

Product description

Enkadrain 5004C/T110PP is a light and flexible geocomposite matting, made up of a three-dimensional polypropylene monofilament drainage core. The matting is thermally pre-formed in a v-shape configuration, making it optimally pressure resistant. In the machine direction (MD) the matting has the highest discharge capacity. For this reason Enkadrain 5004C/T110PP should be installed preferably with the machine direction parallel to the expected flow direction. Due to the basic filament structure a flow between the individual channels is possible.

Enkadrain 5004C/T110PP is manufactured in 5 m wide lanes. The drain is covered on both sides with a thermally bonded polypropylene nonwoven filter. The filters are bonded to the drainage core by means of stitching. The seams of the stitching are parallel to the machine direction. Each of the nonwoven filters extend 100 mm to one side of the core in opposite directions. This ensures that the joint is covered when lanes of Enkadrain are laid adjacent to one another.

Application

Enkadrain 5004C/T110PP has a high discharge capacity at high loading so that the geocomposite can be used to replace mineral drain and filter layers in the civil engineering and building industry. Enkadrain 5004C/T110PP can also be used as drainage layer in the cappings of landfills.

To avoid damage caused by UV radiation or wind we advise to cover Enkadrain immediately, but at least 2 weeks after installation.

Performances

Properties of the composite

Applied stress in kPa	Water flow capacity in their plane** $q_{\text{stress/gradient}}$		
	$i = 0.03$ l/(s·m)	$i = 0.3$ l/(s·m)	$i = 1.0$ l/(s·m)
20	0.07	0.5	1.0*
50	0.06	0.4	0.9
100	0.05	0.4	0.8
200	0.04	0.3	0.7

** Test results by Colbond Geosynthetics Laboratory according to EN ISO 12958, opt. R/F.
Soil pressure against one filter side was simulated by a foam layer.

Hydraulic properties* of the filter T110PP

		Mean value	
Water permeability, V_{H50}	mm/s	70	EN ISO 11058
Opening size, O_{90}	µm	140	EN ISO 12956

Mechanical properties* of the filter T110PP

		Mean value	
Polymer		PP	
Mass per unit area	g/m ²	110	EN 965
Thickness	mm	0.4	EN 964-1
Tensile strength MD	kN/m	7.3	EN 10319
Tensile strength CMD	kN/m	7.3	EN 10319
Elongation at break MD	%	60	EN 10319
Resistance to static puncture	kN	1.1	EN 12236
Dynamic perforation resistance	mm	36	EN 918

* Data given are mean values corresponding with the CE marking.

Dimensions and weights

Enkadrain Wide	Mattings					Rolls		
	Thickness	Weight	Width	Length	Area	Ø	Length	Gross-weight
	mm	g/m ²	m	m	m ²	m	m	kg
5004C/5-2s/T110PP	4	720	5.0	100	500	0.80	5.30	375

Individual values may vary from above mentioned data.

Quality Assurance



The Quality Management System of Colbond Geosynthetics, at Arnhem (development and sales) and Obernburg (production), has been approved by Lloyd's Register Quality Assurance Limited for the ISO 9001:2000 quality management system standard (Certificate No. 935136).



Enkadrain 5004C/T110PP is CE-certified by an independent notified body (0799-CPD).

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