Material Safety Data Sheet

Issue Date: July 11, 2013

Product Name: HY-CLOR ALGAECIDE

Classified as a hazardous substance according to the criteria of the National Occupational Health and Safety Commission.

IDENTIFICATION

Product Name: Hy-Clor Algaecide
Other Names: Benzalkonium Chloride, Quaternary Ammonium Chloride
Product Code & Sizes:
- HYCALG02 2 LITRE
- HYCALG05 5 LITRE
Recommended Uses: Algaecide for swimming pools

Company Name: HY-CLOR AUSTRALIA PTY LIMITED
Address: 178 Power Street, Glendenning, NSW 2761
Tel/Fax: Ph: (02) 8805 2400 Fax: (02) 8805 2401

Emergency Contact Number: Business Hours Only (02) 8805 2400. After Hours 0404 859 515
24 Hour Emergency Contact: If poisoning occurs, contact a doctor or Poisons Information Centre
Australia 131 126 or New Zealand 0800 764 766

HAZARD IDENTIFICATION

Hazard Statement:
This material is not hazardous according to health criteria on NOHSC Australia

Hazard Category
UN Number: None allocated
UN Proper Shipping Name: None allocated
Dangerous Goods Class: None allocated
Subsidiary Risk: None allocated
**Packing Group**
None allocated

**Hazchem Code**
None allocated

**Risk Phrases**
R37 Irritating to the respiratory system
R38 Irritating to skin
R41 Risk of eye damage

**Safety Phrases**
R23 Do not breathe fumes/vapour/mist
R24 Avoid contact with skin
R25 Avoid contact with eyes
R26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Entity</th>
<th>CAS Number</th>
<th>Proportion</th>
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</thead>
<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>
</tr>
</tbody>
</table>

### 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

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

### 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

<table>
<thead>
<tr>
<th><strong>Handling</strong></th>
<th>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.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Storage</strong></td>
<td>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.</td>
</tr>
<tr>
<td><strong>Incompatibilities</strong></td>
<td>None</td>
</tr>
</tbody>
</table>
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**

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

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, it is provided with a disclaimer for any liability or responsibility on the part of Hy-Clor Australia Pty Ltd. The customer accepts all risk and responsibility for use of the goods alone, or in combination with other products. All warranties, guarantees and conditions, other than those expressly stated, and whether implied by statute, common law, custom of the trade otherwise, are to the extent that the law permits expressly excluded.

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