
SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: **AQUATIC ELEMENTS LIQUID ACID**

Recommended use of the chemical and restrictions on use: Pickling and cleaning metal, boiler scale removal, brick cleaning, pH control in swimming pools and precursor for generation of chlorine dioxide gas used in water treatment

Supplier: Aquatic Elements
ABN: 30 879 687 112
Street Address: 2 Hayter Street
Currumbin Waters QLD 4223
Australia

Telephone Number: (07) 5534 3136
Facsimile: (07) 3259 8517
Emergency Telephone: 0411 422 232 (24 hours – Glenn Burrell)

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

SECTION 2 - HAZARDS IDENTIFICATION

Emergency Overview

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Corrosive to Metals - Category 1
Skin Corrosion - Sub-category 1B
Eye Damage - Category 1
Specific target organ toxicity (single exposure) - Category 3

SIGNAL WORD: DANGER



Hazard Statement(s):

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Precautionary Statement(s):

Prevention:

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- P234 Keep only in original container.
- P260 Do not breathe mist / vapours / spray.
- P264 Wash hands thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves / protective clothing / eye protection / face protection.

Response:

- P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P363 Wash contaminated clothing before re-use.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment (see First Aid Measures on Safety Data Sheet).
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P390 Absorb spillage to prevent material damage.

Storage:

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.
- P406 Store in corrosive resistant container with a resistant inner liner.

Disposal:

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

Poisons Schedule (SUSMP): S6 Poison.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| Components | CAS Number | Proportion | Hazard Codes |
|-------------------|------------|------------|--------------|
| Hydrochloric acid | 7647-01-0 | 33% | H314 H335 |
| Water | 7732-18-5 | To 100% | - |

SECTION 4 - FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor.

Inhalation:

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discoloration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

Skin Contact:

If spilt on large areas of skin or hair, immediately drench with running water and remove clothing. Continue to wash skin and hair with plenty of water (and soap if material is insoluble) until advised to stop by the Poisons Information Centre or a doctor.

Eye Contact:

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre or a doctor, or for at least 15 minutes. Continue to wash with large amounts of water until medical help is available.

Ingestion:

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Seek immediate medical assistance.

Indication of immediate medical attention and special treatment needed:

Treat symptomatically. Can cause corneal burns.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Not combustible, however, if material is involved in a fire use: Fine water spray, normal foam, dry agent (carbon dioxide, dry chemical powder).

Hazchem or Emergency Action Code: 2R

Specific hazards arising from the substance or mixture:

Non-combustible material.

Special protective equipment and precautions for fire-fighters:

Decomposes on heating emitting toxic fumes. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. If safe to do so, remove containers from the path of fire.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Emergency procedures/Environmental precautions:

Clear area of all unprotected personnel. If contamination of sewers or waterways has occurred advise local emergency services.

Personal precautions/Protective equipment/Methods and materials for containment and cleaning up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact and breathing in vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Neutralise with lime or soda ash. Collect and seal in properly labelled containers or drums for disposal. Wash area down with excess water.

SECTION 7 - HANDLING AND STORAGE

This material is a Scheduled Poison S6 and must be stored, maintained and used in accordance with the relevant regulations.

Precautions for safe handling:

Avoid skin and eye contact and breathing in vapour, mists and aerosols. Keep out of reach of children. Always add the acid to water, never the reverse.

Conditions for safe storage, including any incompatibilities:

Store in cool place and out of direct sunlight. Store away from incompatible materials described in Section 10. Store away from foodstuffs. Do not store in aluminium containers. Do not store in galvanised containers. Keep containers closed when not in use - check regularly for leaks.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control Parameters:

No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Hydrogen chloride: Peak Limitation = 7.5 mg/m³ (5 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants. Peak Limitation - a maximum or peak airborne concentration of a particular substance determined over the shortest analytically practicable period of time which does not exceed 15 minutes. These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls:

Ensure ventilation is adequate and that air concentrations of components are controlled below quoted Workplace Exposure Standards. If inhalation risk exists: Use with local exhaust ventilation or while wearing suitable mist respirator. Keep containers closed when not in use.

Individual protection measures, such as Personal Protective Equipment (PPE):

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, RUBBER BOOTS, AIR MASK , GLOVES (Long), APRON.

* Not required if wearing air supplied mask.



Wear overalls, chemical goggles, full face shield, elbow-length impervious gloves, splash apron or equivalent chemical impervious outer garment, and rubber boots. Use with adequate ventilation. If determined by a risk assessment an inhalation risk exists, wear an air-supplied mask meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES:

| | |
|---|-------------------------------|
| Physical state: | Clear Liquid |
| Colour: | Colourless to Slightly Yellow |
| Odour: | Pungent |
| Solubility: | Miscible with water |
| Specific Gravity: | 1.16-1.18 at 20°C |
| Relative Vapour Density (air=1): | Not available |
| Vapour Pressure (20 °C): | Not available |
| Flash Point (°C): | Not applicable |
| Flammability Limits (%): | Not applicable |
| Autoignition Temperature (°C): | Not applicable |
| Boiling Point/Range (°C): | 108.6°C |
| pH: | <1 |

SECTION 10 - STABILITY AND REACTIVITY

| | |
|--|--|
| Reactivity: | Reacts with alkalis. |
| Chemical stability: | Corrosive to many metals with the liberation of extremely flammable hydrogen gas. |
| Possibility of hazardous reactions: | Reacts with oxidising agents and sodium hypochlorite liberating toxic chlorine gas. |
| Conditions to avoid: | Avoid contact with foodstuffs. |
| Incompatible materials: | Incompatible with alkalis, oxidising agents, sodium hypochlorite, cyanides, and many metals. |
| Hazardous decomposition products: | Hydrogen chloride. |

SECTION 11 - TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

| | |
|---------------------|---|
| Ingestion: | Swallowing can result in nausea, vomiting, diarrhoea, abdominal pain and chemical burns to the gastrointestinal tract. |
| Eye contact: | A severe eye irritant. Corrosive to eyes; contact can cause corneal burns. Contamination of eyes can result in permanent injury. |

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Skin contact: Contact with skin will result in severe irritation. Corrosive to skin - may cause skin burns.

Inhalation: Breathing in mists or aerosols will produce respiratory irritation.

Acute toxicity:

No LD50 data available for the product. However, for constituent(s) HYDROGEN CHLORIDE:
Oral LD50 (rabbit): 900 mg/kg
Inhalation LC50 (rat): 3124 ppm/1h.

Chronic effects:

Repeated exposure to low levels of hydrochloric acid may produce discolouration and erosion of teeth and ulceration of the nasal passages.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Avoid contaminating waterways.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal methods:

Refer to Waste Management Authority. Dispose of material through a licensed waste contractor. Decontamination and destruction of containers should be considered.

SECTION 14 - TRANSPORT INFORMATION

Road and Rail Transport

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.



UN No: 1789
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: HYDROCHLORIC ACID

Hazchem or Emergency Action Code: 2R

Marine Transport

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

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UN No: 1789
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: HYDROCHLORIC ACID

IMDG EMS Fire: F-A
IMDG EMS Spill: S-B

Air Transport

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN No: 1789
Transport Hazard Class: 8 Corrosive
Packing Group: II
Proper Shipping Name or Technical Name: HYDROCHLORIC ACID

SECTION 15 - REGULATORY INFORMATION

Classification:

This material is hazardous according to Safe Work Australia; HAZARDOUS SUBSTANCE.

Classification of the substance or mixture:

Corrosive to Metals - Category 1
Skin Corrosion - Sub-category 1B
Eye Damage - Category 1
Specific target organ toxicity (single exposure) - Category 3

Hazard Statement(s):

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.

Poisons Schedule (SUSMP): S6 Poison.

All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

SECTION 16 - OTHER INFORMATION

'Registry of Toxic Effects of Chemical Substances'. Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2012.

This safety data sheet has been prepared by Aquatic Elements.

Reason(s) for Issue:

5 Yearly Revised Primary SDS

SAFETY DATA SHEET



This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Aquatic Elements cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Aquatic Elements representative or Aquatic Elements at the contact details on page 1.

Aquatic Elements' responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.