STANDARD CRITERIA

CLASS	TYPE (1)	APPLICATION DESCRIPTION	STANDARD INDEX NO.	PERMITTIVITY SEC^{-1}	AOS SIEVE #	MIN. GRAB TENSILE STRENGTH kN	MIN. SEWN STRENGTH kN/m	MIN. PUNCTURE kN	MIN. TRAPEZOIDAL TEAR kN	MIN. WIDE WIDTH TENSILE STRENGTH kN/m	UV RESISTANCE (Min. Allowed) %	UV RESISTANCE (Min. Allowed) Time (Hrs.)	COMMENTS
DRAINAGE (D)	D-1	Revetment (Special)		(See D-2)	(See D-2)	1.40	1.26	0.50	0.50		50	500	Woven Monofilament Geotextiles only (Elongation < 50%) Provide 6" thick aggregate bedding layer.
	D-2	Revetment (Standard) Articulating Block Gabions Rock, Rubble, Broken Concrete	281	**% SOIL PASSING No. 200 SIEVE** < 15% 0.7 15% to 50% 0.2 > 50% 0.1	**% SOIL PASSING No. 200 SIEVE** < 15% 40 15% to 50% 60 > 50% 70 *	Woven Monofilament 1.10 Other Geotextiles: Elongation < 50% 1.40 > 50% 0.90	Woven Monofilament 0.99 Other Geotextiles: Elongation < 50% 1.20 > 50% 0.81	Woven Monofilament 0.40 Other Geotextiles: Elongation < 50% 0.50 > 50% 0.35	Woven Monofilament 0.25 Other Geotextiles: Elongation < 50% 0.50 > 50% 0.35		50	500	Woven Geotextiles only. No Slit Film Geotextiles allowed. Provide 150 mm thick aggregate bedding layer for revetment (standard). The bedding layer may be omitted if a D-1 fabric is used with revetment (standard). * For cohesive soils with a plasticity index > 7, maximum average role value for AOS is number 50 sieve.
	D-3	Underdrain * * * French Drain Sheet Piling Filter Filter Fabric Jacket (Culvert) Concrete Pavement Subdrainage	286 285 280 287	**% SOIL PASSING No. 200 SIEVE** < 15% 0.5 15% to 50% 0.2 > 50% 0.1	**% SOIL PASSING No. 200 SIEVE** < 15% 40 15% to 50% 60 > 50% 70 *	Elongation < 50% 1.10 > 50% 0.70	Elongation < 50% 0.99 > 50% 0.63	Elongation < 50% 0.40 > 50% 0.25	Elongation < 50% 0.40 ** > 50% 0.25		50	500	No woven slit film fabrics allowed. * For cohesive soils with a plasticity index > 7, maximum average role value for AOS is number 50 sieve. ** Required Trapezoidal tear for woven monofilament is 250. *** See Index No. 286 for the permittivity and AOS values of the internal filter fabric of type V underdrain.
	D-4	Slope Pavement (Sand-Cement) Ditch Pavement (Sand-Cement)	281	0.5	40	0.80	0.72	0.22	0.155		50	500	Non-woven, needle-punch only. Elongation ≥ 50%
	D-5	Mechanical Stabilized Retaining Wall Cast-In-Place Retaining Wall		0.5	40	0.40	0.36	0.22	0.175		50	500	
	D-6	Slope Pavement (Concrete) Ditch Pavement (Concrete)	281	0.5	40	0.80	0.72	0.22	0.155		50	500	Non-woven, needle-punch only. Elongation ≥ 50%
EROSION (E)	E-1	Staked Silt Fence	102	0.05	NA	0.40	0.36	NA	0.155		80	500	Minimum Filtration Efficiency of 75% and minimum flow rate of 0.3 gal.
	E-2	Wind Screen		0.05	NA	0.40	0.36	NA	NA		80	150	
	E-3	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 1)	NA	NA	NA	NA	NA	NA	NA	2 x 1	80	500	Use where design shear stress is ≤ 100 Pa
	E-4	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 2)	NA	NA	NA	NA	NA	NA	NA	4 x 2	80	500	Use where design shear stress is ≤ 170 Pa
	E-5	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 3)	NA	NA	NA	NA	NA	NA	NA	8 x 4	80	500	Use where design shear stress is ≤ 240 Pa
STABILIZATION (R)	R-1	Reinforcement		0.05	30	0.80	0.80	0.40	0.40		80	150	
	R-2	Separation		0.05	30	0.80	0.72	0.35	0.22		—	—	

(1) Type refers to FDOT class and application.

TABLE 1

Test	Unit	Test Method
Permittivity	sec^{-1}	ASTM-D-4491
AOS	mm	ASTM-D-4751
Elongation	%	ASTM-D-4632
Grab Tensile Strength	kN	ASTM-D-4632
Wide With Tensile Strength	kN/m	ASTM-D-4595
Maximum Design Velocity	M/sec	See Design Note 3
Sewn Strength	kN/m	ASTM-D-4884
Puncture	kN	ASTM-D-4833
Trapezoidal Tear	kN	ASTM-D-4533
Ultraviolet Resistance	% Retained In Strength	ASTM-D-4355
Filtration Efficiency	%	ASTM-D-5141
Flow Rate	L^3/min.	ASTM-D-5141

GENERAL NOTES

1. Specifications for geotextiles are in Section 985. Physical criteria for each application is provided by this standard, in conjunction with those sections.
2. All values except AOS are MINIMUM AVERAGE ROLL values in the weakest principal direction. Values for AOS are MAXIMUM AVERAGE ROLL values.
3. Test soil or fill material adjacent to the geotextile for gradation to select values for permittivity and AOS.
4. Unless specifically restricted in COMMENTS column, any type of material may be used.
5. Wide width tensile strength is expressed in units of measure of kN/m, in machine direction and cross direction, as MD x CD.

DESIGN NOTES

1. The Designer shall review this criteria and adjust the values as necessary to satisfy project requirements. These adjustments shall be called for in the plans or contained in the project special provisions.
2. UV Resistance: The value represents the percent of minimum textile strength retained (ASTM-D-4632) after weathering per ASTM-D-4355 for the test period (hours).
3. Shear stress limits for plastic erosion mats determined by 30 minutes sustained flow in unvegetated state as determined by tests performed by Utah State University, Texas Transportation Institute or an independent testing laboratory approved by the State Drainage Engineer.

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

GEOTEXTILE CRITERIA

	Names	Dates
Designed By	COMM	8/91
Drawn By	DLD	8/91
Checked By	KHH	8/91

Approved By
State Drainage Engineer

Revision	Sheet No.	Index No.
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