

**Product name** Clear Spa<sup>104</sup> Spa Solutions Bromo Bright Tablets**Revision date** 5-15-2015**Section 1 Identification**

**Product ID:** Bromo Bright Tablets

**Chemical name** Bromo-chloro-5,5-dimethylhydantoin  
**Synonym(s)** BCDMH, Halobrom  
**Chemical formula** C 5 H 6 BrClN 2 O 2  
**Chemical family** Halogenated hydantoin  
**Molecular weight** 241.5  
**Product Use:** 1" Tabs for use in Bromine Feeders for Spas & Hot Tubs

**Supplier:** Oreq Corporation  
42306 Remington Ave.  
Temecula CA 92590  
(951) 296-5076

**Emergency Telephone:** CHEMTREC: 1-800-424-9300

**Section 2 Hazards identification**

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

**GHS classification** Acute Tox. 4, H302 Harmful if swallowed  
Skin Corr. 1B, 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

**Labels and other form of warning Symbol(s)**



**Signal Word** DANGER

**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

**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.

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**Section 2 Hazards identification (Continued)**

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  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
 P330 - Rinse mouth  
 P405 - Store locked up  
 P501 - Dispose of contents/container in accordance with national and international regulations.

**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.

**Section 3 Composition / Information on ingredients**

| <u>Components</u>                 | <u>CAS No.</u> | <u>Weight %</u> |
|-----------------------------------|----------------|-----------------|
| Bromochloro-5,5-dimethylhydantoin | 32718-18-6     | 96-99.5         |

**Section 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.

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

- **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.

**Note to physician** Corrosive  
No specific antidote.  
In case of ingestion DO NOT induce vomiting.  
Treat symptomatically and supportively.  
Probable mucosal damage may contraindicate the use of gastric lavage.

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## Section 5 Fire - fighting measures

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

**Extinguishing media not to be Used.** Do not use dry chemical extinguisher containing ammonia compounds.

**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.

## Section 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** Prevent entry into sewers and watercourses

## Section 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, well-ventilated area. Store away from incompatible materials (see "materials to avoid").

## Section 8 Exposure controls / personal protection

| <u>Components</u>                               | <u>ACGIH-TVL Data</u> | <u>OSHA (PEL) Data</u> |
|---|-----------------------|------------------------|
| Bromochloro-5,5-dimethylhydantoin<br>32718-18-6 | Not Determined        | Not Determined         |

**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 recommended exposure limit.

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## Section 8 Exposure controls / personal protection (Continued)

**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.

## Section 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>                             |   |
| - Solubility in water                          | 0.22 g/100ml at 25°C  |
| - Solubility in other solvents                 | 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>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>                    | Not sufficient for classification as oxidizer (Method A17 & UN Test O.1)  |
| <b>Particle size</b>                           | Not available   |

## Section 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>                 | COMBUSTIBLE ORGANIC MATERIALS<br>Bases<br>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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## Section 11 Toxicological information

**Likely Routes of Exposure** Skin  
 Eye contact  
 Inhalation

**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** Prolonged skin contact may cause sensitization

**Mutagenicity** 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

**Carcinogenicity** Not classified by IARC  
 Not included in NTP 12th Report on Carcinogens

## Section 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

**Persistence and degradability** BCDMH and the main degradation product DMH are biodegradable and do not persist in the environment

**Bioaccumulative potential** Based on low Kow values, i.e less than 1, BCDMH would not be predicted to significantly accumulate in aquatic organisms, or sorb to organic material in soil or sediment.

**Mobility in soil** There will be no exposure of BCDMH to soil. The main degradation product DMH is mobile in soil.

**Germany, water endangering classes (WGK)** 2

## Section 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)

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**Section 14 Transport information**

|            |                       |   |
|------------|-----------------------|---|
| <b>DOT</b> | UN number:            | 1479  |
|            | Proper shipping name: | Oxidizing Solid, n.o.s.<br>(Bromo-Chloro-5,5-DimethylHydantoin) |
|            | Class:                | 5.1 - Oxidizing substances                                      |
|            | Label:                | OXIDIZER (5.1)  |
|            | Packing Group:        | II  |
|            | Marking:              | Marine Pollutant  |

**Section 15 Regulatory information**

|   |  |
|---|--|
| <b>USA</b>  | This product is registered under FIFRA (CAS #16079-88-2)<br>TSCA: EPA Number P-94-34<br>Subject to reporting under SNUR (Significant New Use Rule) -any use, 60 CFR 11037  |
| <b>- Emergency overview in accordance to EPA Master Label</b> | DANGER<br>Corrosive<br>Causes irreversible eye damage and skin burns<br>Eye contact may cause loss of vision<br>Harmful if inhaled<br>Irritating to nose and throat<br>Harmful if absorbed through skin or swallowed<br>This product is toxic to fish and aquatic organisms.<br>Strong oxidizing agent |
| <b>- SARA 313</b>   | This product does not contain a chemical listed at or above de minimis concentrations  |
| <b>- SARA (311, 312)</b>                                      | This product is a hazardous chemical under 29CFR 1910.1200, and categorized as an immediate and delayed health, and reactivity physical hazard   |
| <b>- Waste Classifications</b>                                | 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.   |
| <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</b>  |  |
| <b>- China inventory</b>                                      | Listed in IECSC  |
| <b>Philippines</b>  | Listed in PICCS  |

**Section 16 Other information**

**DATE OF PREPARATION**  
**5-15-2015**

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