


Section 1: Identification	
Product Name: GreenClean® Acid Cleaner	Product Type/Description: Mineral Acid Cleaning Agent
Recommended Use/ Use Restrictions: Mineral Acid Cleaner / For Commercial Use	Other Means of Identification: Sulfuric Acid Solution,
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> Corrosive to Metals: Category 1 Skin Corrosion: Category 1A Serious Eye Damage: Category 1	<u>Hazard Statements: (As Concentrate)</u> H290: May be corrosive to metals H302: Harmful if swallowed H313: Causes severe skin burns and eye damage	<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> P234: Keep only in original container P260: Do not breathe dusts or mist P262: Do not get in eyes, on skin or on clothing P264: Wash thoroughly after handling P280: Wear protective gloves, clothing, eye protection, face protection	<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 P390: Absorb spillage to prevent material damage <u>Storage:</u> P405: Store locked up 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

Other Hazards: _HMIS: Health – 3; Flammability – 0; Physical hazards -1; Personal Protection – B.

Section 3: Composition/Information on Ingredients		
<u>Components:</u>	<u>CAS-No:</u>	<u>% Concentration by Weight:</u>
Sulfuric Acid	7664-93-9	35-40%
Surfactant Blend	Proprietary	Proprietary

Section 4: First-aid Measures	
Eye Contact:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.. Seek immediate medical attention
Skin Contact:	In case of contact, immediately flush skin with plenty of water for at least 20 minutes. Wash skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse
Ingestion	If swallowed give 2-3 glasses of water if victim is conscious and alert. Do not give anything by mouth to an unconscious person. Do NOT induce vomiting. Obtain medical attention immediately if ingested. Do not use mouth-to-mouth method if victim ingested the substance. Do not leave victim unattended.
Inhalation:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. If breathing is difficult give oxygen. 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:	Persons with pre-existing skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this substance. Treat symptomatically and supportively.

Section 5: Fire-fighting Measures	
Suitable Extinguishing Media:	Non-combustible; Use extinguishing media most appropriate for the surrounding fire.
Unsuitable Extinguishing Media:	None Known
Combustion Products:	Non-combustible;
Unusual Fire and Explosion Hazards:	Non-combustible. Under fire conditions, toxic, corrosive fumes may be emitted
Protective Equipment for Firefighters:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible.

Section 6: Accidental Release Measures	
Personal Precautions:	Ventilate enclosed areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Emergency Procedures	Keep unauthorized personnel away. Dike spill using absorbent or impervious materials such as earth, sand or clay. Dike or retain dilution water or water from firefighting for later disposal.
Environmental Precautions	Prevent spill from entering waterways
Methods and Material for Containment and Cleaning up	Exercise caution during neutralization as considerable heat may be generated. Neutralize spill area with soda ash, sodium bicarbonate or lime. Flush neutralized spill with copious amounts of water.

Section 7: Handling and Storage	
Handling:	Do not get on skin or in eyes. Avoid breathing vapors and mists. Do not ingest. Handle and open container with care. Use only with adequate ventilation. Use caution when combining with water; DO NOT add water to corrosive liquid, ALWAYS add corrosive liquid to water while stirring to prevent release of heat, steam and fumes. This product reacts violently with bases liberating heat and causing spattering
Storage:	Store in a dry, well-ventilated place. Store locked up. Keep away from incompatible materials. Ventilate enclosed areas
Incompatible Materials:	Strong oxidizing agents, strong reducing agents, bases and certain metals

Section 8: Exposure Controls/Personal Protection			
Components with workplace control parameters			
Component	ACGIH	NIOSH	OSHA
Sulfuric acid	TWA; 0.2 mg/m ³ thoracic fraction STEL; 3mg/m	TWA; 1 mg/m ³ STEL; 3mg/m	TWA; 1 mg/m ³
Engineering Controls		Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.	
Personal Protection Equipment	Respiratory	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or symptoms are experienced.	
	Eye/Face Protection	Chemical proof goggles/face shield for splash risk	
	Hands	Hand gloves for handling concentrate = butyl rubber	
	Skin/Body	Wear protective clothing	
	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: Acidic	pH: < 1.0
Melting Point: No data available	Freezing Point < 0°C	Boiling Point: 100 to 200° C (212 to 392 F)
Flash Point: Not Relevant	Flammability: Not Relevant	Flammable Limits: No data available
Vapor Pressure: < 2mmHG (torr) @ 20 C	Specific Gravity: 1.17	Solubility(ies): Completely Miscible
Partition Coefficient n- octanol/water: No data available	Auto-ignition Temperature: No data available	Decomposition Temperature: No data available

Section 10: Stability and Reactivity	
Stability:	Stable under normal conditions
Conditions to Avoid	Excess heat, exposure to moist air or water, incompatible materials, direct sunlight
Incompatible materials	Strong oxidizing agents, strong reducing agents, bases and certain metals
Hazardous Decomposition Products	Sulfur compounds.

Section 11: Toxicological Information		
Acute Toxicological Data:	Oral: Rat LD50 2140 mg/kg -sulfuric acid	Dermal: no data available
Inhalation: Rat LC50 510 mg/m ³ 2h	Primary Skin irritation: rabbit, severe irritant, irreversible,	Primary Eye irritation: rabbit, severely irritating, corrosive.
Likely Routes of Exposure: Inhalation, eye contact, skin contact		
Symptoms and effects:		
Eye Contact	Acute & Chronic Effects	
	Acute: Corrosive. Can cause permanent damage to the cornea, blindness. Chronic: Repeated or prolonged exposure to corrosive materials or fumes may cause conjunctivitis.	
Skin Contact	Acute: Causes severe skin burns and eye damage. Chronic: Repeated or prolonged exposure to corrosive materials will cause dermatitis.	
Inhalation	Acute: Under normal conditions of use, no health effects are expected. Chronic: Repeated or prolonged exposure to corrosive fumes may cause bronchial irritation with chronic cough.	
Ingestion	Acute: Causes corrosion, burns to mouth and esophagus, abdominal pain, chest pain, nausea, vomiting, diarrhea, seizures. Aspiration of the swallowed or vomited product can cause severe pulmonary complications. Chronic: Repeated or prolonged exposure to corrosive materials or fumes may cause gastrointestinal disturbances	
Carcinogenicity	The International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong inorganic-acid mists containing sulfuric acid is carcinogenic to humans (group 1), NTP (National Toxicology Program – Known Carcinogen; Strong inorganic acid mists containing sulfuric acid are known to be human carcinogens	

Section 12: Ecological Information	
Ecotoxicity	Sulfuric Acid - LC50 fishes: 42 mg/l (96 h; Gambusia affinis), 49 mg/l (48 h; Lepomis macrochirus) EC50 Daphnia: 29 mg/l (24 h; Daphnia magna)
Persistence and degradability	Soluble in water, remains in environment as sulfate.
Bioaccumulation potential	No bioaccumulation
Mobility in Soil	No data found for product
Other adverse effects	No specific biodegradation test data located. While acidity of this material is readily reduced in natural waters, the resulting phosphate may persist indefinitely or incorporate into biological systems

Section 13: Disposal Considerations	
Waste From Residues and Unused Product	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations. This material is considered an EPA hazardous waste. EPA "RCRA" Hazardous Waste Code: "C" Corrosive
Contaminated Container Disposal	Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

Section 14: Transport Information						
	UN Number	UN Proper Shipping Name	Hazard Class (Subsidiary)	Label (Subsidiary)	Packing Group	Marine Pollutant
US DOT	1760	Corrosive Liquid N.O.S. (Sulfuric Acid Solution)	8	Corrosive	II	No
Canada (TDG)	1760	Corrosive Liquid N.O.S. (Sulfuric Acid Solution)	8	Corrosive	II	No

Section 15: Regulatory Information

TSCA Inventory List: Yes		US EPA CERCLA RQ: Sulfuric acid: 1000 lbs final	
SARA Title III Section Extremely Hazardous Substance: Listed		Section 304 EHS RQ: sulfuric acid; 1,000 lbs	Section 302 TPQ: Sulfuric acid; 1,000 lbs
SARA Title III Sec. 311/312: Listed		Hazard category: Acute Health hazard, chronic health hazard	
US. EPA EPCRA Section 313 listed: Listed			
Canadian WHIMIS Classification	Category E		
California Prop 65	This product contains Sulfuric Acid, listed as 'Strong inorganic acid mists contain' a chemical known to the State of California to cause cancer		
U.S. State Right-to-Know List	Sulfuric Acid; New Jersey, Massachusetts, Pennsylvania		

Section 16: Other Information

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

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