
SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Glyoxal solution
Product Number: S2505

Sarchem Laboratories, Inc.
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ChemTel Contract No: MIS0009049

Version 1.1
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2. HAZARDS INFORMATION:

Classification of the substance or mixture

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

Acute toxicity, Inhalation (Category 4), H332

Skin irritation (Category 2), H315

Serious eye damage (Category 1), H318

Skin sensitisation (Category 1), H317

Germ cell mutagenicity (Category 2), H341

For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS Label elements, including precautionary statements

Pictogram



Signal Word:

Warning

Hazard Statement:

H320 Causes eye irritation.

H315 Causes skin irritation.

H332 Harmful if inhaled.

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H341 Suspected of causing genetic defects.

H402 Harmful to aquatic life

Precautionary Statements (Prevention):

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

- P271 Use only outdoors or in a well-ventilated area.
 P260 Do not breathe mist or vapour.
 P201 Obtain special instructions before use.
 P273 Avoid release to the environment.
 P202 Do not handle until all safety precautions have been read and understood.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

- P308 + P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician.
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.
 P332 + P313 If skin irritation occurs: Get medical advice/attention.
 P362 + P364 Take off contaminated clothing and wash it before reuse.
 P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.

Precautionary Statements (Storage):

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

Precautionary Statements (Disposal):

- P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified (HNOC) or not covered by GHS - none

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS Number	Weight %	Chemical name
107-22-2	>= 39.5 - <= 40.5%	glyoxal
107-21-1	>= 0.0 - <= 2.5%	ethylene glycol

4. FIRST AID MEASURES:

General Advice

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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

5. FIRE FIGHTING MEASURES

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products

No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

For personal protection see section 8

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the Environment must be avoided.

Methods for cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

For precautions see section 2.2.

Storage

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage class (TRGS 510): 12: Non combustible Liquids.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Control parameters****Components with occupational exposure limits**

ethylene glycol

ACGIH TLV CLV 100 mg/m³ aerosol ; TWA value 25 ppm
Vapor fraction ; STEL value 50 ppm Vapor
fraction ; STEL value 10 mg/m³ Aerosol,
inhalable. ;

glyoxal

ACGIH TLV TWA value 0.1 mg/m³ Inhalable fraction and
vapor ;

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) 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).

Hand protection

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

Eye protection

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).

Skin and body protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES:**Appearance**

Form clear, liquid
Color colorless

Safety data

pH 2 - 3.5 (400 g/l)
Melting Point -50 - -15 °C
Boiling Point 103.6 °C (1,013 hPa)
Flash Point Non-flammable
Ignition temperature no data available
Lower exposure limit For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.
Upper exposure limit no data available
Vapor pressure no data available
Water solubility no data available
Relative density 1.270 g/cm³

10. Stability and Reactivity**Storage stability**

Stable under recommended storage conditions.

Materials to avoid

no data available

Chemical stability

Stable under recommended storage conditions.

Incompatible materials

Strong bases, strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen iodide

Other decomposition products - No data available

In the event of fire: see section 5

11. Toxicological Information

Acute toxicity

no data available

Skin corrosion/irritation

no data available

Serious eye damage/eye irritation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity**Reproductive toxicity**

No data available

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

Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Reproductive toxicity

no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

Additional Information

No data available.

12. Ecological Information**Aquatic toxicity**

Assessment of aquatic toxicity:

Acutely harmful for aquatic organisms. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations

Toxicity to fish

LC50 (96 h) > 186 - < 272 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

The details of the toxic effect relate to the nominal concentration. The ecological data given are those of the active ingredient.

Aquatic invertebrates

EC50 (48 h) 161 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

Nominal concentration. The ecological data given are those of the active ingredient.

LC50 (96 h) 76.0 mg/l, *Americamysis bahia* (other, semistatic)

The details of the toxic effect relate to the nominal concentration. The ecological data given are those of the active ingredient.

Aquatic plants

EC50 (72 h) > 40 mg/l (growth rate), *Scenedesmus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The ecological data given are those of the active ingredient.

EC10 (72 h) > 10 mg/l (growth rate), *Scenedesmus subspicatus* (OECD Guideline 201, static)

The details of the toxic effect relate to the nominal concentration. The ecological data given are those of the active ingredient.

EC50 (72 h) 347.1 mg/l (growth rate), *Skeletonema costatum* (OECD Guideline 201)

The details of the toxic effect relate to the nominal concentration. The ecological data given are those of the active ingredient.

No observed effect concentration (72 h) 118.4 mg/l (growth rate), *Skeletonema costatum* (OECD Guideline 201)

The details of the toxic effect relate to the nominal concentration. The ecological data given are those of the active ingredient

Chronic toxicity to fish

No observed effect concentration (34 d) 112 mg/l, *Pimephales promelas* (OPP 72-4 (EPA-Guideline), Flow through.)

The ecological data given are those of the active ingredient. The statement of the toxic effect relates to the analytically determined concentration.

Chronic toxicity to aquatic invertebrates

No observed effect concentration (21 d) 3.19 mg/l, *Daphnia magna* (OECD Guideline 211, semistatic)

The statement of the toxic effect relates to the analytically determined concentration. The ecological data given are those of the active ingredient.

Assessment of terrestrial toxicity

Toxic effects have been observed in studies with soil living organisms. Toxic effects have been observed in studies with terrestrial plants.

Soil living organisms

Toxicity to soil dwelling organisms:

LC50 (14 d) > 135 mg/kg, Eisenia foetida (OECD Guideline 207, artificial soil)

The ecological data given are those of the active ingredient. The details of the toxic effect relate to the nominal concentration.

EC50 (28 d) > 1,054 mg/kg, soil dwelling microorganisms (OECD 217, natural soil)

The details of the toxic effect relate to the nominal concentration. The data have been calculated from values for a preparation with a lower substance concentration. The ecological data given are those of the active ingredient.

EC50 (28 d) > 1,054 mg/kg, soil dwelling microorganisms (OECD 216, natural soil)

The details of the toxic effect relate to the nominal concentration. The data have been calculated from values for a preparation with a lower substance concentration. The ecological data given are those of the active ingredient.

Toxicity to terrestrial plants

No observed effect concentration (21 d) 314 mg/kg, Brassica napus (OECD Guideline 208)

The ecological data given are those of the active ingredient. The data have been deduced from values for a preparation or mixture with a lower substance concentration.

Other terrestrial non-mammals

No data available.

13. Disposal Considerations

Waste disposal of substance:

Incinerate in suitable incineration plant, observing local authority regulations.

14. Transportation Information

DOT (US)

Not Dangerous Goods

IMDG

Not Dangerous Goods

IATA

Not Dangerous Goods

15. Regulatory Information

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 (DeMinimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act CAS-No. Revision Date

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	
Ethandial	107-22-2	

New Jersey Right To Know Components

	CAS-No.	Revision Date
Water	7732-18-5	
Ethandial	107-22-2	

16. OTHER INFORMATION:

Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
Eye Dam.	Serious eye damage
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
Muta.	Germ cell mutagenicity
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitisation

HMIS Rating

Health hazard:	2
Chronic Health Hazard:	*
Flammability:	0
Physical Hazard	0

NFPA Rating

Health hazard:	2
Fire Hazard:	0
Reactivity Hazard:	0

Further Information

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