

GLYOXAL - 40%

MSDS

September 2007

1. Substance and Company identification:

Substance:	Company
Chemical Name.....Glyoxal	Amzole India Pvt. Ltd.
Chemical formula.....C ₂ H ₂ O ₂	41, Udhog Vihar
Molecular weight.....58	Sukher, Udaipur 313004
CAS Number.....107-22-2	India

2. Ingredients

Ingredient	CAS Number	Percent	Hazardous
Glyoxal	107-22-2	40	Yes
Water	7732-18-5	60	No

3. Hazard identification

Emergency Overview:

Ingestion may damage kidney and liver.
 Causes irritation to skin on contact.
 Contains a suspect teratogen
 Causes irritation to respiratory tract on inhalation.

Potential health effects:

Harmful when swallowed.
 Causes sensitization in humans.

Potential Environmental effects:

When introduced in appropriate concentrations in treatment plants, the degradation activity of the sludge is expected to be inhibited.

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4. First aid measures

Inhalation:

Remove affected individual to fresh air. If not breathing or breathing is difficult, give artificial respiration. Get immediate medical attention.

Ingestion:

Do not induce vomiting. Rinse mouth and drink plenty of water. Do not give anything to the individual if unconscious. Get immediate medical attention.

Skin contact:

Flush affected area with water and wash with soap. Remove and wash contaminated clothing before reuse. Get medical attention if irritation persists.

Eye contact:

Flush eye with water for at least 15 minutes, occasionally lifting upper and lower eyelids. Seek immediate medical attention.

5. Fire fighting measures

Fire:

Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard. Dry Glyoxal may explode when mixed with air.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH approved self contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

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6. Accidental release measures

Personal safety measures:

Avoid contact with eyes, skin and clothing.

Cleanup:

Pump material in case of large amounts.

Use suitable absorbent material like sand, sawdust etc to cleanup residual quantities.

Environmental safety measures:

Do not flush to sewers or any surrounding water bodies.

7. Handling and storage

Storage:

Store in a tightly closed containers in cool, dry and ventilated area.

Shelf life: 12 months

The product may turn yellow after an extended period of storage.

Handling:

Containers may be hazardous even when empty, as it may contain product residue. Observe all warnings and precautions when handling product.

8. Exposure controls and personal protection

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below recommended Airborne Exposure Limits. Local exhaust ventilation is preferred as it can control the emissions of the contaminant at its source, preventing substance dispersion into the general work area.

Personal Respirators (NIOSH Approved):

For conditions, where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full face positive pressure, air supplied respirator.

WARNING: Air purifying respirators do not protect workers in oxygen deficient atmospheres.

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Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick drench facilities in work area.

9. Physical and Chemical properties

Assay, %	40 ± 0.5
pH Value	2 – 3.5
Max. Acidity, %	0.3
Max. Ash, by mass %	0.05
Density @ 20°C, g/cc	1.26 – 1.27
Max Color, APHA	30
Ignition temperature, °C	285

10. Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Peroxide formation not expected in the presence of inhibitors. Dry Glyoxal polymerizes quickly on standing, on contact with water (violent reaction), or solvents containing water.

Incompatibilities:

Reacts weakly to acids. Incompatible with strong oxidizing agents, strong bases, silver, copper and iron salts. Corrosive to most metals.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.

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11. Toxicological Information

Oral:

LD50/rat: 2,000 - 5,000 mg/kg

Moderately toxic.

Inhalation:

LC50/rat: 2.44 mg/l / 4 h

An aerosol was tested

Inhalation-risk test (IRT):

No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

Dermal:

LD50/rat: > 2,000 mg/kg

Skin irritation:

Rabbit (open Draize): 258 mg,

Mild

Eye irritation:

Rabbit: Nonirritating. (OECD Guideline 405)

Sensitization:

Guinea pig maximization test: Caused sensitization in animal studies

Genetic toxicity:

Considered to be mutagenic

Teratogenicity:

Contains teratogen

12. Ecological Information

Biodegradation:

Readily biodegradable

Bioaccumulation:

Accumulation in organisms is not to be expected.

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Chemical oxygen demand (COD):
350 mg/g

Biochemical oxygen demand (BOD):
Incubation period 5.0 d: 175 mg/g

13. Disposal consideration

Waste Disposal:
Incineration while observing proper environmental measures.

Container Disposal:
Uncontaminated containers can be recycled.

14. Transport information

Not regulated

15. Other information

NFPA Ratings:
Health: 1 **Flammability:** 0 **Reactivity:** 0

Label Hazard Warning:
WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT.

Label Precautions:
Avoid breathing vapor.
Avoid contact with eyes, skin and clothing.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.

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Label First Aid:

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. In all cases, get medical attention.
