



Needle-punched non-woven geotextiles are made from polypropylene fibres that are tangled together in a needle-punching process. The fibres may be made in continuous or short lengths and achieve their strength by interlocking. Needle-punched non-woven geotextiles have excellent water flow rates and are used for filtration of soil fines. Needle-punched non-woven geotextiles have been used in drainage applications including trench drains (also known as french drains), as a wrapping for perforated pipe, erosion protection, the separation of a roads sub base and base course and combined with three-dimensional structures to create prefabricated drains. They are also commonly used with geomembranes to provide a protective cushion. Needle-punched non-woven primary functions are filtration, separation, protection, and drainage.

Non-woven geotextiles are typically classified by their weight per square yard, for example a square yard of 6 oz. geotextile, weighs 6 ounces.

Material Properties - US Values

	Non-Woven Needle-Punched Geotextiles - US Values									
	ASTM	3.5 oz.	4 oz.	4.5 oz.	6 oz.	7 oz.	8 oz.	10 oz.	12 oz.	16 oz.
Grab Tensile (lbs)	D4632	90	100	120	160	180	205	250	300	380
Elongation (%)	D4632	50	50	50	50	50	50	50	50	50
Tear (lbs)	D4533	40	50	50	60	75	80	100	115	145
CBR Punc (lbs)	D6241	175	280	310	410	455	525	650	790	1025
AOS (sieve)	D4751	50	70	70	70	70	80	100	100	100
Permittivity (sec-1)	D4491	2.0	2.0	1.7	1.5	1.4	1.4	1.2	1.0	0.7
Water Flow (gpm/ft ²)	D4491	150	140	120	110	100	90	80	75	50
Weight ¹ (oz/yd ²) Nominal	D5261	3.5	4.0	4.5	6.0	7.0	8.0	10.0	12.0	16.0
Thickness ¹ (mil) Nominal	D5199	40	45	50	70	85	85	100	110	165
UV (500 hrs)	D4355	70%	70%	70%	70%	70%	70%	70%	70%	70%
Roll Size (ft)		15 x 360	15 x 360	15 x 360	15 x 300	15 x 300	15 x 300	15 x 300	15 x 300	15 x 150
Roll Weight ¹ (lbs)		160	172	190	202	220	250	308	400	250

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

For More Information, Please Visit Our Website www.contain.ca



Standard woven slit-film polypropylene geotextiles, usually called "wovens" are an economical range of geotextiles that combine high strength with low cost. These materials are made by weaving oriented polypropylene tapes in a simple weave pattern. The resulting fabric has a high strength to weight ratio. Slit-film wovens are primarily used in roadbuilding and embankment construction but can be used in most applications requiring the separation of one type of soil from another. Slit-film wovens help to speed construction with short term reinforcement of the base.

Material Properties - US Values

	Woven Geotextiles - US Values ¹		
	ASTM	200 LB	315 LB
Grab Tensile (lbs)	D4632	200	315
Elongation (%)	D4632	15	15
Trapezoid Tear (lbs)	D4533	75	120
CBR Puncture Strength (lbs)	D6241	700	1000
AOS (sieve size)	D4751	50	40
Permittivity (sec ⁻¹)	D4491	0.05	0.05
Weight (oz/yd ²) (Typical)	D5261	4.0	6.3
UV Resistance (500 hrs)	D4355	70	70
Roll Size (ft) (Typical)		15 x 360 17.5 x 309	15 x 300 17.5 x 258
Roll Weight (lbs) (Typical)		205	220

Note¹ - The physical properties presented in the table above are Minimum Average Roll Values or otherwise indicated.