

MATERIAL SAFETY DATA SHEET

Version :01

PRODUCT NAME: GLUTARALDEHYDE SOLUTION, 25 % IN WATER

CAS Number: 111-30-8

1. IDENTIFICATION:

Product Code : 90612, 96085

Company Name : ADVENT CHEMBIO PRIVATE LIMITED

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2. HAZARDS IDENTIFICATION:**Hazard classification****Health hazards**

Acute toxicity, Oral : Category 4

Skin irritation/corrosion : Category 2

Serious eye damage/ Eye irritation : Category 1

Skin sensitization : Category 1

Specific target organ toxicity – single exposure : Category 3

Labels elements :

Hazard symbol :



Signal word : Danger

Hazard statement

- Harmful if swallowed.
- Causes serious eye irritation.
- Causes skin irritation.
- May cause respiratory irritation.
- May cause an allergic skin reaction.
- Very toxic to aquatic life.

Precautionary statement

Prevention :

- Obtain special instructions before use.
- Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Do not handle until all safety precautions have been read and understood.
- Wear protective gloves/ protective clothing/ eye protection/ face protection.
- Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- Keep container tightly closed. Ground/ bond container and receiving equipment.
- Use explosion-proof electrical/ ventilating/ lighting/ equipment.
- Use only non-sparking tools. Avoid release to the environment.



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- Response** : IF exposed or concerned: Get medical advice/ attention.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- Storage** : Store at ambient temperature in a dry and well ventilated place. Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Disposal** : Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
- Other hazards which do not result in GHS classification** : None.

3. COMPOSITION/ INFORMATION ON INGREDIENTS:

Ingredient	CAS Number	Percent	Hazardous
Glutaraldehyde Solution, 25 % in Water	111-30-8	NLT 25.0%	Yes

4. FIRST AID MEASURES:

- General information** : Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.
- Ingestion** : Call a physician or poison control center immediately. Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
- Inhalation** : Move to fresh air. Call a physician or poison control center immediately. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.
Get medical attention if symptoms persist.
- Skin contact** : Wash the skin immediately with soap and water. If skin irritation or an allergic skin reaction develops, get medical attention. Wash contaminated clothing before reuse.
- Eye contact** : Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.. In case of irritation from airborne exposure, move to fresh air.
- Most important symptoms/effects, acute and delayed** : Harmful if swallowed. Causes serious eye damage. Irritating to eyes, respiratory system and skin.
- Indication of immediate medical attention and special treatment needed** : Symptoms may be delayed. Treat symptomatically.

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5. FIRE FIGHTING MEASURES:

General information	:	In case of fire and/or explosion do not breathe fumes. Move container from fire area if it can be done without risk. Use water spray to keep fire-exposed containers cool.
Suitable (and unsuitable) extinguishing media	:	
Suitable extinguishing media	:	Use fire-extinguishing media appropriate for surrounding materials
Unsuitable extinguishing media	:	None known.
Specific hazards arising from the chemical	:	May burn, but does not ignite readily.
Special protective equipment and precautions for firefighters	:	
Special firefighting procedures	:	Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected location. Move containers from fire area if you can do so without risk.
Special protective equipment for fire-fighters	:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. ACCIDENTAL RELEASE MEASURES:

Personal precautions, protective equipment and emergency procedures	:	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Avoid breathing mists or vapors. Keep upwind. Ventilate closed spaces before entering them. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.
Methods and material for containment and cleaning up	:	Eliminate all ignition sources if safe to do so. Use only non-sparking tools. Take precautionary measures against static discharges. Stop leak if possible without any risk. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.
Notification Procedures	:	Prevent entry into waterways, sewer, basements or confined areas. Inform authorities if large amounts are involved.
Environmental precautions	:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING AND STORAGE:

Precautions for safe handling	:	Do not handle until all safety precautions have been read and understood. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Wear protective gloves/protective clothing/eye protection/ face protection. Avoid contact with eyes, skin, and clothing. Do not breathe mist or vapor. Use only with adequate ventilation. Wash hands thoroughly after handling.
Conditions for safe storage, including any incompatibilities	:	Keep away from food, drink and animal feeding stuffs. Store at ambient temperature in a dry and well ventilated place. Keep the container tightly closed, away from heat. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

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Ground container and transfer equipment to eliminate static electric sparks. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids.

8. EXPOSURE CONTROLS PERSONAL PROTECTION:**Control parameters****Occupational exposure limits** : None established.**Appropriate engineering controls** : No data available**Individual protection measures, such as personal protective equipment****General information** : Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. Use explosion-proof ventilation equipment.**Eye/face protection** : Wear safety glasses with side shields (or goggles).**Hand protection** : Chemical resistant gloves.**Other** : Wear suitable protective clothing.**Respiratory protection** : If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.**Hygiene measures** : Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing.**9. PHYSICAL AND CHEMICAL PROPERTIES:****Appearance** : Clear, colourless to pale yellowish liquid with a pungent, aldehydic odour**Odor** : Characteristics**Solubility** : No data available.**Formula** : $C_5H_8O_2$ **Molecular Weight** : 100.12 g/mol**Specific Gravity** : 1.06 g/cm³ at 25°C

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pH	:	NLT 3.0
% Volatiles by volume @ 21C (70F)	:	No data available.
Boiling Point	:	101°C
Melting Point	:	-10°C
Flash Point	:	No data available.
Vapor Density (Air=1)	:	No data available.
Vapor Pressure (mm Hg)	:	0.2 kPa @ 25°C
Evaporation Rate (BuAc=1)	:	No data available.

10. STABILITY AND REACTIVITY:

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	Material is stable under normal conditions..
Possibility of hazardous reactions	:	Hazardous polymerization does not occur.
Conditions to avoid	:	Heat, sparks, flames. Sunlight.
Incompatible materials	:	Contact with alkalis. Oxidizing agents.
Hazardous decomposition products	:	Fire or excessive heat may produce hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION:

Information on likely routes of exposure

Ingestion	:	Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed.
Inhalation	:	May cause irritation to the mucous membranes and upper respiratory tract. May cause central nervous system effects
Skin contact	:	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	:	Causes serious eye damage.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product	:	LD 50 (Rat): 96.1 mg/kg LD 50 (Mouse): 100 mg/kg
Dermal Product	:	LD 50 (Rabbit): 2,560 mg/kg
Inhalation Product	:	LC 50 (Rat, 4 h): 24 mg/l
Repeated dose toxicity Product	:	No data available.

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Skin corrosion/irritation Product	:	Prolonged or repeated skin contact may cause drying, cracking, or irritation
Serious eye damage/eye irritation Product	:	Irritating to eyes.
Respiratory or skin sensitization Product	:	May cause an allergic skin reaction.
Carcinogenicity Product	:	This substance has no evidence of carcinogenic properties
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans	:	No carcinogenic components identified.
US. National Toxicology Program (NTP) Report on Carcinogens	:	No carcinogenic components identified.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	:	No carcinogenic components identified.
Germ cell mutagenicity	:	
In vitro Product	:	No data available.
Reproductive toxicity Product	:	No components toxic to reproduction .
Specific target organ toxicity - single exposure Product	:	Not known.
Specific target organ toxicity - repeated exposure Product	:	None known.
Aspiration hazard Product	:	May be harmful if swallowed and enters airways .
Other effects	:	None known.

12. ECOLOGICAL INFORMATION:**Ecotoxicity****Acute hazards to the aquatic environment**

Fish Product	LC 50 (Bluegill Sunfish, 96 h): 13 mg/l
Specified substance(s):	LC 50 (Bluegill Sunfish, 24 h): 19 mg/l
GLUTARALDEHYDE	LC 50 (Bluegill Sunfish, 48 h): 13 mg/l
	LC 50 (Bluegill Sunfish, 72 h): 13 mg/l
	LC 50 (Rainbow Trout, 24 h): 17 mg/l
Aquatic invertebrates	LC 50 (Water Flea, 48 h): 16.3 mg/l
Product	LC 50 (Grass Shrimp, 96 h): 41 mg/l
	LC 50 (Green or European shore crab (Carcinus maenas), 96 h): 465 mg/l

Chronic hazards to the aquatic environment

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- Fish Product** : No data available.
- Aquatic invertebrates Product** : No data available.
- Toxicity to Aquatic Plants Product:** : No data available.
- Persistence and degradability**
- Biodegradation Product** : The product is not expected to be biodegradable.
- BOD/COD ratio Product** : No data available.
- Bioaccumulative potential**
- Bioconcentration factor (BCF) Product** : No data available on bioaccumulation.
- Partition coefficient n-octanol / water (log Kow) Product** : No data available.
- Mobility in soil** : No data available.
- Other adverse effects** : Very toxic to aquatic organisms

13. DISPOSAL CONSIDERATION:

- Disposal instructions** : Discharge, treatment, or disposal may be subject to national, state, or local laws. Disposal recommendations are based on uncontaminated material.
- Contaminated packaging** : Since emptied containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION:

	UN No.	UN proper shipping name	Hazard Class(es)	Packaging group	Marine Pollutant
DOT	UN 3082	Glutaraldehyde Solution, 25 % in Water	9	III	No
IMDG	UN 3082	Glutaraldehyde Solution, 25 % in Water	9	III	No
IATA	UN 3082	Glutaraldehyde Solution, 25 % in Water	9	III	No

15. REGULATORY INFORMATION:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006. Safety, health and environmental regulations/legislation specific for the substance or mixture
No Data Available.

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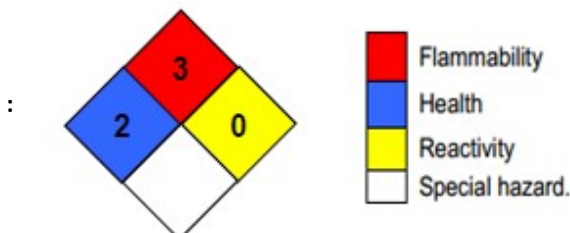
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16. OTHER INFORMATION:

NFPA Hazard ID



Hazard rating: 0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe

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