



Material Safety Data Sheet

Section 1: PRODUCT AND COMPANY INFORMATION

Product Name(s): PermaMatrix® Biotic Soil Amendment HYDRO

Product Identifiers: Organics, Microbes, Mycorrhizae, Burlap/Straw Fiber, Plant Growth Aids

Manufacturer:
 PermaMatrix Inc.
 PO Box 1210
 Fairview OR 97024

Information Telephone Number:
 503-241-7333 (8am to 5pm PST)
Emergency Telephone Number:
 503-313-2795

Product Use: Products are used for Ecological Restoration of soils using hydraulic application.

Note: This MSDS covers many types of soil and media. Individual composition of hazardous constituents will vary between soil types and different media.

Section 2: COMPOSITION/INFORMATION ON INGREDIENTS

| Component | pH | CAS Number | OSHA PEL-TWA (mg/m ;) | ACGIH TLV-TWA (mg/m ;) | LD50 | LC50 |
|-------------------------------|-----------|------------|-----------------------|------------------------|------|------|
| Organic Humic Compounds | 6.4 – 6.6 | NA | NA | NA | NA | NA |
| Blended Fiber | NA | NA | NA | NA | NA | NA |
| Charcoal (Biochar) | 8.0 – 9.0 | NA | NA | NA | NA | NA |
| EcoLive Mycorrhizae | 6.0 - 7.0 | NA | NA | NA | NA | NA |
| Ecobiotics Microbial Suite | 6.5 – 6.7 | NA | NA | NA | NA | NA |
| Water Storing Organic Polymer | 6.0 - 7.0 | NA | NA | NA | NA | NA |

Section 3: HAZARD IDENTIFICATION

Emergency Overview: PermaMatrix is rich dark material of fine particles that may contain other naturally occurring material. (e.g. fiber, straw). It has an earthy odor. It is not combustible or explosive. A single, short term exposure to media presents little or no hazard. Wash hands and exposed skin with soap and water after use.

Potential Health Effects:

Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Skin Contact: Media may cause dry skin, abrasions, discomfort, and irritation.

Inhalation (acute): Breathing dust may cause nose, throat or lung irritation, including choking, depending on the degree of exposure.

Inhalation (chronic): Risk of injury depends on duration and level of exposure.

Section 3: HAZARD IDENTIFICATION (continued)

Ingestion: Do not ingest media. Although ingestion of small quantities of media is not known to be harmful, large quantities can cause intestinal distress.

Medical Conditions

Aggravated by Exposure: Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure to dust.

Section 4: FIRST AID MEASURES

Eye Contact: Rinse eyes thoroughly with water for at least 15 minutes, including under lids, to remove all particles. Seek medical attention for abrasions.

Skin Contact: Wash with water and a pH neutral soap or a mild skin detergent. Seek medical attention for rash or irritation.

Inhalation: Move person to fresh air. Seek medical attention for discomfort or if coughing or other symptoms do not subside.

Ingestion: Remove from exposure, drink plenty of water. Seek medical attention if irritation conditions persist. Product is inert and nontoxic.

Section 5: FIREFIGHTING MEASURES

| | | | |
|---------------------------------|---|--------------------------------|--|
| Flashpoint & Method: | Straw/Burlap, Biochar Not Known Others | Firefighting Equipment: | Media poses no fire-related hazard. A SCBA is recommended to limit exposure to combustion products when fighting any fire. |
| General Hazard: | Non-combustible Avoid Breathing dust. | | |
| Extinguishing Media: | Use extinguishing media appropriate for surrounding fire. | Combustion Products: | Straw/Burlap, Biochar |

Section 6: ACCIDENTAL RELEASE MEASURES

General: Place spilled material into a container. If uncontaminated, product can be reused. Avoid actions that cause the media to become airborne. Avoid inhalation of dust. Wear appropriate protective equipment as described in Section 8.

Waste Disposal Method: Spread over disturbed soils to enhance plant growth.

Section 7: HANDLING AND STORAGE

General: Stack bagged material in a secure manner to prevent falling. Bagged media is heavy and poses risks such as sprains and strains to the back, arms, shoulders and legs during lifting and mixing. Handle with care and use appropriate control measures.

Engulfment hazard. To prevent burial or suffocation, do not enter a confined space, such as a silo, bin, bulk truck, or other storage container or vessel that stores or contains Media. Media can buildup or adhere to the walls of a confined space. The Media can release, collapse or fall unexpectedly.

Section 7: HANDLING AND STORAGE (continued)

Do not stand on stockpiles of Media, they may be unstable. Use engineering controls (e.g. wetting stockpiles) to prevent windblown dust from stockpiles, which may cause the hazards described in Section 3.

Usage: Use all appropriate measures of dust control or suppression, and Personal Protective Equipment (PPE) described in Section 8 below.

Housekeeping: Avoid actions that cause the media to become airborne during clean-up such as dry sweeping or using compressed air. Use HEPA vacuum or thoroughly wet with water to clean-up dust. Use PPE described in Section 8 below.

Storage: Store Media separately from feed, food, pesticides, and fertilizers so that cross contamination does not occur.

Storage Temperature: Unlimited. **Storage Pressure:** Unlimited.

Clothing: Remove and launder clothing that is dusty before it is reused.

WARNING: Large quantities of activated charcoal (especially when wet) can deplete oxygen from the air, and dangerously low levels of oxygen may result. When workers enter a vessel containing straight activated carbon, procedures for potentially low oxygen areas should be followed. Activated carbons are not listed as potential carcinogens by any agency.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Use local exhaust or general dilution ventilation or other suppression methods to maintain dust levels below exposure limits.

Personal Protective Equipment (PPE):

Respiratory Protection: Use appropriate NIOSH/MSHA approved particulate respirators if necessary. Otherwise, use standard respiratory protection to avoid dust inhalation.

Eye Protection: Wear ANSI approved glasses or safety goggles when handling to prevent dust contact with eyes. Wearing contact lenses when handling loose material, under dusty conditions, is not recommended.

Skin Protection: Wear gloves and long sleeve shirts to protect existing abrasions or irritation from dust in situations where irritation may occur. Remove clothing and protective equipment that becomes dusty and launder before reusing.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|--------------------------|---------------------|-----------------------------|-------------|
| Physical State: | Solid | Evaporation Rate: | NA |
| Appearance: | Black to dark Brown | pH (in water): | 6.6 +/- |
| Odor: | Earthy | Boiling Point: | NA |
| Vapor Pressure: | NA | Freezing Point: | None, solid |
| Vapor Density: | NA | Viscosity: | None, solid |
| Specific Gravity: | NA | Solubility in Water: | Insoluble |

