SAFETY DATA SHEET

AQUABROME/ CHAMPION BROMINE MAQB100

1. Identification of the substance/preparation and of the company/undertaking

Product name : **AQUABROME/ CHAMPION BROMINE**

Supplier : Brenntag UK and Ireland
Albion House
Rawdon Park
Green Lane
Yeadon
Leeds
LS19 7XX

EMERGENCY ONLY TELEPHONE NUMBER : (N.C.E.C. CULHAM) 01865 407333

Telephone No. : (0113) 3879200

Fax No. : (0113) 3879280

2. Composition/information on ingredients

Substance/Preparation : Substance

Chemical name*	CAS No.	%	EC Number	Symbol	R-Phrases
1) Bromo-chloro-5,5-dimethylhydantoin	32718-18-6	>90	251-171-5	C, N	R22, R31, R34, R50

*** Occupational Exposure Limit(s), if available, are listed in Section 8**

CAS No. 32718-18-6

EINECS Number 251-171-5

3. Hazards identification

Human health hazards : Harmful if swallowed.
Contact with acids liberates toxic gas.
Causes burns.

Environmental hazards : Very toxic to aquatic organisms.

4. First-aid measures

First-Aid measures

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention immediately.

Ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : In case of contact, immediately flush skin copiously with water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Obtain medical attention immediately.

Eye Contact : In case of contact, immediately flush eyes with a copious amount of water for at least 15 minutes. Obtain medical attention immediately.

Effects and symptoms

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

Ingestion : May be fatal if swallowed. May cause burns to mouth, throat and stomach. Harmful if swallowed.

Skin contact : Hazardous in case of skin contact (sensitizer). corrosive 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.

Eye Contact : Corrosive to eyes. Eye contact can result in corneal damage or blindness. This product is a severe eye irritant.

Aggravating conditions : 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 an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

5. Fire-fighting measures

Extinguishing Media

Suitable : Oxidizing Material
Do not use water jet. Use flooding quantities of water. Avoid contact with organic materials.

Hazardous thermal (de)composition products : Hydrohalogens, bromine, chlorine, poisonous gases/vapours.

Special fire-fighting procedures : Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear.

Protection of fire-fighters : Be sure to use an approved/certified respirator or equivalent.

6. Accidental release measures

Personal Precautions : Splash goggles. Protective overalls/suit. Dust respirator. Boots. Gloves. If there is a significant airborne concentration then suitable breathing apparatus should be used to avoid inhalation of the product. Select appropriate protective clothing for the size of the spillage.

Environmental precautions and cleanup methods : Oxidizing Material Corrosive solid. Toxic solid.
Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing, etc.). Keep substance damp using water spray. Do not touch spilled material. Use water spray to reduce vapours. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Dispose of according to all federal, state and local applicable regulations. **Neutralize the residue with soda ash.**

7. Handling and storage

Handling : Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Empty containers may still contain significant residual amounts of the product. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.

Storage : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. Separate from acids, alkalis, reducing agents and combustibles. See NFPA 43A, Code for the Storage of liquid and Solid Oxidizers.

Packaging materials

Recommended use : Use original container.

8. Exposure controls/personal protection

Engineering measures : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Hygiene measures : Wash hands, forearms, and face thoroughly after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Workplace Exposure Limits : Not available.

Personal protective equipment

Respiratory system : Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.

Skin and body : Synthetic apron.

Hands : Nitrile gloves.

Eyes : Splash goggles.

9. Physical and chemical properties

Physical state : Solid. (Tablets)

Colour : Light yellow.

Odour : Characteristic. (Slight.)

Melting point : 145 to 160°C (293 to 320°F)

Density : 1.9 g/cm^3 at 20°C (68°F)

Solubility : 1500 mg/l at 25ºC.

pH : 3.5 [Acidic.] (1 g/l at 20ºC.)

Flash point : Not available.

10. Stability and reactivity

Stability : The product is stable.

Materials to avoid : Oxidising agents, acids, alkalis, combustible substances, organic substances e.g. wood, paper, fats.

Hazardous decomposition products : Hydrohalogens, bromine, chlorine, poisonous gases/vapours.

11. Toxicological information

Local effects

Skin irritation : Hazardous in case of skin contact (corrosive).

Eye irritation : Hazardous in case of eye contact (corrosive).

Sensitization : Hazardous in case of skin contact (sensitizer).

Acute toxicity : Acute oral toxicity (LD50): 578 mg/kg [Rat].
Acute dermal toxicity (LD50): >2000 mg/kg [Rabbit].
Acute toxicity of the dust (LC50): 0.53 mg/l 4 hours [Rat].

Chronic toxicity : 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 an highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

12. Ecological information

Ecotoxicity : Ecotoxicity in water:
(LC50): 0.87 mg/l, 96 hours [Fish (Trout)].
(EC50): 0.46 mg/l, 48 hours [Daphnia].

Very toxic to aquatic organisms.

13. Disposal considerations

Methods of disposal ; Waste of residues ; Contaminated packaging : Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Waste Classification : Not applicable.

14. Transport information

International transport regulations

UN : UN number 3085

UN : Proper shipping name OXIDIZING SOLID, CORROSIVE, N.O.S. (Bromo-chloro-5,5-dimethylhydantoin)

UN : Class 5.1

Sub-Class: 8

UN : Packing group II

UN : Label

ADR/RID : Class 5.1 **Sub-Class:** 8

ADR/RID : Hazard identification number 58

IMDG : Packing group II

Sub-Class: 8

IATA : Packing group II

IATA : Additional Information - **Sub-Class:** 8

15. Regulatory information

EU Regulations

Hazard symbol(s) :

Classification : Corrosive, Dangerous for the environment

Risk Phrases : R22- Harmful if swallowed.
R31- Contact with acids liberates toxic gas.
R34- Causes burns.
R50- Very toxic to aquatic organisms.

Safety Phrases	:	S1/2- Keep locked up and out of the reach of children. S7/8- Keep container tightly closed and dry. S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S29/56- Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point. 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 the label where possible).
Contains	:	- BROMINE TABLETS
Product Use	:	Classification and labelling have been performed according to EU directives 67/548/EEC, 88/379/EEC, including amendments and the intended use. - Consumer applications.

16. Other information

HISTORY

Date of printing	:	**25/05/2010.**
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Date of previous issue	:	**17/04/2001.**
Version	:	**2.01**
Prepared by	:	**Michael Hale / Alistair Hunter**

Notice to Reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

CHANGES SINCE PREVIOUS VERSIONS:

Version 2: R43 and R53 removed from classification.