

Material Safety Data Sheet

Version:01

Revision Date 5/5/2025

Section 1. Product Information and Company Identification

Product name	Glutaraldehyde Solution		
Mol. formula	C5H8O2	CAS No.	111-30-8
Mol.wt	100.12 g/mol		
Manufacturer name	Pioneers for laboratory chemicals		
Brand name	Piochem		
Address	Area 540, Industrial Zone 6 th October city Giza, Egypt.		
Website	www.piochem.com		
E-mail	info@piochem.com		
Phone number	+201225728304 , +201023932115		

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 4), H332

Skin corrosion (Category 1B), H314

Respiratory sensitisation (Category 1), H334

Skin sensitisation (Category 1), H317

Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335

Acute aquatic toxicity (Category 1), H400

Chronic aquatic toxicity (Category 2), H411

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

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H302 + H332

Harmful if swallowed or if inhaled

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284	Wear respiratory protection.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Supplemental Hazard Statements	none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms : Glutaric dialdehyde solution
Gluteraldehyde
Pentane-1,5-dial

Formula : $C_5H_8O_2$
Molecular weight : 100.12 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component			Classification	Concentration
Glutaral				
CAS-No.	111-30-8		Acute Tox. 3; Skin Corr. 1B;	>= 25 - < 30 %
EC-No.	203-856-5		Resp. Sens. 1; Skin Sens. 1;	
Index-No.	605-022-00-X		Aquatic Acute 1; Aquatic Chronic 2; H301, H331, H314, H334, H317, H400, H411	
			Concentration limits: >= 10 %: Skin Corr. 1B, H314; 0.5 - < 10 %: Skin Irrit. 2, H315; 2 - < 10 %: Eye Dam. 1, H318; 0.5 - < 2 %: Eye Irrit. 2, H319; >= 0.5 %: Skin Sens. 1, H317; >= 0.5 %: STOT SE 3, H335;	
			M-Factor - Aquatic Acute: 1	
Methanol				
CAS-No.	67-56-1		Flam. Liq. 2; Acute Tox. 3;	>= 0.1 - < 1 %
EC-No.	200-659-6		STOT SE 1; H225, H301, H331, H311, H370	
Index-No.	603-001-00-X		Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371;	

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.

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

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

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 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

4.3 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

Carbon oxides
Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. For personal protection see section 8.

6.2 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.

6.3 Methods and materials for containment and cleaning up

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

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. 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.

Recommended storage temperature -20 °C

Store under inert gas. Air sensitive.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****8.2 Exposure controls****Appropriate engineering controls**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment**Eye/face protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin 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.

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.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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).

Control of environmental exposure

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

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties**

- | | |
|--------------------|------------------------------------|
| a) Appearance | Form: liquid
Colour: colourless |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | 2.9 |

- | | |
|---|----------------------|
| e) Melting point/freezing point | -10 °C |
| f) Initial boiling point and boiling range | 101 °C at 1,013 hPa |
| 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) Vapour pressure | 0.0152 mmHg at 20 °C |
| l) Vapour density | No data available |
| m) Relative density | 1.061 g/cm3 |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
| 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 safety information

No data available

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

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides

In the event of fire: see section 5

SECTION 11: Toxicological information**11.1 Information on toxicological effects****Acute toxicity**

No data available

LD50 Oral - Rat - 134 mg/kg(Glutaral)

LC50 Inhalation - Rat - 4 h - 0.48 mg/l(Glutaral)

Remarks: Inhalation may effect the following organs: Lungs, Thorax, or Respiration:Dyspnea. Material is irritating to mucous membranes and upper respiratory tract.

LD50 Dermal - Rat - > 2,500 mg/kg(Glutaral)

Remarks: Prolonged skin contact may cause skin irritation and/or dermatitis.

Skin corrosion/irritation

Skin - Rabbit(Glutaral)

Result: Causes burns.

(OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit(Glutaral)

Result: Severe eye irritation - 24 h

Respiratory or skin sensitisation

May cause allergic respiratory and skin reactions Chronic exposure may cause dermatitis. largely based on human evidence(Glutaral)

Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)(Glutaral)

Germ cell mutagenicity

No data available(Glutaral)

Carcinogenicity

This product is or contains a component that is not classifiable as to its classification.(Glutaral)
(Glutaral)

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available(Glutaral)

Specific target organ toxicity - single exposure

No data available(Glutaral)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available(Glutaral)

Additional Information

RTECS: Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting(Glutaral)

Liver - Irregularities - Based on Human Evidence(Glutaral)

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 3.5 mg/l - 96.0 h(Glutaral)

Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 0.75 mg/l - 48 h(Glutaral)

Toxicity to algae

EC50 - Desmodesmus subspicatus (green algae) - 0.61 mg/l - 72 h(Glutaral)

NOEC - Desmodesmus subspicatus (green algae) - 0.025 mg/l - 72 h(Glutaral)

12.2 Persistence and degradability

Biodegradability

Biotic/Aerobic - Exposure time 28 d(Glutaral)

Result: 90 - 100 % - Readily biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available(Glutaral)

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Very toxic to aquatic life.

SECTION 13: Disposal considerations**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 3265

IMDG: 3265

IATA: 3265

14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaral)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaral)

IATA: Corrosive liquid, acidic, organic, n.o.s. (Glutaral)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H302 + H332	Harmful if swallowed or if inhaled
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H371	May cause damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.