



## Western Excelsior Erosion Control Blanket Properties Temporary Erosion Control Blankets

Excelsior Matrix Blankets - Natural Color

Index Properties	Measurement Method	Blanket Style	Excel R-1		Excel R-1 Rapid Go (Rapid Degradable)		Excel R-1 All Natural (Biodegradable)		Excel S-2		Excel S-2 Rapid Go (Rapid Degradable)		Excel S-2 All Natural (Biodegradable)	
			Single Net Excelsior Blanket Eighteen Month or Less Longevity	English Units SI Units	Single Net Excelsior Blanket 45 - 90 Day Longevity	English Units SI Units	Single Net Excelsior Blanket Eighteen Month or Less Longevity	English Units SI Units	Double Net Excelsior Blanket Twenty-Four Month or Less Longevity	English Units SI Units	Double Net Excelsior Blanket 45 - 90 Day Longevity	English Units SI Units	Double Net Excelsior Blanket Twenty-Four Month or Less Longevity	English Units SI Units
Color	Typical	Any	Green Net, Tan Matrix		Green Net, Tan Matrix		Tan Net, Tan Matrix		Green Net, Tan Matrix		Green Net, Tan Matrix		Tan Net, Tan Matrix	
Top Netting	Typical	Any	Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave	
Bottom Netting	Typical	Any	none		none		none		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave	
Thread	Typical	Any	Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Cotton		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Cotton	
Roll Width	Typical	Narrow Wide	4.0 ft 8.0 ft	1.2 m 2.4 m	4.0 ft 8.0 ft	1.2 m 2.4 m	n/a ft 8.0 ft	n/a m 2.4 m	4.0 ft 8.0 ft	1.2 m 2.4 m	4.0 ft 8.0 ft	1.2 m 2.4 m	n/a ft 8.0 ft	n/a m 2.4 m
Roll Length	Typical	Narrow Wide	180 ft 90 ft	54.9 m 27.5 m	180.0 ft 90.0 ft	54.9 m 27.5 m	n/a ft 112.5 ft	n/a m 34.3 m	180 ft 90 ft	54.9 m 27.5 m	180 ft 90 ft	54.9 m 27.5 m	n/a ft 112.5 ft	n/a m 34.3 m
Target Unit Weight	Typical	Narrow Wide	65 lb/roll 65 lb/roll	35.3 kg/roll 35.3 kg/roll	65 lb/roll 65 lb/roll	35.3 kg/roll 35.3 kg/roll	n/a lb/roll 81 lb/roll	n/a kg/roll 44.1 kg/roll	65 lb/roll 65 lb/roll	35.3 kg/roll 35.3 kg/roll	65 lb/roll 65 lb/roll	35.3 kg/roll 35.3 kg/roll	n/a lb/roll 81 lb/roll	n/a kg/roll 44.1 kg/roll
Top Netting Opening Dimensions (nominal)	Typical (MD) Typical (TD)	Any	0.75 in 1.00 in	19.1 mm 25.4 mm	0.75 in 1.00 in	19.1 mm 25.4 mm	0.50 in 0.50 in	12.7 mm 12.7 mm	0.75 in 1.00 in	19.1 mm 25.4 mm	0.75 in 1.00 in	19.1 mm 25.4 mm	0.50 in 0.50 in	12.7 mm 12.7 mm
Bottom Netting Opening Dimensions (nominal)	Typical (MD) Typical (TD)	Any	n/a in n/a in	n/a mm n/a mm	n/a in n/a in	n/a mm n/a mm	n/a in n/a in	n/a mm n/a mm	0.75 in 1.00 in	19.1 mm 25.4 mm	0.75 in 1.00 in	19.1 mm 25.4 mm	0.5 in 0.50 in	12.7 mm 12.7 mm
Stitch Spacing	Typical	Any	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm
Coverage per Roll	Typical	Narrow Wide	80.0 yd <sup>2</sup> 80.0 yd <sup>2</sup>	66.9 m <sup>2</sup> 66.9 m <sup>2</sup>	80.0 yd <sup>2</sup> 80.0 yd <sup>2</sup>	66.9 m <sup>2</sup> 66.9 m <sup>2</sup>	n/a yd <sup>2</sup> 100.0 yd <sup>2</sup>	n/a m <sup>2</sup> 83.6 m <sup>2</sup>	80.0 yd <sup>2</sup> 80.0 yd <sup>2</sup>	66.9 m <sup>2</sup> 66.9 m <sup>2</sup>	80.0 yd <sup>2</sup> 80.0 yd <sup>2</sup>	66.9 m <sup>2</sup> 66.9 m <sup>2</sup>	n/a yd <sup>2</sup> 100.0 yd <sup>2</sup>	n/a m <sup>2</sup> 83.6 m <sup>2</sup>
Mass per unit area	D 6475	Any	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>
Thickness	D 6525	Any	472 mils	12.0 mm	472 mils	12.0 mm	472 mils	12.0 mm	472 mils	12.0 mm	472 mils	12.0 mm	472 mils	12.0 mm
Tensile Strength - MD	D 6818	Any	5.0 lb/in	0.9 kN/m	5.0 lb/in	0.9 kN/m	9.0 lb/in	1.6 kN/m	10.0 lb/in	1.8 kN/m	10.0 lb/in	1.8 kN/m	16.0 lb/in	2.8 kN/m
Tensile Elong. - MD	D 6818	Any	15.0 %	15.0 %	20.0 %	20.0 %	20.0 %	20.0 %	15.0 %	15.0 %	15.0 %	15.0 %	20.0 %	20.0 %
Tensile Strength - TD	D 6818	Any	4.0 lb/in	0.7 kN/m	4.0 lb/in	0.7 kN/m	6.3 lb/in	1.1 kN/m	7.5 lb/in	1.3 kN/m	7.5 lb/in	1.3 kN/m	11.0 lb/in	1.9 kN/m
Tensile Elong. - TD	D 6818	Any	15.0 %	15.0 %	25.0 %	25.0 %	20.0 %	20.0 %	11.0 %	11.0 %	11.0 %	11.0 %	20.0 %	20.0 %
Density / Sp. Gravity	D 729	Any	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
Light Penetration	D 6567	Any	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %	28.0 %
Swell	ECTC	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Water Absorption	ECTC	Any	275 %	275 %	275 %	275 %	275 %	275 %	275 %	275 %	275 %	275 %	275 %	275 %
Resiliency	D 6524	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Flexural Stiffness	D 1388	Any	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm
UV Resistance, 500 hrs	D 4355	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
<b>Performance Properties</b>														
Maximum Slope Angle (H:V)	N/A	Any	2:1	2:1	2:1	2:1	2:1	2:1	2:1	2:1	2:1	2:1	2:1	2:1
Typical "C Factor"	ASTM D6459*	Any	0.08	0.08	0.08	0.08	0.08	0.08	0.04	0.04	0.04	0.04	0.04	0.04
Maximum Permissible Unvegetated Shear Stress (psf)	ASTM D6460*	Any	1.6 (psf)	77 (PA)	1.6 (psf)	77 (PA)	1.6 (psf)	77 (PA)	2.0 (psf)	96 (PA)	2.0 (psf)	96 (PA)	2.3 (psf)	110 (PA)
Maximum Permissible Velocity Unvegetated (ft/s)	ASTM D6460*	Any	5.5 ft/s	1.7 m/s	5.5 ft/s	1.7 m/s	5.5 ft/s	1.7 m/s	7.0 ft/s	2.1 m/s	7.0 ft/s	2.1 m/s	7.0 ft/s	2.1 m/s
Manning's n	N/A	Any	0.030	0.030	0.030	0.030	0.035	0.035	0.030	0.030	0.030	0.030	0.030	0.030

\* Western Excelsior utilizes procedures outlined in these test methods for the determination of performance properties. Although testing follows these methods closely, some modifications were made to accommodate laboratory dimensions, achieve more erosive conditions or improve efficiency.



## Western Excelsior Erosion Control Blanket Properties

### Temporary Erosion Control Blankets

Straw Blankets

Index Properties	Measurement Method	Blanket Style	Excel SR-1		Excel SR-1 Rapid Go (Rapid Degradable)		Excel SR-1 All Natural (Biodegradable)		Excel SS-2		Excel SS-2 Rapid Go (Rapid Degradable)		Excel SS-2 All Natural (Biodegradable)	
			Single Net Straw Blanket Twelve Month or Less Longevity		Single Net Straw Blanket 45 - 90 Day Longevity		Single Net Straw Blanket Twelve Month or Less Longevity		Double Net Straw Blanket Twelve Month or Less Longevity		Double Net Straw Blanket 45 - 90 Day Longevity		Double Net Straw Blanket Twelve Month or Less Longevity	
			English Units	SI Units	English Units	SI Units	English Units	SI Units	English Units	SI Units	English Units	SI Units	English Units	SI Units
Color	Typical	Any	Green Net, Tan Matrix		Green Net, Tan Matrix		Tan Net, Tan Matrix		Green Net, Tan Matrix		Green Net, Tan Matrix		Tan Net, Tan Matrix	
Top Netting	Typical	Any	Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave	
Bottom Netting	Typical	Any	none		none		none		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave	
Thread	Typical	Any	Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Cotton		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Cotton	
Roll Width	Typical	Narrow Wide	7.5 ft 15.0 ft	2.3 m 4.6 m	7.5 ft 15.0 ft	2.3 m 4.6 m	n/a ft 8.0 ft	n/a m 2.4 m	7.5 ft 15.0 ft	2.3 m 4.6 m	7.5 ft 15.0 ft	2.3 m 4.6 m	n/a ft 8.0 ft	n/a m 2.4 m
Roll Length	Typical	Narrow Wide	120 ft 120 ft	36.6 m 36.6 m	120.0 ft 120.0 ft	36.6 m 36.6 m	n/a ft 112.5 ft	n/a m 34.3 m	120 ft 120 ft	36.6 m 36.6 m	120 ft 120 ft	36.6 m 36.6 m	n/a ft 112.5 ft	n/a m 34.3 m
Target Unit Weight	Typical	Narrow Wide	55 lb/roll 110 lb/roll	29.8 kg/roll 59.7 kg/roll	55 lb/roll 110 lb/roll	29.8 kg/roll 59.7 kg/roll	n/a lb/roll 55 lb/roll	n/a kg/roll 29.8 kg/roll	55 lb/roll 110 lb/roll	29.8 kg/roll 59.7 kg/roll	55 lb/roll 110 lb/roll	29.8 kg/roll 59.7 kg/roll	n/a lb/roll 55 lb/roll	n/a kg/roll 29.8 kg/roll
Top Netting Opening Dimensions (nominal)	Typical (MD) Typical (TD)	Any	0.50 in 0.54 in	12.7 mm 13.7 mm	0.50 in 0.50 in	12.7 mm 12.7 mm	0.50 in 0.50 in	12.7 mm 12.7 mm	0.50 in 0.54 in	12.7 mm 13.7 mm	0.50 in 0.54 in	12.7 mm 13.7 mm	0.50 in 0.50 in	12.7 mm 12.7 mm
Bottom Netting Opening Dimensions (nominal)	Typical (MD) Typical (TD)	Any	n/a in n/a in	n/a mm n/a mm	n/a in n/a in	n/a mm n/a mm	n/a in n/a in	n/a mm n/a mm	0.50 in 0.54 in	12.7 mm 13.7 mm	0.50 in 0.54 in	12.7 mm 13.7 mm	0.50 in 0.50 in	12.7 mm 12.7 mm
Stitch Spacing	Typical	Any	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm
Coverage per Roll	Typical	Narrow Wide	100.0 yd <sup>2</sup> 200.0 yd <sup>2</sup>	83.6 m <sup>2</sup> 167.2 m <sup>2</sup>	100.0 yd <sup>2</sup> 200.0 yd <sup>2</sup>	83.6 m <sup>2</sup> 167.2 m <sup>2</sup>	n/a yd <sup>2</sup> 100.0 yd <sup>2</sup>	n/a m <sup>2</sup> 83.6 m <sup>2</sup>	100.0 yd <sup>2</sup> 200.0 yd <sup>2</sup>	83.6 m <sup>2</sup> 167.2 m <sup>2</sup>	100.0 yd <sup>2</sup> 200.0 yd <sup>2</sup>	83.6 m <sup>2</sup> 167.2 m <sup>2</sup>	n/a yd <sup>2</sup> 100.0 yd <sup>2</sup>	n/a m <sup>2</sup> 83.6 m <sup>2</sup>
Mass per unit area	D 6475	Any	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>
Thickness	D 6525	Any	276 mils	7.0 mm	276 mils	7.0 mm	276 mils	7.0 mm	276 mils	7.0 mm	276 mils	7.0 mm	276 mils	7.0 mm
Tensile Strength - MD	D 6818	Any	4.8 lb/in	0.8 kN/m	5.3 lb/in	0.9 kN/m	9.0 lb/in	1.6 kN/m	10.0 lb/in	1.8 kN/m	10.7 lb/in	1.9 kN/m	16.0 lb/in	2.8 kN/m
Tensile Elong. - MD	D 6818	Any	15.0 %	15.0 %	15.0 %	15.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %
Tensile Strength - TD	D 6818	Any	4.8 lb/in	0.8 kN/m	4.7 lb/in	0.8 kN/m	6.3 lb/in	1.1 kN/m	6.2 lb/in	1.1 kN/m	6.2 lb/in	1.1 kN/m	11.0 lb/in	1.9 kN/m
Tensile Elong. - TD	D 6818	Any	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	20.0 %	26.0 %	26.0 %	26.0 %	26.0 %	20.0 %	20.0 %
Density / Sp. Gravity	D 729	Any	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
Light Penetration	D 6567	Any	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %	22.0 %
Swell	ECTC	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Water Absorption	ECTC	Any	450 %	450 %	450 %	450 %	450 %	450 %	450 %	450 %	450 %	450 %	450 %	450 %
Resiliency	D 6524	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Flexural Stiffness	D 1388	Any	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm
UV Resistance, 500 hrs	D 4355	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
<b>Performance Properties</b>														
Maximum Slope Angle (H:V)	N/A	Any	3:1	3:1	3:1	3:1	3:1	3:1	2:1	2:1	2:1	2:1	2:1	2:1
Typical "C Factor"	ASTM D6459*	Any	0.05	0.05	0.05	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04	0.04
Maximum Permissible Unvegetated Shear Stress (psf)	ASTM D6460*	Any	1.6 (psf)	77 (PA)	1.6 (psf)	77 (PA)	1.6 (psf)	77 (PA)	1.8 (psf)	86 (PA)	1.8 (psf)	86 (PA)	1.9 (psf)	91 (PA)
Maximum Permissible Velocity Unvegetated (ft/s)	ASTM D6460*	Any	5.0 ft/s	1.5 m/s	5.0 ft/s	1.5 m/s	5.0 ft/s	1.5 m/s	6.0 ft/s	1.8 m/s	6.0 ft/s	1.8 m/s	6.0 ft/s	1.8 m/s
Manning's n	N/A	Any	0.030	0.030	0.030	0.030	0.030	0.030	0.032	0.032	0.032	0.032	0.031	0.031

\* Western Excelsior utilizes procedures outlined in these test methods for the determination of performance properties. Although testing follows these methods closely, some modifications were made to accommodate laboratory dimensions, achieve more erosive conditions or improve efficiency.



## Western Excelsior Erosion Control Blanket Properties Extended Term and Long Term Blankets

Coconut/Straw, Heavy Duty Excelsior and Coconut Blankets

Index Properties	Measurement Method	Blanket Style	Excel CS-3		Excel CS-3 All Natural (Rapid Degradable)		Excel SD-3 (Biodegradable)		Excel CC-4		Excel CC-4 All Natural (Rapid Degradable)	
			Double Net Coconut/Straw Twenty-Four Month or Less Longevity		Double Net Coconut/Straw Twenty-Four Month or Less Longevity		Heavy Duty Double Net Excelsior Thirty Month or Less Longevity		Double Net Coconut Thirty-Six Month or Less Longevity		Double Net Coconut Thirty-Six Month or Less Longevity	
			English Units	SI Units	English Units	SI Units	English Units	SI Units	English Units	SI Units	English Units	SI Units
Color	Typical	Any	Black/Green Net, Tan Matrix		Tan Net, Tan Matrix		Black Net, Tan Matrix		Black Net, Tan Matrix		Tan Net, Tan Matrix	
Top Netting	Typical	Any	Synthetic, UV Stabilized		Biodegradable Jute/Scrim Leno Weave		Synthetic, UV Stabilized		Synthetic, UV Stabilized		Biodegradable Jute/Scrim Leno Weave	
Bottom Netting	Typical	Any	Synthetic, Photodegradable		Biodegradable Jute/Scrim Leno Weave		Synthetic, UV Stabilized		Synthetic, UV Stabilized		Biodegradable Jute/Scrim Leno Weave	
Thread	Typical	Any	Synthetic, Photodegradable		Biodegradable Cotton		Synthetic, Photodegradable		Synthetic, Photodegradable		Biodegradable Cotton	
Roll Width	Typical	Narrow Wide	7.5 ft 15.0 ft	2.3 m 4.6 m	n/a ft 8.0 ft	n/a m 2.4 m	4.0 ft 8.0 ft	1.2 m 2.4 m	7.5 ft 15.0 ft	2.3 m 4.6 m	n/a ft 8.0 ft	n/a m 2.4 m
Roll Length	Typical	Narrow Wide	120 ft 120 ft	36.6 m 36.6 m	n/a ft 112.5 ft	n/a m 34.3 m	100 ft 50 ft	30.5 m 15.3 m	120 ft 120 ft	36.6 m 36.6 m	n/a ft 112.5 ft	n/a m 34.3 m
Target Unit Weight	Typical	Narrow Wide	62 lb/roll 124 lb/roll	33.6 kg/roll 67.3 kg/roll	n/a lb/roll 62 lb/roll	n/a kg/roll 33.6 kg/roll	60 lb/roll 60 lb/roll	32.5 kg/roll 32.5 kg/roll	55 lb/roll 110 lb/roll	29.8 kg/roll 59.7 kg/roll	n/a lb/roll 55 lb/roll	n/a kg/roll 29.8 kg/roll
Top Netting Opening Dimensions (nominal)	Typical (MD) Typical (TD)	Any Any	0.75 in 0.75 in	19.1 mm 19.1 mm	0.50 in 0.50 in	12.7 mm 12.7 mm	0.75 in 0.75 in	19.1 mm 19.1 mm	0.75 in 0.75 in	19.1 mm 19.1 mm	0.50 in 0.50 in	12.7 mm 12.7 mm
Bottom Netting Opening Dimensions (nominal)	Typical (MD) Typical (TD)	Any Any	0.54 in 0.50 in	13.7 mm 12.7 mm	0.50 in 0.50 in	12.7 mm 12.7 mm	0.75 in 0.75 in	19.1 mm 19.1 mm	0.75 in 0.75 in	19.1 mm 19.1 mm	0.50 in 0.50 in	12.7 mm 12.7 mm
Stitch Spacing	Typical	Any	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm
Coverage per Roll	Typical	Narrow Wide	100.0 yd <sup>2</sup> 200.0 yd <sup>2</sup>	83.6 m <sup>2</sup> 167.2 m <sup>2</sup>	n/a yd <sup>2</sup> 100.0 yd <sup>2</sup>	n/a m <sup>2</sup> 83.6 m <sup>2</sup>	44.4 yd <sup>2</sup> 44.4 yd <sup>2</sup>	37.2 m <sup>2</sup> 37.2 m <sup>2</sup>	100.0 yd <sup>2</sup> 200.0 yd <sup>2</sup>	83.6 m <sup>2</sup> 167.2 m <sup>2</sup>	n/a yd <sup>2</sup> 100.0 yd <sup>2</sup>	n/a m <sup>2</sup> 83.6 m <sup>2</sup>
Mass per unit area	D 6475	Any	8.9 oz/yd <sup>2</sup>	302 g/m <sup>2</sup>	8.9 oz/yd <sup>2</sup>	302 g/m <sup>2</sup>	18.0 oz/yd <sup>2</sup>	610 g/m <sup>2</sup>	8.5 oz/yd <sup>2</sup>	288 g/m <sup>2</sup>	8.5 oz/yd <sup>2</sup>	288 g/m <sup>2</sup>
Thickness	D 6525	Any	335 mils	8.5 mm	335 mils	8.5 mm	551 mils	14.0 mm	256 mils	6.5 mm	256 mils	6.5 mm
Tensile Strength - MD	D 6818	Any	13.0 lb/in	2.3 kN/m	16.0 lb/in	2.8 kN/m	18.4 lb/in	3.2 kN/m	18.4 lb/in	3.2 kN/m	16.0 lb/in	2.8 kN/m
Tensile Elong. - MD	D 6818	Any	31.0 %	31.0 %	20.0 %	20.0 %	25.0 %	25.0 %	25.0 %	25.0 %	20.0 %	20.0 %
Tensile Strength - TD	D 6818	Any	10.7 lb/in	1.9 kN/m	11.0 lb/in	1.9 kN/m	12.7 lb/in	2.2 kN/m	12.7 lb/in	2.2 kN/m	11.0 lb/in	1.9 kN/m
Tensile Elong. - TD	D 6818	Any	29.0 %	29.0 %	20.0 %	20.0 %	25.0 %	25.0 %	25.0 %	25.0 %	20.0 %	20.0 %
Density / Sp. Gravity	D 729	Any	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a	n/a n/a
Light Penetration	D 6567	Any	10.0 %	10.0 %	10.0 %	10.0 %	15.0 %	15.0 %	15.0 %	15.0 %	15.0 %	15.0 %
Swell	ECTC	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Water Absorption	ECTC	Any	325 %	325 %	325 %	325 %	300 %	300 %	250 %	250 %	250 %	250 %
Resiliency	D 6524	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Flexural Stiffness	D 1388	Any	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm
UV Resistance, 500 hrs	D 4355	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
<b>Performance Properties</b>												
Maximum Slope Angle (H:V)	N/A	Any	3:1	3:1	3:1	3:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1	1.5:1
Typical "C Factor"	ASTM D6459*	Any	0.15	0.15	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Maximum Permissible Unvegetated Shear Stress (psf)	ASTM D6460*	Any	1.6 (psf)	77 (PA)	1.6 (psf)	77 (PA)	2.8 (psf)	134 (PA)	2.3 (psf)	110 (PA)	2.8 (psf)	134 (PA)
Maximum Permissible Velocity Unvegetated (ft/s)	ASTM D6460*	Any	6.0 ft/s	1.8 m/s	6.0 ft/s	1.8 m/s	8.0 ft/s	2.4 m/s	8.5 ft/s	2.6 m/s	9.0 ft/s	2.7 m/s
Manning's n	N/A	Any	0.031	0.031	0.031	0.031	0.029	0.029	0.031	0.031	0.023	0.023

\* Western Excelsior utilizes procedures outlined in these test methods for the determination of performance properties. Although testing follows these methods closely, some modifications were made to accommodate laboratory dimensions, achieve more erosive conditions or improve efficiency.

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## Western Excelsior Erosion Control Blanket Properties Turf Reinforcement Mats

Stitched, Synthetic Fiber Matrix

Index Properties	Measurement Method	Blanket Style	Excel PP5-8		Excel PP5-10		Excel PP5-12	
			Double Net Turf Reinforcement Mat Greater than Thirty Six Months		Double Net Turf Reinforcement Mat Greater than Thirty Six Months		Double Net Turf Reinforcement Mat Greater than Thirty Six Months	
			English Units	SI Units	English Units	SI Units	English Units	SI Units
Color	Typical	Any	Black Net, Green Matrix		Black Net, Green Matrix		Black Net, Green Matrix	
Top Netting	Typical	Any	Synthetic, Non-Degradable		Synthetic, Non-Degradable		Synthetic, Non-Degradable	
Bottom Netting	Typical	Any	Synthetic, Non-Degradable		Synthetic, Non-Degradable		Synthetic, Non-Degradable	
Thread	Typical	Any	Synthetic, Non-Degradable		Synthetic, Non-Degradable		Synthetic, Non-Degradable	
Roll Width	Typical	Narrow	7.5 ft	2.3 m	7.5 ft	2.3 m	7.5 ft	2.3 m
		Wide	15.0 ft	4.6 m	15.0 ft	4.6 m	15.0 ft	4.6 m
Roll Length	Typical	Narrow	120 ft	36.6 m	120 ft	36.6 m	120 ft	36.6 m
		Wide	120 ft	36.6 m	120 ft	36.6 m	120 ft	36.6 m
Target Unit Weight	Typical	Narrow	50 lb/roll	27.1 kg/roll	63 lb/roll	34.2 kg/roll	75 lb/roll	40.7 kg/roll
		Wide	100 lb/roll	54.2 kg/roll	126 lb/roll	68.3 kg/roll	150 lb/roll	81.4 kg/roll
Top Netting Opening Dimensions (nominal)	Typical (MD)	Any	0.75 in	19.1 mm	0.75 in	19.1 mm	0.75 in	19.1 mm
	Typical (TD)	Any	0.75 in	19.1 mm	0.75 in	19.1 mm	0.75 in	19.1 mm
Bottom Netting Opening Dimensions (nominal)	Typical (MD)	Any	0.75 in	19.1 mm	0.75 in	19.1 mm	0.75 in	19.1 mm
	Typical (TD)	Any	0.75 in	19.1 mm	0.75 in	19.1 mm	0.75 in	19.1 mm
Stitch Spacing	Typical	Any	2.0 in	50.8 mm	2.0 in	50.8 mm	2.0 in	50.8 mm
Coverage per Roll	Typical	Narrow	100.0 yd <sup>2</sup>	83.6 m <sup>2</sup>	100.0 yd <sup>2</sup>	83.6 m <sup>2</sup>	100.0 yd <sup>2</sup>	83.6 m <sup>2</sup>
	Typical	Wide	200.0 yd <sup>2</sup>	167.2 m <sup>2</sup>	200.0 yd <sup>2</sup>	167.2 m <sup>2</sup>	200.0 yd <sup>2</sup>	167.2 m <sup>2</sup>
Mass per unit area	D 6475	Any	8.0 oz/yd <sup>2</sup>	271 g/m <sup>2</sup>	10.0 oz/yd <sup>2</sup>	339 g/m <sup>2</sup>	12.0 oz/yd <sup>2</sup>	407 g/m <sup>2</sup>
Thickness	D 6525	Any	339 mils	8.6 mm	362 mils	9.2 mm	378 mils	9.6 mm
Tensile Strength - MD	D 6818	Any	20.8 lb/in	3.6 kN/m	20.8 lb/in	3.6 kN/m	20.8 lb/in	3.6 kN/m
Tensile Elong. - MD	D 6818	Any	25.0 %	25.0 %	25.0 %	25.0 %	25.0 %	25.0 %
Tensile Strength - TD	D 6818	Any	17.7 lb/in	3.1 kN/m	17.7 lb/in	3.1 kN/m	17.7 lb/in	3.1 kN/m
Tensile Elong. - TD	D 6818	Any	25.0 %	25.0 %	25.0 %	25.0 %	25.0 %	25.0 %
Density / Sp. Gravity	D 729	Any	0.91 n/a	n/a n/a	0.91 n/a	n/a n/a	0.91 n/a	n/a n/a
Light Penetration	D 6567	Any	35.0 %	35.0 %	25.0 %	25.0 %	20.0 %	20.0 %
Porosity	Computed	Any	97.0 %	n/a %	96.0 %	n/a %	96.0 %	n/a %
Water Absorption	ECTC	Any	n/a %	n/a %	n/a %	n/a %	n/a %	n/a %
Resiliency	D 6524	Any	89.0 %	n/a %	87.0 %	n/a %	88.0 %	n/a %
Flexural Stiffness	D 1388	Any	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm	n/a mg-cm
UV Resistance, 500 hrs	D 4355	Any	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
<b>Performance Properties</b>								
Maximum Slope Angle (H:V)	N/A	Any	2:1	2:1	1:1	1:1	1:1	1:1
Typical "C Factor"	ASTM D6459*	Any	0.15	0.15	0.03	0.03	0.03	0.03
Maximum Permissible Vegetated Shear Stress (psf)	ASTM D6460*	Any	6.0 (psf)	287 (PA)	12.0 (psf)	575 (PA)	12.0 (psf)	575 (PA)
Maximum Permissible Velocity Vegetated (ft/s)	ASTM D6460*	Any	8.0 ft/s	2.4 m/s	15.0 ft/s	4.6 m/s	15.0 ft/s	4.6 m/s
Unvegetated Manning's n	N/A	Any	0.029	0.029	0.027	0.027	0.027	0.027
Maximum Permissible Unvegetated Shear Stress (psf)	ASTM D6460*	Any	1.5 (psf)	72 (PA)	2.3 (psf)	110 (PA)	2.8 (psf)	134 (PA)
Maximum Permissible Velocity Unvegetated (ft/s)	ASTM D6460*	Any	6.0 ft/s	1.8 m/s	7.0 ft/s	2.1 m/s	8.0 ft/s	2.4 m/s

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