



K-BROM G

Printed: 09/05/2014
Revision: 09/04/2014
Supersedes Revision: 07/07/2014

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Code: 211014
Product Name: K-BROM G
Trade Name: Biocide
Company Name: Water Science Technologies, LLC
5520 Parkwood Circle
Bessemer, AL 35022
Phone Number: (866)284-9244

Emergency Contact: ChemTel, Inc. (US) (800)255-3924
ChemTel, Inc. (Int'l) (813)248-0585

Intended Use: A biocide used to control bacteria, algae, slime, and fungi.

2. HAZARDS IDENTIFICATION

Acute Toxicity: Oral, Category 4
Skin Corrosion/Irritation, Category 1B
Skin Sensitization, Category 1
Aquatic Toxicity (Chronic), Category 1



GHS Signal Word: **Danger**

GHS Hazard Phrases: H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H410 - Very toxic to aquatic life with long lasting effects.

GHS Precaution Phrases: P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P362+364 - Take off contaminated clothing and wash it before reuse.
P273 - Avoid release to the environment.

GHS Response Phrases: P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P310 - Immediately call a POISON CENTER or doctor/physician.
P363 - Wash contaminated clothing before reuse.
P305+351+338 - 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.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310 - Immediately call a POISON CENTER or doctor/physician.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P311 - Call a POISON CENTER or doctor/physician.
P391 - Collect spillage.

GHS Storage and Disposal Phrases: P501 - Dispose of contents/container to national and international regulations.
P405 - Store locked up.



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Hazard Rating System:

HEALTH	3
FLAMMABILITY	0
PHYSICAL	1
PPE	F

HMIS:

Potential Health Effects
(Acute and Chronic):

Inhalation: Irritating to respiratory system.
Skin Contact: May cause sensitization. May cause skin irritation.
Eye Contact: May cause temporary or permanent eye damage.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS #	Hazardous Components (Chemical Name)	Concentration
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	96.0 -99.5 %

4. FIRST AID MEASURES

Emergency and First Aid
Procedures:

In Case of Inhalation: Move victim to fresh air. If not breathing, give artificial respiration. Call 911 or emergency medical service.

In Case of Skin Contact: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Immediately call a POISON CENTER or doctor/physician.

In Case of Eye Contact: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

In Case of Ingestion: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Note to Physician: No specific antidote. Treat symptomatically and supportively. Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: No data.

Suitable Extinguishing Media: Dry chemical or CO2. In case of exothermic decomposition and appearance of smoke, water should be used to suppress it.

Fire Fighting Instructions: Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

Flammable Properties and Hazards: Dusts or fumes may form explosive mixtures in air. Forms explosive mixtures with combustible, organic or other easily oxidizable materials.



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6. ACCIDENTAL RELEASE MEASURES

Protective Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing to minimize contact with skin. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Environmental Precautions: Avoid release to the environment.

Steps To Be Taken In Case Material Is Released Or Spilled: Evacuate area. Sweep up or absorb material, then place into a suitable clean, dry, closed container for disposal. Ventilate the area. Wash area with soap and water.

7. HANDLING AND STORAGE

Precautions To Be Taken in Handling: Keep container tightly closed.

Precautions To Be Taken in Storing: Keep away from sources of ignition. Store at temperatures not exceeding 50°C/120°F. Keep container tightly closed. Store in a cool dry place. Store away from incompatible material.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

CAS #	Components (Chemical Name)	OSHA TWA	ACGIH TWA	Other Limits
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	No data.	No data.	No data.

Respiratory Equipment (Specify Type): A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Eye Protection: Chemical safety goggles.

Protective Gloves: Impervious gloves.

Other Protective Clothing: Lab coat and apron.

Engineering Controls (Ventilation etc.): Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Work/Hygienic/Maintenance Practices: Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical States: [] Gas [] Liquid [X] Solid

Appearance and Odor: faint halogenous odor.
White to Off-White, Granular.

Melting Point: No data.

Boiling Point: No data.

Decomposition Temperature: > 160.00 C (320.0 F)

Autoignition Pt: No data.

Flash Pt: No data.

Explosive Limits: LEL: No data. UEL: No data.

Specific Gravity (Water = 1): 1.8 - 2.0



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Vapor Pressure (vs. Air or mm Hg): 9.35x10(-3) PA at 25.0 C (77.0 F)
Vapor Density (vs. Air = 1): No data.
Evaporation Rate: No data.
Solubility in Water: 0.22g/100mL at 25.0 C (77.0 F)
Solubility Notes: Benzene: 2.5g/100g at 25C
Percent Volatile: No data.

10. STABILITY AND REACTIVITY

Reactivity: Oxidizing agents, Bases, combustible materials.
Stability: Unstable [] Stable [X]
Conditions To Avoid - Instability: heating to decomposition. Moisture.
Incompatibility - Materials To Avoid: Oxidizing agents, Bases.
Hazardous Decomposition Or Byproducts: Nitrogen oxides, hydrogen chloride. hydrogen bromide. chlorine. Carbon oxides.
Possibility of Hazardous Reactions: Will occur [] Will not occur [X]
Conditions To Avoid - Hazardous Reactions: Product will not undergo polymerization.

11. TOXICOLOGICAL INFORMATION

Toxicological Information: No data available.
CAS# 32718-18-6:
Symptoms related to Toxicological Characteristics: Acute toxicity, LD50, Oral, Rat, 929.0 MG/KG.
Acute toxicity, LC50, Inhalation, Rat, 1.100 MG/L, 4 H.
Sensitisation.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	n.a.	n.a.	n.a.	n.a.

12. ECOLOGICAL INFORMATION

No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Observe all federal, state, and local environmental regulations. Dispose of contents/container to approved landfill or incinerator. Avoid release to the environment.



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14. TRANSPORT INFORMATION

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Oxidizing solid, n.o.s.Bromo-Chloro-5,5-DimethylHydantoin
DOT Hazard Class: 5.1 OXIDIZER
UN/NA Number: UN1479 **Packing Group:** III



LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Oxidizing solid, n.o.s.Bromo-Chloro-5,5-DimethylHydantoin
UN Number: 1479 **Packing Group:** III
Hazard Class: 5.1 - OXIDIZER **TDG Classification:**

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name: Oxidizing solid, n.o.s.Bromo-Chloro-5,5-DimethylHydantoin
UN Number: 1479 **Packing Group:** III
Hazard Class: 5.1 - OXIDIZER
Marine Pollutant: Yes

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name: Oxidizing solid, n.o.s.Bromo-Chloro-5,5-DimethylHydantoin

15. REGULATORY INFORMATION

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	No	No	No

CAS #	Hazardous Components (Chemical Name)	Canadian NPRI	Canadian IDL	Canadian DSL
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	No	No	No

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
32718-18-6	Bromochloro-5,5-dimethylimidazolidine-2,4-dione	

Canadian WHMIS Classification:

No data available.

Regulatory Information: Primary EPA Registration # : 88714-5
This product is subject to registration under FIFRA.
All ingredients are reported in the EPA TSCA Inventory.

16. OTHER INFORMATION

Revision Date: 09/04/2014

Additional Information About This Product: No data available.

Company Policy or Disclaimer: The information accumulated herein is believed to be accurate based on the information provided, although no guarantee or warranty, either expressed or implied is made as to



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the accuracy or completeness of this information, whether originating with this company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable and suitable to their circumstances. The conditions or methods of handling, storage, use and disposal of the product and container are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage or use of this information or product. If the product is used as a component in another product, this information may not be applicable.