

MATERIAL SAFETY DATA SHEET

(Issued 12th May 2010)



1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product name: **Agribuff**™
Other names: Phosphorous acid solution
Recommended use: Water conditioner
Supplier name: Modern Plant Nutrition Pty. Ltd. (ACN 138 851 920)
Address: PO Box 21
Kallangur
QLD 4503
Telephone: 0417614406
Emergency telephone: 0402582383 (24 hrs)

2. HAZARDS IDENTIFICATION

HAZARDOUS SUBSTANCE. DANGEROUS GOODS

Classified as Hazardous: **Corrosive (C)** according to NOHSC:1008(2004)

Classified as Dangerous Goods according to ADG Code 7th Ed.

Risk phrases: R22 - Harmful if swallowed
R35 - Causes severe burns

Safety phrases: S25 - Avoid contact with eyes
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39- Wear suitable protective clothing/Wear suitable gloves/Wear eye/face protection

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Proportion (by weight)
Water	7732-18-5	45-54%
Phosphorous acid	10294-56-1	40-45%
Citric acid	77-92-9	5-7%
Other non-hazardous ingredients		<5%

4. FIRST AID MEASURES

Danger / Environment / Hazards

1. Remove affected person from hazard or hazard from person, whichever is safer to prevent further exposure.

Specific contact pathway first aid advice

IF SWALLOWED:

1. For advice, contact a Poisons Information Centre, Doctor or Ambulance immediately.
2. If swallowed do NOT induce vomiting: further injury may occur.
3. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
4. Observe the patient carefully.
5. Never give liquid to a person showing signs of being sleepy or with reduced awareness i.e. becoming unconscious.
6. Give water to rinse out mouth, then provide water slowly and as much as the affected person can comfortably drink.
7. Transport to hospital or doctor without delay.

EYE CONTACT:

1. Immediately hold eyelids apart and flush the eye continuously with running water.
2. If only one eye is affected, flush with the affected eye lower than the unaffected eye.
3. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
4. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.
5. Cover the eye loosely with a non-stick dressing or clean cloth when flushing ends or runs out.
6. Transport to hospital or doctor without delay.

7. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN CONTACT:

1. Immediately remove all contaminated clothing, including footwear.
2. Flush skin and hair with running water (and soap if available).using safety shower were available.
3. Seek medical attention in event of irritation.

NOTES TO DOCTOR OR AMBULANCE:

- Contact Poisons Information Centre or Toxicology Service for further advice if required.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Water spray, foam, dry chemical or carbon dioxide.

Hazards from combustion products

Oxides of carbon (CO, CO₂)

Precautions, special protective equipment (also refer to Sections 8, 10 of this document)

Wear impermeable, splash proof eye protection.

Wear self-contained breathing apparatus if material is combusting.

6. ACCIDENTAL RELEASE MEASURES

General note

Avoid using highly alkaline materials (e.g. lime) to neutralize this material. Agribuff™ is a highly concentrated, acidic material: adding concentrated alkaline materials to it has the potential to release dangerous amounts of heat.

Water is suitable for use as a diluting agent.

Small spills (e.g. 20 L drum)

Use an appropriate amount of adsorbent material, such as soil or diatomaceous earth, to contain the spill and soak up excess material.

Dispose of contaminated material appropriately.

Large spills (e.g. 1000 L intermediate bulk container)

First, contain the spill by using sufficient quantities of inert materials such as soil, sand, gravel etc.

Second, soak up spillage with adsorbent materials such as soil or diatomaceous earth.

Wet vacuuming may be used if the wetted surfaces of the device are resistant to chemical attack by the ingredients in Agribuff™.

Prevent any flows to storm water drains or waterway catchments.

Dispose of contaminated materials appropriately.

7. HANDLING AND STORAGE

Handling: Avoid contact with eyes and skin.

Storage: Keep out of reach of children.
Store under cover and in a safe place.
Store in the tightly closed original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

National exposure standards: No exposure standard allocated

Biological limit values: No biological limit allocated.

Engineering controls: None

Personal protective equipment: Eye/face: wear safety goggles (non vented or indirect vented types only).
Skin: wear chemical resistant gloves made from Nitrile, Neoprene, PVC or natural rubber.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, slightly brown liquid
Odour:	Mild
pH:	2 - 3
Vapour pressure:	Not available
Vapour density:	Not available
Boiling point/range:	100°C
Freezing/melting point:	0°C
Solubility:	Soluble in water
Density:	1250 Kg/m ³
Flash point:	Not available
Flammability (explosive) limits:	Not available
Ignition temperature:	Not available
Viscosity:	Flows freely

10. STABILITY AND REACTIVITY

Chemical stability:	Stable under normal conditions of use.
Conditions to avoid:	Avoid extreme heat.
Incompatible materials:	Avoid contact with strong bases. Avoid contact with strong oxidizing agents. Avoid contact with metal nitrates (can react explosively with citric acid)
Hazardous decomposition products:	In a fire: oxides of carbon (carbon monoxide, carbon dioxide)
Hazardous reactions:	None known.

11. TOXICOLOGICAL INFORMATION

	Potential Acute Health Effects
Inhalation:	Not expected to cause acute health effects
Skin contact:	May cause skin irritation and burns (redness, pain).

Eye contact:	Direct contact with the eyes may cause irritation and burns (redness, pain). May cause corneal damage and blindness.
Ingestion:	May cause irritation and burning of the gastrointestinal tract and mucous membrane (burning sensation). May cause nausea.

Chronic health effects: No ingredients have been classified as carcinogenic, mutagenic or teratogenic.

Animal toxicity data - product: No data available

Animal toxicity data - individual ingredients:

	Phosphorous acid	Citric acid	Sodium gluconate
Oral toxicity (LD₅₀ rat)	1895 mg/Kg	11700 mg/Kg	>2000 mg/Kg
Dermal toxicity (LD₅₀ rabbit)	No data available	No data available	No data available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Product - No data available.

Individual ingredients:

Phosphorous acid	Not classified as harmful to aquatic organisms according to NOHSC:1008(2004) 48 hr EC50 Daphnia 300 mg/L
Citric acid	Not classified as harmful to aquatic organisms according to NOHSC:1008(2004) 72 hr EC50 Daphnia magna 120 mg/L
Sodium gluconate	Not classified as harmful to aquatic organisms according to NOHSC:1008(2004) 48 hr LC50 Daphnia > 1000 mg/L

Persistence/degradability

Product - No data available.

Individual ingredients:

Phosphorous acid	Readily degradable.
Citric acid	Readily degradable.
Sodium gluconate	Readily degradable.

Mobility

No data available

13. DISPOSAL CONSIDERATIONS

Small quantities:

Rinse container thoroughly and add washings to irrigation water. Sewage disposal is only allowable if Agribuff™ satisfies local authority requirements. The clean container should be prepared (e.g. cut, punctured, crushed) in accordance with disposal facility requirements.

Large quantities:

Contact a licensed waste disposal company.

14. TRANSPORT INFORMATION

Classified as Dangerous Goods according to ADG Code 7th Ed.

UN number:	2834
UN proper shipping name:	PHOSPHOROUS ACID 50% SOLUTION
Class and Subsidiary Risk(s):	8
Packing Group:	III
Special precautions for user:	None
Hazchem code:	2R

15. REGULATORY

Agribuff™ is not a regulated material.

Poisons Schedule Number: S5

16. OTHER INFORMATION

MSDS creation date: 12th May 2010

Revised:

The following codes and databases were referred to in the creation of this document:

NOHSC:2011(2003); NOHSC:1008(2004); ADG Code 7th Ed; SUSDP No.23 (2008); HSIS; TOXNET

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