

# Flexterra® Flexible Growth Medium™ (FGM™)



## Setting a new standard of excellence for erosion control and growth establishment.

Flexterra® Flexible Growth Medium™ (FGM™) is designed using patented technology that immediately bonds to the soil, providing superior slope protection to rolled Erosion Control Blankets (ECBs) and Bonded Fiber Matrix (BFM) products—with the speed and cost savings of hydraulic seeding.

Demonstrating unprecedented performance levels when evaluated by the most prominent slope erosion testing laboratories in North America, as well as in a range of field applications, Flexterra is proven:

- Effective upon application—bonds directly to the soil
- Superior erosion control—99% effectiveness (near perfection) at all major testing laboratories
- Fastest turf establishment—grows vegetation eight times faster than bare soil and twice as fast as rolled blankets

### **Composition**

Thermally Processed Wood Fibers . . . . .	74.5% ± 3.5%
Proprietary Crosslinked Hydro-Colloid Tackifiers and Activators . . . . .	10% ± 1%
Proprietary Crimped, Interlocking Fibers . . . . .	5% ± 1%
Moisture Content . . . . .	10.5% ± 1.5%

### **Application Rates**

Slope Gradient/Condition	English	SI
≤ 3H to 1V	3000 lb/ac	3400 kg/ha
> 3H to 1V and ≤ 2H to 1V	3500 lb/ac	3900 kg/ha
> 2H to 1V and ≤ 1H to 1V	4000 lb/ac	4500 kg/ha
> 1H to 1V	4500 lb/ac	5100 kg/ha
Below ECB or TRM	1500 lb/ac	1700 kg/ha
As infill for TRM	3500 lb/ac	3900 kg/ha

### **Packaging**

Bags: Net Weight—50 lb, UV and weather-resistant plastic film

Pallets: Weather-proof, stretch-wrapped with UV resistant pallet cover

40 bags/pallet or 1 ton/pallet

## GENERAL

### 1.01 SUMMARY

#### (Section 32 92 13 – Hydromulching)

A. This section specifies a hydraulically applied Flexible Growth Medium™ (FGM™) composed of long strand, Thermally Refined® wood fibers, crimped, interlocking man-made fibers and performance-enhancing additives. The FGM requires no curing period and upon application forms an intimate bond with the soil surface to create a continuous, porous, absorbent and flexible erosion resistant blanket that allows for rapid germination and accelerated plant growth.

B. Related Sections: Other Specification Sections, which directly relate to the work of this Section include, but are not limited to the following:

1. Section 01 57 00 - Temporary Erosion and Sediment Control
2. Section 31 20 00 - Earthwork; Establishment of Subgrade
3. Section 31 25 00 - Erosion and Sediment Control
4. Section 32 92 00 - Lawns and Gardens

### 1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions. Include required substrate preparation, list of materials and application rate.
- B. Certifications: Manufacturer shall submit a letter of certification that the product meets or exceeds all physical property, endurance, performance and packaging requirements.

### 1.03 DELIVERY, STORAGE AND HANDLING

A. Deliver materials and products in UV and weather-resistant factory labeled packages. Store and handle in strict compliance with manufacturer's instructions and recommendations. Protect from damage, from weather, excessive temperatures and construction operations.

## PRODUCTS

### 2.01 ACCEPTABLE MANUFACTURER

A. PROFILE Products LLC  
 750 Lake Cook Road – Suite 440  
 Buffalo Grove, IL 60089  
 800-366-1180 (Fax 847-215-0577)  
 www.profileproducts.com

### 2.02 MATERIALS

A. Flexible Growth Medium shall be Flexterra® FGM™ and conform to the following property values when uniformly applied at a rate of 3500 pounds per acre (3900 kilograms/hectare) under laboratory conditions.

	TEST METHOD	ENGLISH	SI
<b>PHYSICAL</b>			
Mass Per Unit Area	ASTM D6566 <sup>1</sup>	11.5 oz/yd <sup>2</sup>	390 g/m <sup>2</sup>
Thickness	ASTM D6525 <sup>1</sup>	0.19 in	4.8 mm
% Ground Cover	ASTM D6567 <sup>1</sup>	99%	99%
Water Holding Capacity	ASTM D7367	1500%	1500%
Flexural Rigidity (wet)	ASTM D6575	0.138 oz-in	10,000 mg-cm
Cure Time	Observed	< 2 hr	< 2 hr
Color (fugitive dye)	Observed	Green	Green
<b>ENDURANCE</b>			
Functional Longevity <sup>2</sup>	Observed	≤ 18 months	≤ 18 months
<b>PERFORMANCE</b>			
Cover Factor <sup>3</sup> (6 in/hr event)	ASTM D7101 <sup>1</sup>	0.0066	0.0066
% Effectiveness <sup>4</sup>	ASTM D7101 <sup>1</sup>	≥ 99%	≥ 99%
Cover Factor <sup>3</sup>	Large Scale <sup>5</sup>	≤ 0.01	≤ 0.01
% Effectiveness <sup>4</sup>	Large Scale <sup>5</sup>	≥ 99.0%	≥ 99.0%
Shear Stress	ASTM D7207 <sup>1</sup>	1 lb/ft <sup>2</sup>	48 Pa
Vegetation Establishment	ASTM D7322 <sup>1</sup>	800%	800%

1. ASTM test methods developed for Rolled Erosion Control Products and have been modified to accommodate hydraulically applied erosion control products.
2. Functional longevity is an estimate of product functionality and is dependent upon moisture, light, microbial and other environmental conditions.
3. Cover Factor is calculated as soil loss ratio of treated surface versus an untreated control surface.
4. % Effectiveness = One minus Cover Factor multiplied by 100%.
5. Large scale testing conducted at Utah Water Research Laboratory, San Diego State University/Soil Research Laboratory, Texas Transportation Institute and TRI/Environmental, Inc. For specific testing information please contact a Profile technical service representative at 866-325-6262.

## EXECUTION

### 3.01 SUBSTRATE AND SEEDBED PREPARATION

- A. Examine substrates and conditions where materials will be applied. Apply product to geotechnically stable slopes that have been designed and constructed to divert runoff away from the face of the slope. Do not proceed with installation until satisfactory conditions are established.
- B. Depending upon project sequencing and intended application, prepare seedbed in compliance with Section 1.01 B.

### 3.02 INSTALLATION

- A. Strictly comply with Manufacturer's installation instructions and recommendations. Use approved hydro-spraying machines with fan-type nozzle (50-degree tip) whenever possible to achieve best soil coverage. Apply FGM from opposing directions to assure 100% soil surface coverage. Slope interruption devices or water diversion techniques are recommended when slope lengths exceed 75 ft (23 m).
- B. Erosion Control and Revegetation: For maximum performance, apply FGM in a two-step process:

*Step One: Apply fertilizer, other soil amendments and 50% of seed with a small amount of FGM for visual metering.*

*Step Two: Mix balance of seed and apply FGM at a rate of 50 lb per 125 gallons (23 kg/475 liters) of water over freshly seeded surfaces. Confirm loading rates with equipment manufacturer. Do not leave seeded surfaces unprotected, especially if precipitation is imminent.*

*Depending upon site conditions FGM may be applied in a one-step process where all components may be mixed together in single tank loads. Consult with Manufacturer for further details.*

C. Mixing: A mechanically agitated hydraulic-application machine is recommended:

- i. Fill tank to middle of agitator shaft or tank about 1/3 full of water. Turn on pump to wet or purge lines. Begin agitating. Keep adding water slowly while adding the FGM at a steady rate.
- ii. Consult application and loading charts to determine number of bags to be added. Mix at a rate of 50 lb of FGM per 125 gallons (23 kg/475 liters). Contact Equipment manufacturer to confirm optimum mixing rates.
- iii. All FGM should be loaded when the tank is approximately 3/4 full.
- iv. Fertilizer should be added once the tank is nearly full.
- v. Before applying, mix the slurry for at least 10 minutes after adding the last amount of FGM. This is very important to fully activate the bonding additives and to attain proper viscosity.
- vi. Turn off recirculation valve to minimize potential for air entrainment within the slurry.

### 3.03 CLEANING AND PROTECTION

A. Clean spills promptly. Advise owner of methods for protection of treated areas. Do not allow treated areas to be trafficked or subjected to grazing.

**An electronic text file of this CSI formatted specification can be obtained by contacting a technical service representative at 866-325-6262.**

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