AASHTO's National Transportation Product Evaluation Program

AASHTO NTPEP
Rolled Erosion Control Product (RECP)
Test Report

Manufacturer:	East Coast Erosion Blankets	Plant Name:	East Coast Erosion Blankets
Corporate Address:	443 Bricker Road	Plant Address:	443 Bricker Road
City/State/Zip:	Bernville, PA 19506	City/State/Zip:	Bernville, PA 19506
Corporate Contact:	Diane Hitt	Plant Contact:	Diane Hitt
Phone:	610-488-8496	Phone:	610-488-8496
Fax:	610-488-8494	Fax:	610-488-8494
E-mail:	diane@erosionblankets.com	E-mail:	diane@erosionblankets.com

NTPEP / Log Number: RECP (09-10) - 13

Product Identification: ECSC-3

Description: Tripple-netted synthetic permanent turf reinforcement mat

Netting: Synthetic top, center and bottom nets

Matrix/Fill: 70% Straw / 30% Coconut

Stitching: 100% UV stabilized synthetic @ 1.5 in. transverse stitch spacing

Test Results

Test Method - Description	Parameters	Test Result
ASTM D 6566 - Mass per Unit Area	Index Test	15.97 oz/sq.yd.
ASTM D 6818 – Ultimate Tensile Strength / Strain - MD	Index Test	54.3 lb/in @ % 20.7
- TD		63.9 lb/in @ % 20.8
ASTM D 6525 – Thickness	Index Test	392 mils
ASTM D 6567 - Ground Cover / Light Penetration	Index Test	92.6 % / % 7.4
ASTM D 792 – Specific Gravity - Net Only	Index Test	0.919 g/cm3
ASTM D 7101 - Determination of Unvegetated RECP Ability to Protect Soil From Rain Splash and Associated Runoff Under Bench-Scale Conditions	50 mm (2 in.) / hr for 30 min.	Soil Loss Ratio* = 18.16
	100 mm (4 in.) / hr for 30 min.	Soil Loss Ratio* = 17.83
	150 mm (6 in.) / hr for 30 min.	Soil Loss Ratio* = 17.50
ASTM D 7207 - Determination of Unvegetated RECP Ability to Protect Soil from Hydraulically-Induced Shear Stresses Under Bench-Scale Conditions	Shear: 2.48 psf for 30 min.	Soil Loss = 320.0 g
	Shear: 2.85 psf for 30 min.	Soil Loss = 783.3 g
	Shear: 3.24 psf for 30 min.	Soil Loss = 1195.0 g
	Soil loss curve intercept =	2.63 psf @ ½-in soil loss
ASTM D 7322 - Determination of Temporary Degradable RECP Performance in Encouraging Seed Germination and Plant Growth	Top soil; Fescue (Kentucky 31); 21 day incubation; 27±2° & approximately 45±5% RH	% Improvement = 497% (increased biomass)

* Soil Loss Ratio = Soil Loss Bare Soil / Soil Loss with RECP = 1 / C-Factor (Note: soil loss is based on regression analysis)

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ROLLED EROSION CONTROL PRODUCT TEST RESULTS
Client: NTPEP

Material: **Material: Rolled Erosion Control Product (RECP)**
Manufacturer: East Coast Erosion Blankets
Sample ID: ECSC-3
TRI Log #: E2280-34-10

PARAMETER	TEST REPLICATE NUMBER										MEAN	STD. DEV.
Tensile Properties (ASTM D 6818)	1	2	3	4	5	6	7	8	9	10		
MD - Maximum Load (lb/in)	68.8	41.0	48.4	59.8	53.6						54.3	10.6
TD - Maximum Load (lb/in)	63.3	63.7	64.3	62.6	65.7						63.9	1.2
MD - Elongation @ Max. Load (%)	21.3	18.0	22.0	20.0	22.0						20.7	1.7
TD - Elongation @ Max. Load (%)	19.3	20.0	22.0	21.3	21.3						20.8	1.1
Thickness (ASTM D 6525)												
Thickness (mils)	424	359	394	315	397	388	370	402	421	453	392	38
Density/Specific Gravity (ASTM D 792, Method A) - Net Only												
Density (g/cm3)	0.919	0.919	0.919								0.919	0.000
Light Penetration (ASTM D 6567)												
Baseline Reading	341	341	339	336	342						340	2
Reading with sample	15	20	33	39	19						25	10
% Light Penetration	4.4	5.9	9.7	11.6	5.6						7.4	3.1
% Ground Cover	95.6	94.1	90.3	88.4	94.4						92.6	3.1
Mass/Unit Area (ASTM D 6566)												
Mass of 10 x 10 in specimen (g)	30.47	35.03	38.4	40.34	29.7	31.5	35.29	34.61	44.74	29.53		
Mass/unit area (oz/sq.yd)	13.92	16.00	17.54	18.42	13.57	14.39	16.12	15.81	20.43	13.49	15.97	2.17
Mass/unit area (g/sq. meter)	472	543	595	625	460	488	547	536	693	458	542	74

MD Machine Direction
TD Machine Direction

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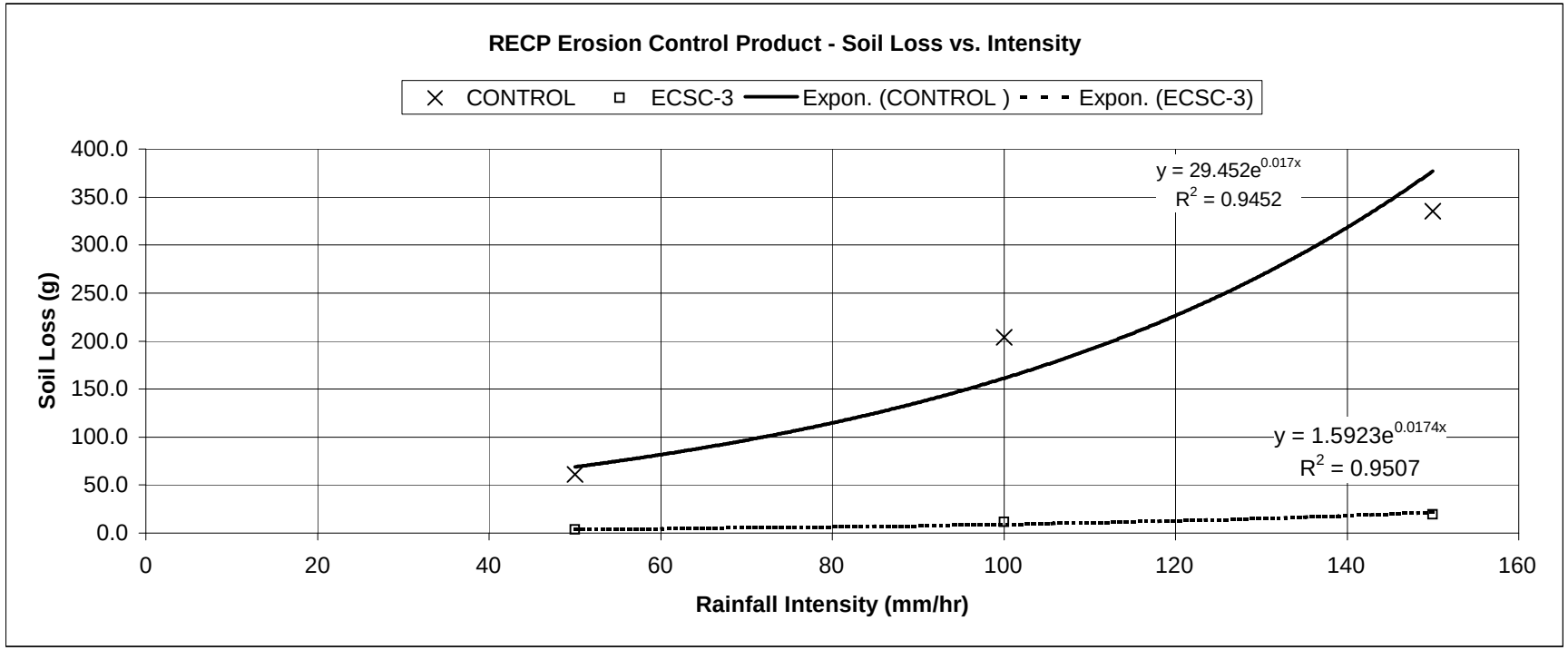
Erosion Control Product Testing Summary

ASTM D 7101:
STANDARD INDEX TEST METHOD FOR the DETERMINATION of UNVEGETATED ROLLED EROSION CONTROL PRODUCT (RECP)
ABILITY TO PROTECT SOIL FROM RAIN SPLASH AND ASSOCIATED RUNOFF UNDER BENCH-SCALE CONDITIONS

3:1 Slope	Raw Soil Loss Data (g)			Soil Loss Ratio* Based on Raw Data			Regression Curve Fitting		Calculated Soil Loss Based on Regression (g)			Soil Loss Ratio* Based on Regression		
Surface Condition	Rain Intensity, mm/hr			Rain Intensity, mm/hr					Rain Intensity, mm/hr			Rain Intensity, mm/hr		
	50	100	150	50	100	150			50	100	150	50	100	150
CONTROL	61.2	204.2	335.2				29.452	0.017	68.9	161.2	377.2			
ECSC-3	3.4	11.4	19.2	18.09	17.97	17.43	1.5923	0.0174	3.8	9.0	21.6	18.16	17.83	17.50
C-Factor				0.06	0.06	0.06						0.055	0.056	0.057

* soil loss ratio = soil loss of unprotected surface (I.e. control) divided by soil loss with protected surface = 1 / C-Factor



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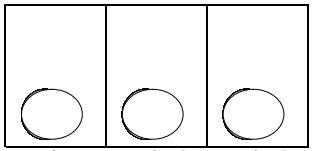
RECP Slope Simulation Test

Client: NTPEP
Mfr: East Coast Erosion Blankets
TRI Log # E2280-34-10
Sample ID: ECSC-3
Slope = 3 TO 1

2 in/hr rainfall
Buckets weighed and volume measured every 5 min
Test duration: 30 min



Bucket 1 Mass	Bucket 2 Mass	Bucket 3 Mass
96.98	92.82	112.8

Mass/Area (osy)
15.97

Soil only

Time(min)		5		10		15		20		25		30		Control	
		Runoff		Runoff		Runoff		Runoff		Runoff		Runoff		Total Runoff	Average Total Runoff Volume
Bucket No.		Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	(ml)
1		709	9.63	676	8.65	701	8.03	930	9.26	767	6.37	668	6.09	4451	
2		822	17.33	762	10.06	806	11.66	946	8.64	739	6.84	679	7.23	4754	4567
3		737	19.63	714	12.32	720	12.58	996	13.10	688	8.66	640	7.60	4495	
	Average		15.5		10.3		10.8		10.3		7.3		7.0		

Time(min)		5		10		15		20		25		30		RECP Protected	
		Mass	Average	Mass	Average	Mass	Average	Mass	Average	Mass	Average	Total	Average	Total Runoff	Average Total Runoff Volume
	Bucket No.	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Volume (ml)	(ml)
Cumulative	1	9.63		18.28		26.31		35.57		41.94		48.03		4117	
soil loss	2	17.33	15.5	27.39	25.9	39.05	36.6	47.69	47.0	54.53	54.3	61.76	61.2	4224	4127
	3	19.63		31.95		44.53		57.63		66.29		73.89		4041	

RECP over Soil

Avg Mass/Area (osy): 15.97

Time(min)		5		10		15		20		25		30		Individual Specimen	Individual Specimen	Individual Specimen
		Runoff		Runoff		Runoff		Runoff		Runoff		Runoff				
Bucket No.		Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Volume (ml)	Mass(g)	Mass (g)	Area (in2)	Mass/Area (osy)
1		432	0.85	617	0.85	704	0.60	776	1.14	801	0.28	787	0.75	96.98	360	12.30
2		529	1.47	700	0.95	713	0.69	756	0.74	782	0.74	744	0.47	92.82	360	11.78
3		542	0.88	617	0.82	682	0.28	745	0.30	749	0.46	706	0.59	112.8	360	14.31
	Average		1.1		0.9		0.5		0.7		0.5		0.6			

Time(min)		5		10		15		20		25		30		30 Normalized	
		Mass	Average	Mass	Average	Mass	Average	Mass	Average	Mass	Average	Total	Average	Total	Average
	Bucket No.	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)	Soil Loss(g)
Cumulative	1	0.85		1.70		2.31		3.45		3.72		4.47		3.45	
soil loss	2	1.47	1.1	2.42	1.9	3.11	2.5	3.85	3.2	4.59	3.7	5.05	4.3	3.73	3.39
	3	0.88		1.70		1.98		2.28		2.74		3.33		2.98	

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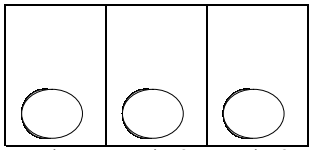
RECP Slope Simulation Test

Client: NTPEP
Mfr: East Coast Erosion Blankets
TRI Log # E2280-34-10
Sample ID: ECSC-3
Slope = 3 TO 1

4 in/hr rainfall
Buckets weighed and volume measured every 5 min
Test duration: 30 min



Bucket 1 Mass	Bucket 2 Mass	Bucket 3 Mass
97.82	94.92	129.96

Mass/Area (osy)
15.97

Soil only

Time(min)	5		10		15		20		25		30		Control
Bucket No.	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Total Runoff Volume (ml)	Average Total Runoff Volume (ml)
1	1507	40.33	1624	34.48	1680	30.49	1645	28.75	1630	24.63	1709	33.11	9795	
2	2081	54.07	2210	35.59	2358	40.70	2290	31.90	2281	36.14	2350	38.38	13570	11231
3	1581	40.59	1710	40.46	1781	34.40	1752	36.01	1720	29.52	1783	3.09	10327	
Average		45.0		36.8		35.2		32.2		30.1		24.9		

Time(min)	5		10		15		20		25		30		RECP Protected
Bucket No.	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Total Soil Loss(g)	Average Soil Loss(g)	Total Runoff Volume (ml)	Average Total Runoff Volume (ml)
Cumulative soil loss 1	40.33		74.81		105.30		134.05		158.68		191.79		8316	
2	54.07	45.0	89.66	81.8	130.36	117.0	162.26	149.3	198.40	179.4	236.78	204.2	9230	8788
3	40.59		81.05		115.45		151.46		180.98		184.07		8817	

RECP over Soil

Avg Mass/Area (osy): 15.97

Time(min)	5		10		15		20		25		30		Individual Specimen Mass (g)	Individual Specimen Area (in2)	Individual Specimen Mass/Area (osy)
Bucket No.	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)			
1	1777	4.96	1255	1.08	1283	1.31	1254	0.68	1375	0.55	1372	0.62	97.82	360	12.41
2	1606	4.17	1507	3.48	1563	1.89	1402	2.07	1621	2.36	1531	1.83	94.92	360	12.04
3	1736	4.42	1390	4.63	1405	1.69	1349	1.14	1468	1.82	1469	0.85	129.96	360	16.49
Average		4.5		3.1		1.6		1.3		1.6		1.1			

Time(min)	5		10		15		20		25		30		30 Normalized	
Bucket No.	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Total Soil Loss(g)	Average Soil Loss(g)	Total Soil Loss(g)	Average Soil Loss(g)
Cumulative soil loss 1	4.96		6.04		7.35		8.03		8.58		9.20		7.15	
2	4.17	4.5	7.65	7.6	9.54	9.2	11.61	10.5	13.97	12.1	15.80	13.2	11.92	11.36
3	4.42		9.05		10.74		11.88		13.70		14.55		15.02	

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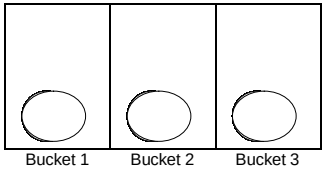
RECP Slope Simulation Test

Client: NTPEP
Mfr: East Coast Erosion Blankets
TRI Log # E2280-34-10
Sample ID: ECSC-3
Slope = 3 TO 1

6 in/hr rainfall
Buckets weighed and volume measured every 5 min
Test duration: 30 min



Bucket 1 Mass	Bucket 2 Mass	Bucket 3 Mass
84.27	93.52	115.3

Mass/Area (osy)
15.97

Soil only

Time(min)	5		10		15		20		25		30		Control	
Bucket No.	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Total Runoff Volume (ml)	Average Total Runoff Volume (ml)
1	2636	97.99	2577	56.84	2562	32.16	2417	47.91	2448	52.06	2483	46.3	15123	
2	2826	98.84	2771	73.16	2627	29.75	2298	42.84	2399	52.17	2465	47.98	15386	15144
3	2503	79.18	2580	66.34	2559	55.97	2282	47.41	2443	29.29	2556	49.29	14923	
Average		92.0		65.4		39.3		46.1		44.5		47.9		

Time(min)	5		10		15		20		25		30		RECP Protected	
Bucket No	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Total Soil Loss(g)	Average Soil Loss(g)	Total Runoff Volume (ml)	Average Total Runoff Volume (ml)
Cumulative soil loss 1	97.99		154.83		186.99		234.9		286.96		333.26		13838	
2	98.84	92.0	172	157.5	201.75	196.7	244.59	242.8	296.76	287.3	344.74	335.2	12303	12999
3	79.18		145.52		201.49		248.9		278.19		327.48		12856	

RECP over Soil

Avg Mass/Area (osy): 15.97

Time(min)	5		10		15		20		25		30		Individual Specimen Mass (g)	Individual Specimen Area (in2)	Individual Specimen Mass/Area (osy)
Bucket No.	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)	Runoff Volume (ml)	Mass(g)			
1	1911	7.09	2166	4.48	2514	2.92	2228	2.06	2464	2.43	2555	2.07	84.27	360	10.69
2	1821	13.50	1974	6.42	2220	4.29	2005	3.73	2162	3.60	2121	1.88	93.52	360	11.87
3	1838	6.79	2060	5.55	2380	3.40	2115	2.04	2238	1.44	2225	1.26	115.3	360	14.63
Average		9.1		5.5		3.5		2.6		2.5		1.7			

Time(min)	5		10		15		20		25		30		30 Normalized	
Bucket No	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Mass Soil Loss(g)	Average Soil Loss(g)	Total Soil Loss(g)	Average Soil Loss(g)	Total Soil Loss(g)	Average Soil Loss(g)
Cumulative soil loss 1	7.09		11.57		14.49		16.55		18.98		21.05		14.09	
2	13.50	9.1	19.92	14.6	24.21	18.1	27.94	20.8	31.54	23.2	33.42	25.0	24.83	19.23
3	6.79		12.34		15.74		17.78		19.22		20.48		18.76	

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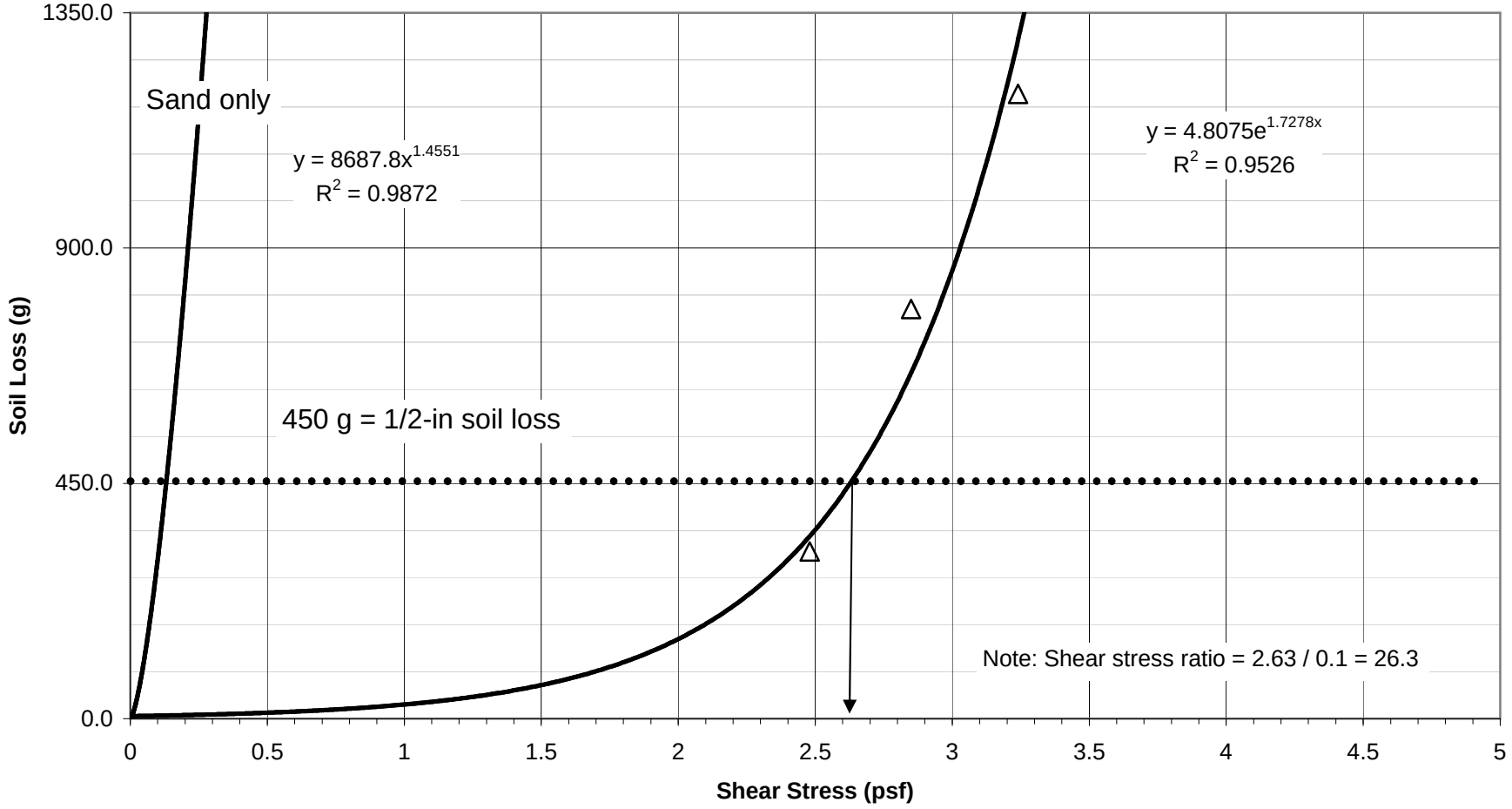
Shear Stress vs Soil Loss

ECSC-3

ASTM D 7207:
STANDARD INDEX TEST METHOD FOR the DETERMINATION of UNVEGETATED ROLLED EROSION CONTROL PRODUCT (RECP) ABILITY TO PROTECT SOIL FROM HYDRAULICALLY-INDUCED SHEAR STRESSES UNDER BENCH-SCALE CONDITIONS



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RECP Channel Simulation Test

CLIENT: East Coast Erosion Blankets
TRI Log # E2280-34-10
Sample ID: ECSC-3

RECP over soil

Test duration: 30 min
RPM: 25
Shear Stress (psf): 2.48

RADIUS = 11
SQ FT = 0.4295

Bucket No.	Mass(g) prior to test	Mass(g) post test	Soil loss(g)	Average Soil loss(g)
1	3935	3590	345	
2	3940	3615	325	320.0
3	3950	3660	290	

RECP over soil

Test duration: 30 min
RPM: 27.5
Shear Stress (psf): 2.85

Bucket No.	Mass(g) prior to test	Mass(g) post test	Soil loss(g)	Average Soil loss(g)
1	3950	3175	775	
2	3925	3515	410	783.3
3	3895	2730	1165	

RECP over soil

Test duration: 30 min
RPM: 30
Shear Stress (psf): 3.24

Bucket No.	Mass(g) prior to test	Mass(g) post test	Soil loss(g)	Average Soil loss(g)
1	3925	2720	1205	
2	3910	2735	1175	1195.0
3	3930	2725	1205	

Comments: Buckets weighed under water

soil only

rpm	soil loss(g)	shear stress(psf)
16	728	0.188
20	1292	0.256
27	2387	0.42

soil only

	slope	7063.41
	intercept	-565.26
	R squared	1.00
Shear =	0	-565.26
Shear =	0.50	2966.44
450	0.14	= 1/2-inch intercept

recp

rpm	soil loss(g)	shear stress(psf)
25	320.0	2.48
27.5	783.3	2.85
30	1195.0	3.24
	5.63	4.81
	452.28	2.63

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Germination / Vegetation Growth Summary

ASTM D 7322:

STANDARD INDEX TEST METHOD FOR the DETERMINATION of TEMPORARY DEGRADABLE RECP PERFORMANCE IN ENCOURAGING SEED GERMINATION AND PLANT GROWTH

Property	Units	Day	Control	ECSC-3
Seeds Germinated per Area	# per 4 sq.in.	0	0.00	0.00
		7	0.89	8.89
		14	5.33	15.78
		21	12.11	17.44
Average Plant Height	inch	0	0.00	0.00
		7	0.66	1.16
		14	0.99	3.29
		21	1.74	4.29
Plant Mass per Area	mg per 4 sq.in.	21	13.57	67.40

Property	Units	Day	Control	ECSC-3
Seeds Germinated per Area	% Improvement vs. Control	7	-	-
		14	1	296%
		21	1	144%
Average Plant Height	% Improvement vs. Control	7	-	-
		14	1	334%
		21	1	247%
Plant Mass per Area	% Improvement vs. Control	21	1	497%

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RECP Germination

Date 12/07/09
Client East Coast Erosion Blankets
TRI Log # E2280-34-10
Sample ID ECSC-3

Top Sample
175 seeds
4" layer top soil

Bottom

RECP PROTECTED

Day 7									Day 14									Day 21								
Bucket 1			Bucket 2			Bucket 3			Bucket 1			Bucket 2			Bucket 3			Bucket 1			Bucket 2			Bucket 3		
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Number of Germinated Seeds									Number of Germinated Seeds									Number of Germinated Seeds								
7	7	6	10	14	6	12	12	6	15	12	11	16	18	14	22	21	13	16	15	12	20	20	16	24	21	13
Average per square									Average per square									Average per square								
8.9									15.8									17.4								
Height of Germinated Plants									Height of Germinated Plants									Height of Germinated Plants								
1.6	1.1	1.2	1.3	1.6	0.2	1.8	0.9	1.8	4.3	4	4.7	3.6	1.4	1.5	2.7	3.4	4	4.8	1.9	4.9	1.1	5.9	4	3.9	5	4.1
1.6	1.1	1.5	0.7	1.7	0.8	1.8	1.4	1.4	2.1	5.5	0.6	1.6	5.4	0.6	3.7	3.8	3.69	3.9	2.8	3.2	4.5	3.3	7.5	4.2	4.1	3.2
0.6	1.5	2	1.7	0.5	0.7	1	0.8	1	2.5	1.3	2.3	3.8	2.8	4.5	5.4	3	2.9	6.3	2.2	5.6	8	3.8	4.3	5.5	3.2	2.7
0.7	1.9	0.4	0.6	1.7	0.7	0.8	1.9	0.5	2.3	3.3	4.2	3.6	3.2	4.2	3.2	3.1	4.4	0.8	5.2	5.3	5.3	4.2	3.7	5.6	3.7	5.7
1.5	1.3	1.9	0.5	1.8	0.4	3.7	2	1	2.3	6.2	3.2	5.3	5	3	3.8	4.1	3.1	3	5.7	4.9	2.4	5.9	3.5	8.6	4.7	4.8
1.2	0.5	1.5	0.9	0.9	1	1.2	1.8	1.4	4.1	2.4	6	4.8	4.8	3.4	0.7	4.2	2.2	5.3	3.7	7.1	5.7	5.3	5.9	5.7	5.4	5.3
0.5	0.2		0.8	1.2		1.6	1		4.6	2.3	0.5	0.7	4.5	4.5	2.1	3.2	2.3	4	6.3	1.7	1.6	8	3.6	2.9	2.3	3.9
			1.2	1.2		0.4	1.6		3	4.1	2.2	3.3	5.6	4.1	1.8	4.1	1.7	5.3	4.9	2.52	4.4	7.4	8.33	3.4	1.9	3.1
			0.4	1.3		1.8	1.1		3.8	3.4	4.9	3.4	2	2.1	6	2.9	3.2	1.5	4.2	3.7	1.5	9.3	5.1	3	6.2	3.5
			1	2.2		1.6	1.7		3.5	2.8	4.4	3	4.2	2.9	2	3.5	1.4	4.7	3.9	4.7	5.1	3.9	5.5	4.2	6	5.2
				0.9		0.9	0.4		3.3	2.9	4.5	2.2	2.6	4.8	2.6	1.2	2.1	3.8	4	6.6	4.3	2.5	4.1	3.3	2.9	3.6
				1.3		1	1.5		0.7	5		4.4	4.1	3.2	3.6	3.9	3.4	3.5	4.4	5	4.8	1.4	5.3	1.4	3.5	4.5
				0.7					4			2.1	4.2	2.6	1.9	2.9	4.7	4.7	5.2		3.6	3.7	1.4	3.8	3.7	3.9
				1.8					1.4			1	5.8	2.9	4.1	2.2		4.4	3.8		5.7	5.6	4.3	4.4	3.6	
									4			2.4	3.1		2.1	0.4		2.8	4.2		3.9	3.3	5.3	4.1	4.8	
												3.6	4.1		4.8	3		4.8			1.2	6.8	1.6	4	4.4	
													5.3		0.5	2					2.9	4.3		3	6.3	
													5.2		1.9	4.1					3.2	4.4		4.8	5.2	
															3.9	4.6					3.8	4.5		4.6	4.7	
															3.2	3.8					4.2	6.1		1.1	4	
															3.5	3.6								2.6	5.5	
															3.9									6.4		
																								2.9		
																								1.7		
Average height of plants in each 2" square									Average height of plants in each 2" square									Average height of plants in each 2" square								
1.1	1.1	1.4	0.9	1.3	0.6	1.5	1.3	1.2	3.1	3.6	3.4	3.1	4.1	3.2	3.1	3.2	3.0	4.0	4.2	4.6	3.9	5.0	4.6	4.0	4.3	4.1
Average height of plants in each bucket									Average height of plants in each bucket									Average height of plants in each bucket								
1.2			1.0			1.3			3.4			3.4			3.1			4.2			4.5			4.1		
Average height of plants of Sample									Average height of plants of Sample									Average height of plants of Sample								
			1.2									3.3									4.3					

Mass(mg) of plants in each 2" square								
59.7	53.7	54.1	65.2	95	64.9	84.6	81.7	47.7
Average per square								
67.4								
Total mass(mg) of plants in each bucket								
167.5			225.1			214		
Total mass(mg) of plants for sample								
			606.6					

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Temp (27 +/- 2 C)																					
Humidity (45 +/- 5 % RH)																					
Light Intensity (900 +/- 100 ft-cd)																					
Water Added (ml)	500						400							400							

AASHTO's National Transportation Product Evaluation Program

RECP Germination

Date
Client East Coast Erosion Blankets
TRI Log # E2280-34-10
Sample ID Control

Top Thin layer of top soil
175 seeds
4" layer top soil

Bottom

Control

Day 7									Day 14									Day 21								
Bucket 1			Bucket 2			Bucket 3			Bucket 1			Bucket 2			Bucket 3			Bucket 1			Bucket 2			Bucket 3		
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Number of Germinated Seeds									Number of Germinated Seeds									Number of Germinated Seeds								
0	3	2	0	1	0	1	1	0	3	8	2	1	7	2	13	8	4	7	16	12	7	19	11	15	16	6
Average per square									Average per square									Average per square								
0.9									5.3									12.1								
Height of Germinated Plants									Height of Germinated Plants									Height of Germinated Plants								
	0.5	1.4		0.6		0.6	0.7		0.5	0.8	2.8	0.1	0.4	0.1	0.2	2.6	0.5	0.3	1.5	6.8	2	2	0.5	1.1	0.3	2.2
	0.5	0.6							0.4	3.4	4		0.5	0.1	2.3	0.2	0.2	2.6	2.2	2.1	1.1	0.1	0.9	3.5	0.2	2.3
	0.4								0.3	0.3			0.1		0.2	3.2	0.2	0.8	2.1	1	1.4	1	0.3	2.7	0.5	2.3
										0.2			0.1		0.2	0.1	1	2.6	4.2	0.7	0.8	2.5	0.5	1.4	1.8	0.8
										2.8			3.2		1.9	0.1		2.3	3.2	1.5	0.7	1.3	0.3	0.3	0.6	1.9
										4.4			0.1		0.1	0.2		3.2	5.2	0.3	0.3	1.8	0.5	2.3	1	0.2
										2.7			0.3		0.2	0.2		0.3	1.2	1.9	0.8	2.1	2.2	2.2	1.7	
										3.3					0.2	0.3			3.9	3.8		1.3	1.6	1.7	4.1	
															0.1				1.3	2.6		0.9	9.8	3.1	1.3	
															0.3				2.4	1.2		1.1	2.4	1.4	0.1	
															1.4				0.8	1.2		2.5	2.2	1.7	0.7	
															0.9				2.3	0.1		2.8		2.7	1.1	
															0.1				2.1			1.3		2	1	
																			2			2.2		1.6	4.8	
																			3.9			0.9		1.6	1.2	
																			0.3			1.6			2.2	
																						3.3				
																						1.4				
																						1.1				
Average height of plants in each 2" square									Average height of plants in each 2" square									Average height of plants in each 2" square								
	0.5	1.0		0.6		0.6	0.7		0.4	2.2	3.4	0.1	0.7	0.1	0.6	0.9	0.5	1.7	2.4	1.9	1.0	1.6	1.9	2.0	1.4	1.6
Average height of plants in each bucket									Average height of plants in each bucket									Average height of plants in each bucket								
0.7			0.6			0.7			2.0			0.3			0.7			2.0			1.5			1.7		
Average height of plants of Sample									Average height of plants of Sample									Average height of plants of Sample								
			0.7									1.0									1.7					

Mass(mg) of plants in each 2" square								
6.3	26.3	18	4.6	16.9	8.5	17.6	17.4	6.5
Average per square								
13.6								
Total mass(mg) of plants in each bucket								
50.6			30			41.5		
Total mass(mg) of plants for sample								
			122.1					

Day	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Temp (27 +/- 2 C)																					
Humidity (45 +/- 5 % RH)																					
Light Intensity (900 +/- 100 ft-cd)																					
Water Added (ml)	500						400							400							

AASHTO's National Transportation Product Evaluation Program

Germination / Vegetation Growth Summary

ECTC Test Method #4:

STANDARD INDEX TEST METHOD FOR the DETERMINATION of TEMPORARY DEGRADABLE RECP PERFORMANCE IN ENCOURAGING SEED GERMINATION AND PLANT GROWTH

Photographs

Bucket # 1 ECSC-3

Bucket # 1 Control

Bucket # 2 ECSC-3

Bucket # 2 Control

Bucket # 3 ECSC-3

Bucket # 3 Control