



SAFETY DATA SHEET

According to Safe Work Australia

Printing date 24.02.2015

Revision: 24.02.2015

1. IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Name: HYDROPONIC pH DOWN**Other Means of Identification:** Mixture**Recommended Use of the Chemical and Restriction on Use:** pH adjustment of nutrient solutions**Details of Manufacturer or Importer:**Growth Technology Pty Ltd
1-45 Stockdale Road
O'Connor WA 6163**Phone Number:** +61 8 9331 3091**Emergency telephone number:** National Poison Information Centre: 13 11 26

2. HAZARDS IDENTIFICATION

Hazardous Nature:

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition).



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Signal Word Danger**Hazard Statements**

H314 Causes severe skin burns and eye damage.

Precautionary Statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash hands thoroughly after handling.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321 Specific treatment (see on this label).

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P310 Immediately call a POISON CENTER/doctor.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national regulations.

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Characterization: Mixtures**Description:** Mixture of substances listed below with nonhazardous additions.**Hazardous Components:**

7664-38-2	Phosphoric acid	Skin Corr. 1B, H314	81-85%
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Additional information:

Note B: Some substances (acids, bases etc) are placed on the market in aqueous solutions at various concentrations and therefore require different labelling since the hazards vary. For aqueous solutions, the

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label shown (under 'Labelling') is for the highest concentration range given under the concentration limits, which are shown (under 'Cut-offs'). For the lower concentration ranges, Safety Phrases should be selected according to the normal rules for preparations. Under 'Name' or 'Synonyms' a general designation of the following type is used: '...% nitric acid'. In this case the manufacturer or any other person who markets such a substance should give on the label the percentage concentration of the solution. Example: 45% nitric acid. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis. The use of other data (for example, specific gravity) or descriptive phrases (for example, fuming or glacial) is permissible. (Phosphoric acid CAS No. 7664-38-2)

4 . FIRST AID MEASURES

Inhalation:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if breathing problems develop.

Skin Contact:

In case of skin contact, remove contaminated clothing and wash affected areas with water and soap. Seek medical attention if symptoms occur.

Eye Contact:

In case of eye contact, immediately hold eyelids open and rinse with water for at least 15 minutes. Seek medical attention if symptoms occur.

Ingestion:

If swallowed, do not induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Symptoms Caused by Exposure:

Inhalation: Spray mist may cause severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath and tissue damage on mucous membranes of eyes, mouth and respiratory tract.

Skin Contact: May cause severe skin burns and affect behavior (somnolence or excitement).

Eye Contact: May cause severe eye burns leading to permanent corneal damage or chemical conjunctivitis, redness, watering, and itching.

Ingestion: Causes irritation, burns of the gastrointestinal tract, severe pain, nausea, vomiting, diarrhea, hematemesis, gastrointestinal hemorrhaging and shock.

5 . FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use fire extinguishing methods suitable to surrounding conditions.

Specific Hazards Arising from the Chemical:

Contact with most metals causes formation of flammable and explosive hydrogen gas. Formation of flammable gases with aldehydes, cyanides, mercaptins, and sulphides.

Mixtures of phosphoric acid with nitromethane are explosive.

Non-explosive in presence of open flames and sparks, of shocks.

Special Protective Equipment and Precautions for Fire Fighters:

Wear Safe Work Australia approved self-contained breathing apparatus and full protective clothing.

6 . ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Wear Safe Work Australia approved respiratory protection, chemical resistant gloves, protective clothing and safety boots. Evacuate all non-essential personnel from affected area. Do not breathe vapours. Ensure adequate ventilation. Do not touch spilled material. Use water spray to reduce vapours.

Environmental Precautions:

In the event of a major spill, prevent spillage from entering drains or water courses.

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Methods and Materials for Containment and Cleaning Up:

Stop leak if safe to do so and absorb spill with sand, earth, vermiculite or some other absorbent material. Collect the spilled material and place into a suitable container for disposal. If necessary, neutralise the residue with a dilute solution of sodium carbonate.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Use of safe work practices are recommended to avoid eye or skin contact and inhalation of vapours. Use only outdoors or in a well-ventilated area. Add phosphoric acid to water, slowly in small amounts. Do not add water to phosphoric acid.

Food, beverages and tobacco products should not be stored or consumed where this material is in use. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. Provide eyewash fountains and safety showers in close proximity to points of potential exposure.

Conditions for Safe Storage:

Store in a cool, dry and well ventilated area. Keep container tightly closed when not in use. Protect from physical damage. Keep away from incompatibles such as oxidising agents, combustible materials, metals, alkalis. May corrode metallic surfaces. Inspect regularly for damage or leaks. Never add water to this product.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Standards:**7664-38-2 Phosphoric acid**

NES	STEL: 3 mg/m ³ TWA: 1 mg/m ³
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Engineering Controls:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below the limits.

Respiratory Protection:

Use a Safe Work Australia approved air-purifying respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapour, inadequate ventilation, development of respiratory tract irritation) and engineering controls are not feasible. See Australian Standards AS/NZS 1715 and 1716 for more information.

Skin Protection:

PVC, PVA, nitrile, neoprene, rubber or vinyl gloves. See Australian/New Zealand Standard AS/NZS 2161 for more information. When selecting gloves for use against certain chemicals, the degradation resistance, permeation rate and permeation breakthrough time should be considered.

Occupational protective clothing (depending on conditions in which it has to be used, in particular as regards the period for which it is worn, which shall be determined on the basis of the seriousness of the risk, the frequency of exposure to the risk, the characteristics of the workstation of each worker and the performance of the protective clothing). See Australian/New Zealand Standard AS/NZS 4501 for more information.

Eye and Face Protection:

Eye and face protectors for protection against splashing materials or liquids. See Australian/New Zealand Standard AS/NZS 1337 for more information.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:

Form:	Clear to hazy, thick liquid
Colour:	Colourless
Odour:	Odourless
Odour Threshold:	Odourless

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pH-Value:	<2
Melting point/Melting range:	21 °C
Initial Boiling Point/Boiling Range:	158 °C
Flash Point:	Not applicable
Flammability:	Product is not flammable.
Auto-ignition Temperature:	Not applicable
Explosion Limits:	
Lower:	Not applicable
Upper:	Not applicable
Vapour Pressure at 20 °C:	0.03
Relative Density:	1.7
Vapour Density:	Not applicable
Solubility in Water:	Soluble in water
Viscosity:	Slight

10 . STABILITY AND REACTIVITY

Possibility of Hazardous Reactions: Hazardous polymerisation will not occur.

Chemical Stability: Stable at ambient temperature and under normal conditions of use.

Conditions to Avoid: No information available

Incompatible Materials:

Oxidising agents, combustible materials, metals, alkalis. May corrode metallic surfaces. Do not mix with solutions containing bleach or ammonia.

Hazardous Decomposition Products: No information available

11 . TOXICOLOGICAL INFORMATION

Toxicity:

LD₅₀/LC₅₀ Values Relevant for Classification:

7664-38-2 Phosphoric acid

Oral	LD ₅₀	1530 mg/kg (rat)
Dermal	LD ₅₀	2740 mg/kg (rabbit)
Inhalation	LC ₅₀ /1 h	>850 mg/m ³ (rat)

Acute Health Effects

Inhalation:

Spray mist may cause severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath and tissue damage on mucous membranes of eyes, mouth and respiratory tract.

Skin: May cause severe skin burns and affect behavior (somnolence or excitement).

Eye:

May cause severe eye burns leading to permanent corneal damage or chemical conjunctivitis, redness, watering, and itching.

Ingestion:

Causes irritation, burns of the gastrointestinal (digestive) tract, severe pain, nausea, vomiting, diarrhea, hematemesis, gastrointestinal hemorrhaging and shock.

Skin Corrosion / Irritation: Causes severe skin burns.

Serious Eye Damage / Irritation: Causes eye damage.

Respiratory or Skin Sensitisation: Based on classification principles, the classification criteria are not met.

Germ Cell Mutagenicity: Based on classification principles, the classification criteria are not met.

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Carcinogenicity: This product does NOT contain any IARC listed chemicals.**Reproductive Toxicity:** Based on classification principles, the classification criteria are not met.**Specific Target Organ Toxicity (STOT) - Single Exposure:**

Based on classification principles, the classification criteria are not met.

Specific Target Organ Toxicity (STOT) - Repeated Exposure:

Based on classification principles, the classification criteria are not met.

Aspiration Hazard: Based on classification principles, the classification criteria are not met.**Chronic Health Effects:**

Repeated or prolonged exposure may cause damage to the following organs: blood, liver, skin, eyes, bone marrow.

Existing Conditions Aggravated by Exposure: No information available

12 . ECOLOGICAL INFORMATION

Ecotoxicity: No information available**Aquatic toxicity:** No information available**Persistence and Degradability:** The products of degradation are less toxic than the product itself.**Bioaccumulative Potential:** No information available**Mobility in Soil:** No information available

13 . DISPOSAL CONSIDERATIONS

Disposal Methods and Containers: Dispose according to applicable local and state government regulations.**Special Precautions for Landfill or Incineration:**

Please consult your state Land Waste Management Authority for more information.

14 . TRANSPORT INFORMATION

UN Number	
ADG, IMDG, IATA	1805
Proper Shipping Name	
ADG, IMDG, IATA	Phosphoric Acid, orthophosphoric acid
Dangerous Goods Class	
ADG Class:	8 Corrosive substances.
Packing Group:	
ADG, IMDG, IATA	III
Hazchem Code:	2R
Special Provisions:	223
Limited Quantities:	5L
Packagings & IBCs - Packing Instruction:	P001, IBC03, LP01
Packagings & IBCs - Special Packing Provisions:	Not applicable
Portable Tanks & Bulk Containers - Instructions:	T4

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Portable Tanks & Bulk Containers - Special Provisions:

TP1

15 . REGULATORY INFORMATION

Australian Inventory of Chemical Substances:

7732-18-5	Water
7664-38-2	Phosphoric acid

Standard for the Uniform Scheduling of Drugs and Poisons (SUSMP) - Poison Schedule:

Poisons Schedule: 6

16 . OTHER INFORMATION

Creation Date: 24.02.2015**Prepared by:** MSDS.COM.AU Pty Ltdwww.msds.com.au

Abbreviations and acronyms:

ADG: Australian Dangerous Goods

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC₅₀: Lethal concentration, 50 percentLD₅₀: Lethal dose, 50 percent

IARC: International Agency for Research on Cancer

STEL: Short Term Exposure Limit

TWA: Time Weighted Average

NES: National Exposure Standard (Safe Work Australia - Workplace Exposure Standards For Airborne Contaminants)

Disclaimer

This MSDS is prepared in accord with the Safe Work Australia document "Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals - December 2011"

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