

# Material Safety Data Sheet

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Infosafe No. HYD03 Issue Date : May 2008 ISSUED by HYDROCHM

Product Name : BIOSUB

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

**Product Name** BIOSUB  
**Company Name** Hydro-Chem Pty Ltd  
**Address** 27 Viking Court Cheltenham  
VIC 3192  
**Telephone/Fax Number** Tel: (03) 9553 1011 Fax: (03) 9553 1387  
**Recommended Use** Biosub aids in the control of bacterial, fungal and algal slimes in open recirculating cooling water systems. Biosub is suitable for industrial or domestic evaporative coolers only. Biosub should be placed in the basin of the coolers. When the container floats, this indicates that the Biosub is depleted. Contact Hydro-Chem for advise on alternatives applications.

### Other Information

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

## 2. HAZARDS IDENTIFICATION

**Hazard Classification** Hazard Category:  
T Toxic  
Xi Irritant  
**Risk Phrase(s)** R22 Harmful if swallowed.  
R23 Toxic by inhalation.  
R38 Irritating to skin.  
R41 Risk of serious damage to eyes.  
R50 Very toxic to aquatic organisms.  
**Safety Phrase(s)** S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
S28 After contact with skin, wash immediately with plenty of  
S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
S45 In case of accident or if you feel unwell seek medical advice immediately

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Characterization** Solid  
**Information on Composition** All ingredient in this product are listed on the Australian Inventory of Chemical Substances (AICS).  
**Ingredients**

<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
1-bromo-3-chloro-5,5-di methylhydantoin	16079-88-2	60-100 %
Inert Ingredients		TO 100%

## 4. FIRST AID MEASURES

**Inhalation** Remove victim to fresh air.  
If irritation persists, contact physician. Never give anything by mouth to and unconscious person.  
**Ingestion** Feed gruel, cooked cereal or bread soaked in milk followed by olive oil.  
Immediately contact physician.  
Never give anything by mouth to an unconscious person.  
**Skin** Wash with plenty of soap and water. Seek immediate medical advice.  
**Eye** Immediately irrigate with copious quantity of water for at least 15 minutes.  
Eyelids to be held open. Seek immediate medical assistance.

## 5. FIRE FIGHTING MEASURES

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**Specific Hazards** Hazardous decomposition products of heating and/or burning: Hydrogen chloride. Oxides of nitrogen  
Hydrogen bromide  
Bromide gas  
Extinguish fire with the following:  
Use carbon dioxide.  
Use CO<sub>2</sub>, dry chemical or foam.  
Keep containers cool with water spray.  
DO NOT BREATHE FUMES  
Contain run-off.  
Oxidizing material. Forms explosive mixtures with combustible, organic or other easily oxidizable materials.

**Hazchem Code** 1Y

## 6. ACCIDENTAL RELEASE MEASURES

**Spills & Disposal** If product from containers is released:  
Contain - prevent contamination of drains and waterways. Sweep up or collect, but avoid generating dust. Use spark free implements. Re-collect in original container if possible. Normally suitable for disposal at an approved land waste site.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling** Do not open containers, avoid release of chemical.  
Always wear gloves when handling this product refer to Section 8.  
If chemical is released refer to Section 6.

**Conditions for Safe Storage** Store in a cool, dry, well ventilated area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards** No data supplied.  
TLV not established

**Engineering Controls** Use with adequate ventilation. Avoid generating and inhaling dusts.

**Personal Protective Equipment** Wearing of the following personal protective equipment is recommended. Safety glasses, goggles or faceshield as appropriate. Rubber gloves. Avoid inhaling the vapour, mist or dust.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Form** Solid

**Appearance** White to off-white tablets.  
Faint halogen odour.

**Melting Point** Not applicable - Decomposes

**Boiling Point** Not Allocated

**Specific Gravity** 1.8-2.0 (water = 1)

**Vapour Pressure** Negligible

**Flash Point** Not Allocated

**Flammability** Keep away from heat, sparks or naked flames.  
OXIDIZING material. Forms explosive mixtures with combustible, organic or other easily combustible materials.

**Flammable Limits - Lower** Not Allocated

**Other Information** Solubility in water.....0.2% @ 25°C/77°F  
Solubility in benzene.....2.5% @ 25°C/77°F

## 10. STABILITY AND REACTIVITY

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**Hazardous Reactions** STRONG OXIDIZING AGENT !!! Mix only with water. Use clean dry utensils. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion. Contamination with moisture, organic matter, or other chemicals may start a chemical reaction with generation of heat, liberation hazardous gases and possible geration of fire and explosion. In case of contamination or decomposition, do not reseal container. If possible, isolate container in open air or well-ventilated area. Flood with large volumes of water, if necessary.

Hazardous Decomposition Products  
Thermal decomposition products may yield the following:  
-hydrogen bromide-bromide gas-hydrogen chloride

Hazardous polymerization  
Product will not undergo polymerization.

Incompatibility  
Avid contact with the following:  
-bases-oxidizing agents-organic chemicals

## 11. TOXICOLOGICAL INFORMATION

**Toxicology Information** Acute Data  
Oral LD50 - rat:929 mg/kg  
Skin irritation - rabbit: severe irritation, may be corrosive.

Mutagenicity Data  
Ames mutagenicity: Negative.

Sensitivity Data  
Sensitization - human: Possible skin sensitization.

**Inhalation** Inhalation of dust may result in respiratory irritation.  
May cause irritation to the throat and lungs.  
May cause -shortness of breath - headache - nausea.

**Ingestion** Moderately toxic. May cause irritation to mouth, throat and stomach.  
May cause damage to the mucous membranes.

**Skin** Contact with skin may result in irritation. Prolonged or repeated exposure may cause skin sensitization.  
Can cause superficial burns after prolonged contact.  
Contact with MOIST skin will cause the following;  
-severe skin burns.

**Eye** A severe eye irritant. Permanent eye damage, including loss of sight, may occur.

**Chronic Effects** No data supplied.

## 12. ECOLOGICAL INFORMATION

**Environ. Protection** This biocide is toxic to fish. DO NOT discharge into lakes, streams, ponds, public water; unless in accordance with NPDES permit. For guidance, contact your Regional Office of the EPA. DO NOT contaminate water by cleaning of container and equipment or disposal of wastes. Apply this biocide only as specified on this label.

Environmental Toxicity;  
Bobwhite quail, Dietary LC50: >5620ppm  
Bobwhite quail, Oral LD50: 1839mg/kg  
Mallard duck, Dietary LC50: >5620 ppm  
Rainbow trout (Salmo gairdneri), 96 hour LC50 Static: 0.4mg/l  
Bluegill sunfish (Lepomis macrochirus), 96 hour LC50 Static: 0.46mg/l  
Daphnia magna, 48 hour LC50: 0.75mg/l  
All results are based on a nominal concentration of active ingredint.

## 13. DISPOSAL CONSIDERATIONS

**Disposal Considerations** Material should be disposed of in accordance with local, state and federal regulations.  
Small quantities can be dissolved in water and flushed to sewer with excess water.

**Container Disposal** Empty containers can be discarded as general waste.

## 14. TRANSPORT INFORMATION

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Product Name : **BIOSUB**

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<b>U.N. Number</b>	1479
<b>Proper Shipping Name</b>	OXIDIZING SOLID, N.O.S.
<b>DG Class</b>	5.1
<b>Hazchem Code</b>	1Y
<b>Packaging Method</b>	3.8.5.1
<b>Packing Group</b>	II
<b>Storage and Transport</b>	Keep containers closed at all times. Store in a cool,dry place. Store away from sources of heat or ignition.
<b>EPG Number</b>	5B1
<b>IERG Number</b>	31

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## 15. REGULATORY INFORMATION

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<b>Poisons Schedule</b>	Not Scheduled
<b>Packaging &amp; Labelling</b>	As required by the ADG Code and the Standard for the Uniform Scheduling of Drugs and Poisons.
<b>Hazard Category</b>	Toxic,Irritant

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## 16. OTHER INFORMATION

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<b>Contact Person/Point</b>	Normal Working Hours - Telephone: (03) 9553 1011 Facsimile: (03) 9553 1387 Ask for Facilities Manager, Sales Manager or Services Manager. After Hours - Telephone : 1300 558 788
<b>Manufacturers Advice</b>	Further information/advice is available to those persons responsible for the design of safe work practices on their written request to Hydro-Chem. DIRECTIONS FOR USE: It is a violation of Federal law to use this product in a manner inconsistent with its labelling.
<b>Other Information</b>	ABBREVIATIONS: ACGIH - American Conference of Government Industrial Hygienists OSHA - Occupational Safety and Health Information TLV - Threshold Limit Hydro-Balance is a range of products developed and manufactured by Hydro-Chem for the preventative maintenance of air conditioning and refrigeration systems. ...End Of MSDS...