



EarthGuard[®] Fiber Matrix Special Provisions

The following pages contain generalized Special Provisions for use on projects in the following situations:

- *Full Seasonal Erosion Control - Winterization*
- *Long-Term Erosion Control*
- *Pad Winterization*
- *Revegetation*
- *Fire-Burn Rehabilitation*
- *Mine Reclamation*
- *Pipeline Mitigation*
- *Golf Course Construction*
- *Landfill Operations*
- *Dust Control*

The information presented should be checked in detail by the professional engineer responsible for the design to verify its accuracy. Also, the assumptions and methods used to obtain the information should be reviewed to make certain that they are applicable and suitable for the design.



EarthGuard[®] Fiber Matrix Special Provisions

THE SPECIAL PROVISIONS DESCRIBED WITHIN IS AN ATTEMPT TO COVER MOST DESIGN ASPECTS OF UTILIZING THE EARTHGUARD FIBER MATRIX EROSION CONTROL SYSTEM. THIS DOCUMENT IS INTENDED TO BE UTILIZED AS A GUIDELINE, WHICH CAN BE CUSTOMIZED BY THE USER TO MEET SPECIFIC PROJECT REQUIREMENTS.

THIS PROVISION DOES NOT ATTEMPT TO ADDRESS ALL ASPECTS OF EROSION CONTROL DESIGN. A PROFESSIONAL ENGINEER RESPONSIBLE FOR DESIGN SHOULD CHECK THE INFORMATION PRESENTED IN DETAIL. CONSULT YOUR EARTHGUARD REPRESENTATIVE FOR MORE INFORMATION.

SOME SITUATIONS WITH: SANDY-SANDY LOAM SOILS, VERY LITTLE ORGANIC MATTER IN THE SOIL, POORLY COMPACTED SLOPES, HEAVY RAINFALL LOCATIONS (OVER 19 INCHES PER YEAR), VERY INTENSE RAIN STORMS (2-3 INCHES AT A TIME), HIGH WIND EXPOSURE, ETC. MAY REQUIRE INCREASING THE EARTHGUARD AND/OR FIBER. WHEN SWPPPS, BMPs OR OTHER PLANS ARE BEING WRITTEN, CONTACT YOUR EARTHGUARD REPRESENTATIVE AT (888) 843-1029 FOR MORE SPECIFIC RATE RECOMMENDATIONS BASED ON SOIL TYPE, RAINFALL, SLOPE AND OTHER CONDITIONS.

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1. GENERAL

1.1. Work Included. EarthGuard Fiber Matrix shall be furnished and applied as shown on the drawings and as required for proper installation and functioning of the product.

2. MATERIALS

2.1. Soil Stabilizing Blend. The soil stabilizing emulsion blend to be applied shall be "EarthGuard" as manufactured by Terra Novo Inc (888) 843-1029. It must be a true emulsion consisting of two completely immiscible liquids, in which minute globules of one liquid are dispersed but not dissolved throughout the other liquid. The blend must also be manufactured exclusively with *GENERALLY REGARDED AS SAFE (GRAS)* materials.

The soil stabilizing emulsion blend to be used shall consist of at least (3) three different linear anionic copolymer of acrylamide/sodium acrylate in water-in-oil emulsions, lending distinct molecular weights greater than 12×10^6 and anionic mole percentages (charge density) greater than 25%, within one emulsion. The blend must be guaranteed to contain 30% (+/- 1%) active polymer, in which all of the active particles are ultra fine in size. The blend shall also be guaranteed to have 100 ppm or less of residual acrylamide.

The soil stabilizing emulsion shall be nontoxic to plant and animal life. It must also be registered and licensed by the State of California, Department of Food and Agriculture, as an "auxiliary soil amendment."

EarthGuard can be stored for 6 months. Always thoroughly mix before using. Always close or seal containers after use. Store in a dry, insulated location to avoid moisture and freezing. If frozen, thaw and completely remix the solution.

2.2. Fiber. The fiber to be used shall be either of wood fiber, paper fiber or a combination of the two and shall be produced from natural or recycled (pulp) fiber, such as wood chips or similar wood materials or from newsprint, and shall be free of synthetic or plastic materials. Fiber shall not contain more than 7 percent ash as determined by the Technical Association of the Pulp and Paper Industry (TAPPI) Standard T 413, shall contain less than 250 parts per million boron and shall be otherwise nontoxic to plant or animal life.

Fiber shall have a water-holding capacity by mass of not less than 1200 percent as determined by the procedure designated in the Caltrans Final Report, CA-DOT-TL-2176-1-76-36, "Water-Holding Capacity for Hydrofiber," available at the Caltrans Transportation Laboratory.

Fiber shall be of such character that the fiber will disperse into a uniform slurry when mixed with water. Water content of the fiber before mixing into slurry shall not exceed 15 percent of the dry mass of the fiber. The percentage of water in the fiber shall be determined by California Test

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226. Fiber shall have the moisture content of the fiber marked on the package. Fiber shall be colored to contrast with the area on which the fiber is to be applied, and shall not stain concrete or painted surfaces.

A Certificate of Compliance for fiber shall be furnished to the Engineer.

2.3. Seed (OPTIONAL – SPECIFY TYPE IF REQUIRED). The seed to be applied in combination with the EarthGuard Fiber Matrix shall be of Type _____ as shown in the plans and specified within these Special Provisions.

Seed shall be labeled by the vendors supplying the seed. Seed shall have been tested for purity and germination not more than 12 months prior to the application of the seed. The test results from seed testing shall be delivered to the Engineer prior to applying the seed. Seed labels furnished by the seed vendors supplying the seed shall indicate the purity, germination and pure live seed as determined by testing.

Seed with a germination rate lower than the minimum rate specified may be used when approved by the Engineer in writing.

Seed specified without a germination requirement, at the time of sowing, shall be from the previous or current year's harvest, and shall be labeled to include the name date (month and year) collected and the name and address of the seed supplier.

2.4. Compost (OPTIONAL – SPECIFY TYPE IF REQUIRED). The compost to be applied in combination with the EarthGuard Fiber Matrix shall be _____ as shown in the plans and specified within these Special Provisions.

2.5. Fertilizer (OPTIONAL – SPECIFY TYPE IF REQUIRED). The fertilizer to be applied in combination with the EarthGuard Fiber Matrix shall be _____ as shown in the plans and specified within these Special Provisions.

2.6. Pre-Emergent (OPTIONAL – SPECIFY TYPE IF REQUIRED). The pre-emergent to be applied in combination with the EarthGuard Fiber Matrix shall be _____ as shown in the plans and specified within these Special Provisions.

3. EARTHGUARD FIBER MATRIX

EarthGuard Fiber Matrix shall consist of a combination of “EarthGuard,” water, and wood and or paper fiber mixed in the following proportions. Seed can be added to the blend for long-term or permanent erosion control. Consult your EarthGuard Sales Representative and/or product manufacturer Terra Novo Inc at (888) 843-1029 for the appropriate project specific application rates.

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Precipitation Rate: 19" or Less in a 4-5 Month Period

SLOPE	Pads	6:1	5:1	4:1	3:1	2:1	1.5:1	1:1
EARTHGUARD (gals/acre)	4	4	5	6	7	8	9	10
FIBER (lb./acre)	1500	1500	1500	1500	1,800	2,000	2,500	3,000
SEED (lb/acre)								
COMPOST (lb/acre)								
FERTILIZER (lb/acre)								
PREEMERGENT (lb/acre)								

Greater than 19" in a 4-5 Month Period

SLOPE	Pads	≤5:1	4:1	≥3:1
EARTHGUARD (gals/acre)	6	6	8	10
FIBER (lb./acre)	2,000	2,000	2,500	3,000
SEED (lb/acre)				
COMPOST (lb/acre)				
FERTILIZER (lb/acre)				
PREEMERGENT (lb/acre)				

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4. BLENDING

Correct mixing and proper application are key factors in obtaining satisfactory performance. Prior to blending, thoroughly mix the EarthGuard in its container. A hydroseeding vessel shall be filled with water to at least 1/3 capacity (high enough to cover agitators) prior to adding any EarthGuard. Continue to fill vessel with water and slowly add the EarthGuard while agitators are in motion. Once the accurate amount of EarthGuard is in solution, add fiber, seed (if specified), compost (if specified), fertilizer (if specified) and pre-emergent (if specified). Continue to mix tank a minimum of 10 minutes prior to application.

If the hydroseeding unit has separate pump and agitator controls (example: Finns), minimize agitator speed once the slurry is completely mixed and before application. This will help increase application rate.

5. APPLICATION

The soil to which the EarthGuard Fiber Matrix Slurry shall be applied to must be graded to remove any pre-existing rills and shall be compacted to meet project specifications. Track-walking or some other soil imprinting device is recommended to roughen the slope to slow water flows during a storm event. Slope interrupting devices such as fiber rolls should be used be placed 25' on-center, perpendicular to the flow of water, on slopes longer than 25' in slope distance.

EarthGuard Fiber Matrix Slurry shall be applied by a qualified applicator at a minimum rate of 3000 gallons/acre (higher rates may be required) evenly over the entire area to be treated. Caution should be taken to avoid creating puddles or runoff. The blend must be sprayed from multiple directions and angles to ensure complete and proper coverage. Treated areas shall not be disturbed after application.

EarthGuard Fiber Matrix shall be applied 24 hours prior to or following a storm event.

An Application Certificate (see below) shall be furnished to the Engineer stating that the appropriate quantities, blending and application methods as specified herewithin have been properly followed.

6. REPAIR OF DAMAGED AREA

Any damaged area shall be repaired utilizing the exact blend and application procedure as specified above.

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7. PAYMENT

EarthGuard Fiber Matrix will be paid for by the square foot of area treated. The price shall include full compensation furnishing all labor, materials, tools, equipment, and incidentals, and for doing all EarthGuard Fiber Matrix work, complete in place, as shown on the plans, and as specified in these special provisions, and as directed by the Engineer.

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EarthGuard Fiber Matrix Applicator Certificate

Applicator: _____ Date: _____

Contract/Proj. No.: _____ Proj. Manager: _____

Developer/Owner: _____ Proj. Location: _____

Proj. Name: _____ Proj. City: _____

SLOPE	< 6:1	6:1	5:1	4:1	3:1	2:1	1½: 1	1:1
SIZE (acres)								
EarthGuard (gal/acre)								
Wood Fiber (lb./acre)								
Paper Fiber (lb./acre)								
Seed (lb./acre)								
Compost (lb./acre)								
Fertilizer (lb./acre)								
Pre- Emergent (lb./acre)								



EarthGuard Fiber Matrix Applicator Certificate

I, _____ (name) _____ (applicator company) hereby declare that the information herewithin is true and correct to the best of my knowledge and belief. I further declare the above listed rates have been applied as specified by the contractor, developer, plans, and specifications or as directed by an owner representative on the site. I further declare the above listed products have been applied in a manner consistent with Terra Novo's recommended application procedures and methods. Any deviation from the plans, specifications, direction by the owner representative, or Terra Novo's recommended application procedures and methods are listed below.

Signature: _____

Date: _____

Deviations: _____

Nothing in this document should be in any way construed as an express warranty or as extending to the buyer any implied warranty including, but not limited to, the implied warranties of merchantability or fitness for any particular purpose.

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