

Erosion Control Technology Council

Rolled Erosion Control Products Specification Chart

Table 1. RECP Specification

June 2006



Rolled Erosion Control—Temporary

ULTRA SHORT-TERM – Typical 3 month functional longevity.

Type	Product Description	Material Composition	Slope Applications *		Channel	Minimum Tensile Strength ¹
			Maximum Gradient	C Factor ^{2, 5}	Max. Shear Stress ^{3, 4, 6}	
1.A	Mulch Control Nets	A photodegradable synthetic mesh or woven biodegradable natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft ² (12 Pa)	5 lbs/ft (0.073 kN/m)
1.B	Netless Rolled Erosion Control Blankets	Natural and/or polymer fibers mechanically interlocked and/or chemically adhered together to form a RECP.	4:1 (H:V)	≤ 0.10 @ 4:1	0.5 lbs/ft ² (24 Pa)	5 lbs/ft (0.073 kN/m)
1.C	Single-net Erosion Control Blankets & Open Weave Textiles	Processed degradable natural and/or polymer fibers mechanically bound together by a single rapidly degrading, synthetic or natural fiber netting or an open weave textile of processed rapidly degrading natural or polymer yarns or twines woven into a continuous matrix.	3:1 (H:V)	≤ 0.15 @ 3:1	1.5 lbs/ft ² (72 Pa)	50 lbs/ft (0.73 kN/m)
1.D	Double-net Erosion Control Blankets	Processed degradable natural and/or polymer fibers mechanically bound together between two rapidly degrading, synthetic or natural fiber nettings.	2:1 (H:V)	≤ 0.20 @ 2:1	1.75 lbs/ft ² (84 Pa)	75 lbs/ft (1.09 kN/m)

SHORT-TERM – Typical 12 month functional longevity.

Type	Product Description	Material Composition	Slope Applications *		Channel Applications *	Minimum Tensile Strength ¹
			Maximum Gradient	C Factor ^{2, 5}	Max. Shear Stress ^{3, 4, 6}	
2.A	Mulch Control Nets	A photodegradable synthetic mesh or woven biodegradable natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft ² (12 Pa)	5 lbs/ft (0.073 kN/m)
2.B	Netless Rolled Erosion Control Blankets	Natural and/or polymer fibers mechanically interlocked and/or chemically adhered together to form a RECP.	4:1 (H:V)	≤ 0.10 @ 4:1	0.5 lbs/ft ² (24 Pa)	5 lbs/ft (0.073 kN/m)
2.C	Single-net Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed degradable natural or polymer fibers mechanically bound together by a single degradable synthetic or natural fiber netting to form a continuous matrix or an open weave textile composed of processed degradable natural or polymer yarns or twines woven into a continuous matrix.	3:1 (H:V)	≤ 0.15 @ 3:1	1.5 lbs/ft ² (72 Pa)	50 lbs/ft (0.73 kN/m)
2.D	Double-net Erosion Control Blankets	Processed degradable natural and/or polymer fibers mechanically bound together between two rapidly degrading, synthetic or natural fiber nettings.	2:1 (H:V)	≤ 0.20 @ 2:1	1.75 lbs/ft ² (84 Pa)	75 lbs/ft (1.09 kN/m)

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Rolled Erosion Control—Temporary						
EXTENDED-TERM — Typical 24 month functional longevity.						
Type	Product Description	Material Composition	Slope Applications *		Channel Applications *	
			Maximum Gradient	C Factor ^{2, 5}	Max. Shear Stress ^{3, 4, 6}	Minimum Tensile Strength ¹
3.A	Mulch Control Nets	A slow degrading synthetic mesh or woven natural fiber netting.	5:1 (H:V)	≤ 0.10 @ 5:1	0.25 lbs/ft ² (12 Pa)	25 lbs/ft (0.073 kN/m)
3.B	Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed slow degrading natural or polymer fibers mechanically bound together between two slow degrading synthetic or natural fiber nettings to form a continuous matrix or an open weave textile composed of processed slow degrading natural or	1.5:1 (H:V)	≤ 0.25 @ 1.5:1	2.00 lbs/ft ² (96 Pa)	100 lbs/ft (1.45 kN/m)

LONG-TERM — Typical 36 month functional longevity.						
Type	Product Description	Material Composition	Slope Applications *		Channel Applications *	
			Maximum Gradient	C Factor ^{2, 5}	Max. Shear Stress ^{3, 4, 6}	Minimum Tensile Strength ¹
4	Erosion Control Blankets & Open Weave Textiles	An erosion control blanket composed of processed slow degrading natural or polymer fibers mechanically bound together between two slow degrading synthetic or natural fiber nettings to form a continuous matrix or an open weave textile composed of processed slow degrading natural or polymer yarns or twines woven into a continuous matrix.	1:1 (H:V)	≤ 0.25 @ 1:1	2.25 lbs/ft ² (108 Pa)	125 lbs/ft (1.82 kN/m)

* "C" factor and shear stress for Types 1.A., 2.A and 3.A mulch control nettings must be obtained with netting used in conjunction with pre-applied mulch material.

¹ Minimum Average Roll Values, Machine direction using ECTC Mod. ASTM D 5035.

² "C" Factor calculated as ratio of soil loss from RECP protected slope (tested at specified or greater gradient, h:v) to ratio of soil loss from unprotected (control) plot in large-scale testing.

³ Required minimum shear stress RECP (unvegetated) can sustain without physical damage or excess erosion (> 12.7 mm (0.5 in) soil loss) during a 30-minute flow event in large-scale testing.

⁴ The permissible shear stress levels established for each performance category are based on historical experience with products characterized by Manning's roughness coefficients in the range of 0.01 - 0.05.

⁵ Acceptable large-scale test methods may include ASTM D6459, or other independent testing deemed acceptable by the engineer.

⁶ Per the engineers discretion. Recommended acceptable large-scale testing protocol may include ASTM D6460, or other independent testing deemed acceptable by the engineer.