1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: HY-CLOR ALGAECIDE
Shipping Name: Benzalkonium Chloride, Quaternary Ammonium Chloride
Product Code: HYCALG02-2 L, HYCALG05-5L
UN Number: None allocated
Other Names: N/A

Recommended Use of the Chemical and Restrictions on Use:
Algaecide for swimming pools

Chemical Formula: N/A
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
Emergency Telephone: 13 11 26 (Australia Poisons Information Centre)
New Zealand 0800 764 766

2. HAZARD IDENTIFICATION

Classified as hazardous according to the criteria of Safe Work Australia

Poisons Schedule: S6

Classification of the substance or mixture:
Eye Damage: Sub Category 1
Skin Corrosion/Irritation – Category 1C
Acute Hazard to Aquatic Environment – Category 1

SIGNAL WORD: Warning
Hazard Statement(s):
H290: May be corrosive to metals
H302: Harmful if swallowed
H314: Causes severe skin burns and eye damage

Precautionary Statement(s):
P102: Keep out of reach of children
P233: Keep container tightly closed
P260: Do not breathe fumes, mists, vapours or spray
P262: Do not get in eyes, on skin, or on clothing
P264: Wash contacted areas thoroughly after handling
P270: Do not eat, drink or smoke when using this product
P280: Wear protective gloves, protective clothing and eye or face protection
P235+P410: Keep cool. Protect from sunlight

Response:
P301+P302: IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell
P301+P330+P331: IF SWALLOWED. Rinse mouth. Do NOT induce vomiting

COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Entity</th>
<th>CAS Number</th>
<th>Proportion</th>
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<tbody>
<tr>
<td>Benzalkonium Chloride</td>
<td>68424-85-1</td>
<td>&lt;15%</td>
</tr>
<tr>
<td>Dye</td>
<td></td>
<td>&lt;0.1%</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>To 100%</td>
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FIRST AID MEASURES

Swallowed: Rinse mouth out with water. Seek advice immediately from a medical practitioner or Poisons Information Centre. Do not induce vomiting unless advised to do so by a medical practitioner. If more than a mouthful has been swallowed, give one or two glasses of water or milk.

Skin: Remove contaminated clothing and thoroughly wash exposed skin with waterless hand cleaner (if available) followed by plenty of soap and water. Seek medical advice if skin irritation occurs.

Eye: If contact with the liquid occurs, or if eye irritation arises, hold the eyelid(s) open and flush the eye(s) with fresh lukewarm water (or, if available, other eye cleansing solutions) for at least 15 minutes. Take care not to rinse contaminated water into the non-affected eye. Seek medical advice for all eye contact.
Inhaled: Remove affected individual from exposure to fresh air. Seek medical advice if respiratory symptoms occur.
Advice to Doctor: No specific treatment recommended. Treat symptomatically for exposure to an irritant (quaternary ammonium compound).

**FIRE FIGHTING MEASURES**

Hazchem Code: None allocated

Extinguishers: If the product is involved in a fire, water spray, alcohol foam, dry chemical or carbon dioxide extinguishers can be used.
Fire Fighting Precautions: In confined areas or areas of excessive smoke, fire fighter must wear full protection and self-contained breathing apparatus.
Combustion Products: Carbon monoxide (in conditions of incomplete combustion), carbon dioxide, nitrogen oxides and hydrogen chloride may be produced if water in the product boils off.
Other Precautions: The product is non flammable. However, after evaporation of water in the product, the residue may be combustible.

**ACCIDENTAL RELEASE MEASURES**

Clean up spills promptly. Keep spilt product out of drains, sewers and waterways. Spills should be contained, and the possibility of collection for re-used evaluated. If this is not possible, collect or absorb the material using absorbents, sand or earth and place into a leak proof container for disposal. Wash down the area of soil with plenty of water to remove any remaining residues.

**HANDLING AND STORAGE**

Handling: Keep out of the reach of children. Do not eat, drink or smoke while handling the product. Do not swallow. Avoid contact with eyes. Avoid contact with skin.
Storage: The product is not classified as a dangerous good. Minimal conditions include storage in a cool, dry, ventilated store away from sunlight. Containers should be kept upright, closed and airtight when not in use.
Incompatibilities: None
EXPOSURE CONTROLS / PERSONAL PROTECTION

Personal Protective Equipment: All personal protective equipment should be selected, used, maintained and decontaminated in accordance with manufacturer’s instructions and applicable standards.

Clothing: Overalls and boots should be worn as a general requirement.

Skin Protection: Where skin exposure is likely, skin protection is required, including gloves and apron. Chemically resistant gloves made of rubber, nitrile, PVC or chloroprene should be satisfactory.

Eye Protection: Eye protection should be used where splashing or large amounts of mists may be generated. Face-shield, chemical safety glasses or side shield glasses are suitable.

Respiratory protection: Respiratory protection is not normally necessary, unless the production of mists is significant. In such cases, a suitable respirator may be worn.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance / Odour Clear colourless to slightly blue liquid
pH 7-7.5 at 1%
Vapour Pressure As for water
Vapour Density As for water
Boiling Point/Range About 100°C
Freezing/Melting Point About 0 °C
Solubility in water Complete
Specific Gravity / Density 1.0 at 20 °C
Evaporation Rate As for water

STABILITY AND REACTIVITY

Chemical Stability This product is stable
Conditions to avoid None
Incompatible Material None
TOXICOLOGICAL INFORMATION

Benzalkonium Chloride is classified as a skin and eye irritant.

Acute Effects

Swallowed: Swallowing this product may produce inflammation of the mouth, throat and gastrointestinal symptom, and may cause nausea and abdominal pain. Swallowing large amounts can be fatal.

Skin: Prolonged skin contact to the liquid may cause irritation. In rare cases, repeated skin contact may cause contact dermatitis.

Eye: Irritating to the eye on contact with the liquid or mists.

Inhaled: Not considered an inhalation hazard.

Chronic Effects: None known.

ECOLOGICAL INFORMATION

As a group, Quaternary ammonium compounds may have temporary effects in aquatic environments. However, they are biodegradable and are unlikely to pose a long term risk to the environment.

DISPOSAL CONSIDERATIONS

Do not discharge this product to natural waterways, stormwater channels or sewers. This product is not a hazardous waste and it can, along with its containers, be disposed to landfill in accordance with local regulations.

TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>UN Number</th>
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</tr>
</thead>
<tbody>
<tr>
<td>UN Proper Shipping Name</td>
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<td>Subsidiary Risk</td>
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<td>Hazchem Code</td>
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Product Name: Hy-Clor Algaecide

Last Review July 11 2013

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**REGULATORY INFORMATION**

Poisons Schedule (Aust): S6 All the constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS)

**OTHER INFORMATION**

**Contact:** Any advice, recommendation, information, assistance, or service provided by Hy-Clor Australia in relation to the goods supplied by it or their use or application is given in good faith and believed to be appropriate and reliable. However, this information is given without warranty or representation. The customer accepts all risk and responsibility for use of the goods alone, or in combination with other products.

Mark Sheridan  
Technical Regulations Manager  
Telephone  
Australia + 61 2 8805 2400  
New Zealand + 64 9 973 2477