE

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## INSTALLATION

- **SUBSTRATE:** must be firm, even, clean and free from loose materials or any construction debris on surface.
- Prior to application, the wall should be protected with an Emufal TE- type bituminous paint (in areas with low humidity) or waterproofed (e.g with Texself self-adhesive membranes, in areas with greater water build-up), given that the drainage system filters and channels water, but does not waterproof.
- DRENTEX PROTECT PLUS rolls are overlapped by unsticking some 10 cm of geotextile mat from both edges, nesting the dimples, i.e. fitting one into the other, and then re-protecting with the unstuck geotextile mat.
- **WALLS INSTALLATION:**
  - The roll can be applied horizontally or vertically.
  - Horizontal Application: Start application at the bottom of the wall. Fill in with soil as the Drentex Protec Plus sheet is installed.
  - Vertical Application: The overlap should be applied in the opposite direction to runoff. In this way, water leakage is minimised behind the drainage system.
  - On the top the sheet must be mechanically fixed by a profile like DRENTEX PERFIL or single fixations DRENTEX FIJACION. The profile DRENTEX PERFIL avoids contamination on the chamber created by the DRENTEX PROTECT PLUS
  - On the bottom of the wall it will be advisable to install a drainage pipe.
  - Lastly, compact the surrounding soil to ensure optimum and correct drainage.



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**PACKAGING AND STORAGE**

|                              | DRENTEX PROTECT PLUS |
|------------------------------|----------------------|
| Colour                       | Black                |
| g/sqm                        | 600                  |
| Dimples height at 2 kPa (mm) | 7,5                  |
| Length (m)                   | 20                   |
| Width (m)                    | 2                    |
| sqm/rollo                    | 40                   |
| sqm/pallet                   | 240                  |
| Roll weight (kg)             | 24                   |

Storage: Must be stored on its original packaging in a dry place and protected from the weathering.

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## TECHNICAL PROPERTIES

| PROPERTIES OF HDPE DIMPLE MEMBRANE         |                   |                         |   |
|--|-------------------|-------------------------|---|
| PROPERTIES                                 | UNIT              | Test Method             | DRENTEX PROTECT PLUS                        |
| Compressive strength                       | KN/m <sup>2</sup> | -                       | 120 ± 30                                    |
| Weight                                     | kg                | EN ISO 9864             | 400 ± 50                                    |
| Dimples height at 2 kPa                    | mm                | EN ISO 9863-1           | 7,5 ± 1                                     |
| Tensile strength ( LxT)                    | KN/m              | EN ISO 10319            | 9 -2 / 9 -2                                 |
| Elongation                                 | %                 | EN ISO 10319            | 50 ± 15 / 55 ± 15                           |
| PROPERTIES OF THE POLIPROPYLENE GEOTEXTILE |                   |                         |   |
| PROPERTIES                                 | UNIT              | Test Method             | DRENTEX PROTECT PLUS                        |
| Weight                                     | g/m <sup>2</sup>  | EN ISO 9864             | 100 ± 10                                    |
| Tensile strength (LxT)                     | kN/m              | EN ISO 10319            | 6 -2 / 6 -2                                 |
| Elongation (LxT)                           | %                 | EN ISO 10319            | 45 ± 30 / 45 ± 30                           |
| Static Puncture Resistance<br>CBR          | N                 | EN ISO 12236            | 1000 -175                                   |
| Dynamic Puncture Resistance<br>(Cone)      | mm                | EN ISO 13433            | 38 +8                                       |
| Water permeability                         | mm/s              | EN ISO 11058            | 100 -35                                     |
| Opening size O90                           | mm                | EN ISO 12956            | 90 ± 35                                     |
| Durability                                 |                   | EN ISO 12224            | To be covered in 14 days after installation |
| HYDRAULIC PROPERTIES                       |                   |                         |   |
| PROPERTIES                                 | UNIT              | LOAD                    | DRENTEX PROTECT PLUS                        |
| Vertical drainage i = 1                    | l/m-s             | A 20 kN/m <sup>2</sup>  | 1.45  |
| Vertical drainage i = 1                    | l/m-s             | A 50 kN/m <sup>2</sup>  | 1.2   |
| Vertical drainage i = 1                    | l/m-s             | A 100 kN/m <sup>2</sup> | 0.5   |
| Horizontal drainage i =0,1                 | l/m-s             | A 20 kN/m <sup>2</sup>  | 0.4   |
| Horizontal drainage i =0,1                 | l/m-s             | A 50 kN/m <sup>2</sup>  | 0.25  |
| Horizontal drainage i =0,1                 | l/m-s             | A 100 kN/m <sup>2</sup> | 0.15  |
| Horizontal drainage i =0,04                | l/m-s             | A 20 kN/m <sup>2</sup>  | 0.2   |
| Horizontal drainage i =0,04                | l/m-s             | A 50 kN/m <sup>2</sup>  | 0.15  |
| Horizontal drainage i =0,04                | l/m-s             | A 100 kN/m <sup>2</sup> | 0.1   |

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