

Section 7: Erosion and Sediment Control Product Specifications

BONDED FIBER MATRIX SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST

PROPERTY AND TEST METHOD	BONDED FIBER MATRIX (BFM)
Material Composition and Properties manufacturer's data	A bonded fiber matrix (BFM) is a hydraulically applied system of long strand wood fibers joined together by an adhesive to create a continuous three dimensional blanket which adheres to the soil surface without leaving gaps between the product and soil. The bonded fiber matrix, upon drying, shall not dissolve or disperse upon rewetting and shall have no germination or growth inhibiting factors and shall not form a water insensitive crust.

EROSION CONTROL BLANKET SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST

PROPERTY AND TEST METHOD	TYPE 1	TYPE 2	TYPE 3	TYPE 4
Material Composition manufacturer's data	Processed degradable 100% straw or 100% excelsior bound with regular to rapidly degrading, synthetic or natural fiber netting(s) to form a continuous matrix.		Processed slow degrading 100% coconut fiber, excelsior or a combo of coconut fiber and straw, bound between two slow degrading synthetic or natural fiber nettings.	
Functional Longevity manufacturer's data	typical 3 to 6 month	typical 6 to 12 month	typical 12 to 24 month	typical 24 to 36 month
Minimum Mass Per Unit Area ASTM D 6475	7 oz/yd ²	7 oz/yd ²	8 oz/yd ²	8 oz/yd ²
Minimum Thickness ASTM D 6525	0.25 in	0.25 in	0.25 in	0.25 in
Minimum Tensile Strength ASTM D 5035 ¹	50 lbs/ft	75 lbs/ft	100 lbs/ft	125 lbs/ft
Maximum Shear Stress ASTM D 6460 ²	1.5 lbs/ft ²	1.5 lbs/ft ²	2 lbs/ft ²	2 lbs/ft ²
C Factor ASTM D 6459 ³	<0.20 @ 3:1 (H:V)	<0.20 @ 2:1 (H:V)	<0.25 @ 1:1 (H:V)	<0.25 @ 1:1 (H:V)

¹ minimum average roll values, Machine Direction (MD)

² (channel applications) minimum shear stress the blanket sustains without damage and without any more than 0.5" soil loss during a 30 minute flow event

³ (slope applications) "C" factor calculated as a ratio of soil loss from a protected slope to ratio of soil loss from an unprotected slope

EROSION CONTROL WATTLES SDDOT SPECIFICATIONS ¹

PROPERTY AND TEST METHOD	EROSION CONTROL WATTLES
Material Composition and Properties manufacturer's data	Erosion control wattles are tubes of 100% weed free straw, excelsior, or coconut husk encased in ultraviolet (UV) degradable or biodegradable netting.

¹ The SDDOT does not have an Approved Products List for Erosion Control Wattles. Products that meet the specifications are listed in "Section D: Erosion and Sediment Control" standard notes and are used on a project by project basis.

FIBER MULCH SDDOT SPECIFICATIONS ¹

PROPERTY AND TEST METHOD	FIBER MULCH
Fiber Composition manufacturer's data	100% wood fiber
Tackifier ² manufacturer's data	3% (by weight) 100% organic

¹ The SDDOT does not have an Approved Products List for Fiber Mulch. Products that meet the specifications are listed in "Section D: Erosion and Sediment Control" standard notes and are used on a project by project basis.

² may be packaged with fiber mulch or may be added separately

SILT FENCE FABRIC SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST

PROPERTY AND TEST METHOD	LOW FLOW	HIGH FLOW
Water Flow Rate ASTM D 4491	20-70 g/min/ft ²	71-145 g/min/ft ²
Minimum Ultra-Violet Stability ASTM D 4355 ¹	70%	70%

¹ strength retention at 500 hours

TURF REINFORCEMENT MAT SDDOT SPECIFICATIONS FOR APPROVED PRODUCTS LIST

PROPERTY AND TEST METHOD	TYPE 1	TYPE 2	TYPE 3
Material Composition manufacturer's data	100% synthetic, non-degradable materials		
Minimum Mass Per Unit Area ASTM D 6566	8 oz/yd ²	10 oz/yd ²	12 oz/yd ²
Minimum Thickness ASTM D 6525	0.25 in	0.25 in	0.25 in
Minimum Tensile Strength ASTM D 6818	125 lbs/ft	150 lbs/ft	175 lbs/ft
Maximum Shear Stress ASTM D 6460 ¹	4 lbs/ft ²	6 lbs/ft ²	8 lbs/ft ²
Minimum Ultra-Violet Stability ASTM D 4355 ²	80%	80%	80%
Minimum Light Penetration ASTM D 6567 ³	20%	15%	15%

¹ channel applications

² strength retention at 500 hours

³ % passing

LANDSCAPE FABRIC / WEED BARRIER FABRIC SDDOT SPECIFICATIONS

PROPERTY AND TEST METHOD	LANDSCAPE FABRIC / WEED BARRIER FABRIC
Material Composition and Properties manufacturer's data	The geotextile fabric shall be a woven, non-woven, or combination woven/non-woven material that allows water and air permeability, but prevents the growth of weeds and grasses. The geotextile fabric shall have been designed and manufactured specifically for use as a landscape fabric/weed barrier fabric.
Minimum Mass Per Unit Area ASTM D 5261	3 oz/yd ²
Minimum Water Flow Rate ASTM D 4491	12 g/min/ft ²
Minimum Ultra-Violet Stability ASTM D 4355 ¹	70%

¹ strength retention at 500 hours