

**Section 1 – Identification of the Material and Supplier**

**Product Name:** Evopure Metal Free Algaecide  
**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
**Product Use:** Swimming pool algaecide.  
**Creation Date:** 1/06/2018  
**This version issued:** 1/06/2018 and is valid for 5 years from this date.

**Details of Manufacturer:**

Evolution Water & Lighting Solutions Pty Ltd  
1/33 Hinkler Drive, Highland Park QLD 4211  
Phone: +61 7 5565 0000  
Fax: +61 7 5565 0010  
Email: enquiries@evolutionwls.com.au

**Emergency Telephone Number: 000**

**Poisons Information Centre: 131 126 in Australia, 0800 764 766 in New Zealand**

**Section 2 – Hazards Identification**

**Hazard Classification of Substance**

Classified as hazardous according to criteria of Safework Australia;

**HAZARDOUS SUBSTANCE**

Classified as dangerous according to criteria of ADG Code.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings, IBC's, or any other receptacle not exceeding 500 kg(L).

**SUSMP Classification:** S5 - CAUTION

**GHS Signal word: DANGER**



**HAZARD CATEGORY**

Acute toxicity - category 4  
Acute toxicity - category 4  
Skin corrosion - category 1B  
Hazardous to the aquatic environment (acute) - category 1

**HAZARD STATEMENTS**

H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS**

**GENERAL**

P101: If medical advice is needed, have product container or label at hand.  
P102: Keep out of reach of children.  
P103: Read label before use.

**PREVENTION**

P264: Wash contacted areas thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.

**RESPONSE**

Poisons Information Centre: 131 126 in Australia. 0800 764 766 in New Zealand

P301 + P330 + P33: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P301+312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304 + P340 + P31: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.  
 P305 + P351 + P33: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P314: Get medical advice/attention if you feel unwell.  
 P330: Rinse mouth.  
 P391: Collect spillage.

#### STORAGE

P405: Store locked up.

#### DISPOSAL

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

### Section 3 – Composition/Information on Ingredients

#### Ingredients

Chemical Entity	CAS Number	Proportion	GHS Classification
Quaternary ammonium compounds, benzyl-C12-14-alkyldimethyl, chlorides	[63449-41-2]	15%	H302; H314 ; H400 ; H410
poly[oxyethylene(dimethylimino)-ethylene(dimethylimino)ethylene dichloride	31512-74-0; or 31075-24-8	6%	H302; H400

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible. If the sum of ingredients is less than 100%, the material consists of further ingredients determined not to be hazardous or below their cut-off limits.

### Section 4 – First Aid Measures

**General Information:** You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 131 126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this SDS with you when you call.

**Ingestion:** Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Never give anything by the mouth to an unconscious patient. Seek medical advice.

**Eye Contact:** Immediately wash in and around the eye area with large amounts of water for at least 15 minutes. Eyelids to be held apart. Remove clothing if contaminated and wash skin. Urgently seek medical assistance. Transport promptly to hospital or medical centre.

**Skin Contact:** If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

**Inhalation:** Remove victim from area of exposure - avoid becoming a casualty. Seek medical advice if effects persist.

**Advice to Doctor:** Treat symptomatically.

#### SYMPTOMS OF EXPOSURE

**Ingestion:** Harmful liable to cause nausea and vomiting. May cause tissue damage to mouth and gullet.

**Eye Contact:** Corrosive. May cause permanent injury and impairment of vision.

**Skin Contact:** Irritant. May be severe with sensitive individuals or after repeated contact. Prolonged or repeated exposure may lead to dermatitis. No specific data available on skin adsorption.

**Inhalation:** Not normally considered an inhalation hazard. Aspiration (breathing in) of liquid, spray mist liable to cause severe irritation and damage to respiratory tract.

### Section 5 – Fire Fighting Measures

**Suitable Extinguishing Media:** Water spray jet, Foam, Carbon Dioxide (CO<sub>2</sub>), Dry Chemical Powder.

**Specific Hazards During Firefighting:** In case of fires, hazardous combustion gases are formed: Carbon monoxide (CO), Nitrogen oxides (NO<sub>x</sub>), Hydrogen chloride (HCl).

**Special Protective Precautions & Equipment for Fire Fighters:** Fire fighters to wear self-contained breathing apparatus if risk of exposure to vapour or products of decomposition (CO<sub>x</sub>) NO<sub>x</sub> HCl evolved.

**Hazchem Code:** 2Z

### 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 & Materials for Containment & 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). Collect and seal in properly labelled containers or drums for disposal.

### Section 7 – Handling and Storage

**Precautions for Safe Handling:** Handle and open container with care. Avoid skin and eye contact and breathing in vapour, mists and aerosols. Observe the general rules of industrial fire protection. Wash hands before breaks and at the end of workday. Use protective skin cream before handling the product. Take off immediately all contaminated clothing and wash it before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well ventilated place. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

### Section 8 – Exposure Controls and Personal Protection

**Control Parameters:** Not determined for product. However for some ingredients the Derived No Effect Limit (DNEL) according to Regulation EC #1907/2006 are shown below:

Substance	End Use	Exposure Route	Potential health Effects	Value DNEL
85409-22-9 Alkyldimethylbenzyl ammoniumchloride	General population	Inhalation	Long-term systemic effects	1.64 mg/m <sup>3</sup>

**Engineering Controls:** Ventilation: No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.

**Personal Protection:** 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, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Wear overalls, chemical goggles and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use. If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

### Section 9 – Physical and Chemical Properties

<b>Appearance:</b>	Blue, clear, mobile fluid. Characteristic odour.
<b>Flammability:</b>	Product is not flammable.
<b>Boiling Point:</b>	100°C
<b>Flash Point:</b>	Unknown
<b>Vapour Pressure:</b>	Unknown
<b>Volatiles:</b>	81+/-0.5%w/w
<b>Vapour Density:</b>	Unknown
<b>Flammability Limits:</b>	Unknown
<b>Specific Gravity:</b>	1.02
<b>Solubility in water:</b>	Completely miscible.
<b>pH 1% as supplied:</b>	8.5-10.5
<b>pH Aqueous Solution:</b>	7.0
<b>Additional Information:</b>	Do not allow to enter watercourses, drains without copious dilution.

### Section 10 – Stability and Reactivity

**Reactivity:** Stable under normal conditions of use.

**Chemical Stability:** Stable under normal conditions of use.

**Conditions to Avoid:** Store away from heat/sources of ignition – do not freeze.

**Incompatible Materials:** Oxidising agents (Class 5), or foodstuffs.

**Hazardous Decomposition Products:** The product will decompose in a fire giving off toxic gases, being oxides of carbon (COX), nitrogen (NOX) and hydrogen chloride.

**Hazardous Reactions:** None under normal conditions of use.

### Section 11 – Toxicological Information

**Acute Oral Toxicity:** No data available for product however active ingredient LD's listed below:

Quaternary ammonium compounds

LD50 (Rat): 500 – 2,000 mg/kg Method: OECD Test Guideline 401

Poly[oxyethylene(dimethylimino)-ethylene(dimethylimino) ethylene dichloride

Acute toxicity, LD50, Oral, Rat, 1850 mg/kg.

Acute toxicity, LD50, Skin, Species: Rabbit, > 2,000 gm/kg.

LC50 Inhalation, Rat = 2.9mg/L/4hr

Acute toxicity:	Not expected to be toxic
Skin corrosion/irritation:	Expected to be an irritant.
Serious eye damage/irritation:	Expected to be an irritant.
Respiratory or skin sensitisation:	Not expected to be a sensitiser.
Germ cell mutagenicity:	No information available.
Carcinogenicity:	No information available.
Reproductive toxicity:	No information available.
Specific Target Organ Toxicity	No data available

(STOT) – single exposure:	
Specific Target Organ Toxicity (STOT) – repeated exposure:	No data available
Aspiration hazard:	Not expected to be a hazard.

## Section 12 – Ecological Information

**Ecotoxicity:** This product, while biodegradable at high dilution, is toxic to marine and aquatic organisms. Ensure all spills are contained and recovered into suitable drums.

Remarks: The values mentioned are those of the active ingredient/s

### Acute Toxicity:

Fish – *LC <sub>50</sub> (Danio rerio (zebra fish): Exposure time: 96 h	1 - 10 mg/l
# LC <sub>50</sub> , Rainbow Trout (Oncorhynchus mykiss), 48 H, Mortality,	44.00 ug/L
Aquatic invertebrate – *EC <sub>50</sub> (Daphnia magna (Water flea): Exposure time: 48 h	5.8 ug/L
#EC <sub>50</sub> (Daphnia magna (Water flea): Exposure time: 48 h	37 ug/L
Algae – EC <sub>50</sub> (Selenastrum capricornutum (green algae)): Exposure time: 72 h	49 ug/L
Microorganisms –	EC <sub>50</sub> : 17 mg/l Method: OECD Test Guideline 209

### Chronic Toxicity:

Fish –	Data not available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	NOEC: 25 ug/L Exposure time: 21 d
Algae –	Data not available
Microorganisms –	Data not available

### Persistence and Degradability:

Biodegradation \*: 35 - 70 %

Method: OECD Test Guideline 302B

Biodegradation \*: > 80 %

Method: OECD Test Guideline 301A

Remarks: Readily biodegradable, according to appropriate OECD test.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** No data available.

## Section 13 – Disposal Considerations

**Disposal Methods and Containers:** Do not dump large quantities into biological treatment ponds. Laboratory data indicates that if quaternary ammonium compounds are discharged steadily at low concentrations (<15 mg/litre), it may be expected that these salts can be degraded in sewage treatment plants by acclimatized organisms.

Before discharging to sewer, contact local sewerage authority. Contact local Waste Disposal Authority regarding all major disposal problems. Rinse empty containers with clear water only, drain and re-seal before disposal or return.

Packaging that cannot be cleaned should be disposed of as product waste.

**Special Precautions for Landfill or Incineration:** Consult your state Land Waste Management Authority for more information.

### 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.

Environmentally Hazardous Substances meeting the descriptions of UN 3077 or 3082 are not subject to the provisions of the Australian Code for the Transport of Dangerous Goods by Road and Rail when transported by road or rail in packagings, IBC's, or any other receptacle not exceeding 500 kg(L).

UN Number: 3082  
Transport Hazard Class/s: 9 Miscellaneous Dangerous Goods  
Packing Group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name: Alkyldimethylbenzylammoniumchloride  
Hazchem Code: 2Z  
IERG Number: 47

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

UN Number: 3082  
Transport Hazard Class/s: 9 Miscellaneous Dangerous Goods  
Packing Group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name: Alkyldimethylbenzylammoniumchloride  
Hazchem Code: 2Z  
Special Instructions for User: NA  
IMDG EMS Fire: F-A  
IMDG EMS SPILL: S-F

**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 Number: 3082  
Transport Hazard Class/s: 9 Miscellaneous Dangerous Goods  
Packing Group: III  
UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
Technical name: Alkyldimethylbenzylammoniumchloride  
Hazchem Code: 2Z  
Environmental Hazards: Special marking provision: environmentally hazardous. Shipment permitted

### Section 15 – Regulatory Information

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

**Classification of the Substance or Mixture:**

Acute toxicity - category 4  
Acute toxicity - category 4  
Skin corrosion - category 1B  
Hazardous to the aquatic environment (acute) - category 1

**Hazard Statements:**

H302: Harmful if swallowed.  
H312: Harmful in contact with skin.  
H314: Causes severe skin burns and eye damage.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

**Poisons Schedule (SUSMP):** 5 CAUTION

**AICS:** All ingredients are on the Australian Inventory of Chemical Substances.

**Section 16 – Other Information**

This SDS contains only safety-related information. For other data see product literature.

**Contact Person / Point:**

FOR EMERGENCIES ONLY CONTACT: Australia: 000  
POISONS INFORMATION CENTRE: Australia 131126  
New Zealand 0800 764 766

**Acronyms:**

**ADG** Australian Code for the Transport of Dangerous Goods by Road and Rail  
**ACGIH** American Conference of Governmental Industrial Hygienists  
**ASCC** Australian Safety and Compensation Council  
**Carcinogen Category Number** 1. Established human carcinogen  
2. Probably human carcinogen  
3. Substances suspected of having carcinogenic potential  
**Code AICS** Australian Inventory of Chemical Substances  
**CAS number** Chemical Abstracts Service Registry Number  
**EPG** Emergency Procedure Guide ( superseded by IERG)  
**Hazchem Code** Emergency action code of numbers and letters that provide information to emergency services especially firefighters  
**IARC** International Agency for Research on Cancer  
**IATA** International Air Transport Association  
**IERG** HB 76-2004 Dangerous goods - Initial Emergency Response Guide  
**IMDG** International Maritime Dangerous Goods. A uniform code for transport of dangerous goods at sea.  
**LEL** lower flammable (explosive) limits in air;  
**LD<sub>50</sub>** Lethal Dose sufficient to kill 50% of test population  
**NIOSH** National Institute for Occupational Safety and Health The United States federal agency responsible for conducting research and making recommendations for the prevention of work-related injury and illness.  
**NOAEL** No Observed Adverse Effect Level  
**NOEL** No Observable Effect Level  
**NOHSC** National Occupational Health and Safety Commission  
**NTP** National Toxicology Program (USA)  
**PEL** Permissible Exposure Limit  
**RTECS** Registry of Toxic Effects of Chemical Substances (Symyx Technologies)  
**TCLO** Toxic Concentration Low  
**TDLO** Toxic Dose Low : lowest dosage per unit of bodyweight (typically stated in milligrams per kilogram) of a substance known to have produced signs of toxicity in a particular animal species.  
**TLV** Threshold Limit Value (ACGIH):The time weighted average used to describe exposure which is harmless to most of the population when exposed 8 hours per day, 40 hours per week.  
**TWA** (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.  
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.  
**SAFEWORK** Independent statutory agency with primary responsibility to improve occupational health and safety and workers' compensation arrangements across Australia.  
**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.  
**SUSDP** Standard for the Uniform Scheduling of Drugs & Poisons

**SUSMP** Standard for the Uniform Scheduling of Medicines & Poisons  
**UEL** upper flammable (explosive) limits in air;  
**UN Number** United Nations Number

**Sources for data.** Safety Data Sheets from Suppliers  
Hazardous Substances Information System (HSIS)– ASCC Australia (on-line)  
GHS (Globally Harmonised System of Substance Classification & Labelling)  
REACH (European Chemical Substance Information System)  
ADG Code 7th Edition  
SUSMP No 13

**Disclaimer:**

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 Evolution Water and Lighting Solutions Pty Ltd 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 Evolution Water and Lighting Solutions Pty Ltd at the contact details on page 1. Evolution Water and Lighting Solutions Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request. Evolution Water and Lighting Solutions Pty Ltd however makes no warranty whatsoever, expressed, implied or of merchantability regarding the accuracy of such data or the results to be obtained from the use thereof and assumes no responsibility for injury to buyer or third persons or for any damage to property, Buyer assumes all risks.