

Safety Data Sheet

Electropolish Solution 6:1:1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Electropolish Solution 6:1:1

Synonyms/Generic Names: None

Product Number: 8591

Product Use: Industrial

Manufacturer: Columbus Chemical Industries, Inc.
N4335 Temkin Rd.
Columbus, WI. 53925

For More Information: 920-623-2140 (Monday-Friday 8:00-4:30)
www.columbuschemical.com

In Case of Emergency Call: CHEMTREC - 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

2. HAZARDS IDENTIFICATION

Hazards Not Otherwise Classified (HNOC): This product may act as an oxidizer

Signal Word: Danger

Pictograms:



GHS Classification:

Corrosive to Metal	Category 1
Skin corrosion/irritation	Category 1B
Eye damage/irritation	Category 1
Acute Toxic, Oral	Category 5
Hazardous to the aquatic environment, acute hazard	Category 3

GHS Label Elements, including precautionary statements:

Hazard Statements:

H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage.
H303	May be harmful if swallowed.
H402	Harmful to aquatic life

Precautionary Statements:

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash skin thoroughly after handling.

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.
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.
P363	Wash contaminated clothing before reuse.
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 or doctor/physician.
P273	Avoid release to the environment.
P390	Absorb spillage to prevent material damage.
P234	Keep only in original container.
P404+P405	Store in a closed container. Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Potential Health Effects

Eyes	Causes eye burns.
Inhalation	May be harmful if inhaled.
Skin	Cause skin burns. May be harmful if absorbed through skin.
Ingestion	May be harmful if swallowed.

NFPA Ratings

Health	3
Flammability	0
Reactivity	2
Specific hazard	NA

HMIS Ratings

Health	3
Fire	0
Reactivity	2

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Sulfuric Acid	73-78	7664-93-9	432-639-5	H ₂ SO ₄	98.08 g/mol
Phosphoric Acid	8-12	64-19-7	231-633-2	H ₃ PO ₄	98.00 g/mol
Hydrochloric Acid	<1-5	7647-01-0	231-595-7	HCL	36.46 g/mol
Water	Balance	7732-18-5	231-791-2	H ₂ O	18.00 g/mol

4. FIRST-AID MEASURES

Eyes	Immediately rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
Inhalation	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.
Skin	Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention immediately.
Ingestion	Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.
General Advice	Show safety data sheet to poison center/doctor/physician.

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media	Product is not flammable. Use appropriate media for adjacent fire, foam, carbon dioxide, dry chemical. Do not use water. Do not get water inside containers. Do not apply water stream directly at source of leak.
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.
Specific hazards arising from the chemical	Emits toxic fumes (oxides of sulfur, phosphorous oxides, hydrogen chloride gas) under fire conditions. (See also Stability and Reactivity section).

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. See section 8 for recommendations on the use of personal protective equipment. Remove the employees that are not involved from the spill area and call the emergency team.
Environmental precautions	Prevent spillage from entering drains. Any release to the environment may be subject to federal/national or local reporting requirements.
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.

7. HANDLING AND STORAGE

Precautions for safe handling

Do not handle until all safety precautions have been read and understood. 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.

Conditions for safe storage, including any incompatibilities

Store in cool, dry well-ventilated area. Keep in original container. Store locked up. Keep away from incompatible materials (see section 10 for incompatibilities). Drains for storage or use areas for this material should have retention basins for pH adjustment and dilution of spills.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls:

Component	Exposure Limits	Basis	Entity
Sulfuric acid	0.2 mg/m ³ (T)	TWA	ACGIH® TLV®
	1 mg/m ³	TWA	OSHA PELs
	1 mg/m ³	TWA	NIOSH RELs
Hydrogen Chloride	2 ppm (2.98 mg/m ³)	CEIL	ACGIH® TLV®
	5 ppm (7 mg/m ³)	CEIL	OSHA PEL
	5 ppm (7 mg/m ³)	CEIL	NIOSH RELs

Phosphoric acid	1 mg/m ³	TWA	ACGIH® TLV®
	3 mg/m ³	STEL	ACGIH® TLV®
	1 mg/m ³	TWA	OSHA PELs
	1 mg/m ³	TWA	NIOSH RELs
	3 mg/m ³	STEL	NIOSH RELs

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

Personal Protection

Eyes	Wear chemical safety glasses or goggles.
Inhalation	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
Skin	Wear acid-resistant protective gloves, apron or lab coat. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Other	Handle in accordance with good industrial hygiene and safety practice.

Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	Clear, colorless liquid
Odor	Not Available
Odor threshold	Not Available
pH	1
Melting point/freezing point	Not Available
Initial boiling point and boiling range	Not Available
Flash point	Not Flammable
Evaporation rate	Not Available
Flammability (solid, gas)	Not Flammable
Upper/lower flammability or explosive limit	Not Explosive
Vapor pressure	Not Available
Vapor density	Not Available
Specific gravity	1.7797 (water = 1)
Solubility (ies)	Completely soluble in water
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	Not Available
Decomposition temperature	Not Available

10. STABILITY AND REACTIVITY

Chemical Stability	Stable
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Extremely high or low temperatures, incompatible materials, uncontrolled addition of water.
Incompatible Materials	Combustible materials. Reducing agents. Strong bases. Strong oxidizers. Metals. Water.

Hazardous Decomposition Products	Thermal decomposition generates: Corrosive vapors, oxides of sulfur, phosphorous oxides, hydrogen chloride gas.
---	---

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Sulfuric acid

Skin	Not Available
Eyes	Not Available
Respiratory	LC50 Inhalation – rat – 2 h – 510 mg/m ³
Ingestion	LD50 Oral – rat – 2140 mg/kg

Hydrochloric acid

Skin	Not Available
Eyes	Not Available
Respiratory	LC50 Inhalation – rat – 1 h – 3124 ppm
Ingestion	LD50 Oral – rabbit – 900 mg/kg

Phosphoric acid

Skin	Not Available
Eyes	Not Available
Respiratory	Not Available
Ingestion	Not Available

Carcinogenicity

IARC	3: Not classifiable as to its carcinogenicity to humans (Hydrogen chloride) 1: Carcinogenic to humans (Sulfuric acid in strong inorganic acid mists)
ACGIH	A4: Not classifiable as a human carcinogen. (Hydrogen chloride) A2: Suspected human carcinogen (Sulfuric acid in strong inorganic acid mists)
NTP	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs & Symptoms of Exposure

Skin	Causes severe irritation which will progress to chemical burns.
Eyes	Causes permanent damage to the cornea, iris, or conjunctiva.
Respiratory	May be corrosive to the respiratory tract.
Ingestion	May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

Chronic Toxicity	May cause bleeding of nose and gums, nasal and oral mucosal ulceration, conjunctivitis, yellowing of teeth and erosion of tooth enamel.
Teratogenicity	Not Available
Mutagenicity	Not Available
Embryotoxicity	Not Available
Specific Target Organ Toxicity	Not Available
Reproductive Toxicity	Not Available
Respiratory/Skin Sensitization	Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Sulfuric Acid

Aquatic Vertebrate	LC50 – Gambusia affinis (Mosquito fish) – 282 mg/l – 96h
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Hydrochloric acid

Aquatic Vertebrate	LC50 – Gambusia affinis (Mosquito fish) – 42 mg/l – 96h
Aquatic Invertebrate	LC80 – Daphnia magna (Water flea) – 56 mg/l – 72h
Terrestrial	Not Available

Phosphoric acid

Aquatic Vertebrate	Not Available
Aquatic Invertebrate	Not Available
Terrestrial	Not Available

Persistence and Degradability	Not Available
Bioaccumulative Potential	Not Available
Mobility in Soil	Not Available
PBT and vPvB Assessment	Not Available
Other Adverse Effects	Not Available

13. DISPOSAL CONSIDERATIONS

Waste Product or Residues	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 or residue.
Product Containers	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 container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

US DOT	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (sulfuric acid and phosphoric acid), 8, pg II
TDG	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (SULFURIC ACID AND PHOSPHORIC ACID), 8, PG II
IMDG	UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., (SULFURIC ACID AND PHOSPHORIC ACID), 8, PG II
Marine Pollutant	No
IATA/ICAO	UN3264, Corrosive liquid, acidic, inorganic, n.o.s., (sulfuric acid and phosphoric acid), 8, pg II

15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	No

Massachusetts: Toxic or Hazardous Substance List, Right to Know	Listed: Sulfuric acid, Phosphoric acid, Hydrochloric acid
New Jersey: Right to Know Hazardous Substance List	Listed: Sulfuric acid, Phosphoric acid, Hydrochloric acid
Pennsylvania: Hazardous Substance List	Listed: Sulfuric acid, Phosphoric acid, Hydrochloric acid
Rhode Island: Hazardous Substance List	Listed: Sulfuric acid, Phosphoric acid, Hydrochloric acid
SARA 302	Listed: Sulfuric Acid
SARA 304	Listed: Sulfuric Acid
SARA 311	Acute Health Hazard, Reactivity Hazard
SARA 312	Acute Health Hazard, Reactivity Hazard
SARA 313	Not Listed
WHMIS Canada	Class E: Corrosive material. Class D1A: Material causing other toxic effects (VERY TOXIC).

16. OTHER INFORMATION

Revision	Date
Revision 1	07/06/2011
Revision 2	10/03/2013
Revision 3	11/16/2021

Disclaimer: The information provided in this Safety Data Sheet ("SDS") is correct to the best of our knowledge, information and belief at the date of publication. The information in this SDS relates only to the specific Product identified under Section 1, and does not relate to its use in combination with other materials or products, or its use as to any particular process. Those handling, storing or using the Product should satisfy themselves that they have current information regarding the particular way the Product is handled, stored or used and that the same is done in accordance with federal, state and local law. WE DO NOT MAKE ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING (WITHOUT LIMITATION) WARRANTIES WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN OR WITH RESPECT TO FITNESS FOR ANY PARTICULAR USE. WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, INJURY, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT.