



PPS Polypropylene geotextile fabrics

Physical Properties		test method	unit																		Tolerance							
Weight			g/m²	90	100	105	120	125	140	150	170	180	200	220	230	250	260	320	400	500	600	800	1000	1500	±	10%		
	2kPa	EN ISO 9863-1	mm	0.60	0.65	0.65	0.70	0.75	0.90	0.90	1.10	1.10	1.20	1.30	1.30	1.40	1.45	1.70	2.20	3.00	3.50	4.20	4.80	7.50	±	20%		
Thickness		20kPa	EN ISO 9863-2	mm	0.50	0.50	0.55	0.60	0.65	0.75	0.80	0.90	1.00	1.10	1.10	10.25	1.30	1.50	1.90	2.40	2.80	3.90	4.50	6.50	±	20%		
	200kPa	EN ISO 9863-3	mm	0.40	0.40	0.40	0.50	0.55	0.55	0.60	0.70	0.70	0.75	0.90	0.90	1.00	1.10	1.30	1.50	1.90	2.10	3.10	4.00	5.60	±	20%		
Mechanical Properties																												
Tensile Strength		md	EN ISO 10319	kN/m	6.5	6.0	8.0	9.0	9.0	10.5	11.0	12.0	13.5	15.0	16.0	16.5	18.0	19.5	24.0	28.0	35.0	40.0	52.0	68.0	85.0	-	10%	
		cmd	EN ISO 10319	kN/m	6.5	6.0	8.0	9.0	9.0	10.5	11.0	12.0	14.0	16.0	17.0	17.5	19.0	20.5	27.0	34.0	42.0	50.0	64.0	80.0	130.0	-	10%	
Elongation at max load		md	EN ISO 10319	%	65	52	65	65	65	65	55	60	65	65	65	65	65	65	65	75	75	80	90	100	±	30%		
		cmd	EN ISO 10319	%	70	55	70	70	70	70	55	60	70	70	70	70	70	70	70	80	80	80	90	100	±	30%		
Energy index			EN ISO 10318	kJ/m ²	2.2	2.0	2.7	3.0	3.0	3.5	4.5	5.0	4.6	5.2	5.6	5.7	6.2	6.8	8.6	10.5	14.9		23.2	33.3	53.8	±	20%	
Static puncture resistance			EN ISO 12236	kN	1.1	1.1	1.2	1.4	1.4	1.8	1.7	2.0	2.3	2.5	2.8	2.9	3.3	3.4	4.3	5.5	6.5	7.5	9.5	14.0	20.0	-	10%	
Dynamic puncture resistance (cone drop test)			EN ISO 13433	mm	38	38	34	30	32	26	30	26	20	18	16	15	14	14	12	7	4	0	0	0	0	+	20%	
Pyramid puncture resistance			EN 14574	N	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	150	200	420	440	440	440	480	600	700	900	1100	1200	2500	-	20%	
Grad Resistance		md	ASTM D 4632	N	360		410			525			680	765		875		1050	1400	1700	1800		2500	3200	6200	-	15%	
		cmd	ASTM D 4632	N	390		430			580			790	870		1050		1250	1550	1900	2050		2800	4000	9000	-	15%	
Grab Elongation		md	ASTM D 4632	%	60		60			60			65	70		70		75	80	90	90		90	90	90	±	20%	
		cmd	ASTM D 4632	%	70		70			70			75	75		75		80	85	90	90		90	90	90	±	20%	
Trapezoid tearing strength		md	ASTM D 4533	N	90		110			170			220	240		260		290	350	430	530		830	1030	1530	-	20%	
		cmd	ASTM D 4533	N	110		130			190			240	260		280		310	370	450	550		850	1050	1550	-	20%	
Hydraulic properties																												
Velocity index VI			EN ISO 11058	mm/s	120	80	110	110	100	90	69	65	70	60	60	60	55	55	55	30	25	25	25	25	20	15	-	30%
Permeability coefficient normal to the plane			EN ISO 10318	l/m ² s	120		110	110	100	90			70	60	60	55	55	55	30	25	25	25	25	25	20	15	-	30%
Permittivity			EN ISO 10318	s ⁻¹	2.40	1.60	2.20		2.00	1.80	1.38	1.30	1.40	1.20		1.10		1.10	0.60	0.50	0.50		0.50	0.40	0.30			
Coefficient of permeability normal to the plane			EN ISO 10318	m/s	1.44	1.04	1.43	110	1.50	1.62	1.24	1.43	1.54	1.44		1.43		1.60	1.02	1.10	1.50		2.10	1.92	2.25			
Hydraulic gradient			EN ISO 10318		83		77			56			45	42		38		34	29	23	17		12	10	7			
In-plane flow capacity at 20kPa		md	EN ISO 12958	10 ⁻⁵ m ² /s	0.80	0.80	0.80	0.80	0.80	0.80			1.60	2.10	2.10	2.10	2.30	2.30	2.50	3.20	5.00	7.80	8.50	9.00	9.00	-	30%	
			EN ISO 10318	l/m s	0.80	0.80	0.80	0.80	0.80	0.80			1.60	2.10	2.10	2.10	2.30	2.30	2.50	3.20	5.00		8.50	9.00	9.00			
Opening size			EN ISO 12956	µm	90	89	90	90	85	70	70	64	60	60	60	60	55	55	50	50	50	50	40	40	40	±	30%	
Durability properties																												
Weathering resistance			EN 12224	To be covered within 15 days from the day of installation																								
Oxydation resistance			EN ISO 13438	Forecast minimum durability of 25 years for every application in natural grounds with 4<pH<9 and soil temperature <25°C																								
Residual strength after UV exposition			ASTM D 4355	Residual strength higher than of 70% after 500 hours																								

The values given are an average obtained in our laboratories and in official testing insitutes
The confidence level is 95%
The is reserved to make changes at any time without notice



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1213-CPD-3269



PPX Polypropylene geotextile fabrics

Physical Properties		test method	unit											Tolerance	
Weight			g/m ²	150	200	300	400	500	700	800	1000	1200	1500	±	10%
Thickness	2kPa	EN ISO 9863-1	mm	1.20	1.30	1.80	2.50	3.30	4.00	4.40	5.50	7.00	8.50	±	20%
	20kPa	EN ISO 9863-1	mm	1.00	1.10	1.60	2.00	2.70	3.30	3.80	5.00	6.30	7.80	±	20%
	200kPa	EN ISO 9863-1	mm	0.80	0.90	1.20	1.60	2.00	2.50	2.90	3.90	4.70	6.30	±	20%
Mechanical Properties															
Tensile Strength	md	EN ISO 10319	kN/m	4.0	5.0	10.0	14.0	18.0	26.5	29.0	32.0	34.0	37.0	-	15%
	cmd	EN ISO 10319	kN/m	4.5	7.0	14.0	19.0	26.0	37.5	43.0	50.0	53.0	57.0	-	15%
Elongation at max load	md	EN ISO 10319	%	70	80	80	80	85	90	90	95	95	95	±	25%
	cmd	EN ISO 10319	%	80	85	85	85	90	95	95	100	100	100	±	25%
Energy index		EN ISO 10318	kJ/m ²	1.6	2.5	5.0	6.8	9.6	14.8	16.7	20.0	21.2	22.9	±	25%
Static puncture resistance		EN ISO 12236	kN	1.0	1.2	2.0	2.8	3.8	5.3	5.8	7.2	9.0	12.0	-	10%
Dynamic puncture resistance (cone drop test)		EN ISO 13433	mm	22	20	13	9	6	3	2	0	0	0	+	25%
Pyramid puncture resistance		EN 14574	N	n/a	150	300	340	400	600	700	1100	1400	1600	-	20%
Grad Resistance	md	ASTM D 4632	N	390	400	700	740	780	860	890	950	980	1040	-	15%
	cmd	ASTM D 4632	N	420	450	750	810	870	980	1030	1130	1180	1280	-	15%
Grab Elongation	md	ASTM D 4632	%	70	90	90	90	90	90	90	90	90	90	±	20%
	cmd	ASTM D 4632	%	90	100	100	100	100	100	100	100	100	100	±	20%
Trapezoid tearing strength	md	ASTM D 4533	N	150	170	280	320	360	440	480	560	600	650	-	20%
	cmd	ASTM D 4533	N	170	210	320	360	400	480	520	600	640	720	-	20%
Hydraulic properties															
Velocity index VI		EN ISO 11058	mm/s	80	70	35	25	20	20	20	20	20	20	-	30%
Permeability normal to the plane		EN ISO 10318	l/m ² s	80	70	35	25	20	20	20	20	20	20	-	30%
Permittivity		EN ISO 10318	s ⁻¹	1.60	1.40	0.70	0.50	0.40	0.40	0.40	0.40	0.40	0.40		
Coefficient of permeability normal to the plane		EN ISO 10318	m/s	1.92	1.82	1.26	1.25	1.32	1.60	1.76	2.20	2.80	3.40		
Hydraulic gradient		EN ISO 10318		42	38	28	20	15	13	11	9	7	6		
Opening size		EN ISO 12956	µm	80	70	55	50	50	45	45	40	40	40	±	30%
Durability properties															
Weathering resistance		EN 12224		To be covered within 1 day from the day of installation											
Oxydation resistance		EN ISO 13438		Forecast minimum durability of 5 years for all non-reinforcement application in natural grounds with 4<pH<9 and soil temperature <25°C											

The values given are an average obtained in our laboratories and in official testing insitutes

The confidence level is 95%

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1213-CPD-3269



PEI Recycled Polyester geotextile fabrics

Physical Properties		test method	unit												Tolerance	
Weight			g/m ²	150	200	300	400	500	700	800	1000	1200	1500	±	10%	
Thickness	2kPa	EN ISO 9863-1	mm	1.00	1.20	1.40	1.80	2.40	3.50	4.00	4.50	5.00	6.00	±	20%	
	20kPa	EN ISO 9863-2	mm	0.80	1.00	1.20	1.60	2.00	2.30	2.40	2.80	3.20	3.50	±	20%	
	200kPa	EN ISO 9863-3	mm	0.40	0.60	0.80	1.20	1.40	1.50	1.50	1.60	1.70	1.80	±	20%	
Mechanical Properties																
Tensile Strength	md	EN ISO 10319	kN/m	1.5	2.0	3.2	5.5	6.0	7.5	8.0	12.0	16.0	25.0	-	10%	
	cmd	EN ISO 10319	kN/m	2.0	2.5	3.8	7.5	9.0	11.0	12.0	14.0	20.0	30.0	-	10%	
Elongation at max load	md	EN ISO 10319	%	60	60	60	60	70	70	80	80	80	80	±	30%	
	cmd	EN ISO 10319	%	70	70	70	70	80	90	90	90	90	90	±	30%	
Energy index		EN ISO 10318	kJ/m ²	0.6	0.7	1.1	2.1	2.8	3.7	4.3	5.5	7.7	11.7	±	20%	
Static puncture resistance		EN ISO 12236	kN	0.3	0.4	0.8	1.0	1.4	1.8	1.9	2.2	3.8	5.5	-	10%	
Dynamic puncture resistance (cone drop test)		EN ISO 13433	mm	>50	4	30	20	10	6	4	2	1		+	20%	
Pyramid puncture resistance		EN 14574	N	n/a	n/a	n/a	250	300	450	500	600	700	800	-	20%	
Grad Resistance	md	ASTM D 4632	N	150	200	380	470	560	720	800	950	1100	1250	-	15%	
	cmd	ASTM D 4632	N	170	220	420	530	620	760	820	970	1150	1350	-	15%	
Grab Elongation	md	ASTM D 4632	%	70	70	70	70	70	70	70	70	70	70	±	20%	
	cmd	ASTM D 4632	%	80	80	80	80	80	80	80	80	80	80	±	20%	
Trapezoid tearing strength	md	ASTM D 4533	N	80	90	150	170	200	270	300	350	400	450	-	20%	
	cmd	ASTM D 4533	N	90	100	170	230	260	320	360	410	460	510	-	20%	
Hydraulic properties																
Velocity index VI		EN ISO 11058	mm/s	95	80	60	40	40	40	40	20	20	20	-	30%	
Permeability coefficient normal to the plane		EN ISO 10318	l/m ² s	95	80	60	40	40	40	40	20	20	20	-	30%	
Permittivity		EN ISO 10318	s ⁻¹	1.90	1.60	1.20	0.80	0.80	0.80	0.80	0.40	0.40	0.40			
Coefficient of permeability normal to the plane		EN ISO 10318	m/s	1.90	1.92	1.68	1.44	1.92	2.80	3.20	1.80	2.00	2.40			
Hydraulic gradient		EN ISO 10318		50	42	36	28	21	14	13	11	10	8			
Opening size		EN ISO 12956	µm	65	60	55	45	45	45	45	40	40	40	±	30%	
Durability properties																
Weathering resistance		EN 12224	To be covered within 1 days from the day of installation													
Oxydation resistance		EN ISO 13438	Forecast minimum durability of 5 years for every application in natural grounds with 4<pH<9 and soil temperature <25°C The values given are an average obtained in our laboratories and in official testing insitutes The confidence level is 95%													
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1213-CPD-3269



PEC (multi-coloured) Recycled Polyester geotextile fabrics

Physical Properties		test method	unit											Tolerance	
Weight			g/m ²	150	200	300	400	500	700	800	1000	1200	1500	±	10%
Thickness	2kPa	EN ISO 9863-1	mm	1.10	1.30	2.00	2.20	2.80	3.20	3.50	4.00	5.50	6.00	±	20%
	20kPa	EN ISO 9863-2	mm	0.80	1.00	1.30	1.80	2.20	2.80	3.00	3.50	3.80	4.00	±	20%
	200kPa	EN ISO 9863-3	mm	0.60	0.70	0.90	1.20	1.50	2.00	2.30	2.80	3.00	3.30	±	20%
Mechanical Properties															
Tensile Strength	md	EN ISO 10319	kN/m	0.8	1.0	1.4	2.5	3.0	7.0	8.0	12.0	16.0	18.0	-	10%
	cmd	EN ISO 10319	kN/m	1.2	1.4	2.0	4.0	4.5	12.0	14.0	16.0	20.0	22.0	-	10%
Elongation at max load	md	EN ISO 10319	%	70	70	80	80	80	80	80	80	80	80	±	30%
	cmd	EN ISO 10319	%	70	70	80	80	80	80	80	80	80	80	±	30%
Energy index		EN ISO 10318	kJ/m ²	0.4	0.4	0.7	1.3	1.5	3.8	4.4	5.6	7.2	8.0	±	20%
Static puncture resistance		EN ISO 12236	kN	0.1	0.2	0.3	0.6	0.8	1.5	1.9	2.2	3.8	4.0	-	10%
Dynamic puncture resistance (cone drop test)		EN ISO 13433	mm	>50	>50	35	25	18	8	6	2	2	2	+	20%
Pyramid puncture resistance		EN 14574	N	n/a	300	400	500	600	800	800	1100	1200	1400	-	20%
Grad Resistance	md	ASTM D 4632	N	75	95	130	230	280	650	745	1100	1200	1400	-	15%
	cmd	ASTM D 4632	N	85	100	145	290	325	865	1000	1200	1400	1500	-	15%
Grab Elongation	md	ASTM D 4632	%	70	70	70	80	80	80	80	80	80	80	±	20%
	cmd	ASTM D 4632	%	80	80	80	90	90	90	90	90	90	90	±	20%
Trapezoid tearing strength	md	ASTM D 4533	N	38	48	67	83	100	230	265	400	530	600	-	20%
	cmd	ASTM D 4533	N	46	53	76	120	135	360	420	480	600	660	-	20%
Hydraulic properties															
Velocity index VI		EN ISO 11058	mm/s	100	90	60	40	25	20	18	13	10	8	-	30%
Permeability coefficient normal to the plane		EN ISO 10318	l/m ² s	100	90	60	40	25	20	18	13	10	8	-	30%
Permittivity		EN ISO 10318	s ⁻¹	2.00	1.80	1.20	0.80	0.50	0.40	0.36	0.26	0.20	0.16		
Coefficient of permeability normal to the plane		EN ISO 10318	m/s	2.20	2.34	2.40	1.76	1.40	1.28	1.26	1.04	1.10	0.96		
Hydraulic gradient		EN ISO 10318		45	38	25	23	18	16	14	13	9	8		
Opening size		EN ISO 12956	µm	65	60	55	50	45	40	38	33	30	30	±	30%
Durability properties															
Weathering resistance		EN 12224		To be covered within 1 days from the day of installation											
Oxydation resistance		EN ISO 13438		Forecast minimum durability of 5 years for every application in natural grounds with 4<pH<9 and soil temperature <25°C											
				The values given are an average obtained in our laboratories and in official testing insitutes											
				The confidence level is 95%											
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