



# Aqua Chemical Supply, Inc.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical name Bromo-chloro-5,5-dimethylhydantoin  
Synonym(s) BCDMH, Halobrom  
Chemical formula  $C_5H_6BrClN_2O_2$   
Molecular weight 241.5  
Type of product and use Swimming pool and Spa disinfectant  
Manufacturer/Supplier/Distributor W.W. Adcock, P.O. Box 492, Huntingdon Valley, PA 19006

Emergency telephone number: For emergency assistance involving chemicals call  
CHEMTREC day or night at: 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

Emergency overview White to off-white tablet with faint halogenous odor  
Corrosive Causes irreversible eye damage and skin burns, Irritating to nose and throat  
May be fatal if inhaled, Harmful if absorbed through skin or swallowed  
Oxidizer

Potential Health Effects:  
- Eye Contact Corrosive  
May cause temporary or permanent eye damage.  
- Skin contact Exposure to wet skin may cause severe irritation.  
May cause skin sensitization  
- Inhalation Irritant to upper respiratory tract.  
Shortness of breath, headache and nausea.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

Components	CAS	ACGIH-TLV Data	OSHA (PEL) Data	Weight %
Bromochloro-5,5-Dimethylhydantoin	32718-18-6	Not determined	Not determined	98

## 4. FIRST AID MEASURES

Eye contact Hold eye 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 advice.  
Skin contact 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.  
Inhalation 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 further treatment advice.  
Ingestion Call poison control center, or doctor immediately for treatment advice. 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.  
Note to physician Probable mucosal damage may contraindicate the use of gastric lavage.

## 5. FIRE FIGHTING MEASURES

Suitable extinguishing media  
Dry powder, carbon dioxide or water spray  
In case of exothermic decomposition and appearance of smoke, water should be used to suppress it.

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

Unusual fire and explosion hazards  
Oxidizing agent. Forms explosive mixtures with combustible, organic or other easily oxidizable materials. When heated to decomposition, may release poisonous and corrosive fumes.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions Evacuate area. Use dust respirator, rubber gloves and chemical safety goggles

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. 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 temperature up to 50°C.

Store in a dry, well-ventilated area Store away from incompatible materials (see "materials to avoid").

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Manufacturer's TLV-TWA 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 exposure limit.

Personal protective equipment:

- Respiratory protection Approved respirator
- Hand protection PVC 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 carefully before eating or smoking. Safety shower and eye bath should be provided.

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance White to off-white tablet with faint halogenous odor

Melting point/range Not applicable (decomposes)

Boiling point/range Not applicable

Flash point Not applicable

Flammable/Explosion limits Not available

Auto-ignition temperature Not available

Vapor pressure 9.35x10<sup>(-3)</sup> Pa (25°C)

Vapor density Not applicable under standard conditions

Evaporation rate (ether=1) Not applicable under standard conditions

Solubility:

- Solubility in water 0.22g/100ml at 25°C

Specific gravity 1.8-2.0

Decomposition temperature >160°C

Partition coefficient

(n-octanol/water) Kow = <1 (pH 5-9)

#### 10. STABILITY AND REACTIVITY

Stability Stable under normal conditions

Materials to avoid COMBUSTIBLE ORGANIC MATERIALS, Bases, Oxidizing agents

Conditions to avoid Exposure to moisture. Contact with combustible materials may initiate decomposition of the material and emit smoke. Heating above decomposition temperature.

Hazardous decomposition products CO, HBr, Cl<sub>2</sub>, NO<sub>x</sub>, HCl, CO<sub>2</sub>

Hazardous polymerization Will not occur

**11. TOXICOLOGICAL INFORMATION**

Acute toxicity:	
- Rat oral LD50	929 mg/kg
- Rat inhalation LC50	1.1 mg/l/4 hour (powder)
- Dermal irritation (rabbit)	Corrosive
Dermal sensitization	Sensitizer
Chronic toxicity	Not available
Mutagenicity	Mutagenic by the Ames Test Mutagenic in the mouse lymphoma L5178Y test system  Non genotoxic in-vivo in micronucleous test in mice Non genotoxic in in-vivo liver unscheduled DNA synthesis (USD) assay
Carcinogenicity	Not classified by IARC Not included in NTP 11th Report on Carcinogens

**12. ECOLOGICAL INFORMATION**

Aquatic toxicity :	
- 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)
Avian toxicity:	
- Oral LD50, Bobwhite quail	1839 mg/kg
- Dietary LC50, Mallard duck	>5620 ppm
- Dietary LC50, Bobwhite quail	>5620 ppm
Bioaccumulative potential	Based on low Kow values, i.e. less than one, BCDMH would not be predicted to significantly accumulate in aquatic organisms, or sorb to organic material in soil or sediment.
Germany, water endangering classes (WGK)	2

**13. DISPOSAL CONSIDERATION**

Waste disposal 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.

**Disposal of Packaging**

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. TRANSPORT INFORMATION**

UN No.	1479
DOT	Proper shipping name: Oxidizing solid, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 - Oxidizing substances Label: OXIDIZER (5.1) Marking: MARINE POLLUTANT Packing Group: II
IMO	Proper shipping name: Oxidizing solid, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 - Oxidizing substances

ICAO/IATA	Label: OXIDIZING AGENT (5.1) Packing Group: II Marking: MARINE POLLUTANT  Proper shipping name: Oxidizing solid, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 Label: OXIDIZER (5.1) Packing group: II
<b>15. REGULATORY INFORMATION</b>	
USA  - SARA 313  - SARA (311, 312)  - Waste Classifications  EEC No.  Japanese METI  China inventory  Philippines	This product is registered under FIFRA. TSCA: EPA Number P-94-34 Subject to reporting under SNUR (Significant New Use Rule) - any use, 60 FR 11037  This product does not contain a chemical listed at or above de minimis concentrations.  This product is a hazardous chemical under 29CFR 1910.1200, and categorized as an immediate and delayed health, and reactivity physical hazard.  Not listed under CERCLA If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.  251-171-5  ENCS No.:5-6368  Listed  Listed in PICCS
<b>16. OTHER INFORMATION</b>	
<p>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.</p> <p>Notice          Aqua Chemical Supply, Inc. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.</p> <p>Do not use ingredient information and/or ingredient percentages in this SDS as a product specification. For product specification information refer to a product specification sheet and/or a certificate of analysis. These can be obtained from your local Aqua Chemical Supply, Inc. sales office.</p> <p>All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Aqua Chemical Supply, Inc. makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Aqua Chemical Supply, Inc.'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein.</p> <p>This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.</p>	