

SAFETY DATA SHEET



Product Name: **BROMINE TABLETS**

SDS Reference **016**

Version No. 4

Revision date 08-11-2004

Initial authorisation date March 25th, 2002

1. IDENTIFICATION OF SUBSTANCE / PREPARATION AND COMPANY

Product Name BROMINE TABLETS
Synonym (s) HALOBROM.
Use(s) For sanitising water
Company Identification **PLASTICA LTD**
Perimeter House,
Napier Road, Telephone +44 (0) 1424 857857
St Leonards-on-Sea, East Sussex, TN38 9NY
Emergency Telephone 09062 655005 (24hr)

2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterisation DISINFECTANT CONTAINING HALAOGENATED HYDANTOIN

<u>Chemical name</u>	<u>CAS-No</u>	<u>EINECS/ELINCS</u>	<u>Classification</u>	<u>Concentration</u>
BROMOCHLORO-5,5-DIMETHYL HYDANTOIN	32718-18-6	251-171-5	T: R23 (see s 16) Xn: R22, R31 C: R34 Xi: R43 N: R50	89-97%

3. HAZARDS IDENTIFICATION



Physical & Chemical: CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE

OXIDISING



Health: HARMFUL IF SWALLOWED.
CONTACT WITH ACIDS LIBERATES TOXIC GAS
CAUSES BURNS.
MAY CAUSE SENSITISATION BY SKIN CONTACT

CORROSIVE



Environmental: VERY TOXIC TO AQUATIC ORGANISMS.

**DANGEROUS
FOR THE
ENVIRONMENT**

4. FIRST AID MEASURES

General information	Remove contaminated clothing immediately, to be disposed of or washed before reuse.
Inhalation	Remove casualty to fresh air and provide warmth and rest. If necessary seek medical advice.
Skin contact	Immediately wash contaminated skin with soap and large quantities of water. If necessary seek medical advice.
Eye contact	Immediately wash out eye thoroughly with plenty of water until irritation subsides. If irritation persists, CONSULT AN EYE SPECIALIST/OPHTHALMOLOGIST)
Ingestion	Do NOT induce vomiting. Drink plenty of water and if necessary seek medical advice. Beware of aspiration if vomiting does occur.
Further information	-First aiders should avoid contact with the product.

5. FIRE FIGHTING MEASURES

General hazard	THE PRODUCT WILL BURN IN A FIRE
Extinguishing media	To suit local surroundings (water spray, foam, carbon dioxide, dry chemical powder)
Extinguishing media not to be used	
Special exposure hazards	The thermal decomposition products released should be considered toxic if inhaled.
Protective equipment	Wear self-contained breathing apparatus.
Further information	Cool endangered containers with water (to prevent container explosion). Avoid run-off water entering the drains (e.g. use barriers)

6. ACCIDENTAL RELEASE MEASURES

Methods for cleaning up	Adhere to personal protective measures. Take up mechanically (e.g. sweep or vacuum up) into a suitable container. Label container and dispose of as prescribed.
Environmental considerations	Do not allow the product to enter ground or waste water. If this occurs, inform the local water authority at once.
Further information	

7. HANDLING & STORAGE

Advice on safe handling	Handle in accordance with good hygiene and safety practice. Keep the raising and deposition of dust to a minimum. Keep away from combustible materials (e.g. organic substances). The formation of explosive air mixtures is possible with combustible, organic or other easily oxidisable substances. Keep away from sources of ignition - NO SMOKING!
Storage conditions	Ensure adequate ventilation of the storage area. Keep containers tightly closed, cool (20-30°C) and dry. Keep away from sunlight and incompatible materials.
Further information	

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure controls	Monitoring of the workplace should be considered in accordance with EH40 (or equivalent) controls
	<u>LTEL (8 hour TWA):</u> <u>ppm</u> 0.1 <u>mg/m³</u> Manufacturer's recommendation
	<u>STEL (15 min):</u> <u>ppm</u> 0.3 <u>mg/m³</u> Based on LTEL
Engineering controls	Ensure adequate ventilation of working area (e.g. local exhaust ventilation).
Personal protection	Observe normal standards for handling chemicals. Avoid breathing dust and eye and skin contact. Wash thoroughly after handling (shower if necessary) It is recommended that those with a medical history of sensitisation should not handle this product. Wear personal protective equipment appropriate to the task (see below)
<u>Eye protection</u>	<u>Safety goggles or face shield (i.e. EN 166 approved)</u>
<u>Skin protection</u>	<u>Natural rubber latex gloves</u> (also consider your own risk assessment; e.g. breakthrough times, rates of diffusion and degradation, tasks undertaken)
<u>Respiratory protection</u>	<u>When dusty conditions are encountered, wear a NIOSH/OSHA full face respirator with chlorine cartridge and dust prefilter.</u>
Other protection	Protective overall, boots

9. PHYSICAL & CHEMICAL PROPERTIES

Physical form	Solid
Colour	White to off-white
Odour	Faintly halogen-like
pH	Not determined
Boiling pt / range	°C
Melting pt / range	> 160 °C (decomposes)
Flash point	°C
Specific gravity	1.8-2.0 g/cm ³
Explosive limits	Lower: % (v/v) Higher: % (v/v)
Water solubility	2 g/l @ 25°C
Vapour pressure	9.35 x 10 ⁻³ Pa. @ 25°C
Additional information	Solubility in benzene @ 25°C: 25 g/l

10. STABILITY & REACTIVITY

Stability	Stable under normal conditions of handling.
Thermal decomposition	> 160°C
Conditions to avoid	Heating above 160°C
Material to avoid	The product is incompatible with oxidising agents, bases and combustible organic materials.
Hazardous reactions	Hazardous polymerisation will not occur.
Hazardous decomposition products	Bromine, HBr, HCl, oxides of carbon and nitrogen

11. TOXICOLOGICAL INFORMATION

Acute toxicity	LD ₅₀ rat (oral)	1500 mg/kg	data for bromochloro-5,5-dimethylhydantoin
	LC ₅₀ rat (inhal)	0.53 mg/l	4 hrs, data for bromochloro-5,5-dimethylhydantoin *
	LD ₁₀ rat (skin)	2000 mg/kg	data for 3-bromo-1-chloro-5,5-dimethylhydantoin
Dermal compatibility	Rabbit skin: 500 mg 24 hrs SEV (data for 3-bromo-1-chloro-5,5-dimethylhydantoin) **		
Mucous membrane compatibility	Rabbit eye: 100 mg 30 sec SEV (data for 3-bromo-1-chloro-5,5-dimethylhydantoin) **		
Further information	Additional data for data for bromochloro-5,5-dimethylhydantoin: mild sensitiser (guinea pig); mutagenic <u>in vitro</u> (Ames Test); no indication of carcinogenicity. * Data for the untabletted product ** does not reach corrosivity for assigning R34 under the CHIP Regulations, but product is registered as a corrosive biocide		

12. ECOLOGICAL INFORMATION

Acute toxicity	LC ₅₀	Fish (rainbow trout)	0.4 mg/l	96 hour, static
	LC ₅₀	Fish (bluegill sunfish)	0.46 mg/l	96 hour static
	LC ₅₀	Daphnia magna	0.75 mg/l	48 hour, static
Degradability	No data available (assumed to be biodegradable)			
Further information	Do not allow to get into waste water or waterways; if this occurs, inform the relevant water authority at once.			

13. DISPOSAL CONSIDERATIONS

Advice on disposal	In accordance with national and local authority regulations, e.g. The Hazardous Waste (England & Wales) Regulations 2005.
Contaminated packaging	Treat empty containers in the same way as the product or if possible wash out thoroughly and recycle.

14. TRANSPORT INFORMATION

United Nations number	UN 3085
Packaging group	II
IMDG code	5.1/3085/II
RID / ADR	5.1, II
ICAO / IATA	<u>5.1/3085/II</u>
Marine pollutant	The product should be marked as a marine pollutant.
Proper shipping name	OXIDISING SOLID, CORROSIVE, N.O.S. (BROMOCHLORO-5,5-DIMETHYL HYDANTOIN)
Emergency action code	2W
Further information	

15. REGULATORY INFORMATION

Classification & labelling The product is classified in accordance with the Chemicals (Hazard Information and Packaging for Supply) Regulations [CHIP 3.1] Contains bromochloro-5,5-dimethyl hydantoin



OXIDISING



CORROSIVE

**DANGEROUS
FOR THE
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Risk phrases	R8	CONTACT WITH COMBUSTIBLE MATERIAL MAY CAUSE FIRE
	R22	HARMFUL IF SWALLOWED.
	R31	CONTACT WITH ACIDS LIBERATES TOXIC GAS
	R34	CAUSES BURNS.
	R43	MAY CAUSE SENSITISATION BY SKIN CONTACT.
Safety phrases	R50	VERY TOXIC TO AQUATIC ORGANISMS.
	S1/2	KEEP LOCKED UP AND OUT OF THE REACH OF CHILDREN.
	S8	KEEP CONTAINER DRY
	S26	IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
	S36/37/39	WEAR SUITABLE PROTECTIVE CLOTHING, GLOVES AND EYE/FACE PROTECTION.
	S45	IN CASE OF ACCIDENT OR IF YOU FEEL UNWELL, SEEK MEDICAL ADVICE IMMEDIATELY (SHOW LABEL WHERE POSSIBLE).
	S61	AVOID RELEASE TO THE ENVIRONMENT. REFER TO SPECIAL INSTRUCTIONS/SAFETY DATA SHEET.

16. OTHER INFORMATION

Further information The safety data sheet has been revised in the following section(s): 8

The classification Toxic, R23 (Toxic by inhalation) has not been assigned to the product since in the tablet form, as supplied, the formation of dust does not occur.

Sources of data The Approved Supply List, [Approved Carriage List, EH40/2005](#) and other suppliers' safety data sheets

Date of issue 04-05-2006

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.

Data sheet prepared by Rising HS&E Services.