

**SAFETY DATA SHEET**

pH Down

**SECTION 1: IDENTIFICATION OF SUBSTANCE / MIXTURE**

Product name: pH Down  
Fertilizer formula: Not Applicable  
Product type: Liquid  
Product usage: pH Adjustment  
Restrictions on use: n/a  
Initial Supplier: Future Harvest Plantlife Products  
Emergency Telephone Number: 250-491-0255

**SECTION 2: HAZARD IDENTIFICATION**

**2.1 Classification of the substance or mixture**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

GHS CLASSIFICATION:

PHYSICAL HAZARDS: Corrosive to Metals  
CONTACT HAZARD - SKIN: Category 1B - Causes severe skin burns and eye damage  
CONTACT HAZARD - EYE: Category 1 - Causes serious eye damage  
ACUTE TOXICITY - ORAL: Category 3 - Toxic if swallowed  
CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.  
UNKNOWN ACUTE TOXICITY: Not applicable.

**2.2 Label elements**

GHS SYMBOL: Corrosion, Skull and Crossbones, Health hazards



GHS - Physical Hazard Statement(s)

May be corrosive to metals

GHS - Health Hazard Statement(s)

Causes severe skin burns and eye damage

Causes serious eye damage

Toxic if swallowed

Causes damage to organs (Gastrointestinal System and Respiratory System)

GHS - Precautionary Statement(s) - Prevention

Keep only in original container

Wash thoroughly after handling

Do not breathe dust, fume, gas, mist, vapors, or spray

Do not eat, drink or smoke when using this product

Wear protective gloves/protective clothing/eye protection/face protection

GHS - Precautionary Statement(s) - Response

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Immediately call a POISON CENTER or doctor/physician

GHS - Precautionary Statement(s) - Storage

Store in corrosive resistant and NON-ALUMINUM container with a resistant inner liner (NOTE: flammable hydrogen gas may be generated if aluminum container and/or aluminum fittings are used)

Store locked up

GHS - Precautionary Statement(s) - Disposal

Dispose of contents and container in accordance with applicable local, regional, national, and/or international regulations

**2.3 Other hazards** None identified

**SECTION 3: COMPOSITION / IDENTIFICATION ON INGREDIENTS**

Chemical Name	CAS No.	Concentration	Other Names
Phosphoric Acid	7664-38-2	30-40%	

**Note:** There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in section 8.

**SECTION 4: FIRST-AID MEASURES**

**4.1 Description of first aid measures**

Eyes contact: In case of contact with eyes, rinse immediately with plenty of water for at least 15 minutes. GET MEDICAL ATTENTION IMMEDIATELY.

Skin contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. GET MEDICAL ATTENTION IMMEDIATELY.

Inhalation: Remove the victim from site of exposure to fresh air. If breathing is difficult, give oxygen. If not breathing give artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: If swallowed, do not induce vomiting. Give large amounts of water. If vomiting occurs spontaneously, keep airway clear. Give more water when vomiting stops. Never give anything by mouth to an unconscious or convulsive person. GET MEDICAL ATTENTION IMMEDIATELY.

**4.2 Most important symptoms and effects, both acute and delayed**

Corrosive. This material may be corrosive to any tissue it comes in contact with. It can cause serious burns and extensive tissue destruction resulting in: liquefaction, necrosis, and/or perforation.

**4.3 Indication of any immediate medical attention and special treatment needed**

Skin: Skin Corrosion: Exposure to skin may cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of skin, and damage to underlying tissues (deep and painful wounds).

Eye: Serious Eye Damage: Eye exposures may cause eye lid burns, conjunctivitis, corneal edema, corneal burn, corneal perforation, damage to internal contents of the eye, permanent visual defects, and blindness and/or loss of the eye.

Ingestion (Swallowing):

Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

Delayed Symptoms/Effects: - Repeated or prolonged exposures to skin that cause irritation may cause a chronic dermatitis

Medical Conditions Aggravated by Exposure: Corrosive. May aggravate pre-existing eye, skin, and respiratory conditions (including asthma and other breathing disorders).

Protection of First-Aiders: Protect yourself by avoiding contact with this material. Use personal protective equipment. Refer to Section 8 for specific personal protective equipment recommendations. Avoid contact with skin and eyes. Do not ingest. Do not breathe vapors or spray mist. At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission.

Notes to Physician: The absence of visible signs or symptoms of burns does NOT reliably exclude the presence of actual tissue damage. Probable mucosal damage may contraindicate the use of gastric lavage. There is no specific antidote.

## **SECTION 5: FIRE-FIGHTING MEASURES**

### **5.1 Extinguishing media**

Compatible with all standard fire fighting techniques.

### **5.2 Special hazards arising from the substance or mixture**

Not applicable. Aqueous solution. Non-combustible.

### **5.3 Advice for firefighters**

None

Fire Hazard: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. May react with chemically reactive metals such as aluminum, zinc, magnesium, copper, etc. to release hydrogen gas which can form explosive mixtures in air.

## **SECTION 6: ACCIDENTAL RELEASE MEASURES**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable protective clothing. Wear eye/face protection.

### **6.2 Environmental precautions**

Do not allow to enter drains, sewers or watercourses. Advise authorities if spillage has entered water course or sewer or has contaminated soil or vegetation.

### **6.3 Methods and materials for containment and cleaning up**

In case of spill or leak, stop the leak as soon as possible. Small and large spills: Contain spilled material if possible. Completely contain spilled materials with dikes, sandbags, etc. After containment, collect the spilled material and transfer to a chemical waste area. Liquid material may be removed with a vacuum truck. Neutralize residue with a liberal covering of sodium bicarbonate or other acceptable drying agent. See Section 13, Disposal considerations, for additional information.

### **6.4 Reference to other sections**

See Also Section 8.

## **SECTION 7: HANDLING AND STORAGE**

### **7.1 Precautions for safe handling**

Avoid contact with eyes, skin and clothing. Avoid generation of mist. Provide adequate ventilation. Emergency shower and eye wash facilities should be readily available. See Also Section 8

### **7.2 Conditions for safe storage, including any incompatibilities**

Storage temperature 0-95° C. Loading temperature 45-95 ° C. Provide an adequate bund wall. Unsuitable containers: Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers. See Also Section 10.

### **7.3 Specific use(s):**

Not available

### **7.4 Environmental Precautions**

Keep out of water supplies and sewers. This material is acidic and may lower the pH of surface waters with low buffering capacity. Releases should be reported, if required, to appropriate agencies.

## **SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **8.1 Precautions for Safe Handling:**

Avoid breathing vapor or mist. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. When mixing, slowly add to water to minimize heat generation and spattering.

### **8.2 Safe Storage Conditions:**

Store and handle in accordance with all current regulations and standards. Keep container tightly closed and properly labeled. Do not store in aluminum container or use aluminum fittings or transfer lines, as flammable hydrogen gas may be generated. Keep separated from incompatible substances (see below or Section 10 of the Safety Data Sheet).

### **8.3 Incompatibilities/ Materials to Avoid:**

Flammable liquids, acids, halogenated compounds, water, Prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys

GHS: PHYSICAL HAZARDS:

- Corrosive to Metals

## **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

### **9.1 Information on basic physical and chemical properties**

Physical state

Liquid Appearance: Clear

Color: Colorless

Odor: Odorless

Odor Threshold [ppm]: Not Available

Molecular Weight: 99

Molecular Formula: H<sub>3</sub>PO<sub>4</sub>

Boiling Point/Range: 216 to 289 °F (102 to 143 °C)

Freezing Point/Range: -85 to 39 °F (-65 to 4 °C)

Vapor Pressure: 4 mmHg @ 77°F (25°C): No data

50% solution 20 mmHg @ 77°F (25°C): No Data

20% solution 7 of 14 Vapor Density (air=1): No data available

### **9.2 Other information**

Relative Density - Specific Gravity (water=1): 1.09 - 1.52 @ 15.6 °C

Water Solubility: 100%

pH: 1.5

VOC Content (%): 0%

Volatility: No data available

Evaporation Rate (ether=1): No data available  
Partition Coefficient (n-octanol/water): Not applicable  
Flash point: Not flammable  
Flammability (solid, gas): Not flammable  
Lower Flammability Level (air): Not applicable  
Upper Flammability Level (air): Not applicable  
Auto-ignition Temperature: Not determined  
Viscosity: No data available

## **SECTION 10: STABILITY AND REACTIVITY**

### **10.1 Reactivity**

Soluble in water. Reacts with bases, giving off heat. May produce Hydrogen gas with metals.

### **10.2 Chemical stability**

The product is stable under normal handling and storage conditions described in Section 7. Reacts with acids.

### **10.3 Possibility of hazardous reactions**

Flammable liquids, acids, halogenated compounds, water, Prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys.

### **10.4 Conditions to avoid**

Mixing with water, bases, or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas.

### **10.5 Incompatible materials**

See Section: 10.3

### **10.6 Hazardous decomposition products**

None known

## **SECTION 11: TOXICOLOGICAL INFORMATION**

### **11.1 Information on likely routes of exposure**

All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation.

### **11.2 Information on toxicological effects**

Acute toxicity (list all possible routes of exposure)

Oral Product: 2600 mg/kg rat

Dermal Product: Irritating to skin.

Inhalation Product: No data available.

Repeated dose toxicity Product: No data available.

### **11.3 Potential Health Effects**

Eye contact: Corrosive. Causes serious eye damage which can result in: severe irritation, pain and burns, and permanent damage including blindness.

Skin contact: Corrosive. Causes severe skin burns. Prolonged or repeat skin exposures can result in dermatitis.

Inhalation: Toxic if inhaled. Corrosive. May cause severe irritation of the respiratory tract with coughing, choking, pain and possibly burns of the mucous membranes. This material can be extremely destructive to the tissue of the mucus membranes and respiratory system.

Ingestion: Toxic if swallowed. Corrosive. May cause severe mucus membrane burns and gastrointestinal burns. If swallowed, may pose a lung aspiration hazard during vomiting. Lung aspiration may result in chemical pneumonitis, pulmonary edema, and damage to lung tissue or death.

Chronic Effects: Repeated or prolonged skin contact may result in dermatitis

### **11.4 Signs and Symptoms of Exposure**

This material may cause severe burns and permanent damage to any tissue with which it comes into contact. Signs and symptoms of exposure vary, and are dependent on the route of exposure, degree of exposure, and duration of exposure. Aspirating this material may cause signs and symptoms that are similar to those experienced as a result of breathing or inhaling this material.

Inhalation (Breathing): Respiratory System Effects: Exposure to airborne material may cause irritation, redness of upper and lower airways, coughing, laryngeal spasm and edema, shortness of breath, bronchio-constriction, and possible pulmonary edema. Severe and permanent scarring may occur. Aspiration of this material may cause the same conditions.

Skin: Skin Corrosion: Exposure to skin may cause redness, itching, irritation, swelling, burns (first, second, or third degree), liquefaction of skin, and damage to underlying tissues (deep and painful wounds).

Eye: Serious Eye Damage: Eye exposures may cause eye lid burns, conjunctivitis, corneal edema, corneal burn, corneal perforation, damage to internal contents of the eye, permanent visual defects, and blindness and/or loss of the eye.



Ingestion (Swallowing): Gastrointestinal System Effects: Exposure by ingestion may cause irritation, swelling, and perforation of upper and lower gastrointestinal tissues. Permanent scarring may occur.

Acute Toxicity: When in solution, this material will affect all tissues with which it comes in contact. The severity of the tissue damage is a function of its concentration, the length of tissue contact time, and local tissue conditions. After exposure there may be a time delay before irritation and other effects occur. This material is a strong irritant and is corrosive to the skin, eyes, and mucous membranes. This material may cause severe burns and permanent damage to any tissue with which it comes into contact.

Chronic Toxicity: Repeated and prolonged skin contact may result in dermatitis

## **SECTION 12: ECOLOGICAL INFORMATION**

### **12.1 Toxicity**

Ecotoxicity: May be harmful to aquatic organisms due to the shift of the pH.

### **12.2 Persistence and Degradability**

Expected to be readily biodegradable.

### **12.3 Bioaccumulative potential**

Phosphorus is essential for life.

### **12.4 Mobility in soil**

When spilled onto soil, phosphoric acid will infiltrate downward, the rate being greater with lower concentration because of reduced viscosity. During transport through the soil, phosphoric acid will dissolve some of the soil material, in particular, carbonate-based materials. The acid will be neutralized to some degree with adsorption of the proton and phosphate ions also possible. However, significant amounts of acid will remain for transport down toward the groundwater table. Upon reaching the groundwater table, the acid will continue to move in the direction of groundwater flow.

### **12.5 Results of PBT and vPvB assessment**

Not applicable

### **12.6 Other adverse effects**

The acidity of this material will have a local effect on ecosystems sensitive to changes in pH. This material has exhibited slight toxicity to terrestrial organisms.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste from material:** Reuse or reprocess, if possible. May be subject to disposal regulations. Dispose of in accordance with all applicable regulations.

**13.2 Container Management:** Dispose of container in accordance with applicable local, regional, national, and/or international regulations. Container rinse must be disposed of in compliance with applicable regulations.

## **SECTION 14: TRANSPORT INFORMATION**

UN Number: UN1805

UN Proper Shipping Name: PHOSPHORIC ACID SOLUTION

Packing Group: III

## **SECTION 15: REGULATORY INFORMATION**

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4): If a release is reportable under CERCLA section 103, notify the state emergency response commission and local emergency planning committee. In addition, notify the National Response Center at (800) 424-8802 or (202) 426-2675.

SARA EHS Chemical (40 CFR 355.30) Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10): Acute Health Hazard

EPCRA SECTION 313 (40 CFR 372.65): Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119): Not regulated

FDA: This material has Generally Recognized as Safe (GRAS) status under specific FDA regulations. Additional information is available from the Code of Federal Regulations which is accessible on the FDA's website. This product is not produced under all current Good Manufacturing Practices (cGMP) requirements as defined by the Food and Drug Administration (FDA).

NATIONAL INVENTORY STATUS U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA): All components are listed or exempt.

TSCA 12(b): This product is not subject to export notification.

Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL.

## CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS - Classifications of Substances:

D1B-Poisonous and Infectious Material; Materials causing immediate and serious toxic effects –Toxic material

E-Corrosive material

## SECTION 16: OTHER INFORMATION

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