SerenaSpa™
Spa Care

SAFETY DATA SHEET
Brominating Tabs - 0090

Product Name: Brominating Tabs
Date: 3/28/2023

SECTION 1 *IDENTIFICATION*

Distributor: Phoenix Products Company
55 Container Drive
Terryville, CT 06786
(860) 589-7502

U.S. PERS Emergency Telephone:	1-800-633-8253
Product Name:	**Brominating Tabs**
Synonyms:	BCDMH; Bromochloro-5,5-dimethylimidazolidine-2,4-dione; 1-Bromo-3-chloro-5,5-dimethyl-2,4-imidazolidinedione; Agribrom; Halobrom; Halogene; Dibromohydantoin; 2,4-Imidazolidinedione
Chemical Name:	Bromochloro-5,5-dimethylhydantoin
Chemical Formula:	$C_5H_6BrClN_2O_2$
CAS Number:	16079-88-2
EPA Registration Number:	84699-3-48520
Product Use:	Sanitizer for pools and spas.

SECTION 2 *HAZARDS IDENTIFICATION*

Emergency Overview
Danger
Corrosive

Hazard Statement(s)

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.

Precautionary Statement(s)

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220: Keep/Store away from clothing/combustible materials.
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.
P302+P352: IF ON SKIN: Wash with soap and water.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove lenses; if present and easy to do so. Continue Rinsing.

SECTION 2 ***HAZARDS IDENTIFICATION - Continued***

Potential Health Effects

Eye Contact: Corrosive. May cause temporary or permanent eye damage.

Skin Contact: Exposure to wet skin may cause burns. May cause sensitization by skin contact

Inhalation: Irritant to upper respiratory tract. Shortness of breath, headache and nausea.

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***

Component	**CAS Number**	**Percent**
1-Bromo-3-chloro-5,5-dimethylhydantoin	16079-88-2	98%

SECTION 4 ***FIRST-AID MEASURES***

Eye Contact: Check for and remove any contact lenses. Flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Get medial aid immediately.
Skin Contact: Immediately wash skin with soap and copious amounts of water while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shows before reuse. Get medical attention immediately.
Inhalation: Remove from exposure and move to fresh air immediately. Loosen tight clothing such as a collar, tie, belt, or waistband. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if irritation develops or persists. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infections or corrosive. Seek immediate medical attention.
Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Wash out mouth with water. Get medical aid. Loosen tight clothing such as a collar, tie, belt or waistband. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive.
Notes To Physician: Treat symptomatically.

SECTION 5 ***FIRE FIGHTING MEASURES***

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Use water spray to cool unopened containers.

Special Hazards Arising from the Substance or Mixture: Contact with other material may cause fire. May accelerate combustion. Forms explosive mixtures with air on intense heating. May emit toxic fumes under fire conditions. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion. Keep product and empty container away from heat and sources of ignition.

Advice for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 *ACCIDENTAL RELEASE MEASURES*

Personal Precautions, Protective Equipment and Emergency Procedures: If packages rupture. Ensure adequate ventilation. Use personal protective equipment. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Eliminate all ignition sources (no smoking, flares, sparks or flames in the immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep substance wet using water spray. Avoid dust formation. Avoid breather dust, vapor, mist, or gas. Shut off source of the leak only if it is easy to do so. Do not get water inside containers.

Environmental Precautions: Take precautions to ensure product does not contaminate the ground or enter the drainage system, surface water, sanitary sewer or ground water system.

Methods and Materials For Containment and Cleaning Up: Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / nation regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7 *HANDLING AND STORAGE*

Precautions for Safe Handling: In accordance with good industrial practice, handle with care and avoid unnecessary personal contact. Use with adequate ventilation. Avoid breathing dust, vapor, mist, or gas. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Avoid prolonged or repeated exposure. Avoid physical damage to the container. Empty containers retain product residue, (dust and/or solids), and can be dangerous. Keep away from open flames, hot surfaces and sources of ignition. Keep away from heat and direct sunlight. Use only non-sparking tools. Use explosion-proof equipment. Ground and bond containers when transferring material. Take precautionary measures against static discharges. No smoking, eating and drinking water at workplace. Before break and at the end of work hands should be thoroughly washed. Do not allow water to get into the container. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, acids.

Conditions for Safe Storage, Including Any Incompatibilities: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances and foodstuff containers. Keep away from heat, sparks and open flames. Keep away from sources of ignition. Keep away from direct sunlight. Keep away from moisture and water. Keep away from combustible materials and wooden floors. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep out of reach of children.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION*

Exposure Limits: No data available

Engineering Controls: Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment:

- **Eyes Protection:** Wear chemical splash goggles
- **Skin Protection:** Wear appropriate protective gloves
- **Body Protection:** Choose body protection according to the amount and concentration of the dangers substance at the workplace.

SECTION 8 *EXPOSURE CONTROLS/PERSONAL PROTECTION - Continued*

-Respirators Protection: Follow the OSHA prespirator regulations found in 29 CFR 1910.134. Use a NIOSH / MSHA approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

-Other Protection: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking to maintain good health habits.

SECTION 9 *PHYSICAL AND CHEMICAL PROPERTIES*

Appearance:	White to off-white tablet with faint halogenous odour
Boiling Point/Range:	Not applicable
Melting Point/Range:	156-165°C
Flash Point:	142°C
Flammable/Explosion Limits:	Not available
Auto-Ignition Temperature:	Not available
Vapour Pressure:	Not available
Evaporation Rate (ether=1):	Not applicable under standard conditions
Vapor Density:	Not applicable under standard conditions
Solubility (in water):	Slightly Soluble
Specific Gravity:	1.8-2.0
Decomposition Temperature:	> 160°C
Partition Coefficient (n-octanol/water):	Not available
Oxidizing Properties:	Oxidizer
Particle Size:	Not available

SECTION 10 *STABILITY AND REACTIVITY*

Reactivity:	No Data Available
Stability:	Stable under normal conditions
Hazardous Polymerization:	Will not occur
Hazardous Reactions:	None under normal processing
Conditions To Avoid:	Incompatible materials; excess heat; direct sunlight; dust generation; ignition sources; exposure to air; combustible materials; exposure to moist air or water
Incompatible Materials:	Strong oxidizing agents; strong acids; strong bases; alcohols; strong reducing agents; organic materials

Hazardous Decomposition Products: CO, HBr, Cl2, NOx, HCl, CO2

SECTION 11 *TOXICOLOGICAL INFORMATION*

Acute Toxicity:

- Oral, Rat LD50:	485 mg/kg
- Skin, Rabbit LD50:	>2000 mg/kg

Skin Corrosion/Irritation:	No Data Available
Serious Eye Damage/Irritation:	No Data Available
Respiratory/Skin Sensitization:	No Data Available

SECTION 11 *TOXICOLOGICAL INFORMATION - Continued*

Germ Cell Mutagenicity: No Data Available

Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as probably, possible or confirmed human carcinogen by IARC.

Reproductive Toxicity: No Data Available

Aspiration Hazard: No Data Available

Potential Health Effects:

Eye: Corrosive to eyes. Eye contact can result in corneal damage or blindness.

Skin: Hazardous in case of skin contact (sensitizer). The amount of tissue damage depends upon length of contact. Skin contact can produce inflammation and blistering. Prolonged exposure may result in skin burns and ulcerations.

Ingestion: Harmful if swallowed. Causes chemical burns to the mouth, throat, esophagus and gastrointestinal tract. Risk of perforation in the esophagus and stomach. Swallowing concentrated chemical may cause sever internal injury.

Inhalation: Inhalation of dust will produce irritation to gastrointestinal or respiratory tract, characterized by burning, sneezing, coughing and wheezing. Overexposure by inhalation may cause respiratory irritation. May be fatal if inhaled.

Symptoms of Exposure: Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction or dermatitis. Repeated inhalation of dust can produce varying degrees of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12 *ECOLOGICAL INFORMATION*

Toxicity: Fish: Oncorhynchus mykiss (rainbow trout): LC50 = 0.65 mg/1/96 h
Fish: Lepomis macrochirus (bluegill sunfish): LC50 = 1.17 mg/1/96 h
Daphnia: Daphinia magna (water flea): EC50 = 0.87 mg/1/48 h

Persistence / Degradability: No Data Available

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

SECTION 13 *DISPOSAL CONSIDERATIONS*

Waste from Unused Products: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classifications.

Contaminated Packaging: Contaminated packaging material should be treated equivalent to residual chemical. Clean packaging material should be subjected to waste management schemes according to local legislation.

SECTION 14 *TRANSPORTATION DATA*

DOT:	**UN Number:**	1479
	Proper Shipping Name:	Oxidizing Solid, n.o.s. (Bromo-Chloro-5,5-DimethylHydantoin)
	Class:	5.1 - Oxidizing Substances
	Packing Group:	II
TDG:	**UN Number:**	1479
	Proper Shipping Name:	Oxidizing Solid, n.o.s. (Bromo-Chloro-5,5-DimethylHydantoin)
	Class:	5.1 - Oxidizing Substances
	Packing Group:	II
	Marine Pollutant:	Yes
MEX:	**UN Number:**	1479
	Proper Shipping Name:	Oxidizing Solid, n.o.s. (Bromo-Chloro-5,5-DimethylHydantoin)
	Class:	5.1 - Oxidizing Substances
	Packing Group:	II
	Marine Pollutant:	Yes

Note: Limited quantity exception is possible.

SECTION 15 *REGULATORY INFORMATION*

USA: This product is registered under FIFRA.
TSCA: EPA Number 84699-3
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.
EC No.: 251-171-5
Japanese METI: ENCS No.:5-6368
China inventory: Listed in IECSC
Philippines: Listed in PICCS

SECTION 16 *ADDITIONAL INFORMATION*

No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 3/28/2023
Phoenix Products Company