



MATERIAL SAFETY DATA SHEET

Last Updated May 21, 2010

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **HydroStraw® Bonded Fiber Matrix Formulation** CAS Number: Mixture
 Product Use: Vegetation establishment erosion control mulch for hydraulic seeding, a blown straw alternative, and an ADC alternative.
 Product Description: Hydraulically applied mulch with a specially formulated composition of annually renewable straw fiber, (V.E.M.) Vegetation Establishment Mulch™, natural fibers for fiber matrix entanglement, and proprietary binder. Load More Spray More, Use Less Water.
 Company Identification: **HydroStraw, LLC**
 3676 W. 9000 N. Rd.
 Manteno, IL 60950 USA
 (800) 545-1755 Toll Free (For product information)
 (815) 468-3610
 (815) 468-7450 Fax
info@hydrostraw.com
www.hydrostraw.com

2. COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

| Ingredients | Percentage | Hazardous |
|--|------------|---------------|
| Heat & Mechanically Treated (HMT)™ - Straw | 68.0% | Non-Hazardous |
| Natural Fibers | 12.0% | Non-Hazardous |
| Moisture | 10.0% | Non-Hazardous |
| Proprietary Tackifiers | 10.0% | Non-Hazardous |

This product is not considered hazardous under the criteria of Federal OSHA Hazard Communication Standard 29CFR 1910.1220.

California Prop 65: This product does not contain an ingredient(s), above the safe harbor limits, which are known to the state of California to cause cancer, birth defects, or other reproductive harm.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION! THIS PRODUCT MAY BE COMBUSTIBLE IF EXPOSED TO TEMPERATURES OVER 180°F. DUST FROM THIS PRODUCT MAY IRRITATE SKIN, EYES AND UPPER RESPIRATORY SYSTEM.

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY: Inhalation, eye contact, and skin contact.

TARGET ORGANS: Respiratory System.

INHALATION: Occasional mild irritation of nose and throat may occur from inhalation of dusts at levels greater than 10 mg/m³.

INGESTION: Not a normal route of entry. Small amounts swallowed are not likely to cause effects; swallowing larger amounts may cause gastrointestinal symptoms.

SKIN CONTACT: Straw dust may cause mild mechanical irritation to skin.

EYE CONTACT: Straw dust may cause mild mechanical irritation to eyes.



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CHRONIC EXPOSURE: None known

AGGRAVATION OF PRE-EXISTING CONDITIONS: Individuals with pre-existing respiratory disorders may aggravate the condition by inhalation of dust.

4. FIRST AID MEASURES

INHALATION FIRST AID: Prolonged exposure to dust levels in excess of regulatory limits should always be avoided. If irritation or difficulty breathing occurs, remove victim to fresh air and provide oxygen if necessary. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention if difficulty persists.

SKIN CONTACT FIRST AID: Wash with soap and water after handling.

EYE CONTACT FIRST AID: If contact with eyes, flush with fresh water for several minutes. If irritation persists seek medical attention.

INGESTION FIRST AID: If swallowed, rinse mouth with water and give four glasses of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if needed.

NOTE TO PHYSICIANS: Treat symptoms

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: Combustible

AUTO IGNITION TEMPERATURE: No data

FLASH POINT: No data

FLAMMABLE LIMITS IN AIR, % by Volume: lel: NE; uel: NE.

EXTINGUISHING MEDIA: Water or other standard media. Same as a wood or straw fire.

FIRE & EXPLOSION HAZARDS: May be combustible above 180°F.

SPECIAL INFORMATION:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

SPILL CLEAN-UP PROCEDURES:

Vacuum, shovel or sweep up mulch and place in containers for reuse, recycling or disposal. Always dispose of waste materials in accordance with all local, state and federal regulations.

7. HANDLING AND STORAGE

RECOMMENDED STORAGE CONDITIONS: Store in a cool, dry well-ventilated location away from heat or ignition sources. Insure packaging is in good condition for outside storage.

HANDLING (PERSONNEL): Handle in accordance with good industrial hygiene and safety practices.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

AIRBORNE EXPOSURE LIMITS: See Section 2 above.

Dust:



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-OSHA Permissible Exposure Limit (PEL): 10 mg/m³ (TWA)

VENTILATION SYSTEM: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.

PERSONAL RESPIRATORS (NIOSH APPROVED): Required if the exposure limit is exceeded or engineering controls are not feasible. Always use a NIOSH approved respirator. A fabric respirator or a face piece respirator with dust cartridges will generally provide adequate protection.

SKIN PROTECTION: Wear gloves of leather, plastic, or rubber when loading tanks.

EYE PROTECTION: Wear safety glasses in high dust areas or when filling tanks..

GOOD HYGIENE CONDITIONS: Wash with soap and water before meals and at the end of each work shift. Good practices require amounts of any chemical be removed from the skin as soon as practical, especially before eating or smoking.

9. PHYSICAL AND CHEMICAL PROPERTIES

ODOR: Negligible

SPECIFIC GRAVITY: NE (Water =1)

pH: 6.80

COLOR: Green

AUTO IGNITION TEMPERATURE: Not Established

10. STABILITY AND REACTIVITY

STABILITY: Stable under ordinary conditions of use and storage.

CONDITIONS TO AVOID: Heat, flame ignition sources.

HAZARDOUS POLYMERIZATION: Will not occur

INCOMPATIBILITY WITH OTHER MATERIALS: None

HAZARDOUS DECOMPOSITION: None

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

No Data Available

Cancer Lists

---NTP Carcinogen---

Ingredient

All ingredients

Known

No

Anticipated

No

IARC Category

None

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE:

This material is expected to have a low environmental impact.

ENVIRONMENTAL TOXICITY:

This material is not expected to be toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL:

Recover, reclaim or recycle when practical.

Dispose of material in accordance with federal, state and local requirements.



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14. TRANSPORTATION INFORMATION

This Product is not regulated by the U.S. Department of Transportation.

15. REGULATORY INFORMATION

FEDERAL REGULATORY STATUS

Federal, State & International Regulations - Part 1

| | <u>-SARA 302-</u> | | <u>List</u> | <u>-SARA 313-</u> <u>Chemical Catalog</u> |
|-----------------|-------------------|------------|-------------|--|
| Ingredient | <u>RQ</u> | <u>TPQ</u> | | |
| All ingredients | NO | NO | NO | NO |

Federal, State & International Regulations - Part 2

| | <u>CERCLA</u> | <u>-RCRA-</u> | <u>-TSCA-</u> |
|-----------------|---------------|---------------|---------------|
| Ingredient | | <u>261.33</u> | <u>8(d)</u> |
| All ingredients | NO | NO | NO |

SARA 311/312: Acute: Yes Chronic: No Fire: Yes Pressure: No
Reactivity: No (Pure / Liquid)

PROP 65 - WARNING:

THIS PRODUCT DOES NOT CONTAIN A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

RCRA 40 CFR: None

16. OTHER INFORMATION

Prepared By: Paul Eigbrett (MSDS Authoring Services)

Part Number: 081310HB

ADDITIONAL INFORMATION:

The data in this Material Safety Data Sheet relates only to the specific material designated herein. It does not relate to use in combination with any other material or in any process. This Material Safety Data Sheet (MSDS) has been reviewed to fully comply with the guidance contained in the ANSI MSDS standard (ANSI Z400.1-2004)

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



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END OF MSDS

YOUR
HYDROSEEDER
WILL LOVE
HYDROSTRAW[®]
MULCH

**NEW
PRODUCT**

HYDROSTRAW[®]
BONDED FIBER MATRIX
FORMULATION



HydroStraw[®] BFM
Formulation Contains
10% Natural Fibers
for Matrix Entanglement
10% Soil Binding Agents
Proprietary Formulation
Patent Pending

THE NATURAL PROGRESSION
Blown Straw Replacement | Saves Money & Time | Facilitates Vegetation
Faster Loading & Application Times | Erosion Prevention for Steep Slopes

VISIT: www.hydrostraw.com

HYDROSTRAW® BONDED FIBER MATRIX FORMULATION

(V.E.M.) Vegetation Establishment Mulch



| Slope Gradient/Condition | Ibs/ac |
|--------------------------|-------------|
| ≤ 3:1 | 3,000 |
| ≤ 2:1 | 3,500 |
| ≤ 1:1 | 4,500 |
| Soil Moisture Retention | 2,000-3,500 |



Enhances Seed Germination

HydroStraw® Bonded Fiber Matrix is designed to be more cost effective than blankets and cost less to apply per acre than conventional BFM mulches on difficult sites, slopes, and adverse soil conditions where extra erosion prevention is needed. The product includes long natural fibers for maximum matrix entanglement for improved performance. The combination of fiber entanglement in conjunction with our cross linked high-strength polymer binders produce great erosion prevention and vegetation establishment.



Extra Strength for Difficult Slopes

HydroStraw® Bonded Fiber Matrix in field tests has shown that the annually renewable heat and mechanically treated straw fibers in this product improves seed's germination and vegetation establishment. Research has shown that vegetation is many times better than temporary mulches in erosion prevention. Thereby the ultimate goal is creating an environment for rapid vegetation establishment with seed friendly straw fibers.



Protection for Difficult Soil Conditions

HydroStraw® Bonded Fiber Matrix consists of annually renewable heat and mechanically treated straw fibers, environmentally safe fibers that are biodegradable, and a non-toxic green colorant to aid in application. Field tests have shown HydroStraw® mulch protects soil and enhances seed germination and vegetation establishment as the fibers bio-degrade. (V.E.M. Vegetation Establishment Mulch).



CONTACT US:

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