


Section 1: Identification	
Product Name: GreenClean Liquid Oxidizer [®]	Product Type/Description: Oxidizer
Recommended Use/ Use Restrictions: hydrogen sulfide reduction/For Commercial Use	Other Means of Identification: Peracetic Acid, Peroxyacetic Acid, PAA
Manufacturer: BioSafe Systems LLC 22 Meadow Street, East Hartford, CT 06108 Telephone Number: (888-273-3088)	Emergency Number: 800-424-9300 (CHEMTREC)

Section 2: Hazard Identification		
<u>GHS Classification (As Concentrate)</u> Oxidizing Liquid: Category 2 Organic Peroxide: Type F Corrosive to Metals: Category 1 Acute Toxicity (oral, dermal and inhalation): Category 4 Skin Corrosion: Category 1 Serious Eye Damage: Category 1	<u>Hazard Statements: (As Concentrate)</u> H272: May intensify fire; oxidizer H242: Heating may cause fire H290: May be corrosive to metals H302: Harmful if swallowed H332: Harmful if inhaled H313: Causes severe skin burns and eye damage H335: May cause respiratory irritation	<u>Pictograms:</u> <div style="text-align: center;">  </div> <p style="text-align: center;">Signal Word: DANGER</p>

Precautionary Statements:	
<u>General:</u> 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. <u>Prevention:</u> P210: Keep away from heat, sparks or open flames, no smoking P220: Store away from combustible materials P221: Take any precautions to avoid mixing with combustibles P234: Keep only in original container P260: Do not breathe fumes, mist or vapors P262: Do not get in eyes, on skin or on clothing P264: Wash thoroughly after handling P270: Do not eat, drink, or smoke when using this product. P280: Wear protective gloves, clothing, eye protection, face protection P271: Use only outdoors or in a well-ventilated area	<u>Response:</u> P301+P330+P331: If SWALLOWED: Rinse mouth. Do not induce vomiting. P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing 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 P370+P378: In case of fire: Use water or other suitable extinguishing media P390: Absorb spillage to prevent material damage <u>Storage:</u> P405: Store locked up P410: Protect from sunlight P411: Store at temperatures not exceeding 55°C (131°F) P406: Store in corrosive resistant container, never use metal containers P420: Store away from Incompatible materials <u>Disposal</u> P501: Dispose of contents/container in accordance with local/regional/national/international regulations

<u>Other Information:</u> NFPA Rating: Health – 2; Flammability – 0; Reactivity – 3; Special – OXY HMIS Rating: Health – 2; Flammability – 0; Reactivity – 2; PPE: Required
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Section 3: Composition/Information on Ingredients		
<u>Components:</u>	<u>CAS-No:</u>	<u>% Concentration by Weight:</u>
Hydrogen Peroxide	7722-84-1	27.1%
Peroxyacetic Acid	79-21-0	2%
Acetic Acid	64-19-7	>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.
Note to Physician:	Probable mucosal damage may contraindicate the use of gastric lavage.

Section 5: Fire-fighting Measures	
Suitable Extinguishing Media:	Product is not flammable and can be quickly diluted with clean water. Oxidizing Agent may cause spontaneous ignition with oxidizing agents
Unsuitable Extinguishing Media:	None Known
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:	Use PPE equipment

Section 6: Accidental Release Measures	
Personal Precautions:	Ensure adequate ventilation. Remove all sources of ignition. Keep people away from and upwind of spill/leak. Avoid inhalation, ingestion and contact with skin and eyes
Emergency Procedures	Ensure clean-up is conducted by trained personnel. Personnel should wear protective equipment outlined in Sections 7 & 8. If facing concentrations above exposure limits personnel shall wear certified respirators
Environmental Precautions	Prevent spill from entering waterways
Methods and Material for Containment and Cleaning up	Cleanup: Rinse small amounts to drain when possible. Dike or dam large spills, pump to containers or soak in inert absorbent. Flush residue to sanitary sewer, rinse area thoroughly with clean water. Avoid materials that are incompatible with concentrate. Waste Disposal: Consult state and local authorities for restrictions on disposal of chemical wastes. Unused product (concentrate) is classified as a (D002) by RCRA criteria.

Section 7: Handling and Storage	
Handling:	Wear protective gloves/eye protection/face protection Do not eat, drink, or smoke when using this product. Wash thoroughly after handling Avoid breathing fumes/mist/vapors. 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	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.
Engineering Controls		Effective exhaust ventilation system	
Personal Protection Equipment	Respiratory	NIOSH approved full-face respirator for excessive conditions	
	Eye/Face Protection	- chemical proof goggles/face shield for splash risk	
	Hands	Hand gloves for handling concentrate = butyl rubber	
	Skin/Body	coveralls when handling concentrate	
	General Hygienic Practices	Do not eat, drink, or smoke when using this product. Wash thoroughly after handling Avoid breathing fumes/mist/vapors. Remove and wash contaminated clothing before reuse	

Section 9: Physical and Chemical Properties		
Appearance: Clear, colorless liquid	Odor: Pungent	pH: 0.96
Melting Point: No data available	Freezing Point: -30°C (-22°F)	Boiling Point: Not applicable, product decomposes
Flash Point: No data available	Flammability: No data available	Flammable Limits: No data available
Vapor Pressure: No data available	Specific Gravity: 1.10	Solubility(ies): soluble
Partition Coefficient n- octanol/water: No data available	Auto-ignition Temperature: No data available	Decomposition Temperature: self-accelerating decomposition temperature > 55°C

Section 10: Stability and Reactivity	
Stability:	Stable under normal conditions, with slow oxygen release
Conditions to Avoid	Heat / Direct Sunlight
Incompatible materials	Acids / Bases / Reducing Agents Organic Materials / Metals / Salts of Metals
Hazardous Decomposition Products	N/A

Section 11: Toxicological Information		
Acute Toxicological Data:	Oral: LD50 rat 3,622 mg/kg. Test substance: 5.6% PAA, 26.9% H2O2, 7.6% HOAc solution	Dermal: LD50 rabbit, 1040 mg/kg. Test substance: 4.89% PAA, 19.72% H2O2, 10% HOAc solution
Inhalation: LD50 rat > 5.35 mg/L for four hour exposure. Test substance: 4.5% PAA, 27% H2O2, 16.7% HOAc solution	Primary Skin irritation: rabbit, severe irritant. Test substance: 2% PAA solution	Primary Eye irritation: rabbit, severely irritating or corrosive. Test substance: 2% PAA solution
Likely Routes of Exposure: Inhalation, eye contact, skin contact		
Symptoms and effects:		
	Acute Effects	
Eye Contact	Causes serious eye damage	
Skin Contact	Causes severe skin burns	
Inhalation	May cause respiratory track irritation	
Ingestion	Harmful if swallowed	
Chronic exposure:	Dermal and inhalation – irritating effects	

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 is Soil	Non-significant adsorption Soil degradation = 99% in 20 minutes
Other adverse effects	N/A

Section 13: Disposal Considerations	
Waste From Residues and Unused Product	Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.
Contaminated Container Disposal	Triple rinse (or equivalent). Then offer for recycling or dispose in a sanitary landfill, or incineration, if allowed by state and local authorities by burning. Stay out of smoke.

Section 14: Transport Information						
	UN Number	UN Proper Shipping Name	Hazard Class (Subsidiary)	Label (Subsidiary)	Packing Group	Marine Pollutant
US DOT	3149	Hydrogen peroxide and peroxyacetic acid mixture, stabilized with acids and water and not more than 5% peroxyacetic acid.	5.1(8)	Oxidizer (Corrosive)	II	No
Canada (TDG)	3149	Hydrogen peroxide and peroxyacetic acid mixture, stabilized with acids and water and not more than 5% peroxyacetic acid.	5.1(8)	Oxidizer (Corrosive)	II	NO

Special Precautions: Shipping Container: UN Certified vented polyethylene

Section 15: Regulatory Information

TSCA Inventory List: Yes		US EPA CERCLA RQ: Acetic Acid 5000 lbs	
SARA Title III Section Extremely Hazardous Substance: Peroxyacetic acid		Section 304 EHS RQ: Peroxyacetic Acid 500 lbs	Section 302 TPQ: Peroxyacetic Acid 500 lbs
SARA Title III Sec. 311/312: peroxyacetic acid		Hazard category: Acute Health Hazard Reactivity Hazard, Fire Hazard	
US. EPA EPCRA Section 313 listed: Peroxyetic acid		Threshold quantity (processed or manufactured): 10,000 lbs	Threshold quantity (otherwise used): 25,0000 lbs
Canadian WHIMIS Classification	C – Oxidizing E – Corrosive F – Dangerously Reactive		
California Prop 65	This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.		

Section 16: Other Information

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 in connection with the information or its use. The information is for use by technically skilled persons at their own discretions 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.



For additional information on GreenClean Liquid Oxidizer , call us toll-free at 1.888.273.3088 or visit www.biosafesystems.com.

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