

Product name ClearView Bromo Tabs

Revision date 8-22-2016

Section 1 Identification

Product ID: Bromo Tabs

Chemical name 1,3-Dibromo-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: Sanitizer - 1" tablets for use in bromine feeders

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. Remove contact lenses, if present and easy to do. Continue rinsing

Product name **ClearView Bromo Tabs**

Revision date **8-22-2016**

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>
1,3-Dibromo-5,5-dimethylhydantoin	16079-88-2	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.

Product name **ClearView Bromo Tabs**

Revision date **8-22-2016**

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>
1,3-Dibromo-5,5-dimethylhydantoin 16079-88-2	Not Determined	Not Determined

Manufacturer's TLV-TWA Recommendation 0.1 mg/m³

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

Product name ClearView Bromo Tabs

Revision date 8-22-2016

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

Appearance	White to off-white tablet with faint halogenous odour
Melting point/range	Not applicable (decomposes)
Boiling point/range	Not applicable
Flash point	Not applicable
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammable/Explosion limits	Not available
Vapor pressure	9.35x10 ⁽⁻³⁾ Pa (25°C)
Vapor density	Not applicable under standard conditions
Solubility:	
- Solubility in water	0.22 g/100ml at 25°C
- Solubility in other solvents	Benzene: 2.5 g/100g at 25°C
Partition coefficient (n-octanol/water)	Kow = <1 (pH 5-9)
Auto-ignition temperature	Not available
Decomposition temperature	>160°C
Specific gravity	1.8-2.0
Explosive properties	Dust may form a weak explosive mixture with air (class St1), but is considered insensitive to ignition from electrostatic discharges.
Oxidising properties	Not sufficient for classification as oxidizer (Method A17 & UN Test O.1)
Particle size	Not available

Section 10 Stability and reactivity

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

Product name ClearView Bromo Tabs

Revision date 8-22-2016

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)

Product name ClearView Bromo Tabs

Revision date 8-22-2016

Section 14 Transport information

DOT UN number: 1479
 Proper shipping name: Oxidizing Solid, n.o.s.
 1,3-Dibromo-5,5-dimethylhydantoin
 Class: 5.1 - Oxidizing substances
 Label: OXIDIZER (5.1)
 Packing Group: II
 Marking: Marine Pollutant

Section 15 Regulatory information

USA This product is registered under FIFRA (CAS #16079-88-2)
 TSCA: EPA Number P-94-34
 Subject to reporting under SNUR (Significant New Use Rule) -any use, 60 CFR 11037

- **Emergency overview in accordance to EPA Master Label**

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
 This product is toxic to fish and aquatic organisms.
 Strong oxidizing 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, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.

EU Reported in EINECS
EC No. 251-171-5
Japan ENCS No. 5-6368
New Zealand Inventory Listed in NZIoC
China
 - **China inventory** Listed in IECSC
Philippines Listed in PICCS

Section 16 Other information

DATE OF PREPARATION
8-22-2016

THE INFORMATION SUPPLIED ABOVE IS PRESENTED IN GOOD FAITH AND HAS BEEN DERIVED FROM SOURCES BELIEVED TO BE RELIABLE, HOWEVER, NO WARRANTY EXPRESSED OR IMPLIED IS EXTENDED REGARDING ITS ACCURACY OR THE RESULTS TO BE OBTAINED FROM ITS USE SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL. ALL RISKS ARE ASSUMED BY THE USER.