

High Performance Erosion Control

# Flexterra® HP-FGM®



## Profile's 5 Fundamentals are the Foundation to Sustainable Vegetation

Establishing sustainable vegetation and receiving the earliest possible Notice of Termination (NOT) are the goals of every project. Profile's 5 Fundamentals are the surest way to get you there. Picking the right erosion control material like Flexterra® HP-FGM® is just one of the 5 steps.



### 1. Assess and Create Optimal Soil Conditions

Soil testing provides essential information to determine what soil amendments, if any, are required to assure a more favorable growing environment for faster, more complete vegetative growth and sustainable establishment.



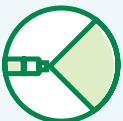
### 2. Pick the Right Plant Species

It is essential to select plant species that are adapted to the site conditions.



### 3. Select the Correct Erosion Control Material

The right cover protects both seed and soil, and facilitates growth. Flexterra HP-FGM is unsurpassed in delivering outstanding performance.



### 4. Ensure Proper Installation

Products must be installed in accordance with manufacturer recommendations to maximize their performance.



### 5. Follow-up Inspections and Maintenance Practices

Continual monitoring ensures all site compliance issues are being addressed. Maintenance may be required to mitigate unexpected challenges.

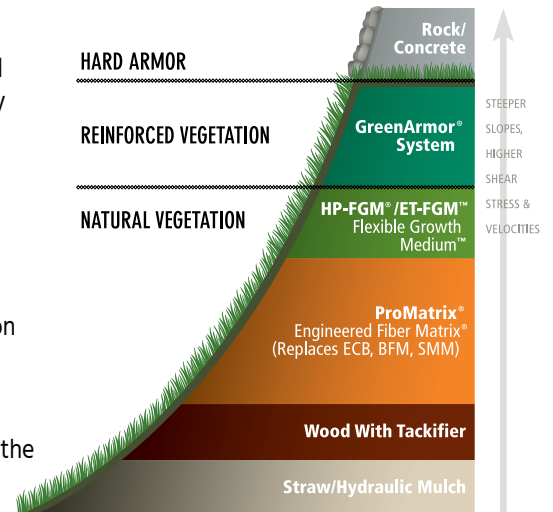
Profile provides valuable assistance for each of these Fundamentals 24/7 — beginning with FREE soil testing. Visit [profileps3.com](http://profileps3.com).

## FLEXTERRA® HP-FGM® Absolutely the Most Effective Erosion Control Medium Available

Flexterra® HP-FGM® (High Performance-Flexible Growth Medium®) stands alone as the ultimate erosion control and revegetation product. Fine grading and extensive soil preparation are unnecessary, allowing you to apply the product for immediate protection and superior performance at reduced overall costs.

### Flexterra HP-FGM Delivers:


- » The highest germination and growth establishment of any rolled or other hydraulically applied erosion control product available
- » Greater than 99% erosion control effectiveness immediately upon application
- » 100% biodegradable
- » Non-toxic and safe for even the most sensitive environments





Superior erosion control across Profile's spectrum of products ensures reliable, sustainable solutions for slopes, channels, shorelines, water management projects, pipeline restorations, waste and fly ash containment sites, fine turf areas and other environmentally sensitive sites.


## Patented Technologies and Greener Components Deliver Unmatched Performance

Flexterra HP-FGM combines both chemical and mechanical bonding techniques to lock the engineered medium in place and promote accelerated germination with minimal soil loss. Greener from the inside out, here's what makes it work so well:

 Revolutionary patented Micro-Pore granules optimize water and nutrient retention

 100% non-toxic biopolymers and water absorbents enhance erosion control resistance and growth establishment

 100% recycled, Thermally Refined® virgin wood fibers produce the highest yield and coverage per unit weight, and are phytosanitized, eliminating weed seeds and pathogens

 Crimped, biodegradable interlocking fibers derived from regenerated cellulose sourced from sustainably harvested wood

## A Closer Look at Micro-Pore Granules and Thermally Refined® Wood Fibers

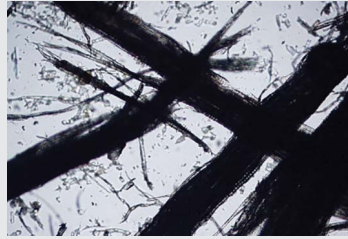


» Micro-Pore granules capture and hold moisture and nutrients, reduce soil surface evaporation and improve oxygen exchange, which all contribute to faster, more uniform vegetation establishment.

» Micro-Pore granules also increase bond strength of the flexible growth medium, resulting in greater resistance to raindrop impact and sheet flow.



Fibers magnified 45 times by independent lab specializing in fiber analysis.



Inferior wood fibers magnified 45 times.

» 100% recycled, Thermally Refined® virgin wood chips create fine, long and highly absorbent fibers that deliver superior yield, coverage and water-holding capacity.

» Competitive refining technologies develop inferior fibers that require more bales to achieve the coverage of Profile's Thermally Refined wood fiber matrices.

## Establishes Vegetation More Reliably

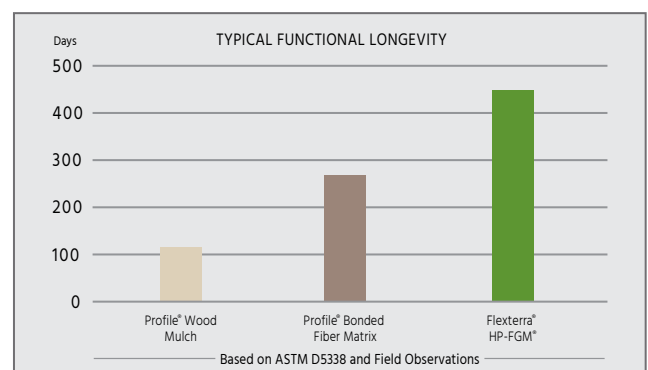
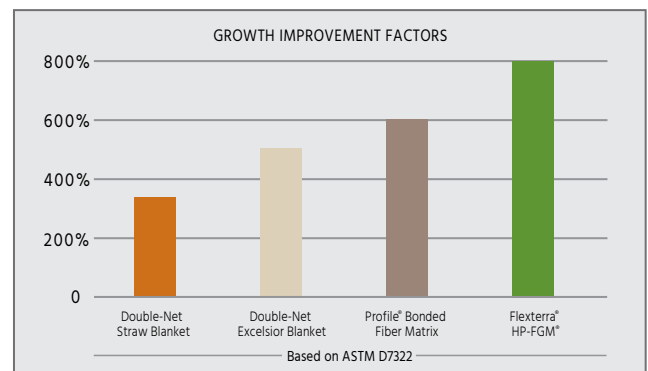
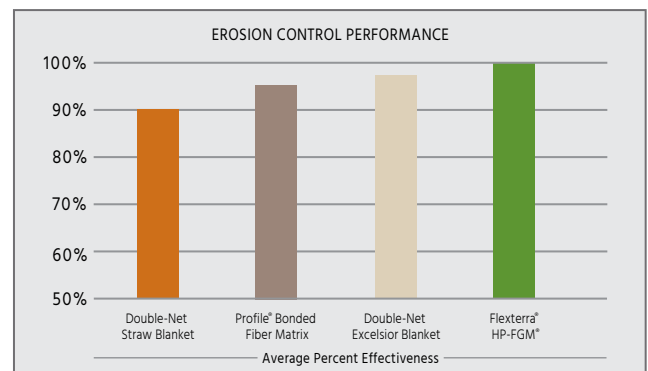
Quicker and complete establishment is the key to long-term erosion control. Flexterra® HP-FGM® has recorded the highest growth establishment rating of any erosion control product in independent laboratory testing using standard test method ASTM D7322.

## The First Erosion Control Product to Offer Documented Functional Longevity

ASTM D5338 testing protocol confirms Flexterra HP-FGM's observed functional longevity of up to 18 months. Flexterra HP-FGM is proven to last longer than other hydraulically applied erosion control products.

### Long-lasting Flexterra HP-FGM is designed to:

- » **Provide protection on bare soil over periods of dormancy;** assures that when more optimal growing conditions arrive, the seed and nutrients are still in place and in an environment conducive to rapid germination and emergence.
- » **Increase survivability of plants;** exceptional water retention nurtures vegetation to better withstand environmental stress.
- » **Accommodate a broad range of vegetative species;** safeguards and helps to cultivate even slow establishing species, such as native grass and wildflower species.



# Flexterra® HP-FGM® Technical Data:

	TEST METHOD	UNITS	TESTED VALUE
<b>PHYSICAL PROPERTIES*</b>			
Mass/Unit Area	ASTM D6566 <sup>1</sup>	g/m <sup>2</sup> (oz/yd <sup>2</sup> )	≥ 390 (11.6)
Thickness	ASTM D6525 <sup>1</sup>	mm (in)	≥ 5.6 (0.22)
Ground Cover	ASTM D6567 <sup>1</sup>	%	≥ 99
Water-Holding Capacity	ASTM D7367	%	≥ 1,700
Material Color	Observed	n/a	Green
<b>ENVIRONMENTAL PROPERTIES*</b>			
Biodegradability	ASTM D5338	n/a	Yes
Ecotoxicity	EPA 2021.0	n/a	Non-Toxic
USDA BioPreferred® Biobased Content	ASTM D6866	%	100
Elemental Impurity Limits	ASTM D8092	Pass/Fail	Pass
Carbon Footprint <sup>3</sup>	Life Cycle Assessment	Unit CO <sub>2</sub> e/Unit of Product <sup>4</sup>	≤ 0.4
<b>PERFORMANCE PROPERTIES*</b>			
Cover Factor <sup>5</sup>	ASTM D8298-Type 1	n/a	≤ 0.01
Percent Effectiveness <sup>6</sup>	ASTM D8298-Type 1	%	≥ 99
Functional Longevity <sup>7</sup>	ASTM D5338	months	≤ 18
Cure Time	Observed	hours	0-2
Vegetation Establishment	ASTM D7322	%	≥ 800
<b>PRODUCT COMPOSITION</b>			<b>TYPICAL VALUE</b>
Thermally Processed <sup>8</sup> (within a pressurized vessel) 100% Recycled Virgin Wood Fibers			80%
Wetting agents (including high-viscosity colloidal polysaccharides, cross-linked biopolymers, and water absorbents)			10%
Crimped Biodegradable Interlocking Fibers derived from regenerated cellulose sourced from sustainably harvested wood			5%
Micro-Pore Granules			5%

\* When uniformly applied at a rate of 3,500 lb/ac (3,900 kg/ha) under laboratory conditions.

1. ASTM test methods developed for Rolled Erosion Control Products that have been modified to accommodate Hydraulic Erosion Control Products.
2. 48-hour LC<sub>50</sub> >100% - LC<sub>50</sub> refers to the percent concentration of a substance in water when 50% percent mortality of an organism is reached. 50% mortality of the tested species (*Daphnia magna*) could not be achieved when subjected to 100% effluent concentration proving the material to be acutely non-toxic.
3. Cradle to factory gate (Conover, NC) lifecycle assessment.
4. "Carbon dioxide equivalent" or CO<sub>2</sub>e is a term for describing different greenhouse gases in a common unit. For any quantity and type of greenhouse gas, CO<sub>2</sub>e signifies the amount of CO<sub>2</sub> which would have the equivalent global warming impact. The unit of CO<sub>2</sub>e per unit of product is a consistent ratio based on mass, regardless of what unity of mass is chosen. For instance, there is a 0.4 kg of CO<sub>2</sub>e per kg of product or 0.4 oz CO<sub>2</sub>e per oz of product.
5. Cover Factor is calculated as soil loss ratio of treated surface versus an untreated control surface.
6. Percent Effectiveness = One minus Cover Factor multiplied by 100%.
7. Functional Longevity is the estimated time period, based upon field observations, that a material can be anticipated to provide erosion control and agronomic benefits as influenced by composition, as well as site-specific conditions, including; but not limited to—temperature, moisture, and light conditions, soils, biological activity, vegetative establishment and other environmental factors.
8. Heated to a temperature greater than 380 degrees Fahrenheit (193 degrees Celsius) for 5 minutes at a pressure greater than 50 psi (345 kPa) in order to be Thermally Refined®/Processed and to achieve phytosanitation.



**GREEN DESIGN ENGINEERING®**  
EARTH-FRIENDLY SOLUTIONS  
FOR SUSTAINABLE RESULTS®

Green Design Engineering® is a holistic approach, combining environmentally beneficial design and ecologically sound products with agronomic and erosion control expertise, to provide the most effective, customized and cost-efficient solutions for erosion control and vegetative establishment.



PS<sup>3</sup>, Profile's unique online project design

and management software, is the best place to start applying The 5 Fundamentals™ to your next project. The process begins with a FREE soil test, and walks you through every Fundamental. It's the only program of its kind that integrates and compares a variety of technologies to your specific project parameters, and provides complete documentation including product specifications, installation guidelines, CAD details and other pertinent technical information. Get started by visiting [ProfilePS3.com](http://ProfilePS3.com).



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