

SAFETY DATA SHEET

1. IDENTIFICATION

Product name: Glyoxal (39% in Water, ca. 8.8mol/L)
Product code: G0152

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

PHYSICAL HAZARDS

Not classified

HEALTH HAZARDS

Acute toxicity (Oral)	Category 5
Acute toxicity (Inhalation)	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1
Germ cell mutagenicity	Category 2
Specific target organ toxicity	Respiratory system Kidney Central nervous system Lung
- Single exposure [Category 2]	Adrenal gland
Specific target organ toxicity	Respiratory system
- Repeated exposure [Category 1]	

ENVIRONMENTAL HAZARDS

Acute aquatic hazard Category 3

Label elements

Pictograms or hazard symbols



Signal word

Danger

Hazard statements

May be harmful if swallowed
 Harmful if inhaled
 Causes skin irritation
 Causes serious eye irritation
 May cause an allergic skin reaction
 Suspected of causing genetic defects
 May cause damage to organs : Respiratory system Kidney
 Central nervous system Lung Adrenal gland
 Causes damage to organs through prolonged or repeated
 exposure : Respiratory system
 Harmful to aquatic life

Precautionary statements
 [Prevention]

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe mist, vapors or spray.

Use only outdoors or in a well-ventilated area.

Avoid release to the environment.

Do not eat, drink or smoke when using this product.

Contaminated work clothing should not be allowed out of the workplace.

Wash hands and face thoroughly after handling.

Wear protective gloves, protective clothing, face protection.

[Response]

IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs:

Take off contaminated clothing. And wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

If exposed or concerned: Call a POISON CENTER or doctor.

[Storage]

Store locked up.

[Disposal]

Dispose of contents and container in accordance with local, regional, national regulations.

Other hazards which do not result in classification

May cause polymerization.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/mixture:	Mixture
Components:	Glyoxal (39% in Water, ca. 8.8mol/L)
Percent:
CAS RN:	107-22-2
Chemical Formula:	C ₂ H ₂ O ₂

4. FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician.
Skin contact:	Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. Call a POISON CENTER or doctor/physician.
Eye contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Call a POISON CENTER or doctor/physician.
Ingestion:	Call a POISON CENTER or doctor/physician. Rinse mouth.
Protection of first-aiders:	A rescuer should wear personal protective equipment, such as rubber gloves and air-tight goggles.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media:	Dry chemical, foam, water spray, carbon dioxide.
Specific hazards arising from the chemical:	This substance may polymerize explosively when heated or involved in a fire. Container may explode when heated. Combat fire from a sheltered position.
Precautions for firefighters:	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
Special protective equipment for firefighters:	When extinguishing fire, be sure to wear personal protective equipment

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:	Use personal protective equipment. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.
Environmental precautions:	Prevent product from entering drains.
Methods and materials for containment and cleaning up:	Absorb spilled material in dry sand or inert absorbent before recovering it into a covered container. In case of large amount of spillage, contain a spill by bunding. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures: Handling is performed in a well ventilated place. Wear suitable protective equipment. Prevent generation of vapour or mist. Wash hands and face thoroughly after handling.
Use a closed system if possible. Use a ventilation, local exhaust if vapour or aerosol will be generated.

Advice on safe handling: Avoid all contact!

Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Store in a cool and dark place.
Store locked up.
Store away from incompatible materials such as oxidizing agents.

Packaging material: Comply with laws.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls: Install a closed system or local exhaust. Also install safety shower and eye bath.

Exposure limits:

ACGIH TLV(TWA): 0.1 mg/m³ (IFV) (sen)

Personal protective equipment

Respiratory protection: Half or full facepiece respirator, self-contained breathing apparatus(SCBA), supplied air respirator, etc. Use respirators approved under appropriate government standards and follow local and national regulations.

Hand protection: Impervious gloves.

Eye protection: Safety goggles. A face-shield, if the situation requires.

Skin and body protection: Impervious protective clothing. Protective boots, if the situation requires.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Liquid
Form: Clear
Colour: Colorless - Slightly pale yellow
Odour: No data available
pH: 2.1 - 2.7
Melting point/freezing point: No data available
Boiling point/range: No data available
Flash point: No data available
Flammability or explosive limits:
Lower: No data available
Upper: No data available
Vapour pressure: 2.4kPa/20°C
Relative density: 1.27
Solubility(ies):
[Water] No data available
[Other solvents] No data available
Log Pow: -0.85
Autoignition temperature: 285°C

10. STABILITY AND REACTIVITY

Chemical stability: Polymerization may occur under the influences of heat, light or on contact with polymerization initiators such as peroxides etc.

Possibility of hazardous reactions: No special reactivity has been reported.

Conditions to avoid: Heat, Light

Incompatible materials: Oxidizing agents, Strong bases

Hazardous decomposition products: Carbon dioxide, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:	orl-rat LD50:2960 mg/kg skn-rbt LD50:10 mL/kg ihl-rat LC50:2410 mg/m ³ /4H
Skin corrosion/irritation: Serious eye damage/irritation:	skn-rbt 258 mg open MLD eye-rbt 100 uL MLD
Germ cell mutagenicity: Carcinogenicity:	No data available
IARC = NTP =	No data available No data available
Reproductive toxicity:	No data available
RTECS Number:	MD2700000

12. ECOLOGICAL INFORMATION

Ecotoxicity:	
Fish:	96h LC50:215 mg/L (Pimephales promelas)
Crustacea:	No data available
Algae:	96h EC50:66.48 mg/L (Selenastrum capricornutum)
Persistence / degradability:	65 % (by BOD) , 98 % (by TOC)
Bioaccumulative potential(BCF):	No data available
Mobility in soil	
Log Pow:	-0.85
Soil adsorption (Koc):	No data available
Henry's Law (PaM³/mol):	No data available

13. DISPOSAL CONSIDERATIONS

Recycle to process, if possible. Consult your local regional authorities. Observe all federal, state and local regulations when disposing of the substance.

14. TRANSPORT INFORMATION

Hazards Class:	Does not correspond to the classification standard of the United Nations
UN-No:	Not listed

15. REGULATORY INFORMATION

Regulations on the Control over Safety of Dangerous Chemicals (State Council announces on January 26, 2002 and revised on February 16,2011): Safe use and production, the storage of a dangerous chemical, transport, loading and unloading were prescribed.

This SDS was prepared sincerely on the basis of the information we could obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.