

MACMAT® 8.1 GEOMAT

MacMat® is a geomat consisting of a three-dimensional structure having a biconical cusped shape made from polypropylene filaments. MacMat® geomat is used to prevent erosion and surface planar failure phenomena on slopes. It is also used in hydraulic/water channels to protect them from the abrasive and tractive forces applied by the stream flow.

MacMat®			8.1
Basic polymer properties			
Polymer			Polypropylene
Melting point ⁽¹⁾	ISO 11357-3	°C	160
Density ⁽¹⁾	ISO 1183	kg/m ³	900
Inflammability	EN ISO 11925-2	Class	F
UV resistance			Stabilized
Mechanical properties			
Tensile strength T _{ch} - MD ⁽²⁾	EN ISO 10319	kN/m	1.1 (- 0.2)
Strain at T _{ch} - MD ⁽³⁾		%	80 (± 30)
Tensile strength T _{ch} - CMD ⁽²⁾		kN/m	0.5 (- 0.2)
Strain at T _{ch} - CMD ⁽³⁾		%	50 (± 25)
Physical Properties			
Structure			Biconical cusped shape
Mass per unit area ⁽⁴⁾	EN ISO 9864	g/m ²	250 (± 30)
PP single filament diameter		mm	500 (± 30%)
Colour			Black or Brown (RAL 8012) or Green (RAL 6020)
Voids index ⁽⁴⁾		%	> 90
Thickness at 2 kPa ⁽³⁾	EN ISO 9863-1	mm	8.0 (± 2.0)
Roll width ^(5,6)		m	4.20
Roll length ⁽⁶⁾		m	50
Roll area		m ²	210
Durability, Environmental and Sustainability Properties			
Content of SVHC ⁽⁷⁾	ISO 14025 EN 15804	%	≤ 0.1
Global Warming Potential Total (GWP) ⁽⁷⁾		kg CO ₂ Eq.	≤ 5.64E-01
Acidification Potential (AP) ⁽⁷⁾		mol H+ Eq.	≤ 1.51E-03
Eutrophication Potential freshwater (EP-fr) ⁽⁷⁾		kg P Eq.	≤ 1.12E-06
Eutrophication Potential marine (EP-mar) ⁽⁷⁾		kg N Eq.	≤ 5.45E-04
Eutrophication Potential terrestrial (EP-ter) ⁽⁷⁾		mol N Eq.	≤ 5.89E-03
Durability	Annex B - hEN		Can be exposed up to 28 days durable in natural soil with 4<pH<9 and soil temperature <25°C for a minimum of 25 years service life



- (1) Informative value given at the best of our knowledge;
- (2) Short-term tests in accordance with EN ISO 10319:2015. The values given correspond to Minimum Average Value at 95% confidence limit to establish the characteristic short-term tensile strength (T_{ch}) in accordance with EN 13251:2016 and calculated as the mean value of ultimate strength deducting the tolerance;
- (3) Typical value;
- (4) Nominal value, where no specific tolerance is indicated a standard of 10% is admissible;
- (5) The material is also available in 2.10 m and 1.95 m width on request;
- (6) Standard dimensions; other dimensions available on request - check feasibility with your local Maccaferri branch. A standard tolerance of 2% is admissible with reference to the declared value;
- (7) Values reported in the EPD certificate KIWA-EE- 000378-EN issued in accordance with EN15804+A2: 2019 and ISO14025 with validity till April 2029. The reported values are selected among the 13 mandatory certified values (EN 15804+A2:2019) and referred to the Product Stage A1-A3. Additional environmental impact indicators and different Product Stages valid for Life Cycle Assessment are reported in the full EPD certificate of the product.

MD: Machine direction; CMD: Cross Machine Direction



For the optimisation and improvement process of the technical characteristics of the products, the producer reserves the right to modify standards and characteristics of the product without warning. The information contained herein is to the best of our knowledge accurate, but since the circumstances and conditions in which it may be used are beyond our control, we do not accept any liability for any loss or damage, however arising, which results directly or indirectly from the use of such information nor do we offer any warranty or immunity against patent infringement. Specifiers are requested to check the validity of the specification they are using.

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