



Glyoxylic acid (50% in water)

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Version: 1.4

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier

Product Form: Substance

Product Name: Glyoxylic acid (50% in water)

CAS No: 298-12-4

Product Code: VOLO10046

Standard InChi: InChi=1S/C2H2O3/c3-1-2(4)5/h1H,(H,4,5)

1.2. Intended Use of the Product

Use of the substance/mixture: For laboratory research purposes.

1.3. Name, Address, and Telephone of the Responsible Party

Manufacturer

Volochem, Inc.

2600 Hilltop Dr.

Bldg B #C211

Richmond, CA 94806

T 510.748.0159

www.volochem.com

1.4. Emergency Telephone Number

Emergency Number : 510-748-0159 (9a-5p M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance

Classification (GHS-US)

Serious eye damage (Category 1)

Skin sensitization (Category 1)

Corrosive to Metals (Category 1)

Aquatic Hazard, Acute (Category 3)

Skin Corrosion/Irritation (Category 1C)

2.2. Label Elements

GHS-US Labeling

Pictogram(s): GHS05, GHS07



Signal word: Danger

Hazard statement(s)

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H402	Harmful to aquatic life

Precautionary statement(s)

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P234	Keep only in original packaging.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310	Immediately call a POISON CENTER/doctor.
P303+P361+P353	IF ON SKIN: Take off immediately all contaminated clothing. Rinse skin with water or shower.
P363	Wash contaminated clothing before reuse.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310	Immediately call a POISON CENTER/ doctor.
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.
P390	Absorb spillage to prevent material-damage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

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

No additional information available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name	Synonym(s)	Product Identifier
Glyoxylic acid	Formylformic acid; Oxoethanoic acid	CAS No. 563-96-2 EC No. 206-058-5

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2. Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Product is flammable. Carbon oxides during combustion.

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Explosion Hazard: Product is not explosive.

5.3. Advice for Firefighters

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Wear self contained breathing apparatus for fire fighting if necessary.

5.4. NFPA Rating

Health hazard: 2

Fire: 1

Reactivity Hazard: 0

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Collect spillage. Avoid generation of dust during clean-up of spills. Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Store under inert gas.

7.3. Specific End Use(s) For laboratory research purposes

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Contains no substances with established occupational exposure limit values.

8.2. Exposure Controls

Appropriate Engineering Controls:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Avoid high dust concentration. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment:



Hand Protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove

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Eye Protection:	removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Respiratory Protection:	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Skin and body protection:	Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State:	Liquid
Appearance:	Clear and colorless
Odor:	No data available
Odor Threshold:	No data available
pH:	No data available
Relative Evaporation Rate (butylacetate=1):	No data available
Melting Point:	Melting point/range: 49 - 52 °C (120 - 126 °F)
Boiling Point:	100 °C (212 °F)
Flash Point:	110 °C (230 °F) - closed cup
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flammability (solid, gas):	No data available
Vapor Pressure:	No data available
Relative Vapor Density at 20 °C:	No data available
Relative Density:	No data available
Specific Gravity:	No data available
Solubility:	No data available
Log Pow:	No data available
Log Kow:	No data available
Viscosity, Kinematic:	No data available
Viscosity, Dynamic:	No data available
Explosive Properties:	No data available
Oxidizing Properties:	No data available
Explosive Limits:	No data available
Bulk Density	No data available

9.2. Other Information

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SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity	No data available
10.2. Chemical Stability	Stable under recommended storage conditions
10.3. Possibility of Hazardous Reactions	Reacts violently with water.
10.4. Conditions to Avoid	No data available
10.5. Incompatible Materials	Bases, Oxidizing agents, Reducing agents
10.6. Hazardous Decomposition Product	Other decomposition products - no data available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity: Oral LD50

No data available

Inhalation LC50

No data available

Dermal LD50

No data available

Other information on acute toxicity

no data available

Skin Corrosion/Irritation:

Skin - rabbit Result: No skin irritation - 4 h (OECD Test Guideline 404)

Serious Eye Damage/Irritation:

Eyes - rabbit Result: Risk of serious damage to eyes. (OECD Test Guideline 405)

Respiratory or Skin Sensitization:

May cause allergic skin reaction.

Germ Cell Mutagenicity:

No data available

Carcinogenicity:

Not classified

Reproductive Toxicity:

no data available

Specific Target Organ Toxicity (Single Exposure):

No data available

Specific Target Organ Toxicity (Repeated Exposure):

No data available

Aspiration Hazard:

No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Fish 96h LC50:41 mg/L (Oryzias latipes)

Crustacea 48h LC50:51 mg/L (Daphnia magna)

Algae 72h EC50:33 mg/L (Selenastrum capricornutum)

12.2. Persistence and Degradability

96 % (by BOD), 100 % (by TOC), 100 % (by HPLC)

12.3. Bioaccumulative Potential

3

12.4. Mobility in Soil

No data available

12.5. Other Adverse Effects

No data available

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SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Contact a licensed professional waste disposal service to dispose of this material. Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1. UN Number	3265
14.2. UN Proper Shipping Name	Corrosive liquid, acidic, organic, n.o.s. (Glyoxylic acid 50% in water)
14.3. Transport hazard class(es)	8
14.4. Packing group	III
14.5.1. Marine Pollutant	No
14.5.2. Reportable Quantity	
14.6.1. Toxic Inhalation Hazard	
14.6.2. Mode specific comments	
14.6.3. Ground transportation - DOT (US)	
14.6.4. Marine transportation - IMDG	EMS No: F-A, S-B
14.6.5. Air transportation - IATA/ICAO	

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

EPA TSCA Inventory

Listed

SARA 302 Components

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

SARA 313 Components

SARA 313: 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 Components

Acute Health Hazard

15.2. US State Regulations

California Proposition 65 List 2014

Not listed

Maine Chemicals of High Concern List 2012

Not listed

Massachusetts Right to Know Hazardous Substance List 2014

Not listed

New Jersey Right to Know Hazardous Substance List 2010

Not listed

Pennsylvania Right to Know Hazardous Substance List 2010

Not listed

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SECTION 16: OTHER INFORMATION

16.1 Other Classifications

HMIS

Health Hazard:	2
Chronic Health Hazard	*
Flammability:	1
Physical hazards:	0

Revision date : 1/3/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Volochem chemicals are for research purposes only and are NOT intended for use as drugs, food additives, household goods, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.

SDS US (GHS HazCom) - US Only