

NONWOVEN ENVIRONMENTAL GRADE

Protect your geomembrane materials from damage while staying compliant with your industry regulations. These nonwoven geotextiles are an industry favorite due to their cost-effective properties and consistent filtration.

Manufactured from high-quality polypropylene fibers, Layfield's nonwoven geotextiles achieve their unique properties through the interlocking fibers that are formed during the needle-punching process. Nonwovens are heat set and needle punched, which enhances their strength-to-weight ratio. Consequently, nonwoven needle-punched geotextiles not only provide excellent filtration, separation, and protection but also offer superior water flow properties for drainage and other applications.

April 2023

Non-Woven Environmental Grade – US Values

	ASTM	LP6EM	LP8EM	LP10EM	LP12E M	LP16E M	LP6ES	LP8ES	LP10ES	LP12ES	LP16ES
Weight (oz/yd ²)	D5261	6	8	10	12	16	6	8	10	12	16
Thickness(mils)	D5199	80	90	115	130	175	85	100	110	120	175
Grab Tensile (lbs)	D4632	170	230	270	320	425	160	225	270	330	425
Grab Elongation (%)	D4632	50	50	50	50	50	50	50	50	50	50
Trapezoid Tear (lbs)	D4533	70	95	105	125	155	65	90	100	125	150
CBR Puncture (lbs)	D6241	450	600	725	900	1200	450	600	725	900	1200
AOS (sieve)	D4751	80	100	100	100	100	70	80	100	100	100
Permittivity (sec-1)	D4491	1.5	1.4	1.2	0.9	0.7	1.63	1.26	.94	.90	.57
Water Flow (gpm/ft ²)	D4491	110	110	85	65	50	125	100	75	70	45
UV (500 hrs)	D4355	80%	80%	80%	80%	80%	70%	70%	70%	70%	70%
Roll Size (ft)		15x300	15x300	15x300	15x300	15x300	15x852	15x600	15x501	15x402	15x360
Roll weight ¹ (lbs)		200	311	371	424	554	500	600	550	570	540

Note1: Typical values. All other values are minimum average roll values (MARV).

Note2: Rolls are available in other lengths 600' or 900' etc. – check availability (EM)

Note3: Rolls are available in other lengths 150' or 300' etc. – check availability (ES)

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Non-Woven Environmental Grade – Metric Values

Material Properties	ASTM	LP6EM	LP8EM	LP10E M	LP12E M	LP16E M	LP6ES	LP8ES	LP10ES	LP12ES	LP16ES	
	Weight (g/m ²)	D5261	203	271	339	407	542	203	271	339	407	542
	Thickness (mm)	D5199	2.0	2.3	2.9	3.3	4.4	2.16	2.50	2.79	3.05	4.45
	Grab Tensile (N)	D4632	757	1024	1202	1424	1891	711	1000	1200	1470	1890
	Grab Elongation (%)	D4632	50	50	50	50	50	50	50	50	50	50
	Trapezoid Tear (N)	D4533	312	423	467	556	690	290	400	440	556	667
	CBR Puncture (N)	D6241	2003	2670	3226	4005	5340	2000	2670	3220	4000	5340
	Permittivity (sec ⁻¹)	D4491	1.5	1.4	1.2	0.90	0.70	1.63	1.26	.94	.90	.57
	Water Flow (l/min/m ²)	D4491	4481	4481	3463	2648	2037	5080	4074	3055	2544	1833
	AOS (mm)	D4751	0.18	0.15	0.15	0.15	0.15	.212	0.18	0.15	0.15	0.15
UV (500 hrs)	D4355	80%	80%	80%	80%	80%	70%	70%	70%	70%	70%	
Roll Size (m)		4.57x91	4.57x91	4.57x91	4.57x91	4.57x91	4.57x259.7	4.57x182.9	4.57x152.7	4.57x122.5	4.57x109.73	
Roll weight1 (KG)		91	141	168	192	251	272.2	249.5	258.5	244.9	244.9	

Note1: Typical Values. All other values are minimum average roll values (MARV).

Note2: Rolls may be available other rolls lengths like 45.7m or 91.4m lengths – check availability (ES)

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