



HydroRush™
Bright White Roots

MATERIAL SAFETY DATA SHEET HydroRush

1. IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name: HydroRush
Responsible Party: Plant Technology Marketing Group, LLC
3309 SE Raymond
Portland Oregon 97202, USA
Office Phone: 503.308.9657

2. HAZARDS IDENTIFICATION

Hazard Classification: Under normal conditions of responsible use, this product should not present a hazard to the user or the environment.

Health Hazards: May cause discomfort or mild irritation of eyes, skin, or respiratory system. Ingestion of large quantities may be harmful.

Physical Hazards: None anticipated.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Composition: A proprietary mixture of inorganic salts and other organic chemical ingredients in aqueous (water-based) solution.

4. FIRST AID MEASURES

Eye: Can cause irritation redness and pain.

Skin: Prolonged exposure can cause irritation or rash. Symptoms can include redness, itching and pain.

Cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness persists, seek medical attention.

Inhalation: (Breathing) If respiratory symptoms develop, move victim away from source of exposure and into fresh air.
If symptoms persist, seek medical attention.

Ingestion: (Swallowing) Can cause irritation to the gastrointestinal tract, may cause nausea, vomiting and diarrhea.

5. FIRE FIGHTING MEASURES

Flammable Properties:

The product is not flammable. Refer to Section 9 for additional information.

Hazards from Combustion Products:

Material will not burn, but if involved in a fire, flammable/toxic gases (oxides of carbon and nitrogen, ammonia) may be generated after material evaporates to dryness.
Exposure to heat may liberate ammonia fumes.

Extinguishing Media: Use extinguishing agent suitable for type of surrounding fire.

Fire Fighting Instructions:

Protective Equipment: For fires beyond the incipient stage, emergency responders in the immediate hazard area should wear appropriate protective equipment as conditions warrant.

When the potential chemical hazard is unknown, in enclosed or confined spaces, or when explicitly required, a self-contained breathing apparatus should be worn.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Can be diluted and flushed into sewer
Material is water-soluble and will disperse in water.

Cleanup: Ensure that disposal of spilled/contaminated material complies with federal, state, and local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling: Avoid ingestion, skin contact, eye contact and inhalation.

Conditions for Safe Storage:

Keep in tightly closed containers in a cool, dry, ventilated area.
Keep away from any incompatible materials. Refer to Section 10.
Protect against extremes in temperature.
Heating above 140°F (60° C) will promote hydrolysis.
Temperatures below 43° F (6° C) will cause crystallization (salting out) of the product. If this occurs, warm the product to 61° F (16° C) and mix well until product is uniform.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls: If current ventilation practices are not adequate to minimize exposure, additional ventilation or exhaust systems may be required.

Personal Protective Equipment (PPE):

Respiratory: Respiratory protection is not usually required, however it may be required when ventilation is not adequate to prevent exposure.

Skin: The use of chemical-resistant impermeable gloves is recommended to prevent skin contact and possible irritation.

Eye/Face: Approved eye protection, such as safety glasses with side shields, to safeguard against potential eye contact, irritation, or injury is recommended.

Depending on conditions of use, safety goggles or a face shield may also be necessary.

Other Protective Equipment: Impervious clothing should be worn as needed. A source of clean water should be available in the work area for flushing eyes and skin.

Exposure Limits:

ACGIH TLV-TWA:
10 mg/m³ for Particulates Not Otherwise Classified (nuisance dusts)

Note: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values are determined at 68° F (20° C) and 760 mm Hg (1 atm).

Physical State:	Liquid, aqueous
Appearance:	Clear, colorless to pale blue solution
Odor:	Slight odor of ammonia
pH:	6.8 – 7.3
Boiling Point:	> 212° F (> 100° C)
Freezing/Melting Point:	< 32° F (< 0° C)
Specific Gravity:	1.34 – 1.44 g/mL at 65° F (18° C)
Bulk Density:	11.8 – 12.2 lb / US gal 1.4 - 1.5 Kg / Liter

Flash Point:	Not applicable
Lower Explosion Limit:	Not applicable



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Upper Explosion Limit: Not applicable
Autoignition Temperature: Not applicable

Percent Volatile: Not determined
Evaporation Rate: (nBuAc =I) <1
Salting Out Point: < 43° F (< 6° C)
Vapor Pressure: 17.2 mm Hg (vapor pressure of water)
Vapor Density (air=I): 0.6 (water)

Solubility in Water: 100%

10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal conditions of storage and handling.

Conditions To Avoid: Do not allow product to evaporate to dryness.

Refer to Section 5.

Incompatible Materials:

Avoid contact with combustible, organic, or other readily oxidizable materials.

Avoid contact with strong acids and chlorates or other strong oxidizers.

Contact with alkaline materials may liberate ammonia.

Avoid contact with metals.

Avoid contact with chlorine bleach.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Significant Routes of Exposure: Ingestion, Inhalation

Target Organs: Blood / circulatory system

Potential Health Effects:

Eye: Contact may cause mild eye irritation. Symptoms may include stinging, watering, and redness.

Skin: Contact may cause mild skin irritation. Symptoms may include redness. No harmful effects from skin absorption have been reported.

Inhalation: (Breathing) May cause mild respiratory irritation.

Ingestion: (Swallowing) May be harmful if ingested.

Ingestion of large amount may interfere with the circulation and oxygen carrying capacity of the blood.

Effects of Overexposure: Symptoms of overexposure may include irritation of the nose, throat and digestive tract, headaches, coughing, nausea, vomiting, diarrhea, and transient disorientation.

Prolonged or repeated overexposure may result in effects on the blood (methemoglobinemia) and blood vessels (vasodilating and a fall in blood pressure). Symptoms of toxicity may include headache, fainting, fatigue, cyanosis, confusion, irregular heartbeats, and possible respiratory paralysis.

Pre-Existing Medical Conditions: Pre-existing heart disease may be aggravated by exposure.

Chronic Effects:

Cancer: Does not contain ingredients known to be carcinogenic by IARC, NTP, OSHA, ACGIH, or EPA.

Developmental: Ingredients in this composition are not known to cause developmental effects.

12. ECOLOGICAL INFORMATION

Environmental Effects: The product itself and its products of degradation are not harmful under normal conditions of careful and responsible use.

Product is fully soluble with water and will move with water flow.

Persistence: The product is non-persistent and non-cumulative when used according to directions.

Precautions: Avoid spills and releases to watercourses and sources of potable water.

Product concentrate may cause irritation to the digestive tract of livestock or wildlife that ingest the material.

13. DISPOSAL CONSIDERATIONS

This material, if discarded as produced, is not classified as a hazardous waste under the U. S. Resource Conservation and Recovery Act (RCRA).

Use of the product that results in chemical or physical change or contamination may subject it to regulation as a hazardous waste.

Along with properly characterizing all waste materials, consult federal, state, and local regulations regarding the proper disposal of this material.

14. TRANSPORT INFORMATION

Hazard Class or Division:

Not classified as Dangerous Goods under:

U. S. Department of Transportation (DOT) Hazardous Material Regulations.

15. REGULATORY INFORMATION

Carcinogenicity: Does not contain ingredients known to be carcinogenic by IARC, NTP, California OSHA, ACGIH, or US EPA.

Other Regulatory Information:

California Proposition 65 (CA Health & Safety Code Section 25249.5):

This product does not contain chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm.

Clean Water Act (CWA):

This product does not contain ingredients considered to be priority pollutants under the Clean Water Act.

CERCLA/SUPERFUND:

This product does not contain ingredients that have Reportable Quantity (RQ) requirements under U.S. 40 CFR 117.302.

16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

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