



## MATERIAL SAFETY DATA SHEET

Product Name: Brominating Tabs  
Product id: AQZBRT025 / AQZBRT050  
Revision date: 01/01/2008 Revision: 4

### 1. Identification of the substance & the company

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  
Supplier W.W. Adcock  
P.O. Box 492  
Huntingdon Valley, PA 19006  
(215)947-3801  
Emergency Transportation Chem Tel - 888-255-3924

### 2. 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

### 3. 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.



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

**HMS Ratings (Scale 0-4)** Health = 3, Fire = 0, Reactivity = 1.

### 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.

**Fire fighting 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,



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may release poisonous and corrosive fumes.

### 6. Accidental release measures

<b>Personal precautions</b>	Evacuate area. Use dust respirator, rubber gloves and chemical safety goggles
<b>Methods for cleaning up</b>	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

<b>Handling</b>	Keep containers tightly closed.
<b>Storage</b>	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

<b>Manufacturer's TLV-TWA Recommendation</b>	0.1 mg/m <sup>3</sup>
<b>Ventilation requirements</b>	Use local exhaust as necessary, especially under dusty conditions. Ventilation must be sufficient to maintain atmospheric concentration below exposure limit.
<b>Personal protective equipment:</b>	
- Respiratory protection	Approved respirator
- Hand protection	PVC gloves
- Eye protection	Chemical safety goggles
- Skin and body protection	Body covering clothes and boots
<b>Hygiene measures</b>	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.



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### 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 LD<sub>50</sub> 929 mg/kg  
- Rat inhalation LC<sub>50</sub> 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



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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)**

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### 13. Disposal considerations

**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. Transportation information

**UN No.** 1479



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**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  
Label: OXIDIZING AGENT (5.1)  
Packing Group: II  
Marking: MARINE POLLUTANT

**ICAO/IATA** Proper shipping name: Oxidizing solid, n.o.s  
(Bromo-Chloro-5,5-DimethylHydantoin)  
Class: 5.1  
Label: OXIDIZER (5.1)  
Packing group: II

### 15. Regulatory information

**USA** 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

**- 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, it meets the criteria of a  
hazardous waste as defined under 40 CFR 261 and would  
have the following EPA hazardous waste number: D001.

**EEC No.** 251-171-5

**Japanese METI** ENCS No.:5-6368

**China inventory** Listed

**Philippines** Listed in PICCS



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### 16. Other information

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**End of safety data sheet**