

**1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER**

**Product Name:** MARQUE ALGAECIDE  
**Chemical Name:** Benzalkonium Chloride,  
**Synonyms** Quaternary Ammonium Chloride, Quaternary ammonium compounds, benzyl-C12-16-alkyldimethylchlorides  
**Product Code:** MARQALG6X01 - 1 L.

**Recommended Use of the Chemical and Restrictions on Use:**

Algaecide for swimming pools

**Supplier:** HY-CLOR AUSTRALIA PTY LIMITED  
**Street Address:** 178 Power Street  
Glendenning NSW 2761

**Telephone Number:** (02) 8805 2400

**After Hours Contact:** 0404 859 515

**Facsimile:** (02) 8805 2401

**Email Contact:** [help@hyclor.com.au](mailto:help@hyclor.com.au)

**Emergency Telephone:** 13 11 26 (Australia Poisons Information Centre)

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

**2. HAZARD IDENTIFICATION**

Classified as hazardous according to the criteria of the GHS as adopted in Australia. A Dangerous Good according to ADG 7.5.

**Poisons Schedule: S5. SIGNAL WORD:** Caution

**GHS Hazard Statement(s)**

Acute Oral Toxicity	Category 5	H303	May be harmful if swallowed
Eye irritation/corrosion	Category 1	H318	Causes serious eye damage
Skin Corrosion irritation	Category 1C	H314	Causes severe skin burns and eye damage
Aquatic acute and chronic toxicity	Category 1	H400	Very Toxic to the aquatic life with long lasting effects

**Safety Data Sheet**Revision date: 17TH July 2018  
Replaces: 20th June 2018**Precautionary statements****Prevention:**

P260: Do not breathe mists.

P264: Wash face and hands thoroughly after handling.

P280: Wear protective gloves/ eye protection/ face protection.

P273: Avoid release to the environment. - if this is not the intended use.

**Response:**

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

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor/ physician.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P391: Collect spillage.

**Storage:**

P405: Store locked up.

**Disposal:**

None

**Hazard pictograms****Signal word**

Danger

<b>Label Statements:</b>	Keep out of reach of Children Read Label before use If medical advice is needed, have product container or label at hand.
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**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Ingredient	CAS Number	Concentration (% w/w)
Benzalkonium Chloride	68424-85-1	15
Dye		< 0.1
Water	7732-18-5	Balance

**4. FIRST AID MEASURES**

For advice, contact a Poisons Information Centre. Phone Australia 13 1126 or a doctor. Have this SDS when you call.

<b>Swallowed:</b>	Do not induce vomiting unless advised to do so from, a medical practitioner. Wash out mouth with water and give plenty of water to drink. Seek medical attention.
<b>Skin:</b>	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If irritation occurs seek immediate medical attention.
<b>Eye:</b>	If contact with the eye(s) occurs, or if eye irritation arises, wash with copious amounts of water holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. If irritation occurs seek immediate medical attention.
<b>Inhaled:</b>	Remove from contaminated area. If symptoms develop seek medical attention.
<b>Note to Physician</b>	Treat symptomatically

**5. FIRE FIGHTING MEASURES**

<b>Suitable extinguishing media:</b>	Water spray, alcohol foam, dry chemical or carbon dioxide extinguishers
<b>Special hazards arising from the chemical:</b>	Carbon monoxide (in conditions of incomplete combustion), carbon dioxide, nitrogen oxides and hydrogen chloride may be produced if water in the product boils off.
<b>Special protective equipment and precautions for fire fighters:</b>	The product is non flammable. However, after evaporation of water in the product, the residue may be combustible. In confined areas or areas of excessive smoke, fire fighter must wear full protection and self-contained breathing apparatus.

Hazchem Code:

2X

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedure**

This product is sold in small packages, and the accidental release from one of these is not usually a cause for concern. Wear personal protective equipment as described in Section 8. Slippery when spilt.

**Environmental precautions**

Keep spilt products out of drains, sewers and waterways. If large quantities of this material enter the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

**Methods and materials for containment and cleaning up**

For minor spills, contain and absorb with inert materials (sand, earth), sweep up, place contaminated material in a sealed container and place in garbage. Wash area down with excess water.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid skin and eye contact and breathing in vapour, mists and aerosols.

**Safe storage, including any incompatibilities**

Store in a cool, dry well-ventilated area, out of direct sunlight. Store in labelled, original containers. Keep containers tightly closed. Store away from incompatible materials described in Section 10. No incompatibilities known.

**EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Occupational Exposure Limits:** Exposure limits have not been established by Safe Work Australia for this product or any of its components.

Workplace Exposure Standard(s) for decomposition product(s) are:

- Hydrogen chloride: TWA Peak Limitation = 7.5 mg/m<sup>3</sup> (5 ppm)
- Carbon oxides: Carbon dioxide 8hr TWA = 9 g/m<sup>3</sup> (5000 ppm)  
Carbon monoxide 8hr TWA = 34 mg/m<sup>3</sup> (30 ppm)
- Nitrogen oxides: Nitrous oxide. TWA = 31 mg/m<sup>3</sup> (25 ppm).  
Nitrogen dioxide TWA – 5.6 mg/m<sup>3</sup> (3 ppm). STEL 9.4 mg/m<sup>3</sup> (5 ppm)

**Exposure controls****Appropriate Engineering Controls:**

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Eye wash bottle or emergency eye-wash fountain must be found in the work place.

### **Personal Protective equipment - for manufacturing and bulk handling situations:**

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.

<b>Clothing:</b>	Wear overalls clothing including chemical resistant apron where clothing is likely to be contaminated.
<b>Skin Protection:</b>	Wear gloves of impervious material such as PVC, neoprene or nitrile. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken.
<b>Eye Protection:</b>	Tightly fitting safety goggles or full-faced shields as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken.
<b>Respiratory Protection:</b>	Respiratory protection is not normally necessary, unless the production of mists is significant. In such cases, a suitable respirator may be worn that meets the requirements of AS/NZS 1715 and AS/NZS 1716.
<b>Personal Hygiene:</b>	Always wash hands after handling this product.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Light Blue Liquid	<b>Vapour density:</b>	No data found
<b>Odour:</b>	None	<b>Relative density:</b>	1.0 at 20°C
<b>pH:</b>	7-7.5 at 1%	<b>Water solubility:</b>	Completely soluble
<b>Melting point / freezing point:</b>	Not applicable	<b>Partition coefficient n-octanol/water:</b>	Not applicable, inorganic compound
<b>Initial boiling point and boiling range:</b>	~ 100°C	<b>Auto-ignition temperature:</b>	Not applicable
<b>Flash point:</b>	Not flammable	<b>Decomposition temperature:</b>	No data found
<b>Evaporation rate:</b>	No data found	<b>Viscosity:</b>	No data found
<b>Flammability:</b>	Not flammable	<b>Explosive properties:</b>	Not explosive
<b>Upper/lower flammability limits:</b>	Not flammable	<b>Oxidising properties:</b>	Not an oxidiser
<b>Vapour pressure:</b>	No data found		

**10. STABILITY AND REACTIVITY**

<b>Reactivity:</b>	This product is stable
<b>Chemical Stability:</b>	This product is stable and unlikely to react or decompose under normal circumstances.
<b>Possibility of hazardous reactions:</b>	Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below. Under fire conditions this product may emit carbon monoxide (in conditions of incomplete combustion), carbon dioxide, nitrogen oxides and hydrogen chloride may be produced if water in the product boils off.
<b>Conditions to avoid:</b>	Extremes of temperature and direct sunlight.
<b>Incompatible materials:</b>	Strong oxidising agents. Strong acids.

**11. TOXICOLOGICAL INFORMATION**

No data available for the product. Information given is based on the benzalkonium chloride (C<sub>12</sub>-C<sub>16</sub> alkyl dimethyl benzyl ammonium chloride) component.

<b>Acute Oral</b>	Swallowing may result in soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting. Oral LD <sub>50</sub> (rat): 426 mg/kg. Product Oral LD <sub>50</sub> by GHS mixture calculation 2840 mg/kg.
<b>Acute Dermal</b>	Dermal LD <sub>50</sub> (rat): 1420 mg/kg. Product Dermal LD <sub>50</sub> by GHS mixture calculation > 5000 mg/kg
<b>Skin corrosion/irritation</b>	Contact with skin may result in severe irritation.
<b>Serious eye damage/eye irritation</b>	May cause irreversible eye damage.
<b>Inhalation</b>	Not considered an inhalation hazard, however product may be irritating.
<b>Respiratory or skin sensitisation</b>	Inhalation of mist may result in respiratory irritation. Not considered a skin sensitiser
<b>Mutagenicity</b>	Not mutagenic or genotoxic
<b>Reproduction/Development</b>	No data found
<b>Carcinogenicity</b>	Not carcinogenic based on rat and mice studies
<b>Specific target organ toxicity - single exposure</b>	Highly active in causing hemolysis of rabbit erythrocytes
<b>Specific target organ toxicity - repeated exposure</b>	No data found
<b>Aspiration hazard</b>	No data found

**12. ECOLOGICAL INFORMATION**

No data available for the product. Information given is based on the benzalkonium chloride (C<sub>12</sub>-C<sub>16</sub> alkyl dimethyl benzyl ammonium chloride) component.

<b>Aquatic toxicity</b>	Algae 96H ErC <sub>50</sub> : 0.06 mg/L Daphnia 48H EC <sub>50</sub> : 0.02 mg/L Fish 96H LC <sub>50</sub> : 0.85 – 1.2 mg/L
<b>Persistence and degradability</b>	Readily biodegradable. If released to watertreatment and the environment biodegradation is expected to occur. If released into water, based on the Koc it is expected to adsorb to suspended solids and sediments.
<b>Bioaccumulative potential:</b>	No data found
<b>Mobility in soil</b>	None expected based on an estimated Koc of 9x10 <sup>-5</sup>
<b>PBT identification:</b>	This product is not identified as a PBT/vPvB substance.
<b>Other adverse effects:</b>	Toxic to soil organisms.

**13. DISPOSAL CONSIDERATIONS**

**Disposal:** Rinse empty containers in the pool and dispose of by wrapping with paper and putting in garbage. For larger quantities, refer to local government authority for disposal recommendations. Dispose of material through a licensed waste contractor. Normally suitable for disposal at approved land waste site

**14. TRANSPORT INFORMATION**



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**Consult the ADG 7.5, IMDG and ICAO/IATA Codes for all the transport requirements for the specified UN Number.**

	Land Transport (ADG 7.5)	Sea Transport (IMDG)	Air Transport (ICAO/IATA)
<b>UN Number</b>	1760		
<b>UN proper shipping name</b>	Corrosive Liquid, N.O.S. (benzalkonium chloride)	Corrosive Liquid, N.O.S. (benzalkonium chloride)	Corrosive Liquid, N.O.S. (benzalkonium chloride)
<b>Transport Hazard Class</b>	8	8	8
<b>Packaging Group</b>	I, II or III (see ADG 7.5 for details)	II	II
<b>Marine Pollutant</b>		Yes	
<b>Special Provisions*</b>	273, 274, TP2, TP27, TP28		

\* See ADG 7.5 for details

## 15. REGULATORY INFORMATION

<b>Poisons Standard (Scheduling):</b>	Schedule 5 (containing ≤ 20% quaternary ammonium compounds)
<b>APVMA Product Number:</b>	xxxx
<b>Listing in the Australian Inventory of Chemical Substances (AICS)</b>	Listed as Quaternary ammonium compounds, benzyl-C12-16-alkyldimethylchlorides. Synonym: benzyl-C - alkyldimethylammonium chlorides

**16. OTHER INFORMATION**

<b>ADG</b>	Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.5, 2017
<b>AS/NZS</b>	Australian Standard/New Zealand Standard
<b>CAS Number:</b>	Unique Chemical Abstracts Service Registry Number
<b>EC<sub>50</sub>:</b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species).
<b>GHS:</b>	Globally Harmonized System of classification and labelling of chemicals (GHS)
<b>Hazchem Code:</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HCIS:</b>	Hazardous Chemical Information System ( <a href="http://hcis.safeworkaustralia.gov.au/HazardousChemical">http://hcis.safeworkaustralia.gov.au/HazardousChemical</a> )
<b>IARC:</b>	International Agency for Research on Cancer
<b>LD<sub>50</sub>:</b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>IDLH:</b>	Immediately dangerous to life or health ( <b>IDLH</b> ) is <b>defined</b> by the US National Institute for Occupational Safety and Health (NIOSH)
<b>LC<sub>50</sub>:</b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population.
<b>NTP:</b>	National Toxicology Program (USA)
<b>SDS:</b>	Safety Data Sheet
<b>STEL:</b>	Short term exposure limit (STEL) means the time-weighted average maximum airborne concentration of a substance calculated over a 15 minute period.
<b>TWA:</b>	8-hour Time-weighted average (TWA) means the maximum average airborne concentration of a substance when calculated over an eight-hour working day, for a five-day working week.
<b>WES:</b>	Workplace exposure standard
<b>UN Number:</b>	United Nations Dangerous Goods Number

**References:**

Work Safe Australia Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (February 2016). The exposure standards comply with the Australian Workplace Exposure Standards for Airborne Contaminants and the The Dangerous Goods Classification complies with the Australian Code for the Transport of Dangerous Goods by Road & Rail Edition 7.5, 2017. Other information from ChemIDPlus and linked databases. European Chemicals Agency Classification and Labelling database.

**Sections Revised:** All



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### **Disclaimer**

This Safety Data Sheet (SDS) has been prepared in compliance with the Work Safe Australia Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice (February 2016). The information in this SDS should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Hy-Clor Australia Pty. Limited shall not be held liable for any damage resulting from handling or from contact with the above product.

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