TENCATE Polyfelt®

DC-Drainage Mats

TenCate Polyfelt® DC are geocomposites comprising a geonet and a filter geotextile on one or both sides. The geonet is made from high density polyethylene (HDPE) and the filter geotextile from polypropylene (PP). They have a very low compressability, resulting in high discharge capacity even under high surcharge load. They are used in all kind of surface drainage applications.

TenCate Polyfelt® DC

Effective surface drainage even under high surcharge loads

DC drainage mats offer the same flow rates as conventional drainage gravel at a considerably reduced thickness. They reduce the space requirements and thus the excavation costs. The working trench can be refilled with the excavation material, thus saving on backfilling costs.

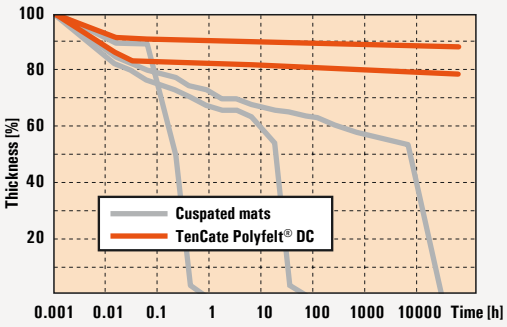
Thanks to their structure, DC drainage mats are highly pressure resistant, and therefore offer adequate drainage even under high surcharge loads. They are also suitable in cases where both pressure and shear stresses are evident (such as along slopes or walls).

DC drainage mats can be easily installed. They are available in rolls of 2 m or 4 m width and can be cut to size using a construction knife. Please ask for our detailed installation guidelines.

Highest quality for long-term drainage

The controlled manufacturing process guarantees a consistantly high quality. This simplyfies the quality control on the construction site.

Both geonet and filter geotextile offer excellent chemical and biological resistance. Therefore they can be used harmlessly in contact with soil and construction materials such as concrete.



Reduction of theickness at 200 kPa surcharge load over a long period of time (Testing laboratory: GEOTRAC / UK)

The advantages at a glance:

- Reduced excavation costs
- Reduced costs for depositon of excavation material
- Easier quality control on the site
- High compression resistance

Applications

Wall and cellar drainage

Soil retaining structures

Cut-and-cover tunnels

Landfill surface drainage/sealing

Bridge abutments

TENCATE Polyfelt®

DC-Drainage Mats – Technical Data

Properties [Standard]		Unit	DC 401E	DC 601E	DC 402E	DC 602E
Type of product		–	Geocomposite (Geonet + Filter geotextile on one side)		Geocomposite (Geonet + Filter geotextile on both side)	
In-plane flow rate q - MD	20 kPa	l/ms	1.26	1.91	0.62	1.40
i = 1	50 kPa		1.11	1.71	0.51	1.25
	200 kPa		0.76	1.30	0.35	1.00
	400 kPa		0.43	0.90	0.24	0.65
i = 0,1	20 kPa	l/ms	0.23	0.43	0.11	0.30
	50 kPa		0.20	0.39	0.09	0.27
	200 kPa		0.13	0.30	0.06	0.18
[ISO 12958, hard – hard, Specimen size 380 x 300 mm]	400 kPa		0.10	0.20	0.04	0.16
Thickness	2 kPa	mm	4.2	6.3	5.2	6.6
	20 kPa	mm	4.0	6.1	4.8	6.4
[EN ISO 9863-1]	200 kPa	mm	3.8	5.8	4.2	6.0
Tensile strength	MD/CD	kN/m	12 / 9	13 / 10	19 / 17	20 / 17
Elongation [EN ISO 10319]	MD/CD	%	40 / 50	40 / 50	40 / 50	40 / 50
CBR puncture resistance [EN 12236]		kN	1.8	2.0	3.2	3.4
Thickness under creep-load (pressure 100 kPa) after 25 years (extrapolated) [EN 1897]		mm	–	–	4.0	6.0

Properties [Standard]	Unit	all grades
Filter Geotextile:		
Type of product	–	Nonwoven
Raw material	–	100 % PP
CBR puncture resistance [EN ISO 12236]	kN	1.4
Cone drop test (hole diameter) [EN ISO 13433]	mm	30
Water permeability (vertical) [EN ISO 11058]	l/m^2s	90
Opening size O_{90} [EN ISO 12956]	mm	0.10
Mass per unit area [EN ISO 9864]	g/m^2	120
Geonet:		
Raw material	–	Polyethylene (HDPE)
Reduction of thickness under long term load [EN 1897-01, 1000 Std., 200 kPa]	%	< 3

Forms of supply	Unit	DC 401/402E	DC 601/602E
Width*	m	2	2
Length	m	25	25
Width*	m	4	4
Length	m	50	65

*) The filter geotextile projects by 10 cm on one side each over the edge of the geonet

The values given are average values obtained in our laboratories and in testing institutes. The right is reserved to make changes without notice at any time.

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Outdoor Fabrics
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Geosynthetics
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TENCATE materials that make a difference