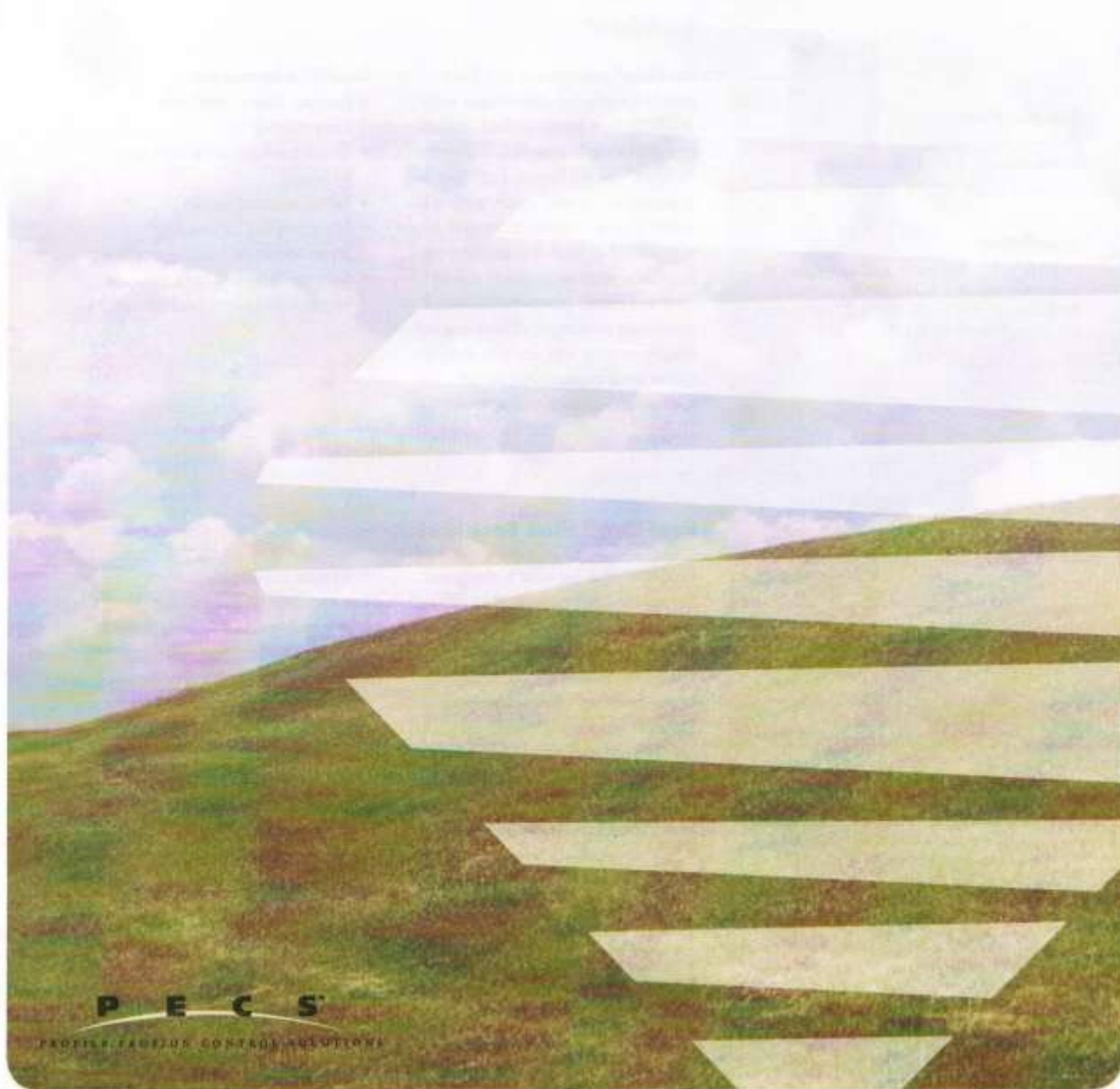


Eco Series Hydraulic Mulches

EcoAegis® • EcoMatrix™ • EcoFibre® • EcoFibre™ Plus Tackifier



P E C S

PROFIL FACTOR CONTROL SOLUTIONS



AS THE WORLD LEADER IN HYDRAULIC MULCH PRODUCTION, Profile Products has introduced product innovations and manufacturing techniques that have continually raised the standard of hydraulic mulch performance. Profile now offers the Eco line of premium hydraulic mulch as part of Profile Erosion Control Solutions (PECS™), adding yet another tool to the industry's most comprehensive collection of cutting edge erosion control and revegetation technologies. No one offers more—or better—ways to keep soil on site and establish dense vegetation faster. The Eco line is another example of that leadership.

Composition:

Thermally Processed
Wood Fibers — 88% ± 3%
Moisture Content — 12% ± 3%



Installation:

EcoFibre wood fiber mulch shall be applied at a minimum rate of 1,800 pounds per acre on flat slopes, or a minimum rate of 2,000 pounds per acre on slopes of 4H:1V.

EcoFibre®

EcoFibre® premium wood fiber mulch covers the same area with 20-30% less product than cellulose mulches due to our 100% Thermally Refined® wood fibers. EcoFibre has a non-toxic, green color added to assist in even application and allow it to blend in with the environment. EcoFibre initially protects seeds and enhances germination—and continues making a difference by decomposing into carbon dioxide, water and organic matter to further aid plant development.

EcoFibre features:

- Longest fibers available
- Easy mixing
- Great performance with tanks or hoses
- Better matting ability
- No clumping or crusting
- More moisture holding capacity
- Best soil bond to help prevent vegetation failure and callbacks



Composition:

Thermally Processed
Wood Fibers — 85% ± 3%
Moisture Content — 12% ± 3%
Hydro-Colloid Polymer Binder — 3% ± 0.5%



Installation:

EcoFibre Plus Tackifier wood fiber mulch shall be applied at a minimum rate of 1,800 pounds per acre on flat slopes, or a minimum rate of 2,500 pounds per acre on slopes of 3H:1V.

EcoFibre™ Plus Tackifier

EcoFibre™ Plus Tackifier is designed to provide extra protection on difficult sites where slopes, soil conditions or weather call for extra erosion control ability. It offers all the advantages of our EcoFibre™ 100% Thermally Refined® wood fiber mulch, plus a high-strength polymer binder to ensure a smooth hydroseeding operation.

EcoFibre Plus Tackifier Features:

- Pre-blended, evenly dispersed, no extra bags
- Consistent, high-quality mixture
- No irritating tackifier dust clouds
- Quick dispersion in water
- Blends smoothly with seed and fertilizer
- Extra lubricity to the mixture, prevents clogging

Field tests consistently confirm that tackifiers perform better with wood mulch. The long fibers of EcoFibre Plus Tackifier mesh together, interlocking to one another and to the soil. While the tackifier improves the holding power, there's no risk of a paper-mache effect.

EcoFibre Plus Tack consists of premium wood fibers, a natural guar gum tackifier and a non-toxic green colorant to aid in metering.

An environmentally superior product, our mulch protects soil and enhances seed germination; then decomposes over time to carbon dioxide, water and organic matter to further aid in plant development.



Wood fibers magnified 45 times



Normally Forest

Thermally Refined Forest

Get More Build Out of Every Eco Bag

Profile's Thermally Refined[®] wood fibers maximize coverage and performance.

You need many more bales of competitive mulch to equal the coverage and performance of Eco brand mulch. Wood fiber in Eco Series hydraulic mulch is Thermally Refined[®] in a pressurized vessel which produces more surface area to hold 12 times its weight in water and promote faster, more complete germination. Our processing technology produces fibers that hold 50% more water than competitive wood fiber products. These atmospherically refined wood fiber simply doesn't provide as much coverage per bag as the Eco line.

Thermally Refined Fiber means:

- Fewer bales of mulch to handle and load
- Fewer callbacks due to washouts or poor turf establishment
- Less down time from coarse fiber clogging hoses
- Easier shooting and more uniform distribution of fiber, helping you cover more ground more quickly

EcoMatrix™

A one-step, hydraulically-applied Stabilized Mulch Matrix (SMM) erosion control system, EcoMatrix™ is formulated to hold soil in place immediately upon application, even during the drying and curing stage. It is designed for use on pads and slopes from flat to a maximum grade of 2H:1V.

EcoMatrix is pre-mixed for maximum wet strength. Our blending process ensures the additives are uniformly mixed in the fiber.

EcoMatrix consists of superior, long wood fibers, non-toxic bonding

agents and soil stabilizers that form a protective mat. It is sprayed on like a hydromulch, allowing the wood fibers to naturally interlock, and when dry, the matrix forms a porous, breathable, erosion-resistant mat that completely biodegrades over time. To resist dispersion and leaching from rain, the bonding compounds are cross-linked; thus, mat integrity is strong and provides excellent erosion protection for a period of three to six months. Simply put, EcoMatrix is designed to save you soil and money.



Composition:

Thermally Processed Wood fibers - 83% ± 4%
 Proprietary Crosslinked Hydro-Colloid Based Polymer tackifier - 5% ± 1%
 Moisture Content - 12% ± 3%



SLOPE GRADIENT/ CONDITION	USAGE AMOUNT
≤ 4H to 1V	2,000 lb/bc
> 4H to 1V and ≤ 3H to 1V	2,500 lb/bc
> 3H to 1V and ≤ 2.5H to 1V	3,000 lb/bc
> 2.5H to 1V and ≤ 2H to 1V	3,500 lb/bc

Consult comprehensive CSI formatted SMM specification for additional details.

EcoAegis®

EcoAegis® is a Bonded Fiber Matrix (BFM) that sprays on like a mulch, but dries to form a porous, breathable and water insoluble mat that bonds firmly with the soil, prevents erosion and saves time and money.

EcoAegis Features:

- Easy to mix
- Easy to apply, no cavitation
- No tenting or rilling
- No staples or stakes
- Does not hurt wildlife or fish

EcoAegis combines the low cost and ease of application of hydroseeding, the protection of a blanket and the advantages of a mulch. Our mat protects seeds and enhances germination; then it slowly decomposes over time into carbon dioxide and organic matter to further aid in plant development. Its protection of seed and soil lasts for a period of 6 to 12 months, giving vegetation time to establish and take hold for long-term slope stabilization.



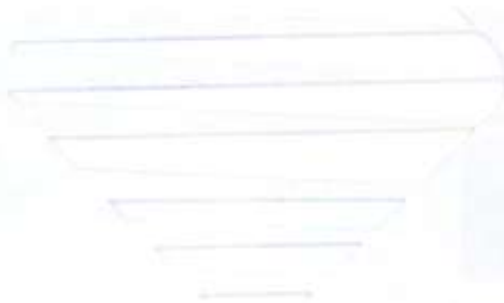
Composition:

Thermally Processed Wood Fibers - 79.5% ± 2.5%
 Proprietary Crosslinked Tackifier - 10% ± 1%
 Moisture Content - 10.5% ± 1.5%



SLOPE GRADIENT/ CONDITION	USAGE AMOUNT
≤ 3H to 1V	3,000 lb/bc
> 3H to 1V and ≤ 2H to 1V	3,500 lb/bc
> 2H to 1V and ≤ 1H to 1V	4,000 lb/bc
Below ECB or TRM	1,500 lb/bc
As stip'd for TRM	3,500 lb/bc

Consult comprehensive CSI formatted BFM specification for additional details.



P E C S™

PROFILE EROSION CONTROL SOLUTIONS

Comprehensive, Customized Solutions for Your Site

Profile Erosion Control Solutions (PECS™) combines the industry's most comprehensive assortment of erosion and sediment control technologies and innovative Green Design Engineering™ to help you maximize erosion control and vegetation establishment on slopes, channels, shorelines, fine turf areas and environmentally sensitive sites. Our dedicated team of erosion control and agronomic experts will work with you to analyze your soil conditions to create and implement a complete solution, utilizing a range of proven Profile products.

PECS IS A UNIQUE, FULLY INTEGRATED APPROACH TO YOUR SITE, INCLUDING:

- IN THE GROUND** Agronomic solutions that promote rapid seed germination and long-term vegetation establishment.
- ON THE GROUND** Innovative products that prevent erosion on slopes, channels, shorelines, streambanks and wetlands while minimizing risk to the environment.
- BY YOUR SIDE** Green Design Engineering ensures unfailing support from agronomic and erosion control experts, to help select and install the right products for maximum results.

**For all the details, contact Profile Products at 1-800-508-8681
or visit www.profile-eco.com.**



PROFILE Products LLC

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Profile™ Products Base Hydraulic Mulch Loading Chart and Application Guide

- Rates are based on product mixing rate of 50 pounds per 100 gallons of water.
- Always refer to equipment manufacturer's specifications for working capacity of the machine.

Water (gal)	Mulch Fiber (50-lb bales)	Mulch Fiber (lb)	1,500 lb/acre		2,000 lb/acre		2,500 lb/acre	
			Sq ft	Acres	Sq ft	Acres	Sq ft	Acres
100	1	50	3,452	0.033	1,089	0.025	871	0.020
300	3	150	4,356	0.099	3,267	0.075	2,614	0.060
500	5	250	7,280	0.166	5,445	0.125	4,356	0.100
700	7	350	10,164	0.233	7,623	0.175	6,098	0.140
900	9	450	13,068	0.299	9,801	0.225	7,841	0.180
1,100	11	550	15,972	0.366	11,979	0.275	9,583	0.220
1,300	13	650	18,876	0.433	14,157	0.325	11,326	0.260
1,500	15	750	21,780	0.499	16,335	0.375	13,068	0.300
1,700	17	850	24,684	0.566	18,513	0.425	14,810	0.340
1,900	19	950	27,588	0.633	20,691	0.475	16,553	0.380
2,100	21	1,050	30,492	0.699	22,869	0.525	18,295	0.420
2,300	23	1,150	33,396	0.766	25,047	0.575	20,038	0.460
2,500	25	1,250	36,300	0.833	27,225	0.625	21,780	0.500
2,700	27	1,350	39,204	0.899	29,403	0.675	23,522	0.540
2,800	29	1,450	42,108	0.966	31,581	0.725	25,265	0.580

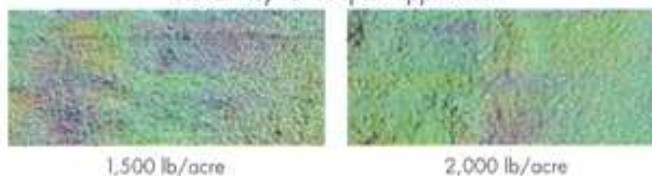
Application/Loading Procedures

- Strictly comply with equipment manufacturer's installation instructions and recommendations.
 - Measure and stake area to ensure proper application rates.
 - For maximum performance, apply in a two-step process*:
 - Apply fertilizer with specified prescriptive agronomic formulations along with 50% of seed with a small amount of mulch for visual metering.
 - Mix balance of seed and apply mulch at a rate of 50 pounds per 100 gallons of water over freshly seeded surfaces. See loading chart above and confirm loading rates with equipment manufacturer. Do not leave seeded surfaces unprotected, especially if precipitation is imminent.
 - Fill 1/3 of the hydroseeder with water. Turn pump on for 15 seconds and purge and pre-wet lines. Turn pump off.
 - Turn agitator on and load low density materials first (i.e. seed).
 - Continue slowly filling tank with water while loading mulch into tank.
 - Consult loading chart above to determine the number of bags to be added for desired area and application rate.
 - Mulch should be completely loaded before water level reaches 90% of the top of tank.
 - Add fertilizer and top off with water.
 - Mix until all fiber is fully broken apart and hydrated (minimum of 10 minutes—increase mixing time when applying in cold conditions). This is very important to fully activate tackifiers and to obtain proper viscosity.
 - Shut off recirculation valve to minimize potential for air to be drawn into the slurry.
 - Slow down agitator and start applying with a 50-degree fan tip nozzle.
 - Spray in opposing directions to achieve at least 75% soil coverage.
- *Hydraulic mulch 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.

Additional Notes:

- For hose applications, 40 lb/100 gal is recommended.
- Rough surfaces (rocky terrain, cat tracks, ripped soils, etc.) may require additional product to achieve a minimum of 75% coverage.
- Be sure to allow for residual material in tank on subsequent applications.

Visual Key for Proper Application



MSDS Material Safety Data Sheet

PROFILE Products, LLC



ECOFIBER®

MSDS Number: CON003

Revision Date: 2/26/08

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

PROFILE Products, LLC
750 LAKE COOK ROAD
SUITE 440
BUFFALO GROVE, IL 60089

Contact:

Telephone Number: (847) 215-1144
FAX Number: (847) 215-0577
E-Mail: profileproducts.com
Web: www.profileproducts.com

Product Name:	ECOFIBER®
Revision Date:	2/26/08
MSDS Number:	CON003
CAS Number:	Not applicable
Product Use:	Erosion control mulch for hydraulic seeding

Product Description: Green dyed wood fibers

2 HAZARDS IDENTIFICATION

Route of Entry:	Inhalation, skin contact, eye contact
Target Organs:	
Inhalation:	Wood dust may cause sneezing, irritation, and dryness of the nose and throat. Dust may aggravate pre-existing respiratory conditions.
Skin Contact:	Wood dust can cause irritation. Skin absorption is not known to occur.
Eye Contact:	Wood dust can irritate the eyes.
Ingestion:	No reports of human ingestion.

NFPA-ratings (scale 0-4): Health = 0, Fire = 2, Reactivity = 0

OSHA Classification: Wood dust is a hazardous substance as defined by the Hazard Communication Standard 29CFR 1910.1200.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas #	Perc.	Chemical Name

MSDS *Material Safety Data Sheet*

PROFILE Products, LLC



ECOFIBER®

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4 FIRST AID MEASURES

Inhalation:	Usually not a problem. Remove to fresh air if respiratory irritation develops, and get medical aid promptly if irritation persists.
Skin Contact:	Usually not a problem. Wash off with running water if irritation is experienced.
Eye Contact:	Open eyelids and flush with water.
Ingestion:	Get medical attention.

5 FIRE FIGHTING MEASURES

Flash Point:	Not applicable
Flash Point Method:	Not applicable
Autoignition Temperature:	200-208°C (400-500°F)
Flammability Classification:	Combustible product

Conditions: In contact with flames or hot surfaces

Flammable- Extinguish with water; same as a wood fire

6 ACCIDENTAL RELEASE MEASURES

Scoop up product. Wear goggles and respirator if dust is produced in unventilated areas. Wet product will be slippery.

7 HANDLING AND STORAGE

Handling Precautions:	Clean up areas where dust settles. Minimize blowdown or other practices that generate high airborne dust concentrations.
Storage Requirements:	Store in a cool, dry place. Keep away from sources of ignition.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:	None required for outdoor mixing and application. Use dust collection system for indoor bagging operations.
Protective Equipment:	Eye Protection: Wear goggles when emptying bags and during other operations where there is a risk of dust entering the eyes. Gloves: Leather, plastic or rubber gloves could be worn to minimize skin irritation. Respirators: When handling methods generate dust at concentrations that exceed occupational exposure limits, wear a NIOSH approved respirator. A fabric respirator or a facepiece respirator with dust cartridges will generally provide adequate protection. Footwear: The product is slippery when wet. Wear appropriate footwear.

MSDS Material Safety Data Sheet

PROFILE Products, LLC



ECOFIBER®

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9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dyed, green wood fibers - Pine and mixed hardwoods	Boiling Point:	
Physical State:	Wood Fibers	Freezing/Melting Pt.:	
Odor:	Mild wood odor	Solubility:	
pH:		Spec Grav./Density:	lighter than water
Vapor Pressure:	N/A		
Vapor Density:			

10 STABILITY AND REACTIVITY

Stability:	Stable product
Conditions to avoid:	Contact with strong acids and oxidizers may generate heat. Product may ignite at temperatures in excess of 200°C (400°F).
Materials to avoid (incompatibility):	Strong acids and oxidizers
Hazardous Decomposition products:	
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

EFFECTS OF CHRONIC EXPOSURE:

Inhalation: Frequent and repeated exposure to wood dust is associated with an increased risk of developing nasal cancer.
Skin Contact: Although rare, wood dust may cause dermatitis in sensitized people.

Occupational Exposure Limits:

Wood dusts- All other species: ACGIH (2007): TLV-TWA 1 mg/m³ (Inhalable fraction); A4

Particulates Not Otherwise Regulated (PNOR): OSHA: PEL-TWA 15 mg/m³ (Total Dust); 5 mg/m³ (Respirable fraction)

Irritancy: Wood dust is a mild irritant

Sensitization: Some wood dusts may cause allergic skin reactions

12 ECOLOGICAL INFORMATION

MSDS *Material Safety Data Sheet*

PROFILE Products, LLC



ECOFIBER®

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13 DISPOSAL CONSIDERATIONS

Normally can be disposed of as a wood residue. Ensure disposal is in compliance with local, provincial (state), and federal regulations.

14 TRANSPORT INFORMATION

DOT Class: Not regulated #

15 REGULATORY INFORMATION

COMPONENT / (CAS/PERC) / CODES

REGULATORY KEY DESCRIPTIONS

MASS = MA Massachusetts Hazardous Substances List
NRC = Nationally Recognized Carcinogens
OSHA WAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TXAIR = TX Air Contaminants with Health Effects Screening Level

CERCLA = Superfund clean up substance
CSWS = Clean Water Act Hazardous substances
EHS302 = Extremely Hazardous Substance
EPCRAWPC = EPCRA Water Priority Chemicals
HAP = Hazardous Air Pollutants
NJEHS = NJ Extraordinarily Hazardous Substances
NJHS = NJ Right-to-Know Hazardous Substances
OSHA PSM = OSHA Chemicals Requiring process safety management
SARA313 = SARA 313 Title III Toxic Chemicals

16 OTHER INFORMATION

END OF MSDS DOCUMENT