


Form #:	SDS-047
Revision Date:	01/04/2019
Revision #:	02
Supersedes Date:	10/23/2018

Section 1: Identification					
Product Name:	ZeroTol [®] HC	Product Type / Description:	Algaecide		
Recommended Use:	Algaecide	Other Means of Identification:	Aqueous solution of hydrogen peroxide and peracetic acid		
Use Restrictions:	It is a violation of federal law to use this product in a manner inconsistent with its labeling.				
Distributor:	BioSafe Systems, LLC 22 Meadow Street East Hartford, CT 06108	EPA Registration #:	70299-16	Canada PMRA Registration #:	N/A
Telephone Number:	1-888-273-3088	Emergency Number: 1-800-424-9300 (CHEMTREC)			

Section 2: Hazard Identification	
GHS Classification	Hazard Statements
Acute Toxicity (Oral, Dermal, and Inhalation): Category 5 Skin Corrosion: Category 3 Serious Eye Damage: Category 1	H302: Harmful if swallowed. H316: Causes mild skin irritation. H318: Causes serious eye damage.
Pictograms	Signal Word
	DANGER
Precautionary Statements	
General	Response
P101: If medical advice is needed, have product container or label at hand. P102: Keep out of reach of children. P103: Read label before use.	P305+P351+P338: 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/doctor. P321: For specific treatments see FIRST AID section on SDS or label P332+P313: If skin irritation occurs: Get medical advice/attention
Prevention	Storage / Disposal
P264: Wash thoroughly after handling. P280: Wear protective gloves, clothing, eye protection, face protection.	P402 + P404: Store in a dry place. Store in a closed container. P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3: Composition / Information on Ingredients		
Components	CAS-No	% Composition (w/w)
Hydrogen Peroxide	7722-84-1	5.34%
Peroxyacetic Acid	79-21-0	1.36%
Acetic Acid	64-19-7	14.5%

Section 4: First-Aid Measures	
Eye Contact:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin Contact:	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
Ingestion:	Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
Inhalation:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1.800.222.1222 for emergency treatment information.
Notes to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.

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Section 5: Fire-Fighting Measures

Suitable Extinguishing Media:	Water spray.
Unsuitable Extinguishing Media:	Dry chemical, alcohol foam, or carbon dioxide.
Combustion Products:	Carbon Oxides.
Unusual Fire and Explosion Hazards:	Product (concentrate) can decompose and will release oxygen thereby adding to the fire hazard.
Protective Equipment for Firefighters:	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Personal Precautions:	Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes.
Emergency Procedures:	Keep away materials that are incompatible with this product. All receiving equipment should be clean, dry, vented, labeled and made of materials compatible with the product.
Environmental Precautions:	Prevent spill from entering waterways.
Methods and Material for Containment and Clean-Up:	Do not return spilled or contaminated material to inventory. Rinse small amounts to drain, when possible. Clean the area with water.

Section 7: Handling and Storage

Handling:	Wear protective gloves/eye protection. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.
Storage:	Keep away from heat. Keep only in original container. Protect from sunlight. Store at temperatures not exceeding 55°C (131°F). Never return product back to the original container. Store in cool, ventilated area. Never use metal containers or spigots. Use vented container.
Incompatible Materials:	Store away from combustible materials. Keep concentrate away from reactive substances.

Section 8: Exposure Controls / Personal Protection

Components with Workplace Control Parameters

Component	ACGIH	NIOSH	OSHA
Acetic Acid	TWA 10 ppm STEL 15 ppm	TWA: 25 mg/m ³ - 8 hours. TWA: 10 ppm - 8 hours.	TWA: 25 mg/m ³ - 8 hours. TWA: 10 ppm - 8 hours.
Hydrogen Peroxide	TWA 1 ppm	TWA: 1.4 mg/m ³ - 8 hours. TWA: 1 ppm - 8 hours.	TWA: 1.4 mg/m ³ - 8 hours. TWA: 1 ppm - 8 hours.
Peracetic Acid	STEL 0.4 ppm		
Engineering Controls:	Ensure adequate ventilation. Emergency eye wash stations should be available in the immediate vicinity of any potential exposure.		
General Hygienic Practices:	Do not eat, drink or smoke during use.		
Personal Protective Equipment:	Protective clothing, protective goggles, gloves, face shield.		
Respiratory Protection:	Use NIOSH-approved air-purifying or supplied air respirator where airborne concentrations of vapor or mist are expected to exceed exposure limits.		
Eye / Face Protection:	Chemical goggles or safety glasses.		
Hands:	Chemical resistant gloves.		
Skin / Body:	Wear suitable protective clothing.		

Section 9: Physical and Chemical Properties

Appearance:	Clear, colorless liquid.	Odor:	Pungent, vinegar-like.	Odor Threshold:	Not available.
pH:	<1.5	Specific Gravity:	1.04 g/cm ³	Viscosity:	Not available.
Melting Point:	Not available.	Freezing Point:	-30°C (-22°F)	Boiling Point:	Not available.
Flash Point:	Not available.	Flammability:	Not available.	Flammability Limits:	Not available.
Vapor Pressure:	22 mm Hg (25°C)	Vapor Density:	Not available.	Solubility:	Complete.
Evaporation Rate:	Not available.	Auto-Ignition Temperature:	Not available.	Decomposition Temperature:	Self-accelerating decomposition temperature > 55°C
Relative Density:	Not available.	Partition Coefficient n-octanol / water:	Not available.		

Section 10: Stability and Reactivity

Stability:	Store below 86°F and not in direct sunlight.
Conditions to Avoid:	Open flames, elevated temperatures, heat sources, direct sunlight. Combustible materials.
Incompatible Materials:	Acids / Bases / Reducing Agents / Organic Materials / Metals / Salts of Metals.
Hazardous Decomposition Products:	Thermal decomposition generates corrosive vapors, acetic acid and oxygen which supports combustion.

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Section 11: Toxicological Information			
Acute Toxicological Data			
Oral LD50:	> 2000 mg/kg (rat)	Dermal LD50:	> 5000 mg/kg (rat)
Inhalation LC50:	Not available.		
Likely Routes of Exposure:	Inhalation, eye contact, skin contact.		
Symptoms and Effects			
Condition	Acute Effects	Chronic (Delayed) Effects	
Eye Contact:	Causes serious eye damage.	None.	
Skin Contact:	May cause irritation.	None.	
Inhalation:	May cause respiratory tract irritation.	None.	
Ingestion:	Harmful if swallowed.	None.	

Section 12: Ecological Information	
Ecotoxicity:	Toxic to simple cell and aquatic organisms; Fish, Rainbow trout LC50, 48 hours > 40 mg/L Crustaceans, EC 50,48 hours 126.8 mg/l 1 mg/ L Bacteria, Pseudomonas aeruginosa, EC 100, 5 minutes, 5mg/L
Persistence and Degradability:	Weak persistence of degradation products.
Bioaccumulation Potential:	No bioaccumulation.
Mobility in Soil:	Non-significant adsorption Soil degradation = 99% in 20 minutes
Other Adverse Effects:	Not applicable.

Section 13: Disposal Considerations	
Waste from Residues and Unused Product:	Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.
Contaminated Container Disposal:	Do not reuse or refill this container. Triple rinse empty containers with clean water. Clean and empty containers are to be recycled or placed in the trash.

Section 14: Transport Information					
UN Number	UN Proper Shipping Name	Hazard Class (Subsidiary)	Label (Subsidiary)	Packing Group	Marine Pollutant
Not Regulated					

Section 15: Regulatory Information						
TSCA Inventory List:	Yes	US EPA CERCLA Hazardous Substances:		Acetic Acid 5000 lbs.		
SARA Title III Sec. 302/303	Peracetic Acid; Hydrogen Peroxide		Sec. 302 TPQ:	Peracetic Acid 500 lbs. Hydrogen Peroxide 1000 lbs.		
SARA Title III Sec. 311/312	Peracetic Acid; Hydrogen Peroxide	Hazard Category:	Acute Health, Reactivity, Fire	Sec. 304 EHS RQ:	Peracetic Acid 500 lbs. Hydrogen Peroxide 1000 lbs.	
US EPA EPCRA Sec. 313	Peracetic Acid		CAA Threshold Qty:		10,000 lbs.	
NFPA Rating	Health: 2	Flammability: 0	Reactivity: 0	Special:	Not applicable.	
HMIS Rating	Health: 2	Flammability: 0	Physical: 0	PPE:	Recommended.	
California Prop 65	This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.					

Section 16: Other Information
<p>According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations</p> <p>To the extent of our knowledge, the information herein is accurate as of the date of this document. However, neither BioSafe Systems nor any of its affiliates make any warranty, expressed or implied, or accept any liability relating to the information or its use. The information is for use by technically skilled persons at their own discretion and risk. This is not a license or a patent. The user alone must finally determine suitability of any information or material for any contemplated use, the manner or use and whether any patents are infringed. Always read and follow label directions.</p> <p style="text-align: center;"></p> <p>For additional information, call us toll-free at 1.888.273.3088 or visit www.biosafesystems.com</p> <p>© 2018 BioSafe Systems, LLC. Revision Date: 01/04/19 Current Revision Number: 02</p>

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Key to Abbreviations

ACGIH - American Conference of Governmental Industrial Hygiene	TWA - Time-Weighted Averages are based on 8h/day, 40h/week exposures
NIOSH - National Institute of Occupational Safety and Health	STEL - Short Term Exposure Limits are based on 15-minute exposures
OSHA - Occupational Safety and Health Administration	STEV - Short Term Exposure Value
EHS - Environmental Health and Safety	PEL - Permissible Exposure Limit
DOT - Department of Transportation	CAN TDG - Canadian Transportation of Dangerous Goods
EPA - Environmental Protection Agency	TSCA - Toxic Substances Control Act
TPQ - Threshold Planning Quantity	RQ - Reportable Quantity
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act	SARA - Superfund Amendments and Reauthorization Act
NFPA - National Fire Protection Association	HMIS - Hazardous Materials Identification System
WHMIS - Workplace Hazardous Materials Information System (Canada)	EPCRA - Emergency Planning and Community Right-to-Know Act