

AQUABUFF PLUS

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: AQUABUFF PLUS
Other identifier: Mixed organic acid buffer system and alcohol ethoxylate surfactant.

Recommended use: Adjuvant
Restrictions on use: Agriculture

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
 PO Box 801,
 Kempton Park, 1620, South Africa

Telephone: (011) 396 2233

Fax: (011) 396 4666

Website: www.villacrop.co.za

Emergency telephone numbers:

24 Hr Transport / Spill emergency no:
 (Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

Griffon Poison Information Centre +27 82 446 8946

(Client: Villa Crop Protection)

Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946

Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008

Hazard classes	Hazard categories	H-statements
Physical		
Flammability	Flammable liquid 3	H226
Health		
Oral	Acute Toxicity 4	H302
Skin Corrosion	Skin Corrosion 1B	H314
Eye	Eye Irritation 2	H319
Aquatic acute	Aquatic acute 2	H401

The most important adverse effects:

Physicochemical effects: Flammable liquid and vapour. (Flam. Liq. 3)

Human health effects:

Harmful if swallowed (Acute Tox. 4).

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

Causes serious eye irritation (Eye Irrit. 2).

Label elements:



Signal word: Danger

Hazard statements:

H226: Flammable liquid and vapour.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

H401: Toxic to aquatic life.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.

P233: Keep container tightly closed.

P260: Do not breathe dusts or mists.

P264: Wash hands and face thoroughly after handling.

P270: Do not eat, drink, or smoke when using this product.

P273: Avoid release to the environment.

P280: Wear impervious rubber gloves and boots, protective clothing, and chemical safety goggles.

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

P302+P361+P354: IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P316: Get emergency medical help immediately.

P330: Rinse mouth.

P337+P317: If eye irritation persists: Get medical help.

P363: Wash contaminated clothing before use.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of content/container to suitable landfill in accordance with local regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Category 4

Classification according to WHO: Class II

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

Chemical name	CAS	Conc. (m/m%)	Classification 1272/2008	EC
Acetic acid	64-19-7	39 %	Flam. Liq. 3 (H226) Skin Corr. 1A (H314)	
Citric acid	77-92-9	< 15 %	Eye Irrit. 2 (H319)	
Ammonium hydroxide	1336-21-6	< 20 %	Skin Corr. 1B (H314) Aquatic Acute 1 (H400) STOT SE 3 (H335)	1
Alkyl polyethylene glycol ether	68439-50-9	< 10 %	Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412)	1 3

AQUABUFF PLUS

SAFETY DATA SHEET

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Do not rub the skin. Persons who become sensitized may require specialized medical management. Immediately seek medical advice.

Eyes: Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention.**

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention immediately. Qualified medical personnel should perform administration of oxygen. If the person is alert, rinse mouth thoroughly with water and give person large volumes of water or milk to drink. When vomiting occurs, keep head lower than hips to prevent aspiration.

Anticipated acute effects: None known.

Anticipated delayed effects: None known.

Most important symptoms / effects: Causes serious skin burns and eye damage.

Advice to physician: No specific antidotes are available. Treat symptomatically. If the product has been ingested, inhaled, observe for latent pulmonary edema.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: Fire may produce irritating, corrosive and/or toxic oxides of carbon.

Special fire-fighting procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. This product is classified as toxic for aquatic acute – Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with eyes and skin. Do not breathe in spray mist or fumes/vapours. Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as toxic to aquatic organisms and may cause effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.)

Methods and Materials for Containment: Contain spilt product by diking area with sand or earth.

Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilt material back in original container. Do not re-use spilt material. Collect washings and add to the drums already collected. Do not flush spilt material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Harmful if swallowed. Avoid contact with eyes and skin. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this product. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces - avoid excess heat. Not to be stored next to

AQUABUFF PLUS

SAFETY DATA SHEET

foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

No occupational exposure limits have been determined for the significant ingredients in this product.

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

Hand Protection: The use of chemically protective (impervious) gloves e.g., PVC is recommended to prevent against skin contact.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employees must wear appropriate protective (impervious) clothing e.g., coveralls, (rubber) boots, hat and equipment to prevent repeated or prolonged skin contact with this product.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this product, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear colourless water-like liquid.

Odour: Slight acetic acid odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 4.26.

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: 23 – 60°C.

Flammability: Flammable.

Upper / lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density / Relative density: 1.098 g/l.

Solubility: Soluble in water.

n-octanol / water partition coefficient: Not available.

Auto-ignition temperature: Not available.

Decomposition temperature: Not available.

Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50°C, preferably below 30°C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of hazardous reactions: Unlikely to occur.

Conditions to avoid: Extreme heat or exposure to flames. Avoid contact with caustic soda, lime, strong alkali and oxidizing agents.

Incompatible materials: Incompatible with copper, copper alloys, galvanized iron, zinc, aluminium and alkali metals.

Hazardous decomposition products: May include oxides of carbon.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS

Oral LD₅₀ (24h) > 1500 mg/kg (rat).

Skin Corrosion: Cause severe skin burns and eye damage.

Eye Damage: Causes serious eye irritation.

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Reproductive cell mutagenicity: Not available.

Carcinogenicity: Not available.

Reproductive toxicity: Not available.

Specific target organ toxicity – single exposure: Not available.

Specific target organ toxicity – repeated exposure: Not available.

Aspiration hazard: Not available.

Chronic Effects: Not available.

POTENTIAL ADVERSE EFFECTS:

Eyes: This product can cause serious eye irritation.

Skin: This product can cause severe skin burns and eye damage. Repeated or prolonged contact may result in dermatitis.

Ingestion: Harmful if swallowed.

Other information: Not available.

AQUABUFF PLUS

SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

This product is expected to be toxic to aquatic organisms.

ECOTOXICITY DATA:

Acetic acid: Slightly toxic to aquatic organisms.

Fish: LC ₅₀ (96 h)	Bluegill sunfish	75 mg/l
	Fathead minnow	79 – 88 mg/l
	Mosquito fish:	251 mg/l

Daphnia: LC ₅₀ (40 h)	<i>Daphnia magna</i>	47 mg/l
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Ammonia: Highly toxic to aquatic organisms.

Fish: LC ₅₀ (96 h)	Rainbow trout	0.16 – 1.1 mg NH ₃ /l
	Fathead minnow	0.75 – 3.4 mg NH ₃ /l
	Bluegill sunfish	0.26 – 4.6 mg NH ₃ /l

Isotridecanol:

Fish: LC ₅₀ (96 h)	<i>Cyprinus carpio</i>	1 -10 mg/l
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Daphnia: LC ₅₀ (24 h)	<i>Daphnia magna</i>	1 -10 mg/l
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Algae: LC ₅₀ (96 h)	<i>Scenedesmus subspicatus</i>	1 -10 mg/l
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ENVIRONMENTAL EFFECTS

Based on information for the active ingredients.

Plants: Persistence, Degradability, Bio-accumulative potential & Mobility in soil:

Acetic acid: Is a common chemical found in all living organisms. It is readily broken down to carbon dioxide and water. 99 % of the product is biodegraded after 7 days under anaerobic conditions. The atmospheric degradation half-life is estimated to be 26.7 days.

The log n-octanol water partition coefficient for acetic acid is -0.17. This suggests that acetic acid has low potential to bio-accumulate.

Ammonia: is in the environment part of the nitrogen cycle. It volatilises into the atmosphere where may undergo a variety of reactions.

In surface water, ammonium may undergo microbiological nitrification, which yields hydrogen and utilizes oxygen so that, in certain systems, acidification and oxygen depletion may result. Ammonia may be assimilated by aquatic plants as a nitrogen source or transferred to sediments or volatilised.

In soil, major sources of ammonia are the aerobic degradation of organic matter and the application and atmospheric deposition of synthetic fertilizers. The ammonium cation is adsorbed on positively charged clay particles and is relatively immobile. Most ammonium undergoes nitrification; the nitrate ion is mobile and is removed by leaching, plant root uptake, or denitrification.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container: Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages.

14. TRANSPORT INFORMATION

UN Number: 2924
Road Transport ADR / ORD:
 Class: 3+8
 Packaging group: III
 UN Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (acid buffer + surfactant 585 g/l)

Maritime Transport IMDG / IMO:
 Class: 3+8
 Packaging group: III
 UN Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (acid buffer + surfactant 585 g/l)

Marine pollutant (Y/N): Y
Air Transport IATA / ICAO:
 Class: 3+8
 Packaging group: III
 UN Proper Shipping Name: FLAMMABLE LIQUID, CORROSIVE, N.O.S. (acid buffer + surfactant 585 g/l)

Special / Environmental Precautions: Wedge drums tightly to avoid movement. **Transport in bulk:** Refer to MARPOL 73/78, Annex II and the IBC code.

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation for the mixture:
 OSHA 1993 Regulations for Hazardous Chemical Substances.
Relevant information regarding restrictions: None.

AQUABUFF PLUS

SAFETY DATA SHEET

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 1, 5, 10, 20, 25, 50, 100 and 200 litres plastic containers/drums, labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H335: May cause respiratory irritation.

H400: Very toxic to aquatic life.

H412: Harmful to aquatic life with long-lasting effects.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.