

# SAFETY DATA SHEET

## BROMINE TABLETS

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Compilation date: 15/10/2012

Revision No: 2

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

#### 1.1. Product identifier

**Product name:** BROMINE TABLETS

**CAS number:** 32718-18-6

**EINECS number:** 251-171-5

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

**Use of substance / mixture:** Industrial Biocide for use in evaporative cooling systems and process waters.

#### 1.3. Details of the supplier of the safety data sheet

**Company name:** Howard's Hydrocare Ltd

Units 1 & 2, Hillgrove Business Park

Nazeing Road

Nazeing

Essex

EN9 2HB

**Tel:** 01992 893389

**Fax:** 01992 893009

**Email:** Roy@howardshydrocare.com

#### 1.4. Emergency telephone number

### Section 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**Classification under CHIP:** O: R8; Xn: R22; C: R34; Sens.: R43; N: R50

**Classification under CLP:** Acute Tox. 4: H302; Aquatic Acute 1: H400; Skin Corr. 1B: H314; Skin Sens. 1: H317

**Most important adverse effects:** Contact with combustible material may cause fire. Harmful if swallowed. Causes burns.  
May cause sensitisation by skin contact. Very toxic to aquatic organisms.

#### 2.2. Label elements

##### Label elements under CLP:

**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.

**Signal words:** Danger

**Hazard pictograms:** GHS05: Corrosion

GHS07: Exclamation mark

GHS09: Environmental

[cont...]

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**Precautionary statements:** P264: Wash with soap and water thoroughly after handling.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P270: Do not eat, drink or smoke when using this product.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release to the environment.  
P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor.  
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P321: Specific treatment (see information on this label).  
P330: Rinse mouth.  
P363: Wash contaminated clothing before reuse.  
P391: Collect spillage.  
P405: Store locked up.  
P501: Dispose of contents/container to at an approved waste facility.

#### Label elements under CHIP:

**Hazard symbols:** Oxidising.  
Corrosive.  
Dangerous for the environment.



**Risk phrases:** R8: Contact with combustible material may cause fire.  
R22: Harmful if swallowed.  
R34: Causes burns.  
R43: May cause sensitisation by skin contact.  
R50: Very toxic to aquatic organisms.

**Safety phrases:** S22: Do not breathe dust.  
S24: Avoid contact with skin.  
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.  
S28: After contact with skin, wash immediately with plenty of water.  
S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S61: Avoid release to the environment. Refer to special instructions / safety data sheets.

[cont...]

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### 2.3. Other hazards

**Other hazards:** Oxidising.

**PBT:** This product is not identified as a PBT substance.

## Section 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous ingredients:

BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE (BCDMH)

EINECS	CAS	CHIP Classification	CLP Classification	Percent
251-171-5	32718-18-6	Xn: R22; C: R34; -: R31; Sens.: R43; N: R50	Acute Tox. 4: H302; Aquatic Acute 1: H400; Skin Corr. 1B: H314; Skin Sens. 1: H317	>95%

## Section 4: First aid measures

### 4.1. Description of first aid measures

**Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin.

Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.

**Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

**Ingestion:** Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.

**Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

### 4.2. Most important symptoms and effects, both acute and delayed

**Skin contact:** Irritation or pain may occur at the site of contact. Blistering may occur. Severe burns may occur.

**Eye contact:** There may be irritation and redness. The eyes may water profusely. Corneal burns may occur.

**Ingestion:** It is unlikely that this substance will be swallowed due to its physical properties.

**Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

[cont...]

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

**Immediate / special treatment:** Eye bathing equipment should be available on the premises.

## Section 5: Fire-fighting measures

### 5.1. Extinguishing media

**Extinguishing media:** Carbon dioxide. Alcohol or polymer foam. Dry chemical powder.

### 5.2. Special hazards arising from the substance or mixture

**Exposure hazards:** Oxidising. Corrosive. In combustion emits toxic fumes.

### 5.3. Advice for fire-fighters

**Advice for fire-fighters:** Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

## Section 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

**Personal precautions:** Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not create dust.

### 6.2. Environmental precautions

**Environmental precautions:** Do not discharge into drains or rivers. Contain the spillage using bunding.

### 6.3. Methods and material for containment and cleaning up

**Clean-up procedures:** Transfer to a closable, labelled salvage container for disposal by an appropriate method. Neutralize any residual with alkaline sodium bisulphite solution. Avoid dust formation.

### 6.4. Reference to other sections

**Reference to other sections:** Refer to section 8 of SDS.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

**Handling requirements:** Ensure there is sufficient ventilation of the area. Avoid direct contact with the substance.

### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions:** Store in cool, well ventilated area. Keep container tightly closed. Keep away from direct sunlight.

**Suitable packaging:** Must only be kept in original packaging.

### 7.3. Specific end use(s)

**Specific end use(s):** No data available.

## Section 8: Exposure controls/personal protection

[cont...]

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### 8.1. Control parameters

**Workplace exposure limits:** No data available.

### 8.1. DNEL/PNEC Values

**DNEL / PNEC** No data available.

### 8.2. Exposure controls

**Engineering measures:** Ensure there is sufficient ventilation of the area.

**Respiratory protection:** Self-contained breathing apparatus must be available in case of emergency.

**Hand protection:** Protective gloves.

**Eye protection:** Safety goggles. Face-shield. Ensure eye bath is to hand.

**Skin protection:** Protective clothing with elasticated cuffs and closed neck. Boots made of PVC. PVC apron covering the tops of the boots. Ensure safety shower is to hand.

## Section 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

**State:** Solid

**Colour:** White

**Odour:** Characteristic odour

**Oxidising:** Oxidising (by EC criteria)

**Solubility in water:** Slightly soluble

**Melting point/range°C:** 158 - 165

### 9.2. Other information

**Other information:** No data available.

## Section 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity:** Stable under recommended transport or storage conditions.

### 10.2. Chemical stability

**Chemical stability:** Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

**Hazardous reactions:** Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

### 10.4. Conditions to avoid

**Conditions to avoid:** Heat. Hot surfaces. Moist air. Humidity.

### 10.5. Incompatible materials

**Materials to avoid:** Reducing agents. Acids. Bases. Organic materials.

[cont...]

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### 10.6. Hazardous decomposition products

**Haz. decomp. products:** Contact with acids liberates toxic gas. In combustion emits toxic fumes.

### Section 11: Toxicological information

#### 11.1. Information on toxicological effects

##### Toxicity values:

Route	Species	Test	Value	Units
EYE	RAT	FIFRA	corrosive	-
ORL	RAT	LD50	485	mg/kg
SKN	RBT	FIFRA	corrosive	-
SKN	RBT	LD50	>2000	mg/kg
Sensitizin	GPG	Buehler	sensitizin	-

##### Hazardous ingredients:

#### BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE (BCDMH)

EYE	RAT	FIFRA	corrosive	-
ORL	RAT	LD50	485	mg/kg
SKN	RBT	FIFRA	corrosive	-
SKN	RBT	LD50	>2000	mg/kg
Sensitizin	GPG	Buehler	sensitizin	-

##### Relevant effects for mixture:

Effect	Route	Basis
Acute toxicity (harmful)	ING	Hazardous: calculated
Corrosivity	OPT INH DRM	Hazardous: calculated
Sensitisation	DRM	Hazardous: calculated

### Symptoms / routes of exposure

**Skin contact:** Irritation or pain may occur at the site of contact. Blistering may occur. Severe burns may occur.

**Eye contact:** There may be irritation and redness. The eyes may water profusely. Corneal burns may occur.

**Ingestion:** It is unlikely that this substance will be swallowed due to its physical properties.

**Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing. There may be congestion of the lungs causing severe shortness of breath. There may be loss of consciousness.

**Delayed / immediate effects:** Immediate effects can be expected after short-term exposure.

[cont...]

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### Section 12: Ecological information

#### 12.1. Toxicity

##### Ecotoxicity values:

Species	Test	Value	Units
FISH	96H LC50	0.65	mg/l
FISH	96H LC50	1.17	mg/l

#### 12.2. Persistence and degradability

#### 12.3. Bioaccumulative potential

**Bioaccumulative potential:** Slightly bioaccumulable.

#### 12.4. Mobility in soil

**Mobility:** Soluble in water.

#### 12.5. Results of PBT and vPvB assessment

**PBT identification:** This product is not identified as a PBT substance.

#### 12.6. Other adverse effects

**Other adverse effects:** Do not allow to enter rivers or lakes.

### Section 13: Disposal considerations

#### 13.1. Waste treatment methods

**Disposal operations:** Disposal should be carried out by licenced contractors.

**Disposal of packaging:** Containers must be disposed of in a safe way.

**NB:** The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

### Section 14: Transport information

#### 14.1. UN number

**UN number:** UN3085

#### 14.2. UN proper shipping name

**Shipping name:** OXIDIZING SOLID, CORROSIVE, N.O.S.  
(BROMOCHLORO-5,5-DIMETHYLIMIDAZOLIDINE-2,4-DIONE (BCDMH))

#### 14.3. Transport hazard class(es)

**Transport class:** 5.1 (8)

#### 14.4. Packing group

**Packing group:** II

[cont...]

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#### 14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: No

#### 14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 2

### Section 15: Regulatory information

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

Specific regulations: EU DIRECTIVES

Regulation (EC) No 1907/2006 the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH),

#### 15.2. Chemical Safety Assessment

**Chemical safety assessment:** A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

### Section 16: Other information

#### Other information

**Other information:** This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

\* indicates text in the SDS which has changed since the last revision.

**Phrases used in s.2 and 3:** 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.

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.

R50: Very toxic to aquatic organisms.

**Legal disclaimer:** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.