

Safety data sheet

Revision date : 2006/01/12
Version: 1.0

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(30174148/MDS GEN US/EN)

1. Substance/preparation and company identification

Company

Amber Chemical, Inc.
5201 Boylan Street
Bakersfield, CA 93308

24 Hour Emergency Response Information

CHEMTREC: (800) 424-9300

Molecular formula: CHO(CH₂)₃CHO
Chemical family: dialdehydes
Synonyms: GLUTARALDEHYDE

2. Composition/information on ingredients

<u>CAS Number</u>	<u>Content (W/W)</u>	<u>Chemical name</u>
7732-18-5	85.0 %	Water
111-30-8	15.0 %	glutaral

3. Hazard identification

Emergency overview

DANGER: CORROSIVE.
Corrosive to eyes.
CAUSES IRREVERSIBLE EYE DAMAGE.
CAUSES ASTHMATIC SIGNS AND SYMPTOMS IN HYPER-REACTIVE INDIVIDUALS.
CAUSES SKIN IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
HARMFUL IF INHALED.
HARMFUL IF SWALLOWED.
HARMFUL IF ABSORBED THROUGH SKIN.
Do not get in eyes, on skin, or on clothing.
Avoid inhalation of mists/vapours.
Provide local exhaust ventilation to control vapours/mists.
Wear NIOSH-certified chemical goggles.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.

Potential health effects

Primary routes of exposure

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquified gases.

Irritation:

Information on: Glutaraldehyde

Eye and skin contact with glutaraldehyde causes severe irritation; burns and permanent injury may result. Prolonged or repeated skin contact with glutaraldehyde may result in dermatitis.

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Sensitization:

May cause sensitization by inhalation and skin contact.

Repeated dose toxicity:

Information on: *Glutaraldehyde*

Overexposures have been known to produce liver damage in animal studies. Fetotoxicity and embryotoxicity in the presence of maternal toxicity has been shown to occur in rabbits at a high dose of 45 mg/kg.

Medical conditions aggravated by overexposure:

Contact may aggravate pulmonary disorders.

Potential environmental effects

Aquatic toxicity:

Acutely toxic for aquatic organisms.

Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible.

4. First-aid measures

General advice:

Remove contaminated clothing.

If inhaled:

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:

Wash affected areas thoroughly with soap and water. Immediate medical attention required.

If in eyes:

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

If swallowed:

Immediately rinse mouth and then drink plenty of water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary edema.

5. Fire-fighting measures

Flash point:

No data available.

Autoignition:

> 225 °C

(DIN 51794)

Suitable extinguishing media:

water, carbon dioxide, dry extinguishing media, foam

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Hazards during fire-fighting:
toxic gases/vapours

Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

NFPA Hazard codes:
Health : 3 Fire: 1 Reactivity: 0 Special:

6. Accidental release measures

Personal precautions:
Use personal protective clothing.

Environmental precautions:
Do not discharge into drains/surface waters/groundwater.

Cleanup:
Spills should be contained, solidified, and placed in suitable containers for disposal.

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations.
For large amounts: Pump off product.

Further information:
Pack in tightly closed containers for disposal.

7. Handling and storage

Handling

General advice:
Keep away from sources of ignition - No smoking. Handle in accordance with good industrial hygiene and safety practice. Keep container tightly sealed.

Storage

General advice:
Store protected against freezing.

Storage incompatibility:
General: Segregate from acids, alkalis or combustible materials. Segregate from oxidizing agents.
Segregate from incompatible substances.

8. Exposure controls and personal protection

Components with workplace control parameters

glutaral
ACGIH CLV 0.05 ppm ;

Advice on system design:
Provide local exhaust ventilation to control vapours/mists.

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Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator.

Hand protection:

Chemical resistant protective gloves

Eye protection:

Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Eye wash fountains and safety showers must be easily accessible. Wear protective clothing as necessary to prevent contact. Avoid inhalation of vapours/mists. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin and eyes. Remove contaminated clothing. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Form:	liquid	
Odour:	characteristic	
Colour:	yellow	
pH value:	approx. 3.6	
Freezing point:	approx. -5 °C	(1 ATM)
Boiling point:	> 100 °C	(1 ATM)
Relative density:	1.04	(20 °C)
Partitioning coefficient n-octanol/water (log Pow):	-0.36	(23 °C) (OECD Guideline 107)

10. Stability and reactivity

Substances to avoid:

acids, bases

Hazardous reactions:

The product is chemically stable.

Decomposition products:

Hazardous decomposition products:
carbon monoxide, carbon dioxide

Thermal decomposition:

No data available.

11. Toxicological information

Skin irritation:

rabbit: Irritant. (Draize test)

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Eye irritation :
rabbit: Severely irritating. (Draize test)

Sensitization:
Open epicutaneous test (OET)/guinea pig: sensitizing
The data rely to a diluted watery solution of the substance.
Literature data.

Chronic toxicity

Genetic toxicity:
The substance was mutagenic in various test systems with bacterias and cell cultures; however, these results could not be confirmed in tests with mammals.

Carcinogenicity:
In long-term animal studies in which the substance was given in the drinking water in high concentrations, a carcinogenic effect was not observed.

Reproductive toxicity:
Animal studies gave no indication of a fertility impairing effect at doses which were not toxic to the parental animals.

Developmental toxicity/teratogenicity:
No indications of a developmental toxic / teratogenic effect were seen in animal studies.

12. Ecological information

Environmental fate and transport

Biodegradation:
Test method: OECD 301 A (new version) (aerobic), activated sludge, domestic
Method of analysis: DOC reduction
Degree of elimination: 90 - 100 % (28 d)
Evaluation: Readily biodegradable (according to OECD criteria).
Readily biodegradable (according to OECD criteria).

Bioaccumulation:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Environmental toxicity

Acute and prolonged toxicity to fish:
See user defined text. static
sunfish, bluegill/LC50 (96 h): 13 mg/l
The details of the toxic effect relate to the nominal concentration.

Acute toxicity to aquatic invertebrates:
Directive 84/449/EEC, C.2 static
Daphnia magna/EC50 (48 h): 29.73 mg/l
The details of the toxic effect relate to the nominal concentration.

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Toxicity to aquatic plants:
OECD Guideline 201 static
green algae/EC50 (72 h): 1.20 mg/l
The statement of the toxic effect relates to the analytically determined concentration.

Toxicity to microorganisms:
bacteria (17 h): 13.3 mg/l

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations.
It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory information

Federal Regulations

Registration status:
TSCA, US released / listed

OSHA hazard category: Chronic target organ effects reported, Acute target organ effects reported,
Skin and/or eye irritant, Sensitizer, Toxic - oral, Highly toxic - inhalation, Corrosive to skin and/or eyes

SARA hazard categories (EPCRA 311/312): Acute, Chronic