

# Safety Data Sheet



## Hazardous, Dangerous Goods

### 1. MATERIAL AND SUPPLY COMPANY IDENTIFICATION

**Product name:** Aquatic Elements Liquid Acid

**Synonyms**  
Muriatic Acid

**Product Code**

**Recommended 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 Pty Ltd  
**ABN:** 30 879 687 112  
**Street Address:** 2 Hayter Street, Currumbin Waters QLD 4217  
**Telephone:** 07 5534 3136  
**Email:** sales@aquaticelements.com.au

**Emergency Telephone number:** 0411422232

### 2. HAZARDS IDENTIFICATION

This material is hazardous according to the criteria of Safe Work Australia GHS 7.



**Signal Word**  
Danger

**Hazard Classifications**  
Corrosive to Metals - Category 1  
Skin Corrosion - Category 1B  
Serious Eye Damage - Category 1

**Hazard Statements**  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H331 Toxic if inhaled.  
H335 May cause respiratory irritation.

**Prevention Precautionary Statements**  
P102 Keep out of reach of children.  
P103 Read carefully and follow all instructions.  
P234 Keep only in original packaging.  
P260 Do not breathe dust, fume, gas, mist, vapours or spray.  
P261 Avoid breathing dust, fume, gas, mist, vapours or spray.  
P264 Wash hands, face and all exposed skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing including eye/face protection.

**Response Precautionary Statements**  
P101 If medical advice is needed, have product container or label at hand.  
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 [or shower].

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P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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/doctor.  
P312 Call a POISON CENTER/doctor if you feel unwell.  
P321 Specific treatment (see (See First Aid Measures on Safety Data Sheet) on product label).  
P390 Absorb spillage to prevent material damage.

## Storage Precautionary Statements

P402 Store in a dry place.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P406 Store in corrosive resistant polypropylene container container with a resistant inner liner.  
P410+P403 Protect from sunlight. Store in a well-ventilated place.

## Disposal Precautionary Statement

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

## Poison Schedule:

## DANGEROUS GOOD CLASSIFICATION

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

**Dangerous Goods Class:** 8

## 3. COMPOSITION INFORMATION

CHEMICAL ENTITY	CAS NO	PROPORTION
Hydrochloric acid	7647-01-0	33 %
Water	7732-18-5	To 100 %
Ingredients determined to be Non-Hazardous		Balance
		100%

## 4. FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

**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 discolouration 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

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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.

**PPE for First Aiders:** Wear rubber boots, overalls, gloves, apron, face shield, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**Notes to physician:** Treat symptomatically. Can cause corneal burns. Treat symptomatically. Can cause corneal burns.

## 5. FIRE FIGHTING MEASURES

**Hazchem Code:** 2R

**Suitable extinguishing media:** If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

**Specific hazards:** Non-combustible material.

**Fire fighting further advice:** Not applicable.

## 6. ACCIDENTAL RELEASE MEASURES

### SMALL SPILLS

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

### LARGE SPILLS

Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

**Dangerous Goods - Initial Emergency Response Guide No:** 157

## 7. HANDLING AND STORAGE

**Handling:** Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols.

**Storage:** Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Store locked up. Store in corrosive resistant container with a resistant inner liner. Keep container standing upright. Keep containers closed when not in use - check regularly for leaks.

This material is classified as a Class 8 Corrosive as per the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and/or the "New Zealand NZS5433: Transport of Dangerous Goods on Land" and must be stored in accordance with the relevant regulations.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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## National occupational exposure limits:

	TWA		STEL		NOTICES
	ppm	mg/m3	ppm	mg/m3	
Hydrogen chloride	5 Peak limitation	7.5 Peak limitation			-

As published by Safe Work Australia.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

These 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 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.

If the directions for use on the product label are followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers who are routinely, potentially exposed during product manufacture.

**Biological Limit Values:** As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

**Engineering Measures:** Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use only in well ventilated areas. Use with local exhaust ventilation or while wearing appropriate respirator.

**Personal Protection Equipment:** RUBBER BOOTS, OVERALLS, GLOVES, APRON, FACE SHIELD, RESPIRATOR.

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear rubber boots, overalls, gloves, apron, face shield, respirator. Use with adequate ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**Hygiene measures:** Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and skin contact. Avoid inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form:** Clear Liquid  
**Colour:** Colourless to Slightly Yellow  
**Odour:** Pungent

**Solubility:** Miscible in Water  
**Specific Gravity:** 1.16-1.18 in 20C  
**Density:** Not Available

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Relative Vapour Density (air=1):	Not Available
Vapour Pressure:	Not applicable
Flash Point (°C):	Not applicable
Autoignition Temperature (°C):	Not applicable
Boiling Point/Range (°C):	108.6C
pH:	1

(Typical values only - consult specification sheet)  
N Av = Not available, N App = Not applicable

## 10. STABILITY AND REACTIVITY

**Chemical stability:** Corrosive to many metals with the liberation of extremely flammable hydrogen 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.

**Hazardous reactions:** Reacts with oxidising agents and sodium hypochlorite liberating toxic chlorine gas.

## 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:

### Acute Effects

**Inhalation:** Toxic if inhaled. Breathing in mists or aerosols will produce respiratory irritation

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

**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.

### Acute toxicity

**Inhalation:** This material has been classified as not hazardous for acute inhalation exposure. Acute toxicity estimate (based on ingredients):  $LC_{50} > 20.0$  mg/L for vapours or  $LC_{50} > 5.0$  mg/L for dust and mist.

**Skin contact:** This material has been classified as not hazardous for acute dermal exposure. Acute toxicity estimate (based on ingredients):  $LD_{50} > 2,000$  mg/Kg bw

**Ingestion:** This material has been classified as not hazardous for acute ingestion exposure. Acute toxicity estimate (based on ingredients):  $LD_{50} > 2,000$  mg/Kg bw

**Corrosion/Irritancy:** Eye: this material has been classified as a Category 1 Hazard (irreversible effects to eyes). Skin: this material has been classified as a Category 1B Hazard (irreversible effects to skin).

**Sensitisation:** Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.

**Aspiration hazard:** This material has been classified as not an aspiration hazard.

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**Specific target organ toxicity (single exposure):** This material has been classified as not a specific hazard to target organs by a single exposure.

## Chronic Toxicity

**Mutagenicity:** This material has been classified as not a mutagen.

**Carcinogenicity:** This material has been classified as not a carcinogen.

**Reproductive toxicity (including via lactation):** This material has been classified as not a reproductive toxicant.

**Specific target organ toxicity (repeat exposure):** This material has been classified as not a specific hazard to target organs by repeat exposure.

## 12. ECOLOGICAL INFORMATION

Avoid contaminating waterways.

**Acute aquatic hazard:** This material has been classified as not hazardous for acute aquatic exposure. Acute toxicity estimate (based on ingredients): > 100 mg/L

**Long-term aquatic hazard:** This material has been classified as not hazardous for chronic aquatic exposure. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log  $K_{ow}$  < 4.

**Ecotoxicity:** No information available.

**Persistence and degradability:** No information available.

**Bioaccumulative potential:** No information available.

**Mobility:** No information available.

## 13. DISPOSAL CONSIDERATIONS

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS.

If possible material and its container should be recycled. If material or container cannot be recycled, dispose in accordance with local, regional, national and international Regulations.

## 14. TRANSPORT INFORMATION

### ROAD AND RAIL TRANSPORT

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".



UN No: 1789

Dangerous Goods Class: 8

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**Packing Group:** II  
**Hazchem Code:** 2R  
**Emergency Response Guide No:** 157  
**Limited Quantities** 1 L

**Proper Shipping Name:** HYDROCHLORIC ACID

**Segregation Dangerous Goods:** Not to be loaded with explosives (Class 1), dangerous when wet substances (Class 4.3), oxidising agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7) or food and food packaging in any quantity. Note 1: Concentrated strong alkalis are incompatible with concentrated strong acids. Note 2: Concentrated strong acids are incompatible with concentrated strong alkalis. Note 3: Acids are incompatible with Dangerous Goods of Class 6 which are cyanides. Exemptions may apply.

## MARINE TRANSPORT

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



**UN No:** 1789  
**Dangerous Goods Class:** 8  
**Packing Group:** II  
**Limited Quantities:** 1 L  
**Proper Shipping Name:** HYDROCHLORIC ACID

## AIR TRANSPORT

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



**UN No:** 1789  
**Dangerous Goods Class:** 8  
**Packing Group:** II  
**Limited Quantities:** 0.5 L  
**Proper Shipping Name:** HYDROCHLORIC ACID

## 15. REGULATORY INFORMATION

### This material is not subject to the following international agreements:

Montreal Protocol (Ozone depleting substances)  
The Stockholm Convention (Persistent Organic Pollutants)  
The Rotterdam Convention (Prior Informed Consent)  
Basel Convention (Hazardous Waste)  
International Convention for the Prevention of Pollution from Ships (MARPOL)

### This material/constituent(s) is covered by the following requirements:

The Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) established under the Therapeutic Goods Act (Commonwealth): .

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## 16. OTHER INFORMATION

Reason for issue: Revised

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.