

1. Identification of the Substance/Preparation:

Product name: pH Down
Company: Flairform Products
Address: 3 Parkinson Lane, Kardinya, Western Australia 6163.
Telephone Number: (+61) 8 9314 7595
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Emergency Telephone Numbers: (+61) 8 9433 5875; 0411 297 030 (mobile)

2. Composition/information on ingredients

To lower pH of hydroponic nutrient solutions.

Common Name	CAS	EINECS	Conc
Orthophosphoric acid	7664 - 38 - 2	-	80% W/V
Water			to 100%

3. Hazards identification

Swallowed: Causes burns to the mouth, throat and stomach. Can cause nausea, difficulty in breathing, shock, acidosis, convulsions and collapse.

Eye: Causes irritation or burns. No permanent damage is expected if treated immediately.

Skin: Causes irritation or burns. Dermatitis may result from prolonged exposure. Injuries more severe with hot acid.

Inhaled: Cause irritation to the respiratory system. Vapours and mists are corrosive to the nose, throat and mucous membranes.

4. First-aid measures

Swallowed: DO NOT induce vomiting. If conscious give a little water to drink. Obtain medical attention immediately.

Eye: Irrigate eyes with gently flowing water for 15 minutes with eyelids held open. Take care not to rinse the contaminated water into the non affected eye. If irritation persists repeat the flushing. Obtain medical attention immediately.

Skin: Flush with plenty of clean water for at least 15 minutes while removing contaminated clothing and footwear. Affected clothing should be washed before reuse. Obtain medical attention immediately.

Inhaled: Remove victim from exposure - avoid becoming a casualty and remove contaminated clothing. If breathing is difficult give oxygen. Obtain medical attention immediately.

5. Fire fighting measures

Fire / Explosion: Not combustible. Material is stable under normal conditions of use. Strong alkalis will liberate much heat and cause spattering. Most metals will cause formation of flammables and explosive hydrogen gases. Sulphide, phosphide, cyanide, carbides and silicides reactions release poisonous gases. Hazardous decomposition products include toxic gases and vapours (phosphoric acid fumes may be released). May release phosphorous oxide.

Flammability: Not flammable.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide or foam type extinguishers. Contact with most metals produces hydrogen which may form flammable mixtures with air. Keep containers cool by spraying with water.

6. Accidental release measures

Spills: Clear area of all unprotected / unnecessary people. Wear full protective equipment to prevent skin and eye contact. Contain using sand and/or earth. Prevent runoff into drains or waterways. Can be greatly diluted or carefully neutralized with soda ash, lime, calcium carbonate and flushed to drain with copious amounts of water. Use absorbent (soil or sand, sawdust, inert material, vermiculite). Collect and hold in suitable containers for waste disposal. Wash spill area down with large amounts of water.

Disposal (After treatment above)

Refer to waste management authority. Empty containers MUST BE decontaminated.

7. Handling and storage

Avoid breathing mist. Prevent contact with eyes, skin or clothing. Keep container tightly closed. Keep away from direct sunlight, alkalis, sulphides, cyanides and metal powders. Check regularly for leaks.

8. Exposure controls/personal protection

Generally not a hazard when handled carefully and as instructed. However, as a precaution, especially if splashing of liquid is possible, suitable (approved) personal protective equipment appropriate to the task should be worn:

Hand: Use gloves resistant to acids (rubber).

Eyes: Approved chemical safety goggles or face protection. Contact lenses pose a hazard: Soft lenses may absorb irritants, and all contact lenses concentrate irritants. Particles may adhere to contact lenses and cause corneal damage.

Skin: Wear protective overalls buttoned at the wrist and neck (or bib resistant to acids) and impervious footwear (rubber boots). Sleeves of jackets or shirts should be buttoned over the glove wrists; trousers should be worn with the bottoms of legs outside the boots - not tucked in.

Respiration: Use an approved respirator - Seek professional advice.

Note, eye wash fountains and safety showers should be located near any area where large quantities of this product are handled. Remove contaminated clothing promptly. Keep contaminated clothing in closed containers. Discard or launder before re-wearing. Inform laundry personnel of contaminants hazards. Do not smoke, eat or drink in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping.

Engineering controls:

Ensure adequate ventilation and / or local exhaust ventilation where misting can occur to maintain exposure levels below standard.

9. Physical and chemical properties

Appearance: Clear, colourless, odourless, aqueous solution.

Boiling Point / Melting Point: Stable below 55°C. Above 55°C the decomposition rate depends on temperature.

Vapour Pressure: Not applicable

Specific Gravity: 1.39

Flashpoint: Not flammable

Flammability Limits: Not flammable

Solubility in Water: Soluble in all proportions

pH: acidic (pH 1.5 for 2% solution)

Corrosiveness: Attacks most metals.

10. Stability and reactivity

Stable under normal conditions. Reacts vigorously and exothermically on mixing with alkalis. No exotherm on dilution with water.

11. Toxicological information

Toxicity Data:

Treat symptomatically based on judgment of doctor and individual reactions of patient.

Oral LD50 = 1530 mg/kg (Rat)

Dermal LD50: 2740 mg/kg (rabbit)

Inhalation TCLO: = 100mg/M3 (human)

Exposure standards: Worksafe Australia recommends TWA 1mg/m3 STEL 3mg/m3.

For further information: See Section 3 of this MSDS ("Hazards Identification").

12. Ecological information

Prevent product from entering rivers, canals and other waterways: Acidic, nutrient for undesirable algae. While acidity may be reduced by natural water hardness minerals, the phosphate may persist indefinitely.

Ecotoxicity value: Tlm mosquito fish 138mg/L/24-96 hr in turbid water at 22 - 24 degrees C. Bioconcentration: none.

13. Disposal considerations

Observe local legislation.

14. Transport information

Shipping name: Orthophosphoric acid; phosphoric acid

Hazard: CORROSIVE

U.N. Number : 1805

Dangerous Goods Class: 8

Secondary Risk: None allocated

Hazchem Code: 2R

Pack Group: 111

EPG No: 37

15. Regulatory information

Labeling:

Hazard: CORROSIVE

Risk phrases:

R35 Causes severe burns.

R22 Harmful if swallowed.

Safety phrases:

S24/25 Avoid contact with skin and eyes.

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S1/2 Keep locked up and out of reach of children.

S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

S27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

Packaging: Dangerous Goods approved containers; "Poison" embossed; Childproof capping on containers smaller than 5 litre.

16. Other information

DISCLAIMER

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification of further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. All information is as accurate and up to date as possible.