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Specialized in chemicals

Safety Data Sheet

Glutaraldehyde SDS

Section 1: Chemical Product and Company Identification

1.1 Product identifiers

Product Name: Glutaraldehyde

CAS No: 111-30-8

1.2 Recommended use of the chemical and restrictions on use

Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company: Hefei TNJ Chemical Industry Co.,Ltd.

D1508 Xincheng Business Center

Qianshan Road, Hefei, 230004 Anhui, China

Telephone: (0086) 551 65418679

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1.4 Emergency telephone number

Emergency Phone # 0086) 551 65418678

Section 2: Hazards Identification

Summary of emergency

liquid, clear colorless Harmful if swallowed., Causes severe skin burns and eye damage.,
May cause an allergic skin reaction., Toxic if inhaled., May cause allergy or asthma symptoms or breathing difficulties if inhaled., May cause respiratory irritation., Very toxic to aquatic life with long lasting effects. First aiders need to protect themselves., Show this material safety data sheet to the doctor in attendance. After inhalation: fresh air.
Immediately call in physician., If breathing stops: immediately apply artificial respiration, if necessary also oxygen. In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower., Call a physician immediately. After eye contact: rinse out with plenty of water., Immediately call in ophthalmologist., Remove contact lenses. After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation)., Call a physician immediately., Do not attempt to neutralise. Not
combustible. Ambient fire may liberate hazardous vapours.

2.1 GHS Classification

Acute toxicity, Oral (Category 4), H302

Acute toxicity, Inhalation (Category 3), H331

Skin corrosion/irritation (Category 1B), H314

Serious eye damage/eye irritation (Category 1), H318

Respiratory sensitization (Category 1), H334

Skin sensitization (Category 1), H317

Specific target organ toxicity - single exposure (Category 3), respiratory tract irritation, H335

Short-term (acute) aquatic hazard (Category 1), H400

Long-term (chronic) aquatic hazard (Category 1), H410

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H302

Harmful if swallowed.

H314

Causes severe skin burns and eye damage.

H317

May cause an allergic skin reaction.

H331

Toxic if inhaled.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335

May cause respiratory irritation.

H410

Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

P261

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264

Wash skin thoroughly after handling.

P270

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

P271

Use only outdoors or in a well-ventilated area.

P272

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

P273
Avoid release to the environment.
P280
Wear protective gloves/ protective clothing/ eye protection/ face protection.
P284
Wear respiratory protection.
Response
P301 + P312 + P330
IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
P301 + P330 + P331
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.
P305 + P351 + P338 + P310
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.
P333 + P313
If skin irritation or rash occurs: Get medical advice/ attention.
P342 + P311
If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
P362 + P364
Take off contaminated clothing and wash it before reuse.
P391
Collect spillage.
Storage
P403 + P233
Store in a well-ventilated place. Keep container tightly closed.
P405
Store locked up.
Disposal
P501
Dispose of contents/ container to an approved waste disposal
plant.

2.3 Physical and chemical hazards

Referring to current information, no physical or chemical hazard.

2.4 Health hazards

H302
Harmful if swallowed.
H331
Toxic if inhaled.
H314

Causes severe skin burns and eye damage.
H318
Causes serious eye damage.
H334
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317
May cause an allergic skin reaction.
H335
May cause respiratory irritation.

2.5 Environmental hazards

H400
Very toxic to aquatic life.
H410
Very toxic to aquatic life with long lasting effects.

2.6 Other hazards

Corrosive to the respiratory tract.

Section 3: Composition/information on ingredients

Composition	CAS #	by Weight,%
Glutaraldehyde	111-30-8	⩾50
Methanol	67-56-1	⩽10
Water	7732-18-5	⩽40

Section 4: First Aid Measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist.
Remove contact lenses.

If swallowed

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

4.4 Notes to physician

No data available

Section 5: Fire and Explosion Data

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and Storage

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

Handle and store under inert gas.

Storage class

Storage class (TRGS 510): 6.1B: Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with workplace control parameters

Component	CAS-No.	Value	Control parameters	Basis
Glutaraldehyde	111-30-8	C	0.2 ppm0.8 mg/m3	USA. NIOSH Recommended Exposure Limits
		C	0.2 ppm0.8 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		C	0.05 ppm0.2 mg/m3	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
		C	0.05 ppm	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Dermal Sensitization Respiratory sensitization Not classifiable as a human carcinogen		

8.2 Exposure controls

Appropriate engineering controls

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min
If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

protective clothing

Respiratory protection

required when vapours/aerosols are generated.
Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Control of environmental exposure

Do not let product enter drains.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

a) Appearance
Form: liquid, clear
Color: colorless
b) Odor
No data available
c) Odor Threshold
No data available
d) pH
No data available
e) Melting point/freezing point
-21 °C
f) Initial boiling point and boiling range
101 °C at 1,013 hPa
g) Flash point
No data available
h) Evaporation rate
No data available
i) Flammability (solid, gas)
No data available
j) Upper/lower flammability or explosive limits
No data available
k) Vapor pressure
20 hPa at 20 °C
l) Vapor density
3.46 - (Air = 1.0)
m) Density

1.106 g/mL at 25 °C
Relative density
No data available
n) Water solubility
soluble
o) Partition coefficient: No data available
n-octanol/water
p) Autoignition temperature
Not applicable
q) Decomposition temperature
No data available
r) Viscosity
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
s) Explosive properties Not classified as explosive.
t) Oxidizing properties none

9.2 Other safety information

Relative vapor
density
3.46 - (Air = 1.0)

Section 10: Stability and Reactivity Data

10.1 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.2 Possibility of hazardous reactions

No data available

10.3 Conditions to avoid

no information available

10.4 Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

10.5 Hazardous decomposition products

In the event of fire: see section 5

Section 11: Toxicological Information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Oral: No data available
Acute toxicity estimate Oral - 400 mg/kg
(Calculation method)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Acute toxicity estimate Inhalation - 4 h - 0.56 mg/l

(Calculation method)
Symptoms: Possible symptoms:, mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
Dermal: No data available
Skin corrosion/irritation
No data available
Mixture causes burns.
Serious eye damage/eye irritation
No data available
Mixture causes serious eye damage. Risk of blindness!
Respiratory or skin sensitization
Mixture may cause allergy or asthma symptoms or breathing difficulties if inhaled. Mixture may cause an allergic skin reaction.
Germ cell mutagenicity
No data available
Carcinogenicity
No data available
Reproductive toxicity
No data available
Specific target organ toxicity - single exposure
Remarks: No data available
Mixture may cause respiratory irritation.
Specific target organ toxicity - repeated exposure
No data available
Aspiration hazard
No data available
11.2 Additional Information
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting
Other dangerous properties can not be excluded.
Handle in accordance with good industrial hygiene and safety practice.
Components
Glutaraldehyde
Acute toxicity
LD50 Oral - Rat - male and female - 200 mg/kg
(US-EPA)
Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
LC50 Inhalation - Rat - male and female - 4 h - 0.28 mg/l
(OECD Test Guideline 403)
Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract
LD50 Dermal - Rabbit - male and female - > 1,000 mg/kg
(US-EPA)
Skin corrosion/irritation
Skin - Rabbit

Result: Corrosive - 4 h
(OECD Test Guideline 404)
Remarks: (50% solution)
(Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Irreversible effects on the eye
(Draize Test)
Remarks: (50% solution)
Causes serious eye damage.

Respiratory or skin sensitization

May cause allergic respiratory and skin reactions Chronic exposure may cause dermatitis. largely based on human evidence

Germ cell mutagenicity

Test Type: Mutagenicity (mammal cell test): chromosome aberration.
Test system: Chinese hamster lung cells
Result: positive
Remarks: (50% solution)
Method: OECD Test Guideline 486
Species: Rat - male - Liver cells
Result: negative
Remarks: (50% solution)

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause respiratory irritation. - Respiratory system
Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)
Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Section 12: Ecological Information

12.1 Toxicity

Mixture

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

No data available

Components

Glutaraldehyde

Toxicity to fish

static test LC50 - Oncorhynchus mykiss (rainbow trout) - 0.8 mg/l - 96 h

(US-EPA)

Toxicity to algae

static test ErC50 - Desmodesmus subspicatus (green algae) - 0.6 mg/l - 72 h

(OECD Test Guideline 201)

Toxicity to bacteria

Section 13: Disposal Considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Section 14: Transport Information

14.1 UN number

ADR/RID: 2922

IMDG: 2922

IATA-DGR: 2922

14.2 UN proper shipping name

ADR/RID:

CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)

IMDG:

CORROSIVE LIQUID, TOXIC, N.O.S. (Glutaraldehyde)

IATA-DGR:

Corrosive liquid, toxic, n.o.s. (Glutaraldehyde)

14.3 Transport hazard class(es)

ADR/RID: 8 (6.1)

IMDG: 8 (6.1)

IATA-DGR: 8 (6.1)

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA-DGR: II

14.5 Environmental hazards

ADR/RID: yes

IMDG Marine pollutant: yes

IATA-DGR: no

14.6 Special precautions for user

Based on chemical properties, choose appropriate tools and conditions of transport.

Transporting tools shall be equipped with appropriate and sufficient firefighting equipment and emergency leaking installations. If transporting by road, please go along the specified route.

14.7 Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

Section 15: Other Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulatory information

Law on the Prevention and Control of Occupational Diseases

Other regulations

Please pay attention on the waste treatment should also comply with local regulations requirement.

Section 16: Other Information

Full text of H-Statements referred to under sections 2 and 3.

H227

Combustible liquid.

H301

Toxic if swallowed.

H302

Harmful if swallowed.

H314

Causes severe skin burns and eye damage.

H317

May cause an allergic skin reaction.

H318

Causes serious eye damage.

H330

Fatal if inhaled.

H331

Toxic if inhaled.

H334

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335

May cause respiratory irritation.

H400

Very toxic to aquatic life.
H410
Very toxic to aquatic life with long lasting effects.
References: Not available.
Other Special Considerations: Not available.
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