

Glycolic acid SDS/MSDS (Safety Data Sheet)

1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

- * Product Name: Glycolic acid
- * Catalog Number: S6272
- * CAS Number: 79-14-1
- * IUPAC Name: Acetic acid, 2-hydroxy-

Relevant identified uses and uses advised against

- * Identified uses: For research and development use only; laboratory chemicals; manufacture of substances.
- * Uses advised against: Not for pharmaceutical, household, or other unapproved uses.

Details of the supplier

- * Company: Selleck Chemicals
- * TollFree: +1 877 796-6397
- * Tel: +1 832 582-8158
- * Fax: +1 832 582-8590

Emergency telephone number

- * Emergency phone #: +1 832 582-8158

2. HAZARDS IDENTIFICATION

2.1 GHS classification in accordance with 29 CFR 1910 (OSHA HCS):

- Acute toxicity (oral): Category 4. H302
- Skin corrosion: Category 1. H314
- Serious eye damage: Category 1. H318
- Acute toxicity (inhalation): Category 4. H332
- Acute toxicity (inhalation): Category 5. H333
- Reproductive toxicity: Category 2. H361
- Specific target organ toxicity (single exposure): Category 1. H370
- Specific target organ toxicity (repeated exposure): Category 2. H373
- Acute aquatic toxicity: Category 3. H402

2.2 GHS Label elements, including precautionary statements

Hazard Pictogram(s)



Signal Word

Danger

Hazard statement(s)	H302: Harmful if swallowed H314: Causes severe skin burns and eye damage H318: Causes serious eye damage H332: Harmful if inhaled H333: May be harmful if inhaled H361: Suspected of damaging fertility or the unborn child H370: Causes damage to organs H373: May causes damage to organs through prolonged or repeated exposure H402: Harmful to aquatic life
Precautionary statement(s)	None.
Prevention	P203: Obtain, read and follow all safety instructions before use. P260: Do not breathe dust/fume/gas/mist/vapors/spray. P261: Avoid breathing dust/fume/gas/mist/vapors/spray. P264: Wash hands thoroughly after handling. P264+P265: Wash hands thoroughly after handling. Do not touch eyes. P270: Do not eat, drink or smoke when using this product. P271: Use only outdoors or in a well-ventilated area. P273: Avoid release to the environment. P280: Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
Response	P301+P317: IF SWALLOWED: Get medical help. P301+P330: IF SWALLOWED: Rinse mouth. P302+P361: IF ON SKIN: Take off immediately all contaminated clothing. P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P354: IF IN EYES: Immediately rinse with water for several minutes. P308+P316: IF exposed or concerned: Get emergency medical help immediately. P316: Get emergency medical help immediately. P317: Get emergency medical help. P318: if exposed or concerned, get medical advice. P319: Get medical help if you feel unwell. P321: Specific treatment (see information on this label and safety datasheet)). P330: Rinse mouth. P331: Do NOT induce vomiting. P338: Remove contact lenses, if present and easy to do. Continue rinsing. P354: Immediately rinse with water for several minutes. P363: Wash contaminated clothing before reuse.
Storage	P405: Store locked up.
Disposal	P501: P501 Dispose of contents/ container to an approved waste disposal plant.

2.3 Other hazards

None.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Product name: Glycolic acid

CAS Number: 79-14-1

PubChem CID: 757

Molecular formula: C₂H₄O₃

Molecular weight: 76.05 g/mol

IUPAC name: 2-hydroxyacetic acid

3.2 Mixtures

Not applicable (pure substance).

4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation: Half-upright position. Fresh air, rest. Refer for medical attention.

Skin contact: First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again.

Eye contact: First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Ingestion: Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention .

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 (Toxicological Information).

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. Contact a poison control center or physician for severe exposure.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable: Water spray, dry chemical, carbon dioxide (CO₂), alcohol-resistant foam.

Unsuitable: None known.

5.2 Specific hazards arising from the substance or mixture

Use water spray, powder, foam, carbon dioxide.

Suitable extinguishing media: Use water spray, alcohol - resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters Wear self contained breathing apparatus for fire fighting if necessary.

Use water spray, powder, foam, carbon dioxide.

Emits toxic fumes under fire conditions. /99% Glycolic acid/

5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective clothing.

Fight fire from upwind. Cool containers with water spray until fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment (see Section 8).

Avoid breathing dust/vapor. Ensure adequate ventilation.

Evacuate personnel to safe areas. Keep people away from and upwind of spill.

6.2 Environmental precautions

Prevent product from entering drains, waterways, or soil.

Contain spill with inert absorbent material.

6.3 Methods and materials for containment and cleaning up

Personal protection: chemical protection suit including self-contained breathing apparatus. Sweep spilled substance into covered containers.

Accidental Release Measures. Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Environmental precautions: Do not let product enter drains. Methods and materials for containment and clean up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Do not contaminate water, food, or feed by ... disposal. ... Do not re-use empty container. Wrap empty bottle and put in trash or recycle. /5% Glycolic acid/

Neutralize spills with lime or soda ash. /70% Glycolic acid/

SRP: The most favorable course of action is to use an alternative chemical product with less inherent propensity for occupational harm/injury/toxicity or environmental contamination. Recycle any unused portion of the material for its approved use or return it to the manufacturer or supplier. Ultimate disposal of the chemical must consider: the material's impact on air quality; potential migration in soil or water; effects on animal and plant life; and conformance with environmental and public health regulations.

SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a permitted wastewater treatment facility is acceptable only after review by the governing authority and assurance that "pass through" violations will not occur. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must be evaluated in accordance with EPA 40 CFR Part 261, specifically Subpart B, in order to determine the appropriate local, state and federal requirements for disposal.

Waste Treatment Methods. Product: Offer surplus and non - recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contaminated packaging: Dispose of as unused product.

SRP: The scientific literature for the use of contact lenses by industrial workers is inconsistent. The benefits or detrimental effects of wearing contact lenses depend not only upon the substance, but also on factors including the form of the substance, characteristics and duration of the exposure, the uses of other eye protection equipment, and the hygiene of the lenses. However, there may be individual substances whose irritating or corrosive properties are such that the wearing of contact lenses would be harmful to the eye. In those specific cases, contact lenses should not be worn. In any event, the usual eye protection equipment should be worn even when contact lenses are in place.

SRP: Contaminated protective clothing should be segregated in a manner such that there is no direct personal contact by personnel who handle, dispose, or clean the clothing. The completeness of the cleaning procedures should be considered before the decontaminated protective clothing is returned for reuse by the workers.

Contaminated clothing should not be taken home at the end of shift, but should remain at employee's place of work for cleaning.

SRP: Local exhaust ventilation should be applied wherever there is an incidence of point source emissions or dispersion of regulated contaminants in the work area. Ventilation control of the contaminant as close to its point of

generation is both the most economical and safest method to minimize personnel exposure to airborne contaminants. Ensure that the local ventilation moves the contaminant away from the worker.

When chemicals containing glycolic acid are used on a daily basis, protection for the skin and eyes is advised to prevent localized irritation. Child-proof packaging is available to prevent children from ingesting these products. Overall, the evidence indicates there is minimal risk of adverse health effects from glycolic acid during the normal use of commercially available cleaning products.

For more Preventive Measures (Complete) data for HYDROXYACETIC ACID (14 total), please visit the HSDB record page.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Separated from strong oxidants, metals, sulfides, cyanides, strong bases and food and feedstuffs. Dry.

Separated from strong oxidants, metals, sulfides, cyanides, strong bases and food and feedstuffs. Dry.

Keep container tightly closed in a dry and well - ventilated place.

Do not contaminate water, food, or feed by storage Store out of reach of children.

7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants, metals, sulfides, cyanides, strong bases and food and feedstuffs. Dry.

Separated from strong oxidants, metals, sulfides, cyanides, strong bases and food and feedstuffs. Dry.

Keep container tightly closed in a dry and well - ventilated place.

Do not contaminate water, food, or feed by storage Store out of reach of children.

Store away from incompatible materials (see Section 10).

[Note: Specific storage temperature not available in public databases. Refer to supplier Certificate of Analysis (COA) for exact storage conditions.]

Store in original container. Keep upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls

8.1.1 Occupational exposure limits (OEL)

OSHA PEL: Not established.

ACGIH TLV: Not established.

NIOSH REL: Not established.

No occupational exposure limit values are established for this substance.

Use the lowest feasible exposure level (ALARA principle).

8.1.2 Appropriate engineering controls

Use in a well-ventilated area. Chemical fume hood recommended for powder handling.

8.2 Individual protection measures

8.2.1 Eye/face protection

Wear chemical safety goggles and face shield.

8.2.2 Skin protection

Wear protective gloves. Recommended material: Nitrile rubber.

Wear suitable protective clothing (lab coat).

8.2.3 Respiratory protection

Use NIOSH-approved dust/mist respirator (N95 or higher) if ventilation is inadequate.

8.2.4 Thermal hazards

Not applicable.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

- a) Appearance: Dry Powder; CBI; Liquid; Other Solid; Large Crystals; Liquid; Liquid
- b) Odor: Odorless
- c) Odor threshold: No data available
- d) pH: pH = 2.5 (0.5%); 2.33 (1.0%); 2.16 (2.0%); 1.91 (5.0%); 1.73 (10.0%)
- e) Melting point/freezing point: 78-80 °C (alpha-modification); 63 °C (beta-modification, metastable)
- f) Initial boiling point and boiling range: 100 °C
- g) Flash point: No data available
- h) Evaporation rate: No data available
- i) Flammability (solid, gas): No data available
- j) Upper/lower flammability or explosive limits: No data available
- k) Vapor pressure: 0.02 [mmHg]
- l) Vapor density: No data available
- m) Relative density: 1.49 at 25 °C/4 °C
- n) Water solubility: Soluble in ethanol, ethyl ether
- o) Partition coefficient: n-octanol/water: Log P (n-octanol/water): -1.1
- p) Auto-ignition temperature: No data available
- q) Decomposition temperature: No data available
- r) Viscosity: No data available
- s) Explosive properties: No data available
- t) Oxidizing properties: No data available

9.2 Other information

Topological Polar Surface Area (TPSA): 57.5 Å²

Complexity: 40

10. STABILITY AND REACTIVITY

10.1 Reactivity

No specific reactivity hazards identified under normal handling conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions under normal conditions.

10.4 Conditions to avoid

Avoid heat, sparks, open flames, direct sunlight, and moisture.

10.5 Incompatible materials

Materials to avoid Bases, Oxidizing agents, Reducing agents

Contact with active metals may produce flammable hydrogen gas (solid).

10.6 Hazardous decomposition products

Thermal decomposition may produce: Carbon monoxide (CO), Carbon dioxide (CO₂).

See also Section 5 (Fire-fighting measures) for combustion products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity:

No acute toxicity data available.

Skin corrosion/irritation:

Causes severe skin burns and eye damage (H314).

Serious eye damage/eye irritation:

Causes serious eye damage (H318).

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

No data available.

Carcinogenicity:

No data available.

Reproductive toxicity:

Suspected of damaging fertility or the unborn child (H361).

Specific target organ toxicity (single exposure):

H370, H373

Specific target organ toxicity (repeated exposure):

No data available.

Aspiration hazard:

No data available.

11.2 Additional information

Carcinogen classification:

Glycolic Acid (Photocarcinogenesis Study)

TR-524: Photocarcinogenesis Study of Glycolic Acid and Salicylic Acid (CASRNs 79-14-1 and 69-72-7) in SKH-1 Mice (Simulated Solar Light and Topical Application Studies) (2007)

09/27/05

Chemical Not Tested in Species/Sex

Chemical Not Tested in Species/Sex

No Evidence

No Evidence

These experiments investigated the impact of topical application of a cosmetic formulation containing 4% or 10% glycolic acid (pH 3.5) or 2% or 4% salicylic acid (pH 4) on the p

Exposure routes:

The substance can be absorbed into the body by inhalation and by ingestion.

Oral (L1909) ; dermal (L1909)

Signs and symptoms of exposure:

Cough. Shortness of breath. Sore throat.

Redness. Pain. Serious skin burns.

Redness. Pain. Blurred vision. Severe deep burns.

Abdominal pain. Burning sensation. Shock or collapse.

Glycolic acid is a strong irritant. Accumulation of glycolic acid and its metabolite, oxalic acid, causes tachycardia, hypertension, hyperventilation, and metabolic acidosis. (L1023, L1909)

Data source: Hazardous Substances Data Bank (HSDB) via PubChem.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

LC50; Species: Pimephales promelas (Fathead minnows); Conditions: static; Concentration: 164 mg/L for 96 hr (nominal)

EC50; Species: Pseudokirchneriella subcapitata (Green algae); Conditions: static; Concentration: 21.6 mg/L for 72 hr; Effect: biomass

EC50; Species: Pseudokirchneriella subcapitata (Green algae); Conditions: static; Concentration: 44.0 mg/L for 72 hr; Effect: growth rate

LC50; Species: Lepomis sp. (sunfish); Concentration: 93 mg/L for 48 hr /Conditions of bioassay not specified in source examined/ /70% purity/

For more Ecotoxicity Values (Complete) data for HYDROXYACETIC ACID (8 total), please visit the HSDB record page.

/AQUATIC SPECIES/ /Green algae (Pseudokirchneriella subcapitata; 3 replicates/concentration) were exposed to /glycolic acid/ at mean measured concentrations of 7.52, 14.5, 30.3, 54.6 and 73.6 mg/L for 72 hours. At the end of the 72-hour exposure period, a control replicate and samples from the test concentrations exhibiting a 50% or greater inhibition of cell counts were selected for a recovery test and exposed to nutrient medium for an additional 144 hours. The effects upon growth rate and biomass were found to be algistatic. 72-hr EC50 (growth) = 44.0 mg/L; 72-hr EC50 (biomass) = 21.6 mg/L

/AQUATIC SPECIES/ Fathead minnows (Pimephales promelas; 10/concentration) were exposed to /glycolic acid/ at nominal concentrations of 0.0064, 0.0081, 0.010, 0.013, 0.016 or 0.020% (v/v) for 96 hours under static conditions. All deaths occurred within 24

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

Log P (n-octanol/water): -1.1

Low potential for bioaccumulation (Log P < 3).

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available.

12.6 Other adverse effects

This substance is classified as hazardous to the aquatic environment.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Waste Treatment Methods: Waste material must be disposed of in accordance with national and local regulations. Leave chemicals in original containers and do not mix with other waste. Handle uncleaned containers in the same manner as the product itself.

14. TRANSPORT INFORMATION**14.1 UN number**

Not regulated as dangerous goods (research quantities typically exempt).

14.2 UN proper shipping name

Not subject to transport regulations (small quantities for research use).

14.3 Transport hazard class(es)

Class 8

14.4 Packing group

Packing group II

14.5 Environmental hazards

Marine pollutant: No (not classified as environmentally hazardous per GHS).

14.6 Special precautions for user

Transport in original packaging. Ensure containers are tightly sealed.

For bulk or commercial quantities, consult applicable transport regulations (DOT, IATA, IMDG).

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15. REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

US EPA / TSCA: Subject to EPA TSCA regulations

EU ECHA / REACH: Registered (REACH Active)

SARA 302 Components:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards:

Acute (short-term) health hazard
Chronic (long-term) health hazard
Environmental hazard

Massachusetts Right To Know Components:

This material contains components subject to the Massachusetts Right to Know Act. See Section 2 for hazard classification.

Pennsylvania Right To Know Components:

This material contains components subject to the Pennsylvania Right to Know Act. See Section 2 for hazard classification.

New Jersey Right To Know Components:

This material contains components subject to the New Jersey Right to Know Act. See Section 2 for hazard classification.

California Prop. 65 Components:

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Other regulatory listings:

- The Australian Inventory of Industrial Chemicals: Chemical: Acetic acid, 2-hydroxy- Specific Information Requirement: Obligations to provide information apply. These obligations are: 1. If the assessment report about the chemical recommends secondary
- EFSA Legal Basis: Regulation (EC) No 1935/2004 (amended)
- FIFRA Requirements: As the federal pesticide law FIFRA directs, EPA is conducting a comprehensive review of older pesticides to consider their health and environmental effects and make decisions about their continued use. Under this pesticide reregistration program, EPA examines newer health and safety data for pesticides
- FDA Requirements: Hydroxyacetic acid is an indirect food additive for use as a component of adhesives.

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out for this substance.

For research-use-only compounds, no CSA is required under REACH Annex I.

16. OTHER INFORMATION

Revision Date: 2026/09/09

Further Information: The information provided is believed to be correct but is not exhaustive and should be used only as a guideline based on current knowledge. It does not represent a guarantee of the properties of the product.

Selleck Chemicals Corporation and its Affiliates shall not be held liable for any damage resulting from handling or contact with the product.