BIOTROL 407

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: BIOTROL 407
Common Name: Mixture
SDS Number: 0165
Product Code: BI0034
Revision Date: 6/5/2019
Version: 3
Product Use: Biocide

Supplier Details: U.S. Water Services
12270 43rd St. NE
St. Michael, MN 55376

Contact: Non-emergency #: 866-663-7632
Email: SDS@uswaterservices.com
Web: www.uswaterservices.com

EMERGENCY RESPONSE: (ChemTel)
US & Canada: 800-255-3924
International: +01-813-248-0585

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Corrosive to Metals, 1
Health, Acute toxicity, 5 Dermal
Health, Skin corrosion/irritation, 1 A
Health, Acute toxicity, 5 Inhalation

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: DANGER

GHS Hazard Pictograms:

GHS Hazard Statements:

H290 - May be corrosive to metals
H313 - May be harmful in contact with skin
H314 - Causes severe skin burns and eye damage
H333 - May be harmful if inhaled

GHS Precautionary Statements:

P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P234 - Keep only in original container.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P271 - Use only outdoors or in a well-ventilated area.
P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, present and easy to do.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P363 - Wash contaminated clothing before reuse.
P390 - Absorb spillage to prevent material damage.
P405 - Store locked up.
P406 - Store in a corrosion resistant container with a resistant inner liner.
P501 - Dispose of contents/container tin accordance with local regulations.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

PPE recommendation is advisory only and based on typical use conditions. An industrial hygienist or safety officer familiar with the specific situation of anticipated use must determine actual PPE required when using this product (29 CFR 1910.132)

3 COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients:

CAS#	%	Chemical Name:
1004542-84-0	15-25%	Sulfamic Acid, N-Bromo, Sodium Salt
1310-73-2	1-5%	Sodium hydroxide

4 FIRST AID MEASURES

Inhalation: Get medical advice/attention if you feel unwell or are concerned.
Skin Contact: Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water with a flushing duration of 15-20 minutes. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before re-use or discard.
Eye Contact: Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 30 minutes. Take care not to rinse contaminated water into the unaffected eye or into the face. Immediately call a POISON CENTER/doctor.
Ingestion: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor. If vomiting occurs naturally, lie on your side, in the recovery position.
Most important symptoms & effects (acute & delayed)**:** Causes irritation/burns that may result in permanent impairment of vision, even blindness. Contact with skin can cause irritation. May be harmful if swallowed.
Indication of need for immediate medical attention: Treat symptomatically
Special treatment needs: No data available

5 FIRE FIGHTING MEASURES

Extinguishing Media:

Suitable: Use water spray, powder, foam, carbon dioxide.

Unsuitable: No information available

Hazardous combustion products: Non combustible. May give off irritating or toxic fumes (or gases) in a fire.

Unusual Fire or Explosion Hazards: May cause fire and explosions when in contact with incompatible materials.

Special protective equipment/precautions: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.
Methods and materials for containment and cleaning up: SMALL SPILLS (less than 1 gallon): Dike small spills with inert material (sand, earth, etc.). Collect in plastic containers only. Wash area and let dry. LARGE SPILL: Should be diked with sand ahead of spill. Collect in plastic containers only. Ensure adequate decontamination of tools and equipment following clean up.
Special spill response procedures: Collect spills in plastic containers only. Prevent from entering sewers, waterways, or low areas.

7 HANDLING AND STORAGE

Handling Precautions: Wear at least chemical resistant gloves and eye protection, face shield, and chemical resistant garments when handling, moving or using this product. Do not contaminate water, food, or feed by storage or disposal.

Storage Requirements: Store in a cool, dry, well ventilated place away from direct sunlight. Keep container closed when not in use.
Incompatible Materials: Strong reducing agents such as sulfite and metabisulfite, strong acids and bases. Never mix this product with undiluted sodium hypochlorite bleach. The mixture will result in a violent exothermic reaction that produces a great deal of heat and nitrogen gas bubbles.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Forced air, local exhaust, or open air is adequate.

Personal Protective Equipment:

Respiratory Protection: Not a respiratory irritant unless dealing with a mist form, then wear appropiate NIOSH respirator.
Skin Protection: Wear chemical resistant gloves and chemical resistant garments when handling, wash garments before re-use.
Eye/Face Protection: Wear chemical goggles; also wear a face shield if splashing hazard exists.
Other Protective Equipment: Eye wash facility and emergency shower should be in close proximity.
General Hygiene Conditions: Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Remove and wash contaminated clothing before re-use. Handle in accordance with good industry hygiene and safety practice.

Exposure Limits:

Sodium Hydroxide (1310-73-2)	ACGIH (TLV)	2mg/m3 (ceiling)
	NIOSH (PEL)	2mg/m3 (ceiling)
	OSHA (REL)	2mg/m3 (ceiling)

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow to light orange liquid		
Physical State:	Liquid	**Odor:**	Mild chlorine like odor
Odor Threshold:	Not determined	**Solubility:**	Complete in water
Spec Grav./Density:	1.3 - 1.35 g/mL	**Freezing/Melting Pt.:**	< -4ºC / 25ºF
Viscosity:	15-25 cSt at 20ºC / 68ºF	**Flash Point:**	Not applicable
Boiling Point:	No information available	**Vapor Density:**	Similar to water
Flammability:	Non flammable	**Auto-Ignition Temp:**	Not determined
Partition Coefficient:	Not determined	**UFL/LFL:**	Not determined
Vapor Pressure:	Similar to water		
pH:	12.0-13.0 (1:100)		
Evap. Rate:	Not determined		
Decomp Temp:	No information available		

10 STABILITY AND REACTIVITY

Reactivity:	Reactive with oxidizing agents, reducing agents, organic materials, metals, acids and alkalis.
Chemical Stability:	Stable for up to 1 year when stored under normal conditions.
Conditions to Avoid:	Avoid contact with strong acids and oxidizers. Incompatible materials and cold temperatures.
Materials to Avoid:	Strong reducing agents such as sulfite and metabisulfite, strong acids and bases. Never mix this product with undiluted sodium hypochlorite bleach. The mixture will result in a violent exothermic reaction that produces a great deal of heat and nitrogen gas bubbles.
Hazardous Decomposition:	Nitrogen oxides, bromine and hydrobromic acid vapors.
Hazardous Polymerization:	May react with incompatible materials.

11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Routes of entry - inhalation: YES
Routes of entry - skin & eye: YES
Routes of entry - ingestion: YES
Routes of entry - skin absorption: NO

Potential Health Effects:
Signs and symptoms of short term (acute) exposure:
Inhalation: May cause irritation to respiratory system in mist/vapor form.
Ingestion: Corrosive! Swallowing causes severe burns of mouth, throat, and stomach. Severe scarring of tissue, corrosion, permanent tissue destruction and death may result. Symptoms may include severe pain, nausea, vomiting, diarrhea, shock, hemorrhaging and/or fall in blood pressure. Damage may appear days after exposure.

Skin: Corrosive! Contact with skin causes irritation or severe burns and scarring with greater exposures.
Eye: Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent impairment of vision, even blindness.

Potential Chronic Health Effects:
Mutagenicity: May have mutagenic and tumorigenic effects with long term exposure.
Carcinogenicity: No ingredients are listed as carcinogens by ACGIH, IARC, OSHA, or NTP.
Reproductive effects: May cause reproductive effects.
Sensitization to material: Not a known sensitizer in humans or animals.
Specific target organ effects: No information available
Medical conditions aggravated by overexposure: No information available
Toxicological data: The calculated ATE values for this mixture are:
ATE oral = > 5000 mg/kg
ATE dermal = > 2000 mg/kg
ATE inhalation (mist) = 2.85 mg/L

12 ECOLOGICAL INFORMATION

Aquatic Toxicity- *Results below are based on the active product (reported as Cl2).*

Avian Exposure

Upland Game Birds:

Acute oral LD_{50}:	> 2,510 mg/kg
Subacute Dietary LC_{50}:	> 5,000 mg/kg

Aquatic Data

Cold Water Fish, acute toxicity, LC_{50}:	1.35 ppm (max- 96hr)
Warm Water Fish, acute toxicity, LC_{50}:	2.1 ppm (max-96 hr)
Invertebrate (D. magna), acute toxicity, LC_{50}	2.3 ppm (max-48 hr)

Elimination (persistency & degradability): No data available
Bioaccumulative potential: No data available
Mobility in soil: No data available
Other adverse effects: No data availableInhalation

13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations.

This material should be fully characterized for toxicity and possible reactivity prior to disposal (40 CFR 261). Use which results in chemical or physical change or contamination may subject it to regulation as a hazardous waste. Along with properly characterizing all waste materials, consult state and local regulations regarding the proper disposal of this material.

Container contents should be completely used and containers should be emptied prior to discard. Container rinsate could be considered a RCRA hazardous waste and must be disposed of with care and in full compliance with federal, state and local regulations. Larger empty containers, such as drums, should be returned to the distributor or to a drum reconditioner. To assure proper disposal of smaller empty containers, consult with state and local regulations and disposal authorities.

14 TRANSPORT INFORMATION

UN1760, Corrosive liquids, n.o.s., (Bromide Salts), 8, PG III
Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes.

Please note the GHS and DOT Standards are NOT identical and therefore can have varying classifications

Environmental hazards: Not a Marine Pollutant

15 REGULATORY INFORMATION

[%] RQ (CAS#) Substance - Reg Codes

[15-25%] Sulfamic Acid, N-Bromo, Sodium Salt (1004542-84-0)

[1-5%] RQ(1000LBS), Sodium hydroxide (1310-73-2) CERCLA, CSWHS, MASS, OSHAWAC, PA, TSCA, TXAIR

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

Regulatory Code Legend

RQ = Reportable Quantity
CERCLA = Superfund clean up substance
CSWHS = Clean Water Act Hazardous substances
MASS = MA Massachusetts Hazardous Substances List
OSHAWAC = OSHA Workplace Air Contaminants
PA = PA Right-To-Know List of Hazardous Substances
TSCA = Toxic Substances Control Act
TXAIR = TX Air Contaminants with Health Effects Screening Level

TSCA: All components of this product are listed (or are not required to be listed) in the TSCA inventory
EPA / CERCLA / SARA TITLE III:
Toxic Chemical List (SARA 313): This product does not contain any chemicals subject to routine annual toxic chemical release reporting.
Extremely Hazardous Substance (SARA 302/304): This product does not contain any extremely hazardous substances subject to emergency planning requirements.
SARA 312: Acute
RCRA: Corrosive, D002
California Proposition 65: This product does not contain any proposition 65 chemicals.

16 OTHER INFORMATION

PPE

Author: U.S. Water Services

Revision Notes: Updated to GHS format

Disclaimer:
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences

of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s). The above information is not claiming characteristics of the product in term of legal claims of performance / guarantee. This information only describes safety measures and no liability may arise from the use or application of the product described herein. This information is given in good faith and based on our current knowledge of the product.

Revision Date: 6/5/2019