

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name Electropolish Solution

CAS number See section 3

Synonyms None

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory Chemicals

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
 12501 Pauls Valley Road
 Austin, Texas 78737
 U.S.A.

Telephone 512-668-9918

Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC


SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, Oral Category 5
 Skin corrosion Category 1B
 Eye damage Category 1
 Respiratory sensitizer Category 1
 Target organ toxicity Category 3
 Acute toxicity, Inhalation Category 3
 Acute toxicity, Dermal Category 5

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	<p>H314 Causes severe skin burns and eye damage. H330 Fatal if inhaled. H402 Harmful to aquatic life. H371 May cause damage to organs. H302 Harmful if swallowed. H313 May be harmful in contact with skin.</p>
Precautionary statements	<p>P260 Do not breathe dust/gas/fume/mist/vapors/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 Wear respiratory protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing. P310 Immediately call a POISON CENTER or doctor/physician. P264 Wash skin thoroughly after handling. P270 Do not eat, drink, or smoke when using this product. P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P301+P361+P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P363 Wash contaminated clothing before reuse. P405 Store locked up. P501 Dispose of contents/container to an approved waste disposal plant.</p>

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Sulfuric Acid	-	7664-93-9	40%
Phosphoric Acid	-	7664-38-2	47%
Water	-	7732-18-5	13%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice	Show this sheet to a doctor if medical advice is needed.
If inhaled	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.
In case of skin contact	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
In case of eye contact	Immediately rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
If swallowed	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

Severe irritating, burning. Material is extremely destructive to skin. Material is extremely destructive to eyes. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting. Material is extremely destructive to esophagus and digestive tract.

4.3 Indication of any immediate medical attention and special treatment needed

Get medical attention immediately. Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water, keep away from common metals.
Unsuitable extinguishing media	None identified.

5.2 Specific hazards arising from the substance or mixture

Emits toxic fumes (oxides of sulfur, phosphorous oxides, hydrogen chloride gas) under fire conditions. (See also Stability and Reactivity section).

5.3 Special protective equipment and precautions for firefighters

Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Material can react violently with water (spattering and misting) and react with metals to produce flammable hydrogen gas.

5.4 Further information

Flash Point Not flammable.

Autoignition Temperature No data available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No data available.

Sensitivity to Static Discharge No data available.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	3	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

See section 8 for recommendations on the use of personal protective equipment.

6.2 Environmental precautions

Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.

6.3 Methods and materials for containment and cleaning up

Neutralize spill. Absorb neutralized spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste or cleanup materials in accordance with local regulations. Containers, even when empty, will retain residue and vapors.

6.4 Reference to other sections

See section 8 for personal protective equipment. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store in cool, dry well ventilated area. Keep away from incompatible materials. Drains for storage or use areas for this material should have retention basins for pH adjustment and dilution of spills.

Incompatibilities

Moisture, heat, bases, halides, organic material, metals, carbides, cyanides, chlorates, nitrates, picrates, permanganate, peroxides.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Sulfuric Acid	PEL	1 mg/m ³
Phosphoric Acid	PEL	1 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Sulfuric Acid	TLV	0.2 mg/m ³
Phosphoric Acid	TLV STEL	1 mg/m ³ 3 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Sulfuric Acid	CEIL	5 ppm 7 mg/m ³
Phosphoric Acid	REL STEL	1 mg/m ³ 3 mg/m ³

Biological occupational exposure limits

No additional information.

8.2 Exposure controls

Appropriate engineering controls

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

Personal protective equipment

Eye/face protection

Wear chemical safety glasses or goggles, and face shield.

Skin and Body protection

Wear nitrile or rubber gloves, and full body covering. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.

Control of environmental exposure

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear, colorless
Odor	Caustic
Odor Threshold	No data available
pH	1
Melting Point/Range	No data available
Boiling Point/Range	No data available
Evaporation Rate	No data available
Flammability (solid)	No data available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No data available
Vapor Density	No data available
Density	1.7797 (water = 1)
Solubility	Completely soluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temp	No data available

Decomposition Temp	No data available
Viscosity	No data available
Molecular Formula	No data available
Molecular Weight	No data available
VOC Content(%)	No data available
Oxidizing properties	No data available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Not reactive.

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Will not occur.

10.4 Conditions to avoid

Fire, uncontrolled addition of water.

10.5 Incompatible materials

Moisture, heat, bases, halides, organic material, metals, carbides, cyanides, chlorates, nitrates, picrates, permanganate, peroxides.

10.6 Hazardous decomposition products

Oxides of sulfur, phosphorous oxides, hydrogen chloride gas.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric Acid	Rat - 2140 mg/kg	-	Rat - 2 h - 510 mg/m3

Skin corrosion/irritation

Severe irritating, burning. Material is extremely destructive to skin.

Serious eye damage/eye irritation

Severe irritating, burning. Material is extremely destructive to eyes.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Sulfuric Acid	7664-93-9	1	Not listed	A2	Not listed	Not listed

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Reproductive toxicity

No data available.

Chronic effects

May cause bleeding of nose and gums, nasal and oral mucosal ulceration, conjunctivitis, yellowing of teeth and erosion of tooth enamel.

11.2 Additional Information

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Sulfuric Acid: Aquatic Vertebrate LC50 – *Gambusia affinis* (Mosquito fish) – 282 mg/l – 96h

12.2 Persistence and degradability

No information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste Disposal Methods

Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product, containers, or residues.

SECTION 14: Transport information

DOT (US)

UN Number	UN3264
Proper Shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Hazard Class	8, 5.1
Packaging Group	II
Technical name	Electropolish Solution (sulfuric acid, phosphoric acid)

IMDG

UN Number	UN3264
Proper Shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
Hazard Class	8, 5.1
Packaging Group	II
Technical name	Electropolish Solution (sulfuric acid, phosphoric acid)

IATA

UN Number	UN3264
Proper Shipping name	Corrosive liquid, acidic, inorganic, n.o.s.
Hazard Class	8, 5.1
Packaging Group	II
Technical name	Electropolish Solution (sulfuric acid, phosphoric acid)

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Sulfuric Acid: Listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sulfuric Acid: 1,000 lb RQ.

Phosphoric Acid: 5,000 lb RQ.

SARA 304 Emergency release notification

Sulfuric Acid: 1,000 lb RQ.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Listed: Sulfuric Acid

SARA 311/312 Hazardous

Acute Health Hazard, Reactivity Hazard.

SARA 313 (TRI reporting)

Not listed.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed.

Safe Drinking Water Act

Sulfuric Acid: 1,000,000 lb RQ.

Phosphoric Acid: 5,000,000 lb RQ.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations

US. Massachusetts RTK - Substance List

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Listed: Sulfuric Acid

California Proposition 65

Sulfuric Acid (mists) - listed : Cancer.

SECTION 16: Other information

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SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.