

Revision Date: 5-January-2012
 Replaces: New

Safety

Section 1 - Chemical Product and Company Identification

Emergency Response No: (800) 255-3924 (Chemtel)

Product/Chemical Name: **BIOTROL-150**

Product Description/Use:

Manufacturer: U.S. Water Services
 330 South Cleveland St
 Cambridge, MN 55008

Section 2 - Composition/Information on Ingredients

<u>Ingredient Name</u>	<u>CAS Number</u>	<u>% wt or % vol</u>	<u>Exposure Limits (ACGIH, OSHA)</u>
Peroxyacetic Acid	79-21-0	15-16%	NE
Hydrogen Peroxide	7722-84-1	22-23%	1 ppm (TWA); 1 ppm PEL
Acetic Acid	64-19-7	15-17%	15 ppm STEL; 10 ppm PEL
Water	7732-18-5	Balance	

NE = not established

Section 3 - Hazards Identification

Potential Health Effects

Primary Entry Routes: Eye, skin, inhalation and ingestion.

Acute Effects: Causes severe burns. Harmful by inhalation, in contact with skin, and if swallowed.

Inhalation: Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough, may cause breathing difficulties. Inhaled corrosive substances can lead to a toxic edema of the lungs, or chemical pneumonitis. Repeated or prolonged exposure: Risk of sore throat, nose bleeds, chronic bronchitis.

Eye contact: May cause severe eye irritation, redness, lachrymation, swelling of tissue. May cause irreversible eye damage. Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

Skin contact: May cause severe skin irritation, redness, swelling of tissue. Causes severe burns.

Ingestion: Paleness and cyanosis of the face. If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach. Risk of shock, excessive fluid in the mouth and nose with risk of suffocation, risk of throat edema and suffocation, bloating of stomach, belching, nausea, bloody vomiting, cough, breathing difficulties, risk of chemical pneumonitis and pulmonary edema.

Carcinogenicity: NTP, and OSHA do not list this product or its components as a carcinogen. See also section 11.

Chronic Effects: No data available for the product.

HMIS	
H	3 Serious Hazard
F	1 Slight Hazard
R	1 Slight Hazard
PPE	H Goggles, gloves, apron, respirator

Section 4 - First Aid Measures

Inhalation: Remove to fresh air. If breathing discomfort occurs and persists, see a medical doctor. If breathing has stopped, give artificial respiration. See medical doctor immediately.

Eye Contact: Immediately flush with water for at least 15 minutes, lifting upper and lower eyelids intermittently. See a medical doctor immediately.

Skin Contact: Remove contaminated clothing and thoroughly wash with soap and water. If irritation occurs and persists, contact a physician.

Ingestion: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water if able to swallow. Never give anything by mouth to an unconscious person. DO NOT induce vomiting. See medical doctor immediately.

First Aid Notes: This product can be corrosive to skin, eyes, and mucous membranes. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered.

Section 5 - Fire-Fighting Measures

Flash Point: 200F

Flash Point Method: TCC

Flammability Limits: NA

Auto-ignition Temperature: 270 ° C.

LEL: Not determined

UEL: Not determined

Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical.

Fire-Fighting Instructions: Use flooding quantities of water only. Use water spray to keep all containers cool. Fight fire from protected or removed distance. Chemical type extinguishers are not very effective. Use proper personal protective equipment and positive pressure self-contained breathing apparatus.

Hazardous Combustion Products: Burning can produce carbon monoxide and/or carbon dioxide and oxygen that support combustion.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full-face piece operated in pressure-demand or positive-pressure mode.

Section 6 - Accidental Release Measures

Spill/Leak Procedures: Follow all Federal, State and local regulations.

Small Spills: Do not flush into sewer. Absorb on inert media, then dispose of material in accordance with Federal, State and local Authorities.

Large Spills: Dike well ahead of spill with non-reactive material such as sand. Spill may be neutralized with soda ash (sodium carbonate) broadcasted on surface. Use 1 to 1.5 lb. of soda ash for each gallon of spilled material. The resultant neutralized product will become carbon dioxide and water.

Containment: Dike spill, recover if possible.

Cleanup: Accumulate the absorbed materials and dispose of according to federal, state and local regulations.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120)

Section 7 - Handling and Storage

Handling Precautions: Use the recommended safety controls and personal protective equipment as outlined. Fully review all data before handling of the material itself. Avoid contact with skin or eyes. Avoid breathing dust or mist. Keep from contact with clothing and other combustible materials. Observe good personal hygiene and housekeeping practices.

Storage Requirements: Store in original container. Store drums in upright position only. Keep container sealed when not in use. Shelf life one year. Protect from extreme heat and cold. Store below 86 F if possible. Store away from open flames, elevated temperatures, any source of heat, combustibles such as paper, wood, or leather. Do not store near reducing agents, fuels, organic material, or other non-compatible materials. DO NOT STORE IN DIRECT SUNLIGHT, or near sources of ignition or heat. Use first in, first out storage management. Containers must be vented.

Regulatory Requirements: Store materials according to all local, state and federal guidelines that are established for corrosive materials.

Section 8 - Exposure Controls/Personal Protection

Engineering Controls: None specified.

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs (Sec. 2). Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls: None specified.

Respiratory Protection: Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR

1910.134) and, if necessary, wear a MSHA/NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contamination, and presence of sufficient oxygen. For emergency or non-routine operations (cleaning spills, reactor vessel, or storage tanks), wear an SCBA. **Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.** If respirators are used, OSHA requires a written respiratory protection program that includes at least: medical certification, training, fit testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.

Protective Clothing/Equipment: Wear chemically protective gloves, boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear protective eyeglasses or chemical safety goggles, per OSHA eye-and face-protection regulations (29 CFR 1910.133). Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.

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

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

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

Section – 9 Physical and Chemical Properties

Boiling Point: 158°F

Appearance and Odor: Colorless liquid. Sharp, pungent, vinegar-like odor.

Vapor Pressure: 22 mmHg @ 25 C

Vapor Density (Air=1): NE

Specific Gravity (H₂O=1, at 4°C): 1.14

pH: < 1 (10% solution)

Water Solubility: 100%

Other Solubilities: Not tested for the blend

Evaporation Rate (water =1): Not determined

Water Reactive: No

Freeze Point: -2°F

Section 10 - Stability and Reactivity

Stability: This product is stable at room temperature in closed containers under normal storage and handling conditions. However, avoid temperature extremes.

Polymerization: Hazardous polymerization will not occur.

Chemical Incompatibilities: Strong alkalis and temperature extremes.

Conditions to Avoid: Open flames, elevated temperatures, any source of heat, combustibles such as paper, wood, or leather. Temperatures above 86 F will degrade product, accelerate decomposition, and reduce shelf life.

Hazardous Decomposition Products: Hazardous decomposition products may include acetic acid, oxygen, or other unknown compounds.

Section 11 - Toxicological Information

Acute Toxicity

See Also Section 3

EYE EFFECTS: Severely irritating, corrosive (rabbit)

SKIN EFFECTS: Severely irritating, corrosive (rabbit) 15% Peracetic Acid (CAS # 79-21-0-12)

DERMAL LD50: > 200 mg/kg (rabbit)

ORAL LD50: No data available for the product.

INHALATION LC50: No data available for the product.

ACUTE EFFECTS FROM OVEREXPOSURE: Liquid may cause severe burns and irreversible tissue damage to eyes, including blindness. Inhalation of peracetic acid vapors causes lacrimation and irritation of the mucous membranes, eyes and nasal passages.

CHRONIC EFFECTS FROM OVEREXPOSURE: No data available for the product. Product contains hydrogen peroxide. The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans).

The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3). Repeated inhalation of the mist may cause inflammation of the upper respiratory tract, chronic bronchitis and etching of the dental enamel.

Section 12 - Ecological Information

Test Species	Water Type	Test Type	Endpoint	LC ₅₀ / IC ₅₀ mg/L Biotrol 150	NOEC mg/L	LOEC mg/L
Fathead Minnow	Freshwater	Chronic	Survival	1.16	0.89	1.62
Fathead Minnow	Freshwater	Chronic	Growth	1.19	0.89	1.62
Blue Gill Sunfish	Freshwater	Acute	Survival	1.21	0.78	1.79
Daphnia magna	Freshwater	Acute	Survival	0.67	0.40	0.86
<i>Ceriodaphnia dubia</i>	Freshwater	Chronic	Survival	0.86	0.68	1.45
<i>Ceriodaphnia dubia</i>	Freshwater	Chronic	Reproduction	1.03	0.68	1.45
Pacific Silverside	Marine	Acute	Survival	2.17	1.73	3.58
Sheepshead Minnow	Marine	Acute	Survival	3.78	2.47	6.2
Topsmelt	Marine	Acute	Survival	2.79	1.17	2.58
Mysid	Marine	Acute	Survival	0.65	0.29	0.79
Bay Mussel	Marine	Acute	Development	2.91	1.6	3.13
Pacific Silverside	Marine	Chronic	Survival	0.49	0.2	0.44
Pacific Silverside	Marine	Chronic	Growth	0.52	<0.2	0.2
Sheepshead Minnow	Marine	Chronic	Survival	5.93	3.47	6.65
Sheepshead Minnow	Marine	Chronic	Growth	4.76	3.47	>3.47

Environmental Fate: No data available for this product.

Environmental Degradation: Not determined.

Soil Absorption/Mobility: No studies have been conducted for this blend

Section 13 - Disposal Considerations

Disposal: Review federal, state and local government requirements prior to disposal.

Disposal Regulatory Requirements: Follow all Federal, State and local regulations.

Container Cleaning and Disposal: Review federal, state and local government requirements prior to disposal.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Organic Peroxide, Type F, Liquid (peroxyacetic acid); Hazard Class: 5.2 (oxidizer) UN 3109

Hazard Class: 5.2 (oxidizer)

ID No.: UN 3109

Packing Group: II

HMIS Label Code: 311H

Section 15 - Regulatory Information

SARA TITLE III SECTION 302: (40 CFR 355) Listed: (acetic acid), Planning Threshold = 6,500 lbs (as is)
SECTION 302.4 REPORTABLE QUANTITIES (40 CFR 355) Listed: (acetic acid), Planning Threshold = 6,500 lbs (as is)
SECTION 311 HAZARD CATEGORY (40 CFR 370) Immediate Health Hazard (Acute)
SECTION 312 THRESHOLD PLANNING QUANTITY (40 CFR 370) Listed: (acetic acid), Planning Threshold = 6,500 lbs (as is)
SECTION 313 REPORTABLE INGREDIENTS (40 CFR 372) Listed, Peracetic Acid 15%
CERCLA (40 CFR 302.4) Listed (Acetic Acid), Category D; RQ = 31,000 lbs (as is)
CANADA: WHMIS Hazard Class: Class D, Div. 2, Subdiv. B, Class E (Corrosive),
Class C (Oxidizer); Ingredient Disclosure List: Listed.

Section 16 - Other Information

Prepared By: U.S. Water Services

Revision Notes: None

Additional Hazard Rating Systems: None

Disclaimer:

USERS RESPONSIBILITY

The information and recommendations contained herein cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. It is your responsibility to use this information to develop appropriate work practice guidelines and employee instructional programs for your operation.

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