STANDARD CRITERIA

CLASS	TYPE (1)	APPLICATION DESCRIPTION	STANDARD INDEX NO.	PERMITTIVITY SEC^{-1}	A. O. S. SIEVE #	GRAB TENSILE STRENGTH N	SEWN STRENGTH N	PUNCTURE N	TRAPEZOIDAL TEAR N	WIDE WIDTH TENSILE STRENGTH KN/M	U V RESISTANCE (Min. Allowed) %	U V RESISTANCE (Min. Allowed) Time (Hrs.)	COMMENTS
DRAINAGE (D)	D-1	Revetment (Special)		(See D-2)	(See D-2)	1400	1260	500	500		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 1100 Other Geotextiles: Elongation < 50% 1400 > 50% 900	Woven Monofilament 990 Other Geotextiles: Elongation < 50% 1200 > 50% 810	Woven Monofilament 400 Other Geotextiles: Elongation < 50% 500 > 50% 350	Woven Monofilament 250 Other Geotextiles: Elongation < 50% 500 > 50% 350		50	500	Woven Geotextiles only. No Silt 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. 2000 SIEVE < 15% 0.5 15% to 50% 0.2 > 50% 0.1	% SOIL PASSING No. 2000 SIEVE < 15% 40 15% to 50% 60 > 50% 70 *	Elongation < 50% 1100 > 50% 700	Elongation < 50% 990 > 50% 630	Elongation < 50% 400 > 50% 250	Elongation < 50% 400 ** > 50% 250		50	500	No woven silt 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	800	720	220	155		50	500	Nonwoven only. Min. Thickness 90 Mils Elongation ≥ 50%
	D-5	Mechanical Stabilized Retaining Wall Cast-In-Place Retaining Wall		0.5	40	400	360	220	175		50	500	
	D-6	Slope Pavement (Concrete) Ditch Pavement (Concrete)	281	0.5	40	800	720	220	155		50	500	Nonwoven only. Min. Thickness 120 Mils Elongation ≥ 50%
EROSION (E)	E-1	Staked Silt Fence	102	0.5	NA	400	360	NA	155		80	500	Minimum Filtration Efficiency of 75% and minimum flow rate of 0.3 gal.
	E-2	Wind Screen		0.5	NA	400	360	NA	NA		80	150	
	E-3	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 1)	NA	NA	NA	NA	NA	NA	NA	15 x 11	80	2,000	Maximum Permissible design velocity 3.0 M/Sec
	E-4	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 2)	NA	NA	NA	NA	NA	NA	NA	29 x 21	80	2,000	Maximum Permissible design velocity 4.3 M/Sec
	E-5	Plastic Erosion Mat (Turf Reinforcement Mat) (Type 3)	NA	NA	NA	NA	NA	NA	NA	44 x 32	80	2,000	Maximum Permissible design velocity 5.5 M/Sec
STABILIZATION (R)	R-1	Reinforcement		0.05	30	880	800	400	400		80	150	
	R-2	Separation		0.05	30	800	720	355	220		—	—	

(1) Type refers to FDOT class and application.

TABLE I

Test	Unit	Test Method
Permittivity	sec^{-1}	ASTM-D-4491
AOS	mm	ASTM-D-4751
Elongation	%	ASTM-D-4632
Grab Tensile Strength	N	ASTM-D-4632
Wide Width Tensile Strength	KN/M	ASTM-D-4595
Maximum Design Velocity	M/sec	See Design Note 3
Sewn Strength	N	ASTM-D-4884
Puncture	N	ASTM-D-4833
Trapezoidal Tear	N	ASTM-D-4533
Ultra Violet 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.

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. U V 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. Maximum design velocity for plastic erosion mats shall be 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
ROAD DESIGN

GEOTEXTILE CRITERIA

	Names	Dates	Approved By: J. A. Mohammed
Designed By	COMM	8/01	State Drainage Engineer
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