

## MACDRAIN™ M 1181 DRAINAGE COMPOSITE

Geocomposite for planar drainage (GCD), realized by thermobonding a draining mat in extruded monofilaments having a biconical cusped shape (GMA) with two filtering geotextiles (GTX) that may also be working as separation or protecting layers.

|  | Standard     | Unit                  | Value | Tolerance     |
|--|--------------|-----------------------|-------|---------------|
| <b>EXTERNAL FILTERS (GTX)</b>  |              |                       |       |               |
| Structure: needlepunched and thermotreated geotextiles   |              |                       |       |               |
| Raw Material: UV stabilized polypropylene  |              |                       |       |               |
| Mass per unit area   | EN ISO 9864  | g/m <sup>2</sup>      | 130   | average value |
| Thickness at 2 kPa   | EN 9863-1    | mm                    | 0.80  | +/-15%        |
| Tensile strength MD & CMD  | EN ISO 10319 | kN/m                  | 10.0  | -1.3          |
| Static puncture resistance   | EN ISO 12236 | N                     | 1600  | -20%          |
| Dynamic puncture resistance  | EN ISO 13433 | mm                    | 26    | +20%          |
| Flux perpendicular to the plane  | EN ISO 11058 | l/(m <sup>2</sup> .s) | 100   | -30%          |
| Characteristic opening size O <sub>90</sub>  | EN ISO 12956 | micron                | 90    | +/-30%        |
| <b>DRAINAGE CORE (GMA)</b>   |              |                       |       |               |
| Structure: three dimensional geomat made by extruded monofilaments set in biconical cusped shape |              |                       |       |               |
| Raw Material: polypropylene UV stabilized by carbon black  |              |                       |       |               |
| Mass per unit area   | EN ISO 9864  | g/m <sup>2</sup>      | 550   | +/-10%        |
| Width  |              | cm                    | 420   | +/-3%         |
| <b>GEOCOMPOSITE (GCO)</b>  |              |                       |       |               |
| Thickness at 2 kPa   | EN 9863-1    | mm                    | 20    | -2.0          |
| Thickness at 20 kPa  | EN 9863-1    | mm                    | 16.5  | -2.0          |
| Mass per unit area   | EN ISO 9864  | g/m <sup>2</sup>      | 800   | +/-10%        |
| Tensile strength MD  | EN ISO 10319 | kN/m                  | 18    | -3            |
| Strain at max load MD  | EN ISO 10319 | %                     | 80    | +/-30%        |
| In plane flow capacity MD  | EN ISO 12958 | l/(m.s)               |       |               |
|  | gradient i = | 0.03                  | 1.0   |               |
| soft/soft contact  | 20 kPa       | -                     | 4.20  | -25%          |
| rigid/soft contact   | 20 kPa       | 0.60                  | 4.40  | -20%          |
|  | 50 kPa       | 0.11                  | 1.00  | -30%          |
|  | 100 kPa      | -                     | -     |               |
| <b>STANDARD DIMENSIONS OF GEOCOMPOSITE</b>   |              |                       |       |               |
| Width <sup>(1)</sup>   |              | cm                    | 420   | average value |
| Length   |              | m                     | 28    | average value |
| Roll area  |              | m <sup>2</sup>        | 117.6 | +/-4%         |
| Roll diameter  |              | cm                    | 80    | average value |

(1) Material is available in submultiple of standard width; check feasibility with our commercial dpt.



MD : longitudinal direction  
CMD : transversal direction

The producer, for his optimisation and improving process of the product's technical characteristics, has the faculty to modify the standards and the characteristics of the product without any pre-advice. All the information are given in base to our experience; in any case no responsibility for an incorrect use could be referred to the producer or one of his distributors.

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with SINCERT's and UKAS' s accreditation.