



Health	2
Fire	0
Reactivity	0
Personal Protection	H

## Material Safety Data Sheet

### Glutaraldehyde Solution, 24% MSDS

#### Section 1: Chemical Product and Company Identification

**Product Name:** Glutaraldehyde Solution, 24%

**Catalog Codes:** SLG1405

**CAS#:** Mixture.

**RTECS:** Not applicable.

**TSCA:** TSCA 8(b) inventory: Glutaraldehyde; Water

**CI#:** Not available.

**Synonym:** Glutaraldehyde Solution, 24%;

**Chemical Name:** Not applicable.

**Chemical Formula:** Not applicable.

**Contact Information:**

**Sciencelab.com, Inc.**

14025 Smith Rd.

Houston, Texas 77396

US Sales: **1-800-901-7247**

International Sales: **1-281-441-4400**

Order Online: [ScienceLab.com](http://ScienceLab.com)

**CHEMTREC (24HR Emergency Telephone), call:**

1-800-424-9300

**International CHEMTREC, call:** 1-703-527-3887

**For non-emergency assistance, call:** 1-281-441-4400

#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Glutaraldehyde	111-30-8	23.5-24.5
Water	7732-18-5	75.5-76.5

**Toxicological Data on Ingredients:** Glutaraldehyde: ORAL (LD50): Acute: 134 mg/kg [Rat]. 100 mg/kg [Mouse]. DERMAL (LD50): Acute: >2500 mg/kg [Rat]. >5840 mg/kg [Mouse]. VAPOR (LC50): Acute: 480 mg/m 4 hours [Rat].

#### Section 3: Hazards Identification

**Potential Acute Health Effects:**

Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation (lung irritant, lung sensitizer). Slightly hazardous in case of skin contact (sensitizer, permeator). Severe over-exposure can result in death.

**Potential Chronic Health Effects:**

**CARCINOGENIC EFFECTS:** Classified A4 (Not classifiable for human or animal.) by ACGIH [Glutaraldehyde]. **MUTAGENIC EFFECTS:** Mutagenic for mammalian somatic cells. [Glutaraldehyde]. Mutagenic for bacteria and/or yeast. [Glutaraldehyde]. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [Glutaraldehyde]. The substance may be toxic to blood, the reproductive system, liver, mucous membranes, spleen, central nervous system (CNS), urinary system. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

## Section 4: First Aid Measures

### **Eye Contact:**

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

### **Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.

### **Serious Skin Contact:**

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

### **Inhalation:**

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

### **Serious Inhalation:**

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. **WARNING:** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

### **Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

**Serious Ingestion:** Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Non-flammable.

**Auto-Ignition Temperature:** Not applicable.

**Flash Points:** Not applicable.

**Flammable Limits:** Not applicable.

**Products of Combustion:** Not available.

**Fire Hazards in Presence of Various Substances:** Not applicable.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:** Not applicable.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

### **Small Spill:**

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

### **Large Spill:**

Poisonous liquid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep locked up.. Do not ingest. Do not breathe gas/fumes/ vapor/spray. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes.

**Storage:** Refrigerate. Keep container tightly closed. Keep container in a cool, well-ventilated area.

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

Glutaraldehyde TWA: 0.2 (ppm) [Australia] TWA: 0.82 (mg/m3) [Australia] TWA: 0.25 CEIL: 0.2 (ppm) from NIOSH CEIL: 0.2 (ppm) from OSHA (PEL) [United States] TWA: 0.05 STEL: 0.05 (ppm) [United Kingdom (UK)] Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Not available.

**Taste:** Not available.

**Molecular Weight:** Not applicable.

**Color:** Clear Colorless.

**pH (1% soln/water):** pH of 24% solution: 3.5 [Acidic.]

**Boiling Point:** 101°C (213.8°F)

**Melting Point:** -6°C(21.2°F) - -7 C

**Critical Temperature:** Not available.

**Specific Gravity:** 1.062 - 1.124(Water = 1)

**Vapor Pressure:** The highest known value is 2.3 kPa (@ 20°C) (Glutaraldehyde).

**Vapor Density:** 1.05 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** The highest known value is 0.04 ppm (Glutaraldehyde)

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water, diethyl ether.

**Solubility:**

Easily soluble in cold water. Soluble in diethyl ether. Soluble in benzene, ethanol and other organic solvents.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Conditions to avoid: exposure to air, and excess heat. (Glutaraldehyde)

**Incompatibility with various substances:** Slightly reactive to reactive with oxidizing agents, alkalis.

**Corrosivity:** Non-corrosive in presence of glass.

**Special Remarks on Reactivity:**

Also incompatible with amines, ammonia and other caustics (e.g. ammonium hydroxide, calcium hydroxide, potassium hydroxide, and sodium hydroxide). Alkaline solutions react with alcohol, ketones, amines, hydrazines and proteins. (Glutaraldehyde)

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Will not occur.

## Section 11: Toxicological Information

**Routes of Entry:** Absorbed through skin. Eye contact.

**Toxicity to Animals:**

Glutaraldehyde: ORAL (LD50): DERMAL (LD50): VAPOR (LC50): Acute: 134 mg/kg [Rat]. 100 mg/kg [Mouse]. Acute: >2500 mg/kg [Rat]. >5840 mg/kg [Mouse]. Acute: 480 mg/m 4 hours [Rat]. 3

**Chronic Effects on Humans:**

CARCINOGENIC EFFECTS: Classified A4 (Not classifiable for human or animal.) by ACGIH [Glutaraldehyde]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Glutaraldehyde]. Mutagenic for bacteria and/or yeast. [Glutaraldehyde]. DEVELOPMENTAL TOXICITY: Classified Reproductive system/toxin/female, Reproductive system/toxin/male [SUSPECTED] [Glutaraldehyde]. Contains material which may cause damage to the following organs: blood, the reproductive system, liver, mucous membranes, spleen, central nervous system (CNS), Urinary system.

**Other Toxic Effects on Humans:**

Hazardous in case of skin contact (irritant), of ingestion, of inhalation (lung irritant, lung sensitizer). Slightly hazardous in case of skin contact (sensitizer, permeator).

**Special Remarks on Toxicity to Animals:**

Acute Toxicity: LD50 [Rabbit] dermal: Dose: 560 ul/kg. Reproductive Effects: TDL [male Rat] oral: Dose: 875 mg/kg given 35 days prior to mating TDL [female rat] oral: Dose 4370 mg/kg given 35 days prior to mating. (Glutaraldehyde)

**Special Remarks on Chronic Effects on Humans:**

May affect genetic material. Reproductive Effects in animals (rat): Paternal effects: testes, epididymis, sperm duct, prostate, seminal vesicle, Cowper's gland, accessory. Maternal effects: uterus, cervix, vagina (Glutaraldehyde)

**Special Remarks on other Toxic Effects on Humans:**

Potential Health Effects: Eye: Causes severe eye irritation. May cause eye injury or chemical conjunctivitis. Skin: Causes moderate to severe skin irritation. It may be absorbed through the skin, although poorly. May cause allergic contact dermatitis with itching and skin rash. May cause staining of the skin and nails to a brown or golden brown color. Ingestion: Harmful if swallowed. May cause severe irritation of the digestive tract with burning sensation in the chest, abdominal pain, cramping, vomiting, diarrhea (perhaps bloody diarrhea), vascular collapse, and coma. May also affect liver (increased liver enzymes, liver damage), spleen, blood (normocytic anemia), metabolism (weight loss), behavior (somnolence, excitement, dizziness, lethargy, ataxia, seizures), metabolism (weight loss), urinary system ( abnormal renal function, anuria) Inhalation: Harmful if inhaled. Can cause respiratory tract irritation and sudden headaches, nausea, and vomiting, chest pain, coryza, epistaxis when exposed to vapor or mist. May cause asthma. May also affect

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:**

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are less toxic than the product itself.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

**Waste Disposal:**

## Section 14: Transport Information

**DOT Classification:** Not a DOT controlled material (United States).

**Identification:** Not applicable.

**Special Provisions for Transport:** Not available.

## Section 15: Other Regulatory Information

**Federal and State Regulations:**

Pennsylvania RTK: Glutaraldehyde Florida: Glutaraldehyde Massachusetts RTK: Glutaraldehyde New Jersey: Glutaraldehyde California Director's List of Hazardous Substances: Glutaraldehyde TSCA 8(b) inventory: Glutaraldehyde; Water TSCA 8(a) PAIR: Glutaraldehyde TSCA 8(d) H and S data reporting: Glutaraldehyde: 9/30/91 to 9/30/01

**Other Regulations:** OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Other Classifications:**

**WHMIS (Canada):**

For Glutaraldehyde: CLASS D-1A: Material causing immediate and serious toxic effects (VERY TOXIC). CLASS D-2A: Material causing other toxic effects (VERY TOXIC).

**DSCL (EEC):**

For Glutaraldehyde: R23/25- Toxic by inhalation and if swallowed. R37/38- Irritating to respiratory system and skin. R41- Risk of serious damage to eyes. R42/43- May cause sensitization by inhalation and skin contact. R50- Very toxic to aquatic organisms. R20- Harmful by inhalation. R22- Harmful if swallowed. For Glutaraldehyde: S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39- Wear suitable gloves and eye/face protection. S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). S36- Wear suitable protective clothing. S61- Avoid release to the environment. Refer

**HMIS (U.S.A.):**

**Health Hazard:** 2

**Fire Hazard:** 0

**Reactivity:** 0

**Personal Protection:** h

**National Fire Protection Association (U.S.A.):**

**Health:** 2

**Flammability:** 0

**Reactivity:** 0

**Specific hazard:**

**Protective Equipment:**

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

## Section 16: Other Information

**References:** Not available.

**Other Special Considerations:** Not available.

**Created:** 10/09/2005 05:38 PM

**Last Updated:** 05/21/2013 12:00 PM

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