
SAFETY DATA SHEET

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name: Bromine Tablets
Datasheet Number: 016 1. 2. 0
Chemical Name: Bromo-chloro-5,5-dimethylhydantoin
EC Number: 251-171-5
CAS No: 32718-18-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

Pool/Spa Sanitiser

1.3. Details of the supplier of the safety data sheet

Name of Supplier: Plastica Ltd
Address of Supplier: Perimeter House
Napier Road
St Leonards-on-Sea
East Sussex TN38 9NY
United Kingdom
Telephone: +44 (0) 1424 857857
Fax: +44 (0) 1424 857858
Responsible Person:
Email: info@plasticapools.net

1.4 Emergency telephone number 0800 043 0892

2. Hazards identification

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 [CLP/GHS] 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

Additional information EUH031- Contact with acids liberates toxic gas

Classification in accordance with Directive 67/548/EEC, 1999/45/EC Harmful (Xn); R22: Harmful if swallowed
Corrosive (C), R34; Causes burns
Irritant (Xi), R43: May cause sensitization by skin contact
Dangerous for the Environment (N), R50: Very toxic to aquatic organisms
R31; Contact with acids liberates toxic gas.

2.2 Label Elements:

Labelling in accordance with CLP Regulation EC (No) 1272/2008



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
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

2.3 Other Hazards:

- None

3. Composition/information on ingredients

3.1 Substances:

Components	Weight %	Index No.	EC No.	EU Classification
Bromochloro-5,5-dimethylhy dantoin 32718-18-6	96-99.5		251-171-5	Acute Tox. 4 H302, Acute Tox. 4 H332 Skin Corr. 1B H314, Skin Sens. 1 H317, Aquatic Acute 1 H400, EUH031 (In accordance with CLP 1272/2008) ----- Xn; R20/22 C; R34 Xi; R43 N;R50, R31 (In accordance with DSD 67/548/EEC)

4. First Aid Measures:

4.1 Description of first aid measures

Eye contact	Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.
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	In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.
Ingestion	If swallowed, wash mouth thoroughly with plenty of water. Get medical attention immediately.

NOTE: Never give an unconscious person anything to drink

4.2 Most important symptoms and effects, both acute and delayed

- Ocula	Corrosive. May cause temporary or permanent eye damage
- Derma	Exposure to wet skin may cause burns. May cause skin sensitization
- Inhalatio	Irritant to upper respiratory tract. Shortness of breath, headache and nausea
- Ingestio	Harmful if swallowed
- Sensitizatio	May cause skin sensitization

4.3. Indication of any immediate medical attention and special treatment needed

Corrosive.
In case of ingestion DO NOT induce vomiting.
No specific antidote.
Treat symptomatically and supportively.

Section 5: Fire-fighting measures

5.1. 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.
5.2 Special hazards arising from the substance or mixture	Forms explosive mixtures with combustible, organic or other easily oxidizable materials. Dust may form a weak explosive mixture with air (class St1), but is considered insensitive to ignition from electrostatic discharges. When heated to decomposition, may release poisonous and corrosive fumes.
5.3. Advice for fire-fighters	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

- 6.1. Personal precautions, protective equipment and emergency procedures** 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.
- 6.2. Environmental precautions** Prevent entry into sewers and watercourses
- 6.3. Methods and materials for containment and 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.
- 6.4 Reference to other sections** None.

Section 7: Handling and storage

- 7.1. Precautions for safe handling** Keep containers tightly closed.
- 7.2. Conditions for safe storage, including any incompatibilities** 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 away from incompatible materials (see Section 10).
- 7.3. Specific end use(s)** No specific requirements

Section 8: Exposure controls/personal protection

Components	Weight %	ACGIH-TLV Data	UK (WEL) - TWA	Germany MAK (TRGS 900)
Bromochloro-5,5-dimethylhydantoin 32718-18-6	96-99.5	Not determined	Not determined	Not determined

Manufacturer's TLV-TWA Recommendation 0.1 mg/m³

8.2. Exposure controls

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

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.



Respirator



Goggles



Gloves



Suit

Section 9. Physical & Chemical Properties

9.1 Information on basic 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
Vapor pressure	9.35x10 ⁽⁻³⁾ Pa (25°C)
Vapor density	Not applicable under standard conditions
Solubility:	
- Solubility in wate	0.22 g/100ml at 25°C
- Solubility in other solvent	Benzene: 2.5 g/100g at 25°C
Partition coefficient (n-octanol/water)	Kow = <1 (pH 5-9)
Auto-ignition temperature	Not available
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)
Decomposition temperature	>160°C
Particle size	Not available
Flammable/Explosion limits	Not available
Specific gravity	1.8-2.0

Section 10. Stability and reactivity

10.1 Reactivity	Combustible materials. Oxidizing agents. Bases.
10.2 Chemical stability	Stable under normal conditions
10.3 Possibility of hazardous reactions	Contact with combustible materials may initiate decomposition of the material and emission of smoke.
10.4 Conditions to avoid	Exposure to moisture Heating above decomposition temperature
10.5 Incompatible materials	COMBUSTIBLE ORGANIC MATERIALS Bases Oxidising agents
10.6 Hazardous decomposition products	CO, HBr, Cl ₂ , NO _x , HCl, CO ₂

Section 11. Toxicological information 11.1

Information on toxicological effects

Acute toxicity:	
- Rat oral LD ₅₀	929 mg/kg
- Rat inhalation LC ₅₀	1.1 mg/l/4 hour (powder)
Skin corrosion/irritation	Corrosive
Respiratory or skin sensitisation	Skin sensitiser

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
Specific Target Organ Toxicity (STOT) - Single exposure	No effects on specific target organs have been identified
Specific Target Organ Toxicity (STOT) - Repeat exposure	Prolonged skin contact may cause sensitization.
Aspiration hazard	Not expected to occur

Section 12. Ecological information

12.1 Toxicity

Aquatic toxicity :

- 96 Hour-LC50, Fis	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)
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- 48 hour-LC50, Daphnia magn	0.75 mg/l (Static)
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Avian toxicity:

- Oral LD50, Bobwhite quai	1839 mg/kg
- Dietary LC50, Mallard duc	>5620 ppm
- Dietary LC50, Bobwhite quai	>5620 ppm

12.2 Persistence and degradability

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

12.3 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.

12.4 Mobility in soil

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

12.5 Results of PBT and vPvB assessment

Neither BCDMH nor its main degradation product DMH fulfill PBT or vPvB criteria

12.6 Other adverse effects

Germany, water endangering classes (WGK) 2

Section 13. Disposal considerations

13.1 Waste treatment methods

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).

Section 14. Transport information



Oxidising Agent



Environmentally Hazardous



Corrosive

UN No.	3085
ADR/RID	Proper shipping name: Oxidizing solid, corrosive, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 - Oxidizing substances Classification Code: OC2 Danger Label Model No.:5.1+8 Hazard identification No. 58 Packing group: III Marking: Environmentally hazardous substance
IMDG	Proper shipping name: Oxidizing solid, corrosive, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 - Oxidizing substances Subsidiary risk: 8 Labels: OXIDIZER (5.1); and CORROSIVE (8) Packing Group: III Marking: Marine Pollutant
Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code	Not relevant
ICAO/IATA	Proper shipping name: Oxidizing solid, corrosive, n.o.s (Bromo-Chloro-5,5-DimethylHydantoin) Class: 5.1 Subsidiary Risk: 8 Hazard label(s): OXIDIZER (5.1) & CORROSIVE (8) Packing group: III Marking: Environmentally hazardous substance

15 Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU	Reported in EINECS
EC No.	251-171-5
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
China - China inventor	Listed in IECSC

Japan	ENCS No. 5-6368
New Zealand Inventory	Listed in NZIoC
Philippines	Listed in PICCS

16 Other information

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of PLASTICA'S limited knowledge and belief, accurate, and reliable as of the date of authorisation of this safety data sheet. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. It is the user's responsibility to be satisfied as to the suitability and completeness of such information for the product as used.