

## Chemical Safety Data Sheet MSDS / SDS

## Glycollic acid SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: Glycollic acid  
CAS: 79-14-1

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

Relevant identified uses: For R&D use only. Not for medicinal, household or other use.  
Uses advised against: none

**Company Identification**

Company: Chemicalbook.in  
Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090  
Telephone: +91 9550333722

**SECTION 2: Hazards identification****Classification of the substance or mixture**

Skin corrosion, Sub-category 1B  
Serious eye damage, Category 1

Acute toxicity - Category 4, Inhalation

**GHS label elements, including precautionary statements**

Pictogram(s)



Signal word

Danger

**Hazard statement(s)**

H314 Causes severe skin burns and eye damage

H318 Causes serious eye damage

H332 Harmful if inhaled

**Precautionary statement(s)**

**Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P271 Use only outdoors or in a well-ventilated area.

**Response**

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P321 Specific treatment (see ... on this label).

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

**Storage**

P405 Store locked up.

**Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in classification**

no data available

**SECTION 3: Composition/information on ingredients**

**Substance**

Chemical name:	Glycollic acid
Common names and synonyms:	Glycollic acid
CAS number:	79-14-1
EC number:	201-180-5
Concentration:	100%

**SECTION 4: First aid measures**

**Description of necessary first-aid measures**

**If inhaled**

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

**Following skin contact**

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

**Following eye contact**

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

**Following ingestion**

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

**Most important symptoms/effects, acute and delayed**

no data available

#### **Indication of immediate medical attention and special treatment needed, if necessary**

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Organic acids and related compounds

### **SECTION 5: Firefighting measures**

#### **Suitable extinguishing media**

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

#### **Specific hazards arising from the chemical**

Combustible.

#### **Special protective actions for fire-fighters**

Use water spray, powder, foam, carbon dioxide.

### **SECTION 6: Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

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

#### **Environmental precautions**

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

#### **Methods and materials for containment and cleaning up**

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.

## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

NO open flames. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### **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.

## **SECTION 8: Exposure controls/personal protection**

### **Control parameters**

### **Occupational Exposure limit values**

no data available

### **Biological limit values**

no data available

### **Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### **Individual protection measures, such as personal protective equipment (PPE)**

#### **Eye/face protection**

Wear safety goggles or eye protection in combination with breathing protection.

#### **Skin protection**

Protective gloves.

### Respiratory protection

Avoid inhalation of dust and mist.

### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Solid. Crystalline.
Colour:	Colourless.
Odour:	Odorless
Melting point/freezing point:	78 - 80.5 °C.
Boiling point or initial boiling point and boiling range:	169 °C. Atm. press.:998 hPa.
Flammability:	Combustible.
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	> 100 °C.
Auto-ignition temperature:	no data available
Decomposition temperature:	100°C
pH:	pH = 2.5 (0.5%); 2.33 (1.0%); 2.16 (2.0%); 1.91 (5.0%); 1.73 (10.0%)
Kinematic viscosity:	kinematic viscosity (in mm <sup>2</sup> /s) = 6.149. Temperature:23.0°C. Remarks:Mean of two runs.

Solubility:	In water, 1X10+6 mg/L at 25 deg C (est)
Partition coefficient n-octanol/water:	log Pow = < 0.3. Temperature:25 °C.;log Pow = < 0.3. Temperature:25 °C.;log Pow = < 0.3. Temperature:25 °C.
Vapour pressure:	0.41 Pa. Temperature:25 °C. Remarks:Mean value from four runs.
Density and/or relative density:	1.26 g/cm3. Temperature:20 °C.
Relative vapour density:	(air = 1): 2.6
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Reacts with strong oxidants, cyanides and sulfides. Reacts violently with aluminium, zinc and tin. This generates fire and explosion hazard. The solution in water is a medium strong acid.

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

Combustible.

### Conditions to avoid

no data available

### Incompatible materials

Materials to avoid Bases, Oxidizing agents, Reducing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## SECTION 11: Toxicological information

### Acute toxicity

Oral: LD50 - rat (male/female) - 2 040 mg/kg bw. Remarks:LD50 recalculated in revised report to address death of one intermediate dose female that died following apparent dosing trauma. The LD50 was based on 100% glycolic acid dosed (adjusted for 70% purity of the test substance).

Inhalation: LC50 - rat (female) - > 5.2 mg/L air.

Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

The substance is corrosive to the skin and eyes. The substance is irritating to the respiratory tract. Corrosive on ingestion. This



may result in kidney failure.

#### **STOT-repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis.

#### **Aspiration hazard**

A harmful concentration of airborne particles can be reached quickly on spraying or when dispersed, especially if powdered.

## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: LC50 - *Pimephales promelas* - 164 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 141 mg/L - 48 h.

Toxicity to algae: EC50 - *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*) - 22.5 mg/L - 72 h.

Toxicity to microorganisms: EC50 - activated sludge - > 100 mg/L - 3 h. Remarks: Respiration rate.

### **Persistence and degradability**

AEROBIC: Hydroxyacetic acid achieved 32% theoretical oxidation by acclimated activated sludge after 12 hours of aeration(1). The theoretical BOD for hydroxyacetic acid was reported to be 0.89 after 5 days using acclimated mixed microbial cultures(2). Hydroxyacetic acid, present at 100 mg/L, reached 86% of its theoretical BOD in 2 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(3). Therefore this compound is expected to biodegrade rapidly in the environment(SRC).

### **Bioaccumulative potential**

An estimated BCF of 3 was calculated in fish for hydroxyacetic acid (SRC), using a measured log Kow of -1.11(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### **Mobility in soil**

The Koc of hydroxyacetic acid is estimated as 0.14(SRC), using a measured log Kow of -1.11(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that hydroxyacetic acid is expected to have very high mobility in soil. The pKa of hydroxyacetic acid is 3.6(4), indicating that this compound will exist almost entirely in the

anion form and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

#### **Other adverse effects**

no data available

### **SECTION 13: Disposal considerations**

#### **Disposal methods**

##### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

##### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

### **SECTION 14: Transport information**

#### **UN Number**

ADR/RID: UN3261 (For reference only, please check.)

IMDG: UN3261 (For reference only, please check.)

IATA: UN3261 (For reference only, please check.)

#### **UN Proper Shipping Name**

ADR/RID: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

IMDG: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

IATA: CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (For reference only, please check.)

#### **Transport hazard class(es)**

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

**Packing group, if applicable**

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

**Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

**Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

**SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Not Listed.

### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

### **(PICCS)**

Listed.

### **Vietnam National Chemical Inventory**

Listed.

### **IECSC)**

Listed.

### **Korea Existing Chemicals List (KECL)**

Listed.

## **SECTION 16: Other information**

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### **Other Information**

This substance is often available commercially as a 70% solution with UN number 3265, hazard class 8, packaging group II.

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any