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MATERIAL SAFETY DATA SHEET  
GENERAL HYDROPONICS pH Down™

3/15/01

SECTION 1. MATERIAL IDENTIFICATION

Product Name: pH Down™

Chemical Family: Corrosive mixture of acids in aqueous solution.

Product Use: To lower the pH of hydroponic nutrient solutions and plant fertilizers.

Manufactured by: General Hydroponics, 3789 Vine Hill Rd. Sebastopol CA 95472  
(707) 824-9376. Fax: (707) 824-9377

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

The percentage of mixture information for pH Down™ is withheld as a trade secret. The basic ingredients of pH Down™ are phosphoric acid, and ammonium bisulfate.

Chemical Name	CAS#	OSHA PELs	ACGIH TLVs	Toxicity: Data
Phosphoric acid	7664-38-2	TWA: 1 mg/lm3	1 mg/m3	Rat oral, LD50 1,530 mg/kg
		STEL: 3 mg/m3		Rabbit skin, LD50 220 mg/kg
Ammonium bisulfate	7803-63-6	NE*	NE*	Rat oral, LD50.2840 mg/Kg

\*Not established

SECTION 3. HAZARDS IDENTIFICATION

\*\*\* Emergency Overview \*\*\*

General Hydroponics pH Down™ is a corrosive mixture of acids and can be an irritant to the eyes, skin, mucous membranes, and the upper respiratory tract. Concentrated solutions are moderately toxic by ingestion and skin contact. In case of inhalation or ingestion, rinse mouth out with water. **Do not induce vomiting.** See a physician immediately. Skin and eye contact require flushing with large amounts of water for at least 15 minutes.

Potential Health Effects:

Primary Entry Routes: Ingestion, inhalation, skin.

Target Organs: Gastrointestinal and respiratory tract

**Acute Effects:**

- **Ingestion**, severe digestive tract irritation with possible burns
- **Inhalation**, irritation and possible burn.
- **Eye**, severe burns
- **Skin**, severe irritation and burns.

**Carcinogenicity:** IARC, NTP, and OSHA do not list as a carcinogen.

**Medical Conditions Aggravated by Long-Term Exposure:** Unknown

**Chronic Effects:** Same as acute.

**Other:** None.

#### **SECTION 4. FIRST AID MEASURES**

**Ingestion:** Never give anything by mouth to an unconscious or convulsing person. Rinse out the mouth drink two to four cups of milk. Do not induce vomiting. See a physician immediately.

**Eye Contact:** Do not allow victim to rub or keep eyes tightly shut. Gently lift eyelids and flush immediately and continuously with flooding amounts of water for at least 15 minutes. Consult a physician or ophthalmologist if pain or irritation develops.

**Skin Contact:** Wash exposed area with soap and water. For reddened or blistered skin, consult a physician.

**Inhalation:** Remove exposed person to fresh air and support breathing, if necessary. Consult a physician as soon as possible.

**After first aid:** Get appropriate community medical support.

#### **SECTION 5. FIRE AND EXPLOSION DATA**

**Flash Point:** Not flammable.

**Auto-ignition Temperature:** Not flammable.

**LEL:** Unknown.

**Flammability Classification:** Not flammable

**Burning Rate:** Not flammable.

**Extinguishing Media:** Use dry chemical, carbon dioxide, water spray, fog, or foam

**Unusual Fire or Explosion Hazards:** Container may explode in heat of fire.

**Hazardous Combustion Products:** Unknown

**Fire-Fighting Instructions:** Do not release run-off from fire control methods to sewers or waterways

**Fire Fighting Equipment:** Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full-face piece.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Spill /Leak Procedures:** Use personal protective equipment, cover with dry lime or soda ash, and place in closed container for disposal. Flush spill area with water. In case of large spill, clear the area and notify appropriate emergency response activity.

**Regulatory Requirements:** Follow applicable OSHA regulations (29 CFR 1910.120)

## SECTION 7. HANDLING AND STORAGE

**Handling Precautions:** Use only in well-ventilated areas. Avoid contact with skin and eyes, inhalation of aerosols and ingestion. Wear an appropriate NIOSH-approved respirator for protection where airborne concentrations are excessive. Respirator usage must be in accordance with OSHA requirements (29 CFR 1910.134)

**Storage Requirements:** Store as a corrosive in tightly closed containers away from incompatible materials

**Regulatory Requirements:** Follow applicable OSHA regulations.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Provide general or local exhaust ventilation systems to maintain airborne concentrations as low as possible.

**Administrative Controls:** Avoid inhalation, ingestion, skin and eye contact. **Do not mix with solutions containing bleach or ammonia.**

**Respiratory Protection:** If this product is used as directed, respiratory protection is not required. Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, wear a MSHA/ NIOSH-approved respirator. If respirators are used, OSHA requires a written respiratory protection program that includes, at least, medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

**Protective Clothing/ Equipment:** Use gloves and aprons while using.

**Comments:** Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance Odor and Physical State:** Yellow liquid

**Odor Threshold Range:** Odorless