

**BIOTROL 12.5****1 PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier:** BIOTROL 12.5  
**Common Name:** Mixture  
**SDS Number:** 1533  
**Revision Date:** 9/3/2015  
**Version:** 1  
**Internal ID:** 301C  
**Product Use:** Industrial chlorine based 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):**

Health, Skin corrosion/irritation, 1 B  
Physical, Corrosive to Metals, 1  
Health, Specific target organ toxicity - Single exposure, 1

**GHS Label elements, including precautionary statements**

**GHS Signal Word:** **DANGER**

**GHS Hazard Pictograms:****GHS Hazard Statements:**

H314 - Causes severe skin burns and eye damage  
H290 - May be corrosive to metals  
H370 - Causes damage to organs

**GHS Precautionary Statements:**

P234 - Keep only in original container.  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P264 - Wash thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

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P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
P305+351+338 - IF IN EYES: Rinse continuously 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.  
P363 - Wash contaminated clothing before reuse.  
P404 - Store in a closed container.  
P406 - Store in a corrosive resistant container with a resistant inner liner.  
P501 - Dispose of contents/container in accordance with local, regional, and international 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 ON INGREDIENTS****Ingredients:**

Cas#	%	Chemical Name
7681-52-9	12.5	Sodium hypochlorite
1310-73-2	0.2-5.0%	Sodium hydroxide

**4 FIRST AID MEASURES**

**Inhalation:** If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. Symptoms of pulmonary edema can be delayed up to 48 hours after exposure.

**Skin Contact:** If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Do not apply oils or ointments unless ordered by the physician. If skin feels slippery, caustic may still be present in sufficient quantities to cause rash or burn. Continue washing skin until slick feeling is gone. Discard footwear which cannot be decontaminated. Discard contaminated leather articles such as shoes and belt.

**Eye Contact:** If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Do not attempt to neutralize with chemical agents. Washing eyes within several seconds is essential to achieve maximum effectiveness. Oils or ointments should not be used at this time. Remove contact lenses after the first 5 minutes and continue flushing.

**Ingestion:** If swallowed: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Do not give sodium bicarbonate, fruit juices or vinegar. If vomiting occurs spontaneously, keep airway clear and give more water.

**Most important symptoms & effects (acute & delayed):** No data available

**Indication of need for immediate medical attention:** None

**Special treatment needs:** No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be

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dangerous to the person providing aid to give mouth-to-mouth resuscitation. There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient. The absence of visible signs or symptoms of burns does not reliably exclude the presence of actual tissue damage.

**5****FIRE FIGHTING MEASURES**

**Flammability:** Not flammable  
**Flash Point:** None  
**Flash Point Method:** Pensky Martens Closed cup  
**Burning Rate:** No data available  
**Autoignition Temp:** No data available  
**LEL:** Not applicable  
**UEL:** Not applicable

**Extinguishing Media:**

**Suitable:** Use extinguishing media suitable for surrounding fire.

**Unsuitable:** None

**Hazardous combustion products:** Chlorine-containing gases. Metal oxides. Oxygen. Halogenated compounds. Toxic fumes. Carbon dioxide. Carbon monoxide. Sodium oxides. Irritating and/or toxic gases.

**Unusual Fire or Explosion Hazards:** OXIDIZER. May generate potentially explosive oxygen. Contact with combustible materials may cause a fire.

**Special protective equipment/precautions:** Wear self-contained breathing apparatus

**6****ACCIDENTAL RELEASE MEASURES**

**Personal Precautions, Protective equipment, emergency procedures:** Avoid contact with the material. See section 8 of SDS for PPE recommendations

**Environmental Precautions:** Keep runoff from entering drains or waterways

**Spill/Leak procedures:** Contain spill or leak. Dike area if necessary to prevent spill from spreading or entering sewers and waterways. Recover as much as possible then absorb remainder with inert material. Place into closed container for disposal.

**Regulatory Requirements:** Dispose of recovered material in accordance with all applicable state and federal regulations.

**7****HANDLING AND STORAGE**

**Handling Precautions:** Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Mixing this product with gross filth such as feces, urine, etc. or with ammonia, acids, detergents or other chemicals may release hazardous gases irritating to eyes, lungs and mucous

**BIOTROL 12.5****Storage Requirements:**

membranes. CORROSIVE MATERIAL. Avoid dust or mist formation.  
CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Relieve pressure in containers weekly. Do not freeze. Avoid temperatures greater than 70 Deg. F. Product degrades more rapidly with increasing temperature. Avoid contact with combustible materials, wood and organic materials. Avoid storage on wood floors or near wooden walls, etc.. DO NOT contaminate water, food or feed by storage or disposal. Highly corrosive to most metals with evolution of hydrogen gas.

**8 EXPOSURE CONTROLS/PERSONAL PROTECTION****Engineering Controls:**

Provide local exhaust ventilation as needed to control misting.

**Personal Protective Equipment:**

HMIS PP, C | Safety Glasses, Gloves, Apron

Respiratory protection: If needed use MSHA/NIOSH approved respirator for dusts and mists. Seek professional advice prior to respirator selection and use. Follow all requirements of OSHA respirator regulations (29 CFR 1910.134)

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

General Hygiene: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, using the toilet, or applying cosmetics.

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)

**Exposure Limits:****Sodium Hypochlorite****Sodium Hydroxide****OSHA PEL:**

1ppm (Ceiling) as Chlorine\*

2 mg/m<sup>3</sup> (TWA)

**NIOSH/REL:**

0.5ppm (Ceiling) as Chlorine\*

**9 PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance:** Clear, yellow-green

**Physical State:** Liquid

**Odor Threshold:** Not determined

**Spec Grav./Density:** 10.01 lb/gal

**Viscosity:** Not determined

**Boiling Point:** Not determined

**Partition Coefficient:** Not determined

**Vapor Pressure:** Not determined

**pH:** >12

**Evap. Rate:** Not determined

**Decomp Temp:** Not determined

**Odor:** Chlorine

**Solubility:** Complete in water

**Freezing/Melting Pt.:** appx -10F

**Flash Point:** None

**Vapor Density:** Not determined

**Auto-Ignition Temp:** Not determined

**UFL/LFL:** Not determined

**10 STABILITY AND REACTIVITY**

**Stability:** Product is stable under normal storage and use conditions.

**Conditions to Avoid:** Avoid exposure to light. Avoid temperatures greater than 70 Deg. F. Product

**BIOTROL 12.5****Materials to Avoid:**

degrades more rapidly with increasing temperature. Keep away from incompatibles. Heavy metals. Nickel. Iron. Copper. Cobalt. Acids. Ammonia. Ammonium compounds. Hydrogen peroxide. Alum. Oxidizing agents. Reducing agents. Combustible materials. Wood. Organic materials. Organic solvents. Amines. Methanol. Cleaners. Solvents. Magnesium. Aluminum. Chromium. Carbon steel. Manganese. Steel. Tin. Zinc. Sodium sulfite. Sodium thiosulfate. Bronze. Brass. Reacts with other household chemicals, such as toilet bowl cleaners, pool/hot tub chemicals/materials, peroxides, brick and concrete cleaners, insecticides, windshield wash, gasoline, greases, oils, fuels, rust removers, vinegar, human and animal waste to produce hazardous gases such as chlorine. Ether, ammonia compounds, cloth, propane, organic polymers, ethylene glycol, sodium bisulfite, sodium hydrosulfite may release hazardous gases. Alcohols. Chlorinated compounds. Cyanides. Hydrocarbons. Metals such as aluminum, zinc, tin, etc. Lead. Other alkali sensitive metals or alloys. Organic nitro compounds. Chlorinated hydrocarbons. Fluorinated hydrocarbons. Acetaldehyde. Chlorine trifluoride. Hydroquinone. Maleic anhydride. Tetrahydrofuran. Acrolein. Phosphorous. Trichloroethylene. Leather. Wool. Phosphorous pentoxide. Halogenated compounds. Glycols. Explosives. Acrylonitrile. 1,2-Dichloroethylene. Tetrachloroethane. Organic peroxides. Sodium tetrahydroborate. Food sugars. Silver nitrate. Chloroform. Zirconium. Chlorine-containing gases. Reacts with acids to release poisonous chlorine gas. Sodium oxide. Hypochlorous acid. Oxygen. Hydrogen chloride. Hydrogen gas. Carbon monoxide. Phosphine. Thermal decomposition may release: Hazardous polymerization will not occur under normal conditions. Sodium hydroxide can induce hazardous polymerization of acetaldehyde, acrolein, and acrylonitrile. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Contact with acid or incompatible materials may cause a violent reaction with evolution of heat. May react with certain metals to produce flammable hydrogen gas. Contact with acids, halogenated organics, organic nitro compounds, glycols, or sodium tetrahydroborate may produce flammable hydrogen gas. Contact with 1,2-dichloroethylene, trichloroethylene, tetrachloroethane, or phosphorous can form spontaneously flammable chemicals. Reactions with various food sugars may form carbon monoxide.

**Hazardous Decomposition:****Hazardous Polymerization:****11****TOXICOLOGICAL INFORMATION****Acute Toxicity:**

Sodium Hypochlorite

Oral LD<sub>50</sub> (rat) 8,200 mg/kgDermal LD<sub>50</sub> (rabbit) >10,000 mg/kg

Sodium Hydroxide

Dermal LD<sub>50</sub> (rabbit) 1,350 mg/kgs

ATE (Acute Toxicity Estimate)

Dermal 27,000 mg/kg

**Skin Corrosion/Irritation:** Corrosive**Serious eye damage/irritation:** Corrosive**Respiratory or skin sensitization:** Corrosive (Inhalation)**Specific target organ toxicity (single exposure):** No data available**Specific target organ toxicity (repeated exposure):** No data available

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**Aspiration hazard:** No data available

**Carcinogenicity:** No carcinogenic effects are known for the components of this product

**Germ Cell Mutagenicity:** No mutagenic effects are known for the components of this product

**Teratogenicity:** No teratogenic effects are known for the components of this product

**12****ECOLOGICAL INFORMATION**

**Aquatic Toxicity:** Data provided is for Sodium Hypochlorite

Freshwater Fish Toxicity:

- LC<sub>50</sub> clupea harengus 0.033 - 0.097 mg/l/96 hr, flow through bioassay (pH: 8)
- LC<sub>50</sub> cymatogaster aggregata 0.045 - 0.098 mg/l/96 hr, flow through bioassay (pH: 8)
- LC<sub>50</sub> gasterosteus aculeatus 0.141 - 0.193 mg/l/96 hr, flow through bioassay (pH: 8)
- LC<sub>50</sub> oncorhynchus gorbuscha 0.023 - 0.052 mg/l/96 hr, flow through bioassay (pH: 8)
- LC<sub>50</sub> oncorhynchus kisutch 0.026 - 0.038 mg/l/96 hr, flow through bioassay (pH: 8)
- LC<sub>50</sub> oncorhynchus mykiss: 0.05-0.771 mg/L/96 hr, flow through
- LC<sub>50</sub> oncorhynchus mykiss: >0.03-<0.19 mg/L/96 hr, semi-static
- LC<sub>50</sub> oncorhynchus mykiss: 0.18-0.22 mg/L/96 hr, static
- LC<sub>50</sub> parophrys vetulus 0.044 - 0.144 mg/l/96 hr, flow through bioassay (pH: 8)
- LC<sub>50</sub> pimephales promelas 0.22 - 0.62 mg/l/96 hr, flow through bioassay (pH: 7)
- LC<sub>50</sub> pimephales promelas: 4.5-7.6 mg/L/96 hr, static
- LC<sub>50</sub> lepomis macrochirus: 0.4-0.8 mg/L/96 hr, static
- LC<sub>50</sub> lepomis macrochirus: 0.28-1 mg/L/96 hr, flow through

Invertebrate Toxicity:

- EC<sub>50</sub> ceriodaphnia sp. 0.006 mg/l/24 hr
- EC<sub>50</sub> daphnia magna 0.07 - 0.7 mg/l/24 hr
- EC<sub>50</sub> daphnia magna 2.1mg/l/96 hr
- EC<sub>50</sub> gammarus fasciatus 4 mg/l/96 hr
- EC<sub>50</sub> nitocra spinipes 40 mg/l/96 hr
- EC<sub>50</sub> palaemonetes pugio 52 mg/l/96 hr

Algae:

- ErC<sub>50</sub> dunaliella sp. 0.6 mg/l/24 hr
- ErC<sub>50</sub> dunaliella tertiolecta 0.11 mg/l/24 hr
- ErC<sub>50</sub> skeletonema costatum 0.095 mg/l/24 hr

**Elimination** (persistence & degradability): Material is inorganic

**Bioaccumulative potential:** Not expected to bioaccumulate

**Mobility in soil:** No data available

**Other adverse effects:** No data available

**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.



**BIOTROL 12.5****14****TRANSPORT INFORMATION**

UN1791, Hypochlorite solutions, 8, PGIII, (Sodium Hypochlorite)

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.

DOT Transportation data (49 CFR 172.101)

See section 15 for information on Reportable Quantity chemicals (RQ)

**15****REGULATORY INFORMATION****Component (CAS#) [%] - CODES**

RQ(100LBS), Sodium hypochlorite (7681-52-9) [12.5] CERCLA, CSWHS, MASS, PA, TSCA

RQ(1000LBS), Sodium hydroxide (1310-73-2) [0.2-5.0%] CERCLA, CSWHS, MASS, OSHAWAC, PA, TSCA, TXAIR

**Regulatory CODE Descriptions**

RQ = Reportable Quantity

CERCLA = Superfund clean up substance

CSWHS = Clean Water Act Hazardous substances

MASS = MA Massachusetts Hazardous Substances List

PA = PA Right-To-Know List of Hazardous Substances

TSCA = Toxic Substances Control Act

OSHA WAC = OSHA Workplace Air Contaminants

TXAIR = TX Air Contaminants with Health Effects Screening Level

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, Fire

**RCRA:** Corrosive, D002

**TSCA:** All components of this product are listed (or are not required to be listed) in the TSCA inventory

**California Proposition 65:** This product does not contain any proposition 65 chemicals.

**BIOTROL 12.5****16****OTHER INFORMATION**

HMIS III: Health = 3(Chronic), Fire = 0, Physical Hazard = 1  
HMIS PPE: C - Safety Glasses, Gloves, Apron

HMIS		
HEALTH	<input checked="" type="checkbox"/>	3
FLAMMABILITY		0
PHYSICAL HAZARD		1
PERSONAL PROTECTION		C

**Author:** U.S. Water Services

**Revision Notes:** Updated to GHS format

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