Product Type: Fiber Reinforced Matrix Hydraulic Mulch
Revision Date: May 2015

1. Identification and Product Identification

Product Name: SprayMatrix® Fiber Reinforced Matrix
Company Name: Central Fiber LLC
4814 Fiber Lane
Wellsville, KS 66092

Emergency Contact: 785-883-4600
Recommended Use: Hydraulic mulch used for soil erosion control and hydroseeding.
Restrictions: None known

2. Hazardous Identification

DANGER! THIS PRODUCT MAY CONTAIN WOOD DUST.

WOOD DUST MAY CAUSE NASOPHARYNGEAL CANCER BY PROLONGED INHALATION. MAY CAUSE ALLERGY OR ASTHMA SYMPTOMS OR BREATHING DIFFICULTIES IF INHALED. MAY CAUSE AN ALLERGIC SKIN REACTION. MAY CAUSE RESPIRATORY IRRITATION. CAUSES EYE IRRITATION. SUSPECTED OF CAUSING GENETIC DEFECTS. MAY FORM COMBUSTIBLE DUST CONCENTRATIONS IN AIR (DURING PROCESSING).

PRECAUTIONS:

Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Take off contaminated clothing and wash before reuse. Avoid breathing dust. In case of inadequate ventilation, wear respiratory protection. Keep away from sparks/open flames. No smoking.

Overexposure to wood dust and other components from this product under normal use, handling, and storage is not anticipated.

3. Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS NUMBER</th>
<th>NAME</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td>Wood Fiber from Soft/Hard Woods</td>
<td>≥81%</td>
</tr>
<tr>
<td>Proprietary</td>
<td>Polysaccharide Tackifier</td>
<td>8-9%</td>
</tr>
<tr>
<td>Proprietary</td>
<td>Synthetic Fiber</td>
<td>3-5%</td>
</tr>
<tr>
<td>Proprietary</td>
<td>Soil Stabilizer</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>107-22-2</td>
<td>Proprietary Glyoxal Based Crosslinker</td>
<td>&lt;1.4%</td>
</tr>
<tr>
<td>41272-40-6 or 3844-45-9</td>
<td>Green Dye/Blue Dye</td>
<td>&lt;0.1%</td>
</tr>
</tbody>
</table>
4. First-Aid Measures

IF INHALED: And breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms following removal to fresh air, call Doctor or other qualified medical professional. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs, get medical advice/attention. IF EXPOSED OR CONCERNED: Get medical advice/attention.

5. Fire-Fighting Measures

Explosion: Fine dust dispersed in air in sufficient concentration and in the presence of an ignition source is a potential dust explosion hazard. Avoid generating dust.
Extinguish media: Water spray, CO₂.

6. Accidental Release Measures

Dust: Avoid generating dust near an ignition source.
Spill: Remove with explosion-proof vacuum or sweep up excess material while avoiding generating dust.
Disposal: In accordance with federal, state, and local refuse regulations

7. Handling and Storage

Avoid dust formation and accumulation with routine housekeeping. Avoid use around or near ignition sources. Avoid eye contact. Avoid prolonged or repeated contact with skin. Avoid prolonged or repeated breathing of wood dust. Store in a dry location, avoid moisture.

8. Exposure Controls / Personal Protection

<table>
<thead>
<tr>
<th>Component</th>
<th>NIOSH/ACGIH TLV</th>
<th>OSHA PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Dust, soft or hardwood</td>
<td>TLV-TWA 1mg/m³ Inhalable fraction</td>
<td>PEL-TWA 15mg/m³ Total</td>
</tr>
<tr>
<td>Glyoxal</td>
<td>0.1 mg/m³ vapor</td>
<td>PEL-TWA 5mg/m³ Respirable</td>
</tr>
</tbody>
</table>

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

Use in a processing environment designed to avoid generating dusts, which is free of ignition sources.
9. Physical and Chemical Properties

- **Flash Point:** Not Applicable
- **Boiling Point (F):** Not Applicable
- **Vapor Pressure (mm Hg):** Not Applicable
- **Vapor Density:** Not Applicable
- **Solubility in Water:** Insoluble, Dispersible
- **Bulk Density (packaged product):** 16-18 lb/ft³
- **Reactivity in Water:** Dispersible
- **Melting Point:** Not Applicable
- **Appearance & Odor:** Fibrous material, green or blue-green in color. No discernible odor.
- **LEL/UEL:** 40,000 mg of dust per m³ is considered the LEL for wood dust.

10. Stability & 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

11. Toxicological Information

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50 Inhale (dust)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood Fiber from Soft/Hard Woods</td>
<td>Non-toxic</td>
<td>Non-toxic</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Polysaccharide Tackifier</td>
<td>&gt; 6000 mg/kg rat</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>Glyoxal Based Crosslinker</td>
<td>&gt; 5000 mg/kg rat</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

* Components not listed are not hazardous substances.

May cause irritation to eye and respiratory system. Persons with respiratory problems should avoid breathing dust. Can cause irritation to mucous membrane and upper respiratory system. Remove to fresh air.

**Carcinogenicity Listing:** Wood Dust

**NTP:** Wood Dust, Known Human Carcinogen.

An association between wood dust exposure and cancer of the nasal cavity has been observed in many cases reports, cohort studies, and case-control studies that specifically addressed nasal cancer. Strong and consistent association with cancer of the nasal cavities and paranasal sinuses were observed both in studies of people whose occupation are associated with wood dust exposure and in studies that directly estimated wood dust exposure. This classification is based primarily on increased risk in occurrence of adenocarcinomas of the nasal cavities and paranasal sinuses associated with exposure to wood dust. The evaluation did not find sufficient evidence for cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum.

There is inadequate evidence for the carcinogenicity of wood dust from studies in experimental animals according to NTP.
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**IARC Monographs:** Wood Dust, Group 1 – Carcinogenic to Humans

This classification is primarily based on studies showing an association between occupational exposure to wood dust and adenocarcinoma to the nasal cavities and paranasal sinuses. IARC did not find evidence of an association between occupational exposure to wood dust and cancers of the oropharynx, hypopharynx, lung, lymphatic and hematopoietic systems, stomach, colon or rectum.

**Assessment of mutagenicity:**

Glyoxal was mutagenic in various test systems with microorganisms and cell cultures; however, these results could not be confirmed in tests with mammals. Mutagenic properties cannot be excluded on the basis of experimental data.

*Overexposure to wood dust and other components from this product under normal use, handling, and storage is not anticipated.*

**12. Ecological Information**

Wood fiber slowly biodegrades in water, is not eco-toxic and persists for longer periods of time in arid soils. The green or blue dye used in this product is not believed to be eco-toxic at concentrations found in this product. Glyoxal is readily biodegradable (according to OECD criteria) and not considered to be eco-toxic at concentration found in this product.

**Acute Toxicity:**  
(SprayMatrix run-off collected per modified ASTM 6459)  
LC50 Daphnia pupex > 100%  
LC50 Pimephales promelas > 100%

**13. Disposal Considerations**

No special requirements. Follow applicable federal, state, and local regulations.

**14. Transportation Information**

Not regulated as a hazardous material for transport.

**15. Regulatory Information**

**WHMIS:** Wood dust – controlled Product: D2A – wood dust: IARC Group 1.  
**TSCA:** Not applicable or listed.  
**State Right-to-Know:** Wood dust - California Proposition 65: wood dust is a substance known to cause cancer. PA: Wood dust appears on Pennsylvania's Appendix A., Hazardous Substance List. NJ: wood dust/glyoxal appear on New Jersey's Environmental Hazardous Substance List.  
**SARA 313 Information:** This product does not contain any chemical components that exceed the threshold (de minimis) reporting levels established by SARA Title III, section 313 and 40 CFR section 372.  
**CERCLA:** Not applicable.  
**DSL:** Not applicable.
Safety Data Sheet – SDS

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OSHA: Wood fiber per se is not hazardous under the criteria of the federal OSHA Hazard Communication Standard (29 CFR 1910.1200). However, wood dust may be hazardous and hence is included under 1910.1200.

REACH: Not applicable.

16. Other Information

See NFPA 654 for safe handling of combustible particulate solids.

Information presented herein has been compiled from sources considered dependable and is accurate and reliable to the best of our knowledge and belief, but it is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or any product in violation of any patents or in violation of any laws or regulations. It is the user’s responsibility to determine the suitability of any material for a specific purpose and adopt necessary safety precautions. We make no warranty as to results to be obtained in using any material and, since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.
To Us, Effective Erosion Control Is Second Nature®

Advanced formulation using both wood and engineered fibers, Thermo-Mechanical processing and a proprietary blend of Cross-linked Bonding Agents. SprayMatrix is specifically developed for solving unique erosion control and revegetation challenges.

SprayMatrix saves time and labor when combined with seed, fertilizer and soil amendments, by eliminating excess site preparation with its Simple One-Step Application.

Engineered fibers link together, forming a Strong interwoven network, ensuring a more consistent and Flexible bond for improved strength, durability and water retention with Lasting Performance.

SprayMatrix is 100% Non-Toxic and biodegradable with no weed seed or chemicals to inhibit germination and establishment of healthy turf.

Erosion control projects can be complex and labor intensive. SprayMatrix's unique properties allow for a more efficient application with easy distribution. Higher Quality Protection + Lower Installation Costs = Superior Project Results.
SprayMatrix is a high performance hydraulically applied Fiber Reinforced Matrix (FRM) comprised of thermomechanically 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. SprayMatrix instantly adheres to the soil providing immediate protection that increases in effectiveness the longer it cures. SprayMatrix 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**

SprayMatrix 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.

**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