

# SAFETY DATA SHEET

According to OSHA Hazard Communication Standard 29 CFR 1910.1200 (GHS)  
According to Canada WHMIS 2015

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<b>Product name</b>	<b>1" BCDMH Tablets</b>	
<b>Product id</b>	8424S	
<b>Revision date</b>	26/12/2016	<b>Revision: 1</b>

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## 1. Identification of the substance & the company

<b>Product identifier</b>	Halobrom® Mini Slow Dissolving Brominating Tablets for Pool & Spa. HALOBROM BCDMH 96%
<b>Chemical name</b>	Bromo-chloro-5,5-dimethylhydantoin
<b>Synonym(s)</b>	BCDMH, Halobrom.
<b>Chemical family</b>	Halogenated hydantoin
<b>Type of product and use</b>	Swimming pools and Spas & Hot Tubs disinfectant
<b>Supplier</b>	ICL-IP America Inc. 622 Emerson Road - Suite 500 St Louis, Missouri 63141, USA Tel:(314)983-7884 Fax:(314)983-7607 e-mail:msdsinfo@icl-group.com
<b>Emergency Telephone</b>	Chemtrec: (800) 424-9300 Medical: PROSAR 1-888-875-1685 (24HRS)

## 2. Hazards identification

<b>GHS classification</b>	Acute Tox. 4, H302 Harmful if swallowed Skin Corr. 1C, H314 Causes severe skin burns and eye damage Skin Sens. 1, H317 May cause an allergic skin reaction Aquatic Acute 1, H400 - Very toxic to aquatic life
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**Additional OSHA/ WHMIS 2015 hazards** Combustible dust

### Labels and other form of warning

**Symbol(s)**



**Signal Word**

DANGER

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**Hazard statements**  
H302 - Harmful if swallowed  
H314 - Causes severe skin burns and eye damage  
H317 - May cause an allergic skin reaction  
H400 - Very toxic to aquatic life  
EUH031 - Contact with acids liberates toxic gas

**Additional OSHA/ WHMIS 2015 hazards** May form combustible dust concentrations in air

**Precautionary statements**  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor/physician  
P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention  
P362 + P364 - Take off all contaminated clothing and wash it before reuse  
P391 - Collect spillage  
  
P264 - Wash hands thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P272 - Contaminated work clothing should not be allowed out of the workplace  
P405 - Store locked up  
P501 - Dispose of contents/container to licensed hazardous waste disposal agent/site in accordance with local, regional, national and international legislation

**NFPA Ratings (Scale 0-4)** Health = 3, Fire = 0, Reactivity = 1. Special Hazard Warning: OXIDIZER  
**HMIS Ratings (Scale 0-4)** Health = 3, Fire = 0, Reactivity = 1.

### 3. Composition / information on ingredients

Components	CAS No.	Weight %
Bromochloro-5,5-dimethylhydantoin	32718-18-6	94-98

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### 4. First-aid measures

<b>Eye contact</b>	Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advise.
<b>Skin contact</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
<b>Inhalation</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advise.
<b>Ingestion</b>	Call poison control center, or doctor immediately for treatment advise. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

#### Most important symptoms and effects, acute or delayed

- Ocular	Causes serious eye damage
- Dermal	Causes severe skin burns Exposure to wet skin may cause burns.
- Inhalation	Irritant to upper respiratory tract. Shortness of breath, headache and nausea
- Ingestion	Harmful if swallowed
- Sensitization	May cause an allergic skin reaction

<b>Notes to the physician</b>	Corrosive. No specific antidote. Treat symptomatically and supportively. In case of ingestion DO NOT induce vomiting. Probable mucosal damage may contraindicate the use of gastric lavage.
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### 5. Fire - fighting measures

<b>Suitable extinguishing media</b>	Dry powder, carbon dioxide or water spray. Water may be ineffective. In case of exothermic decomposition and appearance of smoke, water should be used to suppress it.
<b>Extinguishing media not to be used</b>	Do not use dry chemical extinguisher containing ammonia compounds.

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**Unusual fire and explosion hazards** Forms explosive mixtures with combustible, organic or other easily oxidizable materials. When heated to decomposition, may release poisonous and corrosive fumes. Dust may form a weak explosive mixture with air (class St1), but is not sensitive to ignition from electrostatic discharges.

**Fire fighting procedure** Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

## 6. Accidental release measures

**Personal precautions** Evacuate area. Use respirator with combined filter (inorganic gas and dust), gloves, chemical safety goggles and body covering clothes. If material is decomposing, use self-contained breathing apparatus and a fully encapsulated suit.

**Methods for cleaning up** Sweep up, place in a suitable container and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

**Environmental precautions** Avoid access to streams, lakes or ponds.

## 7. Handling and storage

**Handling** Keep containers tightly closed.

**Storage** Keep away from all sources of ignition. Recommended storage temperature below 30°C. For transportation purposes it is possible to store at temperatures up to 50°C. Store in a dry, cool, well-ventilated area. Store away from incompatible materials (see "materials to avoid").

## 8. Exposure controls / personal protection

### Exposure Limits :

Components	ACGIH-TLV Data	OSHA (PEL) Data
Bromochloro-5,5-dimethylhydantoin 32718-18-6	Not determined	Not determined

**Manufacturer's recommendation** 0.1 mg/m<sup>3</sup>

**Ventilation requirements** Use local exhaust as necessary, especially under dusty conditions. Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.

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**Personal protective equipment:**

- **Respiratory protection**      Respirator with combined filter (inorganic gas and dust).
- **Hand protection**            Neoprene gloves
- **Eye protection**                Chemical safety goggles
- **Skin and body protection**    Body covering clothes and boots

**Hygiene measures**                      Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

### 9. Physical and chemical properties

<b>Appearance</b>	White to off-white tablet with faint halogenous odour
<b>Melting point/range</b>	Not applicable (decomposes)
<b>Boiling point/range</b>	Not applicable
<b>Flash point</b>	Not applicable
<b>Evaporation rate (ether=1)</b>	Not applicable under standard conditions
<b>Flammable/Explosion limits</b>	Not available
<b>Vapor pressure</b>	9.35x10 <sup>-3</sup> Pa (25°C)
<b>Vapor density</b>	Not applicable under standard conditions
<b>Solubility:</b>	
- <b>Solubility in water</b>	0.22 g/100ml at 25°C
- <b>Solubility in other solvents</b>	Benzene: 2.5 g/100g at 25°C
<b>Partition coefficient (n-octanol/water)</b>	Kow = <1 (pH 5-9)
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	160°C
<b>Viscosity</b>	Not applicable
<b>Specific gravity</b>	1.8-2.0
<b>Explosive properties</b>	Dust may form a weak explosive mixture with air (class St1), but is considered insensitive to ignition from electrostatic discharges.
<b>Oxidising properties</b>	Oxidiser
<b>Particle size</b>	Not available

### 10. Stability and reactivity

<b>Reactivity</b>	Combustible materials. Oxidizing agents. Bases.
<b>Stability</b>	Stable under normal conditions
<b>Possibility of hazardous reactions</b>	Contact with combustible materials may initiate decomposition of the material and emission of smoke.
<b>Conditions to avoid</b>	Exposure to moisture. Heating above decomposition temperature.
<b>Materials to avoid</b>	Bases. COMBUSTIBLE ORGANIC MATERIALS. Oxidizing agents.
<b>Hazardous decomposition products</b>	CO, HBr, Cl <sub>2</sub> , NO <sub>x</sub> , HCl, CO <sub>2</sub> .

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## 11. Toxicological information

<b>Likely Routes of Exposure</b>	Skin Eye contact Inhalation Ingestion
<b>Acute toxicity:</b>	
- Rat oral LD50	929 mg/kg
- Rat inhalation LC50	1.1 mg/l/4 hour (powder)
- Dermal irritation (rabbit)	Corrosive
<b>Dermal sensitization</b>	Sensitizer
<b>Mutagenicity</b>	Mutagenic by the Ames Test Mutagenic in the mouse lymphoma L5178Y test system. Non genotoxic in an in-vivo micronucleus test in mice Non genotoxic in an in-vivo liver unscheduled DNA synthesis (USD) assay
<b>Carcinogenicity</b>	Not classified by IARC Not included in NTP 14th Report on Carcinogens
<b>Specific Target Organ Toxicity (STOT) - Single exposure</b>	No effects on specific target organs have been identified
<b>Specific Target Organ Toxicity (STOT) - Repeat exposure</b>	Prolonged skin contact may cause sensitization.
<b>Aspiration hazard</b>	Not expected to occur

## 12. Ecological information

<b>Aquatic toxicity :</b>	
- 96 Hour-LC50, Fish	1.2 mg/l (Eastern oyster, Acute flow through) 1.9 mg/l (Mysid shrimp, Acute flow through) 0.4 mg/l (Rainbow trout, Static) 0.46 mg/l (Bluegill sunfish, Static) 1.6 mg/l (Sheepshead minnow, Acute flow through)
- 48 hour-LC50, Daphnia magna	0.75 mg/l (Static)

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<b>Avian toxicity:</b>	
- Oral LD50, Bobwhite quail	1839 mg/kg
- Dietary LC50, Mallard duck	>5620 ppm
- Dietary LC50, Bobwhite quail	>5620 ppm
<b>Persistence and degradability</b>	BCDMH and the main degradation product DMH are biodegradable and do not persist in the environment
<b>Bioaccumulative potential</b>	Based on low Kow values, i.e less than 1, BCDMH would not be predicted to significantly accumulate in aquatic organisms, or absorb to organic material in soil or sediment.
<b>Mobility in soil</b>	There will be no exposure of BCDMH to soil. The main degradation product DMH is mobile in soil.

### 13. Disposal considerations

<b>Waste disposal</b>	Dispose of in approved landfill sites or an approved incinerator. Avoid access to streams, lakes or ponds. Observe all federal, state and local environmental regulations when disposing of this material.
<b>Disposal of Packaging</b>	Crush and bury empty containers. Do NOT throw into public waste disposal site. Avoid contact with organic materials and moisture. See conditions to avoid (Section 10)

### 14. Transportation information

<b>UN No.</b>	1479
<b>DOT</b>	Proper shipping name: Oxidizing solid, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 - Oxidizing substances Label: OXIDIZER (5.1) Packing Group: III Marking: Marine Pollutant

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### 15. Regulatory information

**USA** This product is registered under FIFRA  
BCDMH is listed in TSCA inventory under CAS number:16079-88-2  
TSCA: EPA Number P-94-34  
Subject to reporting under SNUR (Significant New Use Rule) – any use, section 40 CFR 721.

**- EPA Registration no.** 8622-41 (Halobrom® Mini Slow Dissolving Brominating Tablets for Pool & Spa)  
8622-70 (HALOBROM BCDMH 96%)

**- Emergency overview in accordance to EPA Master Label** 8622-41 (Halobrom® Mini Slow Dissolving Brominating Tablets for Pool & Spa):  
**DANGER**  
 Corrosive  
 Causes irreversible eye damage and skin burns  
 Eye contact may cause loss of vision  
 Harmful if inhaled  
 Irritating to nose and throat  
 Harmful if absorbed through skin or swallowed  
 Users must wear chemical-resistant gloves while placing the tablet in the swimming pool/spas  
 Strong oxidizing agent  
 This product is toxic to fish and aquatic organisms.

8622-70 (HALOBROM BCDMH 96%):  
**DANGER**  
 Corrosive  
 Causes irreversible eye damage or skin burns  
 Eye contact may cause loss of vision  
 May be fatal if inhaled  
 Irritating to nose and throat  
 Harmful if absorbed through skin or swallowed  
 Do not smoke, drink, or eat when handling.  
 This pesticide is toxic to fish and aquatic organisms.  
 Strong oxidising agent.

**- SARA 313** This product does not contain a chemical listed at or above de minimis concentrations

**- SARA (311, 312)** This product is a hazardous chemical under 29CFR 1910.1200, and categorized as an immediate and delayed health, and reactivity physical hazard

**- Waste Classifications** Not listed under CERCLA If this product becomes a waste as defined under 40 CFR 261, it may meet the criteria of a hazardous waste. Please check with all federal, state and local regulations to determine if this product meets the definition of a hazardous waste listed under 40 CFR 262.11.

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<b>EU</b>	Reported in EINECS
<b>EC No.</b>	251-171-5
<b>Japan</b>	ENCS No. 5-6368
<b>New Zealand Inventory</b>	Listed in NZIoC
<b>China - China inventory</b>	Listed in IECSC
<b>Taiwan</b>	Listed (TCSI)
<b>Philippines</b>	Listed in PICCS

### 16. Other information

**Note:**

Previous product code 8424B and 8424T-96

The information in this Material Safety Data Sheet should be provided to all who will use, handle, store, transport, or otherwise be exposed to this product. This information has been prepared for the guidance of plant engineering, operations and management and for persons working with or handling this product. Additionally, if this Material Safety Data Sheet is more than three years old, you should contact NAVA Water products at the phone number listed below to make certain that this sheet is current.

**Health, Safety & Environment Policy**

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation

**TO MEET THIS COMMITMENT WE WILL:** Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations Implement documented management systems consistent with and for promotion of the Responsible Care ethics

Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations

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Educate and train employees, contractors and customers to improve their HSE performance Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals Support Product Stewardship programs in cooperation with customers, distributors and transporters

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, ICL-IP America Inc. makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will ICL-IP America Inc. be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

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**End of safety data sheet**