



Materials Specification For: Geotextiles

1. Geotextile fabrics shall meet the following minimum material properties:

Table 1 - Non-Woven Geotextiles

Property	ASTM	Class 1 (Heavy Duty)	Class 2 (Normal Duty)	Class 3 (Light Duty)
Grab Tensile Strength (N)	D 4632	900	700	500
Elongation (%) at Grab Tensile Strength	D 4632	50 min	50 min	50 min
CBR Puncture (N)	D6241	2200	1800	1350
Trapezoid Tear (N)	D 4533	350	250	180
UV Stability (min % Retained Strength @ hr)	D 4355	50 % at 500 hr	50 % at 500 hr	50 % at 500 hr
Apparent Opening Size, (mm) max	D 4751	0.25	0.25	0.25
Permittivity (per sec) min	D 4491	0.50	0.50	0.50

Table 2- Woven Geotextiles

Property	ASTM	Class 1 (Heavy Duty)	Class 2 (Normal Duty)	Class 3 (Light Duty)
Grab Tensile Strength (N)	D 4632	1400	1100	800
Sewn Seam Strength (N)	D 4632	1260	990	720
Elongation (%) at Grab Tensile Strength	D 4632	15 max	15 max	15 max
CBR Puncture (N)	D6241	4000	3200	2800
Trapezoid Tear (N)	D 4533	500	400	300
UV Stability (min % Retained Strength @ hr)	D 4355	50 % at 500 hr	50 % at 500 hr	50 % at 500 hr
Apparent Opening Size,(mm) max	D 4751	0.43	0.43	0.43
Permittivity (per sec) min	D 4491	0.05	0.05	0.05

Note: Values are Minimum Average Roll Values (MARV) except as noted

2. Roll Dimensions

There are no standards for roll widths or lengths. Roll dimensions and the specified minimum overlap dimension must be considered when calculating required quantities.

3. Approvals:

3.1 Geotextiles must be approved by Manitoba Infrastructure and Transportation to be listed on MIT's Approved Products List (APL). Submissions for inclusion on the APL shall include a certificate or certificates with the following information:

- Product identification or name;
- Name of the product manufacturer, whether the same name as the supplier or not;

Manitoba



Infrastructure and Transportation

MATERIALS ENGINEERING BRANCH

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- Type or style of the product;
- Composition of the product (yarn, filaments, etc.);
- Confirmation that the product meets all of the specified material properties;
- Other information or details to fully describe the product.

3.2 In addition to information required by 3.1 of this specification, MIT may require that the supplier provide test results, from a testing facility acceptable to the MIT to confirm that the product meets the specified properties. This requirement will be made at MIT's discretion and may be implemented as part of the APL approval process, or that tests be performed on representative samples at any time during the procurement process or a construction project.

3.3 The supplier must advise MIT of any changes to the product as set out in 3.1 of this specification. Failure by the supplier to do so could result in de-listing the product from the APL or rejection of the product by MIT at delivery or during construction.

Approved:

Said Kass, P. Eng.
Director, Materials Engineering Branch