


GEO PP TC needle-punched, thermocalandered high tenacity polypropylene geotextile, UV stabilized

Sheet n. 002/06
Rev. 00 14/04/2006

Technical data sheet

PRODUCT RANGE			TC 100	TC 120	TC 140	TC 150	TC 160	TC 180	TC 200	TC 220	TC 250	TC 280	TC 300	TC 330	TC 350	TC 400	TC 500	TC 700
Standard	Unit																	
Physical Properties																		
Unit weight	EN ISO 9864	g/m ²	100	120	140	150	160	180	200	220	250	280	300	330	350	400	500	700
Thickness at 2 kPa	EN ISO 9863-1	mm	0,65	0,65	0,75	0,8	0,90	0,95	1,0	1,1	1,2	1,25	1,45	1,5	1,6	1,9	2,1	3,0
Mechanical Properties																		
Tensile strength MD	EN ISO 10319	kN/m	6,0	7,5	9,5	10,0	11,0	13,0	14,0	16,0	19,0	21,0	22,0	24,0	26,0	29,0	34,0	45,0
Tensile strength CMD	EN ISO 10319	kN/m	6,0	7,5	9,5	10,0	11,0	13,0	14,0	16,0	19,0	21,0	22,0	24,0	26,0	29,0	39,0	50,0
Elongation MD	EN ISO 10319	%	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Elongation CMD	EN ISO 10319	%	60	70	65	65	60	60	60	60	60	60	60	60	60	60	60	50
Static puncture (CBR test)	EN ISO 12236	N	1100	1300	1600	1650	2000	2250	2600	2900	3300	3500	3700	4300	4500	5300	6000	8400
Dynamic perforation (Cone drop)	EN 918	mm	33	31	29	28	27	26	23	22	20	17	15	14	13	10	7	0
Hydraulic Properties																		
Velocity index	EN ISO 11058	m/s	0,086	0,075	0,070	0,065	0,060	0,050	0,040	0,040	0,035	0,027	0,025	0,015	0,015	0,014	0,010	0,005
Permeability normal to the plane	EN ISO 11058	l/(s m ²)	86	75	70	65	60	50	40	40	35	27	25	15	15	14	10	5
Permittivity	EN ISO 11058	s ⁻¹	1,72	1,50	1,40	1,30	1,20	1,00	0,80	0,80	0,70	0,54	0,50	0,30	0,30	0,28	0,20	0,10
Transmissivity under 20 kPa	EN ISO 12958	m ² /s x 10 ⁻⁶	0,45	0,50	0,85	1,0	1,2	1,2	1,2	1,2	1,3	1,4	1,4	1,4	1,5	1,6	1,6	1,7
Water flow in the plane (20 kpa, i=1)	EN ISO 12958	l/(m h)	1,8	1,8	3,2	3,6	4,3	4,3	4,3	4,3	4,7	5,0	5,0	5,0	5,4	5,8	5,8	6,1
Characteristic opening size O90	EN ISO 12956	micron	90	80	75	70	70	70	70	70	70	65	65	65	65	60	60	50

Durability	EN 12224	To be covered in 1 month after installation. Predicted to be durable for more than 25 years in natural soils with 4<ph<9 and soil temperature < 25 °C	
Oxidation Resistance	ENV ISO 13438	Retained strength	MD 100 % CMD 100 %
Chemical resistance	EN 14030	Retained strength	MD 100 % CMD 99 %
Microbiological resistance	EN 12225	Retained strength	MD 90 % CMD 99 %
Geotextiles for Civil Engineering GEO PP TC geotextiles can be used in building and construction works for separation, filtration, drainage, protection and reinforcement. All products are UV stabilized.	Quality Management: Geo&Tex 2000 spa production control is certified CE-marking level 2+  0799-CPD-15 The Quality System is certified according to international quality management system EN ISO 9001:2000.	Main certifications: ASQUAL (France) RVS (Austria) NorGeoSpecs 2002 (Scandinavian market)	

Above technical values are mean values based on measurements in current production and test results from independent test institutes.

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Tolerances

PRODUCT RANGE			TC 100	TC 120	TC 140	TC 150	TC 160	TC 180	TC 200	TC 220	TC 250	TC 280	TC 300	TC 330	TC 350	TC 400	TC 500	TC 700
Standard	Unit																	
Physical Properties																		
Unit weight	EN ISO 9864	g/m ²	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%	± 10%
Thickness at 2 kPa	EN ISO 9863-1	mm	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%	± 20%
Mechanical Properties																		
Tensile strength MD	EN ISO 10319	kN/m	- 0,6	- 0,7	- 1,0	- 1,0	- 1,0	- 1,3	- 1,0	- 1,5	- 2,0	- 2,0	- 2,0	- 2,0	- 2,6	- 3,0	- 3,0	- 4,5
Tensile strength CMD	EN ISO 10319	kN/m	- 0,6	- 0,7	- 1,0	- 1,0	- 1,0	- 1,3	- 1,0	- 1,5	- 2,0	- 2,0	- 2,0	- 2,0	- 2,6	- 3,0	- 3,0	- 5,0
Elongation MD	EN ISO 10319	%	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15	± 15
Elongation CMD	EN ISO 10319	%	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20	± 20
Static puncture (CBR test)	EN ISO 12236	N	- 105	- 130	- 160	- 150	- 200	- 225	- 260	- 290	- 330	- 350	- 370	- 400	- 440	- 500	- 600	- 840
Dynamic perforation (Cone drop)	EN 918	mm	+ 6,6	+ 6,0	+ 6,0	+ 5,6	+ 5,4	+ 5,2	+ 4,6	+ 4,2	+ 4,0	+ 3,4	+ 3,0	+ 2,8	+ 2,5	+ 2,0	+ 1,5	-
Hydraulic Properties																		
Velocity index	EN ISO 11058	m/s	- 0,026	- 0,022	- 0,021	- 0,019	- 0,018	- 0,015	- 0,012	- 0,012	- 0,010	- 0,008	- 0,007	- 0,005	- 0,005	- 0,004	- 0,003	- 0,001
Permeability normal to the plane	EN ISO 11058	l/(s m ²)	- 26	- 22	- 21	- 19	- 18	- 15	- 12	- 12	- 10	- 8	- 7	- 5	- 5	- 4	- 3	- 1
Permittivity	EN ISO 11058	s ⁻¹	- 0,52	- 0,44	- 0,42	- 0,38	- 0,36	- 0,30	- 0,24	- 0,24	- 0,20	- 0,16	- 0,14	- 0,10	- 0,10	- 0,08	- 0,06	- 0,02
Transmissivity under 20 kPa	EN ISO 12958	m ² /s x 10 ⁻⁶	- 0,14	- 0,15	- 0,26	- 0,30	- 0,36	- 0,36	- 0,36	- 0,36	- 0,40	- 0,42	- 0,42	- 0,42	- 0,45	- 0,48	- 0,48	- 0,51
Water flow in the plane (20 kPa, i=1)	EN ISO 12958	l/(m h)	- 0,5	- 0,5	- 0,9	- 1,1	- 1,3	- 1,3	- 1,3	- 1,3	- 1,4	- 1,5	- 1,5	- 1,5	- 1,6	- 1,7	- 1,7	- 1,8
Characteristic opening size O90	EN ISO 12956	micron	± 30	± 30	± 30	± 30	± 21	± 21	± 21	± 21	± 21	± 21	± 21	± 21	± 21	± 21	± 21	± 21

Above tolerance values correspond to a confidence level of 95% according to European harmonized standards EN 13249-EN 13257 and EN 13256

STANDARD DIMENSIONS			TC 100	TC 120	TC 140	TC 150	TC 160	TC 180	TC 200	TC 220	TC 250	TC 280	TC 300	TC 330	TC 350	TC 400	TC 500	TC 700
Width			Standard width m 6 – 5 – 3 – 2 – 1 for all types															
Length	m		180	150	130	120	110	100	90	110	100	90	100	90	80	70	50	40
Roll diameter	cm		33	33	33	33	33	33	33	38	38	38	41	41	41	41	38	41

LOADING CAPACITY			TC 100	TC 120	TC 140	TC 150	TC 160	TC 180	TC 200	TC 220	TC 250	TC 280	TC 300	TC 330	TC 350	TC 400	TC 500	TC 700
Rolls per truck staple	n		56	56	56	56	56	56	56	42	42	42	39	39	39	39	42	39
Quantity per full truck m 12	m ²		120960	100800	87360	80640	73920	67200	60480	55440	50400	45360	46800	42120	37440	32760	25200	18720



Non wovens