

**MACDRAIN® W105M**  
DRAINAGE COMPOSITE



Geocomposite for planar drainage (GCO), realized by thermobonding a draining core in extruded monofilaments (GMA) with one filtering nonwoven geotextile (GTX) (that may also be working as separation or protecting layer) and with one polymeric reinforced membrane (GBR-P). The draining three dimensional core will have a "W" configuration as longitudinal parallel channels.

GEOCOMPOSITE (GCO)	Standard	Unit	Value	Tolerance
Thickness at 2 kPa	EN 9863-1	mm	5.0	-10%
Mass per unit area	EN ISO 9864	g/m <sup>2</sup>	620	+/-10%
Tensile strength MD <sup>(1)</sup>	EN ISO 10319	kN/m	18	+/-20%

IN PLANE FLOW CAPACITY MD <sup>(1)</sup> in l/(m.s) according to EN ISO 12958 (+/- 30%)				
		Load	i <sup>(3)</sup> = 0.1	i <sup>(3)</sup> = 1.0
	soft/soft contact	20 kPa	-	1.0
	rigid/soft contact	20 kPa	0.22	1.1
		100 kPa	0.26	0.8
		200 kPa	0.12	0.5

EXTERNAL FILTER (GTX)	Standard	Unit	Value	Tolerance
Structure: nonwoven geotextiles				
Raw Material: UV stabilized polyolefin				
Mass per unit area	EN ISO 9864	g/m <sup>2</sup>	120	+/-15%
Thickness at 2 kPa	EN ISO 9863-1	mm	0.75	+/-20%
Tensile strength MD <sup>(1)</sup> & CMD <sup>(2)</sup>	EN ISO 10319	kN/m	8.0	-1.3
Static puncture resistance	EN ISO 12236	N	1400	+/-20%
Dynamic puncture resistance	EN ISO 13433	mm	33	+15%
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	110	+/-50%

EXTERNAL MEMBRANE (GBR-P)				
Structure: woven geotextile reinforcement of polypropylene filaments laminated on both surfaces with a polyolefin film				
Tensile strength MD <sup>(1)</sup> & CMD <sup>(2)</sup>	EN ISO 10319	kN/m	13	+/-1
Static puncture resistance	EN ISO 12236	N	2100	+/-100

DRAINAGE CORE (GMA)				
Structure: three dimensional geomat made by extruded monofilaments set in longitudinal parallel channel configuration				
Raw Material: polypropylene UV stabilised by carbon black				
Mass per unit area	EN ISO 9864	g/m <sup>2</sup>	380	+/-10%

Note: Sizes may vary depending on stock. Verify availability with our commercial department. Other sizes are available on request.

- <sup>(1)</sup> MD: longitudinal direction  
<sup>(2)</sup> CMD: transversal direction  
<sup>(3)</sup> i: Hydraulic gradient



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