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Material Safety Data Sheet – MSDS

Product Name:	Enviro-Matrix™ Fiber Reinforced Matrix (FRM)
Revision Date:	May 2013

1. Product Identification

Product	Wood Based Fiber Reinforced Matrix (FRM) Hydraulic Mulch	
Trade Name	Enviro-Matrix	
CAS#	9004-34-6	
ACGIH TLV	5 mg/m3 (respirable)	
OSHA	15 mppcf	
HMIS Rating:	Flammability	1
	Personal Protection	E
	Health	1
	Reactivity	0
Filler	Proprietary	

2. Hazardous Ingredients

Wood Dust is considered a hazardous substance as defined by the Hazardous Communications Standards 29CFR1910.1200.

3. Physical Properties

Boiling Point (F)	Not Applicable
Vapor Pressure (mm Hg)	Not Applicable
Vapor Density	Not Applicable
Solubility in Water	Insoluble, Dispersible
Bulk Density	22 lb/ft³
Reactivity in Water	Dispersible
Melting Point	Not Applicable
Appearance & Odor	Coarse material, green in color. No discernible odor.

4. Fire & Explosion Data

Flash Point	>550F
Flammability Limits:	
LEL	Not Applicable
UEL	Not Applicable
Extinguishing Media	Water
Special Fire Fighting Procedures	None
Unusual Fire & Explosion Hazards	None

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5. Reactivity

Stability	Stable
Conditions to Avoid	Avoid extreme heat and flame
Hazardous Decomposition	May produce carbon monoxide and carbon dioxide
Hazardous Polymerization	Will not occur

6. Health Hazards

Material is primarily a Nuisance Dust

Overexposure	May cause irritation to eye and respiratory system. Avoid breathing dust.
Inhalation	Can cause irritation to mucous membrane and upper respiratory system. Remove to fresh air.
Ingestion	May cause vomiting or diarrhea.
Eyes	In case of eye contact flush with copious amount of water
Skin	In case of broken skin, wear gloves. Wash dust with soap and water.

7. Special Precautions Spill/Leak Procedures

Spill	Sweep up excess material
Disposal	In accordance with Federal, State and local refuse regulations

8. Special Protection Control Measures

Respiratory Protection	Use NIOSH approved respiratory masks
Eye Protection	Use goggles or eye glasses
Hand Protection	If sensitive, wear gloves
Other Protective Clothing	None
Ventilation	Normal & ventilation
Work/Hygiene	Practices standard hygiene

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Enviro-Matrix™
FIBER REINFORCED MATRIX

Advanced Formula
Ultimate Performance
Sustainable Results

ENGINEERED TECHNOLOGY

Produced from Thermo-Mechanically processed **Virgin Wood Fibers**, our proprietary blend of "**Cross-linked**" bonding agents, and strength-enhancing **Engineered Fibers**, Enviro-Matrix is the professional choice for solving unique erosion control and revegetation challenges.

ENVIRONMENTALLY SAFE

Enviro-Matrix cures to a durable, flexible blanket that contours to the surface achieving intimate soil contact and providing superior coverage, reduced moisture loss and improved vegetative growth. **100% Non-Toxic, Biodegradable and Environmentally Friendly.**

ULTIMATE PERFORMANCE

Engineered fibers are evenly dispursed throughout, forming a strong interwoven network to ensure **Uniform Strength and Maximum Durability for Superior Long-Term Performance. No Cure Time Required.**

FAST & EFFECTIVE

Eliminate excess site preparation with **Enviro-Matrix's Simple One-Step Hydraulic Application**. Easily combine seed, fertilizer and soil amendments for a more efficient application with a smooth, even distribution.

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Dependable, Smart. Naturally.

Call 800.654.6117 or visit:

www.centralfiber.com/enviro-matrix.php

Distributed By:

Enviro-Matrix™
FIBER REINFORCED MATRIX

TECHNICAL DATA

Enviro-Matrix is a high performance hydraulically applied Fiber Reinforced Matrix (FRM) comprised of thermo-mechanically processed virgin wood fiber and engineered reinforcing fibers. It comes premixed with a proprietary blend of cross-linked bonding agents and does not require additional binders or other additives to provide superior erosion control. Enviro-Matrix instantly adheres to the soil providing immediate protection that increases in effectiveness the longer it cures. Enviro-Matrix provides a functional and economical alternative to more expensive materials. It gets vegetation off to a faster, stronger start by maximizing water and nutrient retention while having the durability to ensure sustainable growth.

Mixing & Application

Enviro-Matrix Fiber Reinforced Matrix is mixed and applied with a standard hydro seeding machine (mechanically agitated machines are recommended). Mix the FRM with approximately 125 gallons of water per 50 pound bale. Seed, fertilizer, and soil amendments may be added at specified rates to provide a one-step application for hydro seeding and erosion control projects. Apply the FRM with a fan-type nozzle (50° tip), in a cross-directional method, to achieve a minimum of 95% soil surface coverage. Follow the equipment manufacturer's installation instructions and recommendations for operation.

Recommended Application Rates*		
Slope Gradient	US	Metric
≤ 4H to 1V	2500lbs / Acre	2800kg / Ha
≤ 3H to 1V	3000lbs / Acre	3400kg / Ha
≤ 2H to 1V	3500lbs / Acre	3900kg / Ha
≤ 1H to 1V	4000lbs / Acre	4500kg / Ha
> 1H to 1V	4500lbs / Acre	5000kg / Ha
Under Blankets or TRM	1500lbs / Acre	1700kg / Ha
Infill for TRM	3500lbs / Acre	3900kg / Ha

**Rates represent typical conditions & may be modified by the engineer for site requirements; Not recommended for channels or high concentrated flow areas.*

Cleaning

Thoroughly wash/flush equipment exterior and interior (tank, hoses, pump) after application to remove any residue. Material that is allowed to dry becomes difficult to remove.

Product Composition / Property Values

Thermo-Mechanically Processed Virgin Wood Fiber	81% (minimum)
Proprietary Blend of Cross-linked Bonding Agents	14% (maximum)
Engineered Reinforcing Fibers	5% (maximum)
Moisture Content	10% (±3%)
% Effectiveness	99.99% (ASTM 6459)
Functional Longevity	Up to 18 Months
Vegetation Enhancement	400% (minimum [ASTM D7322])
Water Holding Capacity	1300% (minimum [ASTM D7367])
Cure Time	None Required *(Optimal results with up to 24 hour cure time)*
Cover Factor	0.001 (Large Scale Testing)
EcoToxicity	Non-Toxic (EPA 821/R-02/012)
Degradability	100%
Applied Color	Green

Packaging & Shipping

Bag Dimensions, Net Weight	18" x 10" x 26", 50lbs *(UV / Weather-Resistant Plastic)*
Pallet Dimensions, Quantity	46" x 46" x 101", 40 Bags *(UV/Weather-Resistant Stretch-Wrap)*
Full Truckload	22 pallets, 880 Bags

Technical Assistance

Technical Department: (800) 654-6117