

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16539-06, 16539-07, 16539-08
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

Glutaraldehyde

(Contd. on page 2)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

- **Hazard statements**

Harmful if inhaled.
 Causes skin irritation.
 Causes serious eye damage.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause an allergic skin reaction.
 May cause respiratory irritation.

- **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves / eye protection / face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If on skin: Wash with plenty of water.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 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.
 Specific treatment (see on this label).
 Take off contaminated clothing and wash it before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Wash contaminated clothing before reuse.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
 Fire = 0
 Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *3
 Fire = 0
 Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

111-30-8	Glutaraldehyde	>2.5-≤10%
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(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 2)

124-65-2 sodium dimethylarsinate

≤2.5%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

111-30-8	Glutaraldehyde	0.2 ppm
124-65-2	sodium dimethylarsinate	3.2 mg/m ³

- **PAC-2:**

111-30-8	Glutaraldehyde	1 ppm
124-65-2	sodium dimethylarsinate	86 mg/m ³

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

· PAC-3:		
111-30-8	Glutaraldehyde	5 ppm
124-65-2	sodium dimethylarsinate	510 mg/m ³

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

111-30-8 Glutaraldehyde	
REL	Ceiling limit value: 0.8 mg/m ³ , 0.2 ppm See Pocket Guide App. C
TLV	Ceiling limit value: 0.2 mg/m ³ , 0.05 ppm DSEN;RSEN ;activated or inactivated

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 4)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Fluid
Color:	According to product specification
Odor:	Characteristic
Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** 7.4

· **Change in condition**

Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not flammable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower:	Not determined.
Upper:	Not determined.

· **Vapor pressure at 20 °C (68 °F):** 23 hPa (17.3 mm Hg)

· **Density at 20 °C (68 °F):** 1 g/cm³ (8.345 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Fully miscible.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 5)

- | | |
|---|-----------------------|
| · Partition coefficient (n-octanol/water): Not determined. | |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |
| · Solvent content: | |
| Water: | 95.0 % |
| VOC content: | 0.00 % |
| | 0.0 g/l / 0.00 lb/gal |
| · Solids content: 0.0 % | |
| · Other information No further relevant information available. | |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2,560 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:**
- Sensitization possible through inhalation.
- Sensitization possible through skin contact.
- **Additional toxicological information:**
- The product shows the following dangers according to internally approved calculation methods for preparations:
- Harmful
- Irritant
- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

· **OSHA-Ca (Occupational Safety Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Toxic for fish
Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|----------------------------------|--|
| · UN-Number | |
| · DOT, ADR, IMDG, IATA | UN1760 |
| · UN proper shipping name | |
| · DOT | Corrosive liquids, n.o.s. (Glutaraldehyde) |
| · ADR | 1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde) |
| · IMDG, IATA | CORROSIVE LIQUID, N.O.S. (Glutaraldehyde) |

(Contd. on page 8)

US

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

· **Transport hazard class(es)**

· **DOT**



· **Class** 8 Corrosive substances
 · **Label** 8

· **ADR, IMDG, IATA**



· **Class** 8 Corrosive substances
 · **Label** 8

· **Packing group**

· **DOT, ADR, IMDG, IATA** II

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Corrosive substances

· **Hazard identification number (Kemler code):** 80

· **EMS Number:** F-A,S-B

· **Segregation groups** Acids

· **Stowage Category** B

· **Stowage Code** SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations** On passenger aircraft/rail: 1 L
 On cargo aircraft only: 30 L

· **ADR**

· **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **IMDG**

· **Limited quantities (LQ)** 1L
 · **Excepted quantities (EQ)** Code: E2
 Maximum net quantity per inner packaging: 30 ml
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 1760 CORROSIVE LIQUID, N.O.S. (GLUTARALDEHYDE), 8, II

US

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/30/2020

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Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 8)

15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

124-65-2	sodium dimethylarsinate
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· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

111-30-8	Glutaraldehyde	A4
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· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**

Glutaraldehyde

· **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

(Contd. on page 10)

Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 9)

· **Precautionary statements**

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

Wear protective gloves / eye protection / face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of preparation / last revision** 06/30/2020 / -

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet

according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16539-06, 16539-07, 16539-08
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

(Contd. on page 2)

Safety Data Sheet

according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labelling:**

Glutaraldehyde

· **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

Wear protective gloves / eye protection / face protection.

Wear respiratory protection.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition and Information on Ingredients

· **Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

111-30-8	Glutaraldehyde	>2.5-≤10%
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(Contd. on page 3)

Safety Data Sheet

according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 2)

124-65-2 sodium dimethylarsinate

≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

(Contd. on page 4)

AU

Safety Data Sheet according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:**

111-30-8 Glutaraldehyde

WES	Peak limitation: 0.41 mg/m ³ , 0.1 ppm
	Sen

124-65-2 sodium dimethylarsinate

WES	Long-term value: 0.05 mg/m ³
	Note (g); as As

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

- **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

Safety Data Sheet

according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: *Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 7.4· **Change in condition**

· Melting point/freezing point:	0 °C
· Initial boiling point and boiling range:	100 °C

· **Flash point:** Not applicable.· **Flammability (solid, gas):** Not applicable.· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Product is not selfigniting.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· Density at 20 °C:	1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.· **Partition coefficient: n-octanol/water:** Not determined.· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· Water:	95.0 %
· VOC (EC)	0.00 %

· **Solids content:** 0.0 %

(Contd. on page 6)

Safety Data Sheet according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 5)

· **Other information**

No further relevant information available.

10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2,560 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Toxic for fish
Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.

(Contd. on page 7)

Safety Data Sheet according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **UN-Number**

· **ADG, IMDG, IATA**

UN1760

· **UN proper shipping name**

· **ADG**

· **IMDG, IATA**

1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)

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

· **Transport hazard class(es)**

· **ADG, IMDG, IATA**



· **Class**

8 Corrosive substances.

· **Label**

8

· **Packing group**

· **ADG, IMDG, IATA**

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Corrosive substances.

· **Hazard identification number (Kemler code):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Acids

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

(Contd. on page 8)

Safety Data Sheet

according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

· Transport/Additional information:

· ADG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· Transport category

2

· Tunnel restriction code

E

· IMDG

· Limited quantities (LQ)

1L

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation":

UN 1760 CORROSIVE LIQUID, N.O.S.
(GLUTARALDEHYDE), 8, II

15 Regulatory information

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

· Australian Inventory of Chemical Substances

All ingredients are listed.

· Standard for the Uniform Scheduling of Medicines and Poisons

111-30-8 Glutaraldehyde

S2, S5, S6

· Australia: Priority Existing Chemicals

111-30-8 Glutaraldehyde

· GHS label elements The product is classified and labelled according to the Globally Harmonised System (GHS).

· Hazard pictograms



GHS05

GHS07

GHS08

· Signal word Danger

· Hazard-determining components of labelling:

Glutaraldehyde

· Hazard statements

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· Precautionary statements

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

(Contd. on page 9)

Safety Data Sheet according to WHS Regulations

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 8)

Wear protective gloves / eye protection / face protection.

Wear respiratory protection.

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

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.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Wash contaminated clothing before reuse.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity - inhalation – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16539-06, 16539-07, 16539-08
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: info@emsdiasum.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Respiratory Sensitizer - Category 1

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 Corrosion

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity (Inhalation) - Category 4

H332 Harmful if inhaled.

Skin Irritation - Category 2

H315 Causes skin irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure -
Category 3

H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** Danger

(Contd. on page 2)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

· **Hazard-determining components of labeling:**

Glutaraldehyde

· **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *3

Fire = 0

Reactivity = 0

3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

111-30-8	Glutaraldehyde	1-5% w/w *
124-65-2	sodium dimethylarsinate	0.1-1% w/w *

* Actual concentration ranges are withheld as a trade secret.

CA

(Contd. on page 3)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 2)

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/ Personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

111-30-8 Glutaraldehyde

EL	Ceiling: 0.05 ppm S(D), S(R)
EV	Ceiling: 0.05 ppm activated and inactivated

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Tightly sealed goggles

CA

(Contd. on page 5)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 4)

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Color:	According to product specification
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value at 20 °C:** 7.4

· **Change in condition**

· Melting point/Melting range:	0 °C
· Boiling point/Boiling range:	100 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not flammable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapor pressure at 20 °C:** 23 hPa

· Density at 20 °C:	1 g/cm ³
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· **Water:** 95.0 %

· **Solids content:** 0.0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

· **Incompatible materials:** No further relevant information available.

(Contd. on page 6)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 5)

· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2,560 mg/kg (rabbit)

· **Primary irritant effect:**

· **on the skin:** Irritant to skin and mucous membranes.

· **on the eye:** Strong irritant with the danger of severe eye injury.

· **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful

Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:**

Toxic for fish

Harmful to fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

(Contd. on page 7)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- | | |
|--|---|
| <ul style="list-style-type: none"> · UN-Number · DOT/TDG, ADR, IMDG, IATA | <p style="margin-left: 20px;">UN1760</p> |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT/TDG · ADR · IMDG, IATA | <p style="margin-left: 20px;">Corrosive liquids, n.o.s. (Glutaraldehyde)
1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)
CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)</p> |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT/TDG (Transport dangerous goods): | <div style="text-align: center; margin-bottom: 10px;"> </div> |
| <ul style="list-style-type: none"> · Class · Label | <p style="margin-left: 20px;">8 Corrosive substances
8</p> |
| <ul style="list-style-type: none"> · ADR, IMDG, IATA | |
| <div style="text-align: center; margin-bottom: 10px;"> </div> <ul style="list-style-type: none"> · Class · Label | <p style="margin-left: 20px;">8 Corrosive substances
8</p> |
| <ul style="list-style-type: none"> · Packing group · DOT/TDG, ADR, IMDG, IATA | <p style="margin-left: 20px;">II</p> |
| <ul style="list-style-type: none"> · Environmental hazards: | <p style="margin-left: 20px;">Not applicable.</p> |
| <ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code | <p style="margin-left: 20px;">Warning: Corrosive substances
80
F-A,S-B
Acids
B
SW2 Clear of living quarters.</p> |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | <p style="margin-left: 20px;">Not applicable.</p> |

(Contd. on page 8)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: **Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 7)

· **Transport/Additional information:**

· **DOT/TDG**

· **Quantity limitations**

On passenger aircraft/rail: 1 L

On cargo aircraft only: 30 L

· **ADR**

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **IMDG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1760 CORROSIVE LIQUID, N.O.S. (GLUTARALDEHYDE),
8, II

15 Regulatory information

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

124-65-2 | sodium dimethylarsinate

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

All ingredients are listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 1%)**

111-30-8 | Glutaraldehyde

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05



GHS07



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Glutaraldehyde

· **Hazard statements**

Harmful if inhaled.

(Contd. on page 9)

Safety Data Sheet according to HPR, Schedule 1

Printing date 06/30/2020

Reviewed on 06/30/2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 8)

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

Wear protective gloves/protective clothing/eye protection/face protection.

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Date of the latest revision of the safety data sheet** 06/30/2020 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16539-06, 16539-07, 16539-08
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



corrosion

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Acute Tox. 5 H303 May be harmful if swallowed.

Aquatic Acute 2 H401 Toxic to aquatic life.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**

· **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: **Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 1)

· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:**

Glutaraldehyde
sodium dimethylarsinate

· **Hazard statements**

May be harmful if swallowed.
Harmful if inhaled.
Causes skin irritation.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

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.
Specific treatment (see on this label).
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterisation:** *Mixtures*· **Description:** *Mixture of substances listed below with nonhazardous additions.*· **Dangerous components:**

111-30-8	Glutaraldehyde ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335; Flam. Liq. 4, H227; Acute Tox. 5, H313	>2.5-≤10%
124-65-2	sodium dimethylarsinate ⚠ Acute Tox. 3, H301	≤2.5%

· **Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 2)

4 First aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**

111-30-8 Glutaraldehyde

TLV	Ceiling limit: 0.05 ppm
-----	-------------------------

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Immediately remove all soiled and contaminated clothing
 - Wash hands before breaks and at the end of work.
 - Avoid contact with the skin.
 - Avoid contact with the eyes and skin.
- **Respiratory protection:**
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
 - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

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(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 4)

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Fluid
· Colour:	According to product specification
· Odour:	Characteristic
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 7.4

· **Change in condition**

· Melting point/freezing point:	0 °C
· Initial boiling point and boiling range:	100 °C

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

· Lower:	Not determined.
· Upper:	Not determined.

· **Vapour pressure at 20 °C:** 23 hPa

· Density at 20 °C:	1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:** Fully miscible.

· **Partition coefficient: n-octanol/water:** Not determined.

· **Viscosity:**

· Dynamic:	Not determined.
· Kinematic:	Not determined.

· **Solvent content:**

· Water:	95.0 %
· VOC (EC)	0.00 %

· **Solids content:** 0.0 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Reactivity** No further relevant information available.

· **Chemical stability**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **Possibility of hazardous reactions** No dangerous reactions known.

· **Conditions to avoid** No further relevant information available.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 5)

- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity**

- **LD/LC50 values relevant for classification:**

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2,560 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Irritant

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**
Toxic for fish
Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

IL

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020


Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number · ADR, IMDG, IATA	UN1760
· UN proper shipping name · ADR · IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde) CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)
· Transport hazard class(es) · ADR, IMDG, IATA	
	
· Class · Label	8 Corrosive substances. 8
· Packing group · ADR, IMDG, IATA	II
· Environmental hazards:	Not applicable.
· Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups · Stowage Category · Stowage Code	Warning: Corrosive substances. 80 F-A,S-B Acids B SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· Transport category · Tunnel restriction code	2 E

(Contd. on page 8)

IL

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

· **IMDG**

- **Limited quantities (LQ)**
- **Excepted quantities (EQ)**

IL

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":**

UN 1760 CORROSIVE LIQUID, N.O.S.
(GLUTARALDEHYDE), 8, II

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05

GHS07

GHS08

- **Signal word** *Danger*

· **Hazard-determining components of labelling:**

*Glutaraldehyde**sodium dimethylarsinate*

· **Hazard statements**

*May be harmful if swallowed.**Harmful if inhaled.**Causes skin irritation.**Causes serious eye damage.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.**May cause respiratory irritation.**Toxic to aquatic life.**Harmful to aquatic life with long lasting effects.*

· **Precautionary statements**

*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.**Specific treatment (see on this label).**Take off contaminated clothing and wash it before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Directive 2012/18/EU**

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 8)

· **Relevant phrases**

H227 Combustible liquid.
 H301 Toxic if swallowed.
 H313 May be harmful in contact with skin.
 H314 Causes severe skin burns and eye damage.
 H317 May cause an allergic skin reaction.
 H330 Fatal 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.
 H411 Toxic to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Flam. Liq. 4: Flammable liquids – Category 4
 Acute Tox. 3: Acute toxicity - oral – Category 3
 Acute Tox. 5: Acute toxicity - dermal – Category 5
 Acute Tox. 2: Acute toxicity - inhalation – Category 2
 Acute Tox. 4: Acute toxicity - inhalation – Category 4
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Resp. Sens. 1: Respiratory sensitisation – Category 1
 Skin Sens. 1: Skin sensitisation – Category 1
 Skin Sens. 1A: Skin sensitisation – Category 1A
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Acute 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2
 Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

IL

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16539-06, 16539-07, 16539-08
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS08 health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: **Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 1)

· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:***Glutaraldehyde*· **Hazard statements***H332 Harmful if inhaled.**H315 Causes skin irritation.**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.**H412 Harmful to aquatic life with long lasting effects.*· **Precautionary statements***P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P310 Immediately call a POISON CENTER/doctor.**P321 Specific treatment (see on this label).**P362+P364 Take off contaminated clothing and wash it before reuse.**P405 Store locked up.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.*· **2.3 Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterisation: Mixtures**· **Description:** Mixture of substances listed below with nonhazardous additions.· **Dangerous components:**

CAS: 111-30-8 EINECS: 203-856-5	Glutaraldehyde ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335	>2.5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	sodium dimethylarsinate ⚠ Acute Tox. 4, H302	≤2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**· **General information:***Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 2)

- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
- **5.3 Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

111-30-8 Glutaraldehyde

WEL	Short-term value: 0.2 mg/m ³ , 0.05 ppm
	Long-term value: 0.2 mg/m ³ , 0.05 ppm
Sen	

· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· **General Information**

· **Appearance:**

Form: Fluid

Colour: According to product specification

· **Odour:** Characteristic

· **Odour threshold:** Not determined.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: **Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 4)

· pH-value at 20 °C:	7.4
· Change in condition	
Melting point/freezing point:	0 °C
Initial boiling point and boiling range:	100 °C
· Flash point:	Not applicable.
· Flammability (solid, gas):	Not applicable.
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not selfigniting.
· Explosive properties:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density at 20 °C:	1 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Water:	95.0 %
VOC (EC)	0.00 %
Solids content:	0.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

GB

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 5)

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects

· Acute toxicity

Harmful if inhaled.

· LD/LC50 values relevant for classification:

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2,560 mg/kg (rabbit)

· Primary irritant effect:

· Skin corrosion/irritation

Causes skin irritation.

· Serious eye damage/irritation

Causes serious eye damage.

· Respiratory or skin sensitisation

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

May cause an allergic skin reaction.

· CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· STOT-single exposure

May cause respiratory irritation.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· Ecotoxicological effects:

· Remark:

Toxic for fish

Harmful to fish

· Additional ecological information:

· General notes:

Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water

Do not allow product to reach ground water, water course or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into the ground.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

· 12.5 Results of PBT and vPvB assessment

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

GB

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: *Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*

(Contd. of page 6)

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging:**

· **Recommendation:** *Disposal must be made according to official regulations.*

· **Recommended cleansing agents:** *Water, if necessary together with cleansing agents.*

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, IMDG, IATA**

UN1760

· **14.2 UN proper shipping name**

· **ADR**

1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)

· **IMDG, IATA**

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

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class**

8 Corrosive substances.

· **Label**

8

· **14.4 Packing group**

· **ADR, IMDG, IATA**

II

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Warning: Corrosive substances.

· **Hazard identification number (Kemler code):**

80

· **EMS Number:**

F-A,S-B

· **Segregation groups**

Acids

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **14.7 Transport in bulk according to Annex II of**

Marpol and the IBC Code

Not applicable.

· **Transport/Additional information:**

· **ADR**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

E

(Contd. on page 8)

GB

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 1760 CORROSIVE LIQUID, N.O.S. (GLUTARALDEHYDE), 8, II</p>

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3

- **Regulation (EU) No 649/2012**

124-65-2 | sodium dimethylarsinate

Annex I Part I

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H330 Fatal 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.
- H411 Toxic to aquatic life with long lasting effects.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 3: Acute toxicity - oral – Category 3
 Acute Tox. 4: Acute toxicity - oral – Category 4
 Acute Tox. 2: Acute toxicity - inhalation – Category 2
 Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 Resp. Sens. 1: Respiratory sensitisation – Category 1

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 30.06.2020

Revision: 30.06.2020

Trade name: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*Skin Sens. 1: Skin sensitisation – Category 1**Skin Sens. 1A: Skin sensitisation – Category 1A**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

(Contd. of page 8)

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

RUBRIEK 1: Identificatie van de stof of het mengsel en van de vennootschap/onderneming

· 1.1 Productidentificatie

· **Handelsnaam:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

· **Artikelnummer:** 16539-06, 16539-07, 16539-08

· **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.

· **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën

· 1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad

· **Fabrikant/leverancier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aurion

Binnenhaven 5

6709 PD Wageningen

The Netherlands

Tel: 31 317 415094

Fax: 31 317 415955

email: info@aurion.nl

· **Inlichtingengevende sector:** Product safety department

· 1.4 Telefoonnummer voor noodgevallen:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

· 2.1 Indeling van de stof of het mengsel

· **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS08 gezondheidsgevaar

Resp. Sens. 1 H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.



GHS05 corrosie

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.



GHS07

Acute Tox. 4 H332 Schadelijk bij inademing.

Skin Irrit. 2 H315 Veroorzaakt huidirritatie.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

Aquatic Chronic 3 H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 1)

- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008**
Het product is geclassificeerd en geëtiketteerd volgens de CLP-verordening.
- **Gevarenpictogrammen**



GHS05 GHS07 GHS08

- **Signaalwoord** Gevaar
- **Gevaaraanduidende componenten voor de etikettering:**
Glutaaraldehyd
- **Gevarenaanduidingen**
H332 Schadelijk bij inademing.
H315 Veroorzaakt huidirritatie.
H318 Veroorzaakt ernstig oogletsel.
H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.
H317 Kan een allergische huidreactie veroorzaken.
H335 Kan irritatie van de luchtwegen veroorzaken.
H412 Schadelijk voor in het water levende organismen, met langdurige gevolgen.
- **Veiligheidsaanbevelingen**
P305+P351+P338 **BIJ CONTACT MET DE OGEN:** voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.
P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.
P321 Specifieke behandeling vereist (zie op dit etiket).
P362+P364 Verontreinigde kleding uittrekken en wassen alvorens deze opnieuw te gebruiken.
P405 Achter slot bewaren.
P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.
- **2.3 Andere gevaren**
- **Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

- **3.2 Chemische karakterisering: Mengsels**
- **Beschrijving:** Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

- **Gevaarlijke inhoudstoffen:**

CAS: 111-30-8 EINECS: 203-856-5	Glutaaraldehyd ☠ Acute Tox. 3, H301; Acute Tox. 2, H330; ☠ Resp. Sens. 1, H334; ☠ Skin Corr. 1B, H314; ☠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ☠ Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	natrïumdïmethïlarsïnaat ☠ Acute Tox. 4, H302	≤2,5%

- **Aanvullende gegevens:**
De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 2)

RUBRIEK 4: Eerstehulpmaatregelen

· 4.1 Beschrijving van de eerstehulpmaatregelen

· Algemene informatie:

Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.

· Na het inademen:

Veel verse lucht toedienen en voor alle zekerheid een arts raadplegen.

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

· Na huidcontact: Onmiddellijk met water en zeep afwassen en goed naspoelen.

· Na oogcontact: Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.

· Na inslikken: Onmiddellijk arts raadplegen.

· 4.2 Belangrijkste acute en uitgestelde symptomen en effecten

Geen verdere relevante informatie verkrijgbaar.

· 4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling

Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 5: Brandbestrijdingsmaatregelen

· 5.1 Blusmiddelen

· Geschikte blusmiddelen: Brandblusmaatregelen op omgeving afstemmen.

· 5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt

Geen verdere relevante informatie verkrijgbaar.

· 5.3 Advies voor brandweerlieden

· Speciale beschermende kleding: Ademhalingstoestel aantrekken.

RUBRIEK 6: Maatregelen bij het accidenteel vrijkomen van de stof of het mengsel

· 6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures

Niet nodig.

· 6.2 Milieuvorzorgsmaatregelen:

Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.

Met veel water verdunnen.

Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.

· 6.3 Insluifings- en reinigingsmethoden en -materiaal:

Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

· 6.4 Verwijzing naar andere rubrieken

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

Informatie inzake berging - zie hoofdstuk 13.

RUBRIEK 7: Hantering en opslag

· 7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel

Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.

Aërosolvorming vermijden.

· Informatie m.b.t. brand- en ontploffingsgevaar: Geen bijzondere maatregelen noodzakelijk.

· 7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten

· Opslag:

· Eisen ten opzichte van opslagruimte en tanks: Geen bijzondere eisen.

· Informatie m.b.t. gezamenlijke opslag: Niet noodzakelijk.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 3)

- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **8.1 Controleparameters**
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**
Het produkt bevat geen relevante hoeveelheden van stoffen, die met betrekking tot de werkplaatsen, qua grenswaarden gecontroleerd moeten worden.
- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
Verwijderd houden van eet- en drinkwaren.
Verontreinigde kleding onmiddellijk uittrekken.
Vóór de pauze en aan het einde van werktijd handen wassen.
Aanraking met de huid vermijden.
Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

- Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.
- **Handschoenmateriaal**
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.
 - **Doordringingstijd van het handschoenmateriaal**
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
 - **Oogbescherming:**



Nauw aansluitende veiligheidsbril

NL

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 4)

RUBRIEK 9: Fysische en chemische eigenschappen

· 9.1 Informatie over fysische en chemische basiseigenschappen

· Algemene gegevens

· Voorkomen:

Vorm:	Vloeibaar
Kleur:	Volgens de produktbeschrijving
Geur:	Karakteristiek
Geurdrempelwaarde:	Niet bepaald.

· pH-waarde bij 20 °C: 7,4

· Toestandsverandering

Smelt-/vriespunt:	0 °C
Beginkookpunt en kooktraject:	100 °C

· Vlampunt: Niet bruikbaar.

· Ontvlambaarheid (vast, gas): Niet bruikbaar.

· Ontledingstemperatuur: Niet bepaald.

· Zelfontbrandingstemperatuur: Het produkt ontbrandt niet uit zichzelf.

· Ontploffingseigenschappen: Het produkt is niet ontploffingsgevaarlijk.

· Ontploffingsgrenzen:

Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.

· Dampspanning bij 20 °C: 23 hPa

· Dichtheid bij 20 °C:	1 g/cm ³
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingssnelheid	Niet bepaald.

· Oplosbaarheid in/mengbaarheid met

Water: Volledig mengbaar.

· Verdelingscoëfficiënt: n-octanol/water: Niet bepaald.

· Viscositeit

Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.

· Oplosmiddelgehalte:

Water:	95,0 %
VOC (EG)	0,00 %

Gehalte aan vaste bestanddelen: 0,0 %

· 9.2 Overige informatie: Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 10: Stabiliteit en reactiviteit

· 10.1 Reactiviteit: Geen verdere relevante informatie verkrijgbaar.

· 10.2 Chemische stabiliteit

· Thermische afbraak / te vermijden omstandigheden: Geen afbraak bij gebruik volgens voorschrift.

· 10.3 Mogelijke gevaarlijke reacties: Geen gevaarlijke reacties bekend.

· 10.4 Te vermijden omstandigheden: Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 5)

- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit**
Schadelijk bij inademing.

Indelingsrelevantie LD/LC50-waarden:

111-30-8 Glutaaraldehyd

Oraal	LD50	134 mg/kg (rat)
Dermaal	LD50	2.560 mg/kg (rabbit)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**
Veroorzaakt huidirritatie.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**
Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling**
Kan irritatie van de luchtwegen veroorzaken.
- **STOT bij herhaalde blootstelling** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Gevaar bij inademing** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:**
Giftig voor vissen.
Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)
Gevaar voor water klasse 3 (D) (Zelfclassificatie): gevaar voor water groot
Niet lozen in grondwater, oppervlaktewater of riolering, ook niet in kleine hoeveelheden.
Gevaar voor drinkwater zelfs bij het uitlopen van zeer geringe hoeveelheden in de ondergrond.
In oppervlaktewater ook giftig voor vissen en plankton.
giftig voor in het water levende organismen
schadelijk voor in het water levende organismen

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4


(Vervolg van blz. 6)

- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terecht komen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.
- **Aanbevolen reinigingsmiddel:** Water, eventueel met toevoeging van reinigingsmiddelen.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- | | |
|---|--|
| <ul style="list-style-type: none"> · 14.1 VN-nummer · ADR, IMDG, IATA | <p style="text-align: right;">UNI760</p> |
| <ul style="list-style-type: none"> · 14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN · ADR · IMDG, IATA | <p style="text-align: right;">1760 BIJTENDE VLOEISTOF, N.E.G. (Glutaaraldehyd)
CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)</p> |
| <ul style="list-style-type: none"> · 14.3 Transportgevarenklasse(n) · ADR, IMDG, IATA | <p style="text-align: right;">8 Bijtende stoffen</p> |
| <div style="text-align: center;">  </div> <ul style="list-style-type: none"> · klasse · Etiket | <p style="text-align: right;">8
8</p> |
| <ul style="list-style-type: none"> · 14.4 Verpakkingsgroep: · ADR, IMDG, IATA | <p style="text-align: right;">II</p> |
| <ul style="list-style-type: none"> · 14.5 Milieugevaren: | <p style="text-align: right;">Niet bruikbaar.</p> |
| <ul style="list-style-type: none"> · 14.6 Bijzondere voorzorgen voor de gebruiker · Gevaarsidentificatienummer (Kemler-getal): · EMS-nummer: · Segregation groups · Stowage Category · Stowage Code | <p style="text-align: right;">Waarschuwing: Bijtende stoffen
80
F-A,S-B
Acids
B
SW2 Clear of living quarters.</p> |
| <ul style="list-style-type: none"> · 14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code | <p style="text-align: right;">Niet bruikbaar.</p> |
| <ul style="list-style-type: none"> · Transport/verdere gegevens: | |
| <ul style="list-style-type: none"> · ADR · Beperkte hoeveelheden (LQ) · Uitzonderde hoeveelheden (EQ) · Vervoerscategorie | <p style="text-align: right;">1L
Code: E2
Grootste netto hoeveelheid per binnenverpakking: 30 ml
Grootste netto hoeveelheid per buitenverpakking: 500 ml
2</p> |

(Vervolg op blz. 8)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 7)

· Tunnelbeperkingscode	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· VN "Model Regulation":	UN 1760 BIJTENDE VLOEISTOF, N.E.G. (GLUTAARALDEHYD), 8, II

RUBRIEK 15: Regelgeving

· **15.1 Specifieke veiligheids-, gezondheids- en milieureglementen en -wetgeving voor de stof of het mengsel**

· **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Vruchtbaarheid**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Ontwikkeling**

geen der bestanddelen staat op de lijst.

· **NIET-limitatieve lijst van voor de voortplanting giftige stoffen - Borstvoeding**

geen der bestanddelen staat op de lijst.

· **Lijst Zeer Zorgwekkende Stoffen (ZZS)**

124-65-2 natriumdimethylarsinaat

· **Lijst van Potentieel Zeer Zorgwekkende Stoffen**

111-30-8 Glutaaraldehyd

· **Richtlijn 2012/18/EU**

· **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** geen der bestanddelen staat op de lijst.

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII** Beperkingsvoorwaarden: 3

· **Verordening (EU) Nr. 649/2012**

124-65-2 natriumdimethylarsinaat

Annex I Part I

· **Nationale voorschriften:**

· **Gevaarklasse v. water:**

Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)

· **15.2 Chemischeveiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

RUBRIEK 16: Overige informatie

Deze gegevens zijn gebaseerd op de huidige stand van onze kennis. Zij beschrijven echter geen garantie van producteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Relevante zinnen**

H301 Giftig bij inslikken.

H302 Schadelijk bij inslikken.

(Vervolg op blz. 9)

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

datum van de druk: 30.06.2020

Herziening van: 30.06.2020

Handelsnaam: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 8)

*H314 Veroorzaakt ernstige brandwonden en oogletsel.**H317 Kan een allergische huidreactie veroorzaken.**H330 Dodelijk bij inademing.**H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.**H335 Kan irritatie van de luchtwegen veroorzaken.**H400 Zeer giftig voor in het water levende organismen.**H411 Giftig voor in het water levende organismen, met langdurige gevolgen.***· Afkortingen en acroniemen:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Acute toxiciteit - oraal – Categorie 3**Acute Tox. 4: Acute toxiciteit - oraal – Categorie 4**Acute Tox. 2: Acute toxiciteit - inademing – Categorie 2**Skin Corr. 1B: Huidcorrosie/-irritatie – Categorie 1B**Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2**Eye Dam. 1: Ernstig oogletsel/oogirritatie – Categorie 1**Resp. Sens. 1: Sensibilisatie van de luchtwegen – Categorie 1**Skin Sens. 1: Sensibilisatie van de huid – Categorie 1**Skin Sens. 1A: Sensibilisatie van de huid – Categorie 1A**STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3**Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1**Aquatic Chronic 2: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 2**Aquatic Chronic 3: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 3*

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

RUBRIQUE 1: Identification de la substance/du mélange et de la société/l'entreprise

- **1.1 Identificateur de produit**
- **Nom du produit:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Code du produit:** 16539-06, 16539-07, 16539-08
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

- **2.1 Classification de la substance ou du mélange**
- **Classification selon le règlement (CE) n° 1272/2008**



GHS08 danger pour la santé

Resp. Sens. 1 H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.



GHS05 corrosion

Eye Dam. 1 H318 Provoque de graves lésions des yeux.



GHS07

Acute Tox. 4 H332 Nocif par inhalation.
Skin Irrit. 2 H315 Provoque une irritation cutanée.
Skin Sens. 1 H317 Peut provoquer une allergie cutanée.
STOT SE 3 H335 Peut irriter les voies respiratoires.

Aquatic Chronic 3 H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 1)

· Pictogrammes de danger



GHS05 GHS07 GHS08

· Mention d'avertissement Danger

· Composants dangereux déterminants pour l'étiquetage:

glutaral

· Mentions de danger

H332 Nocif par inhalation.

H315 Provoque une irritation cutanée.

H318 Provoque de graves lésions des yeux.

H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

H317 Peut provoquer une allergie cutanée.

H335 Peut irriter les voies respiratoires.

H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.

· Conseils de prudence

P305+P351+P338 **EN CAS DE CONTACT AVEC LES YEUX: Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.**

P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.

P321 Traitement spécifique (voir sur cette étiquette).

P362+P364 Enlever les vêtements contaminés et les laver avant réutilisation.

P405 Garder sous clef.

P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

· 2.3 Autres dangers

· Résultats des évaluations PBT et vPvB

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· 3.2 Caractérisation chimique: Mélanges

· **Description:** Mélange des substances mentionnées à la suite avec des additifs non dangereux.

· Composants dangereux:

CAS: 111-30-8 EINECS: 203-856-5	glutaral Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2,5- ≤10%
CAS: 124-65-2 EINECS: 204-708-2	diméthylarsinate de sodium Acute Tox. 4, H302	≤2,5%

· **Indications complémentaires:** Pour le libellé des phrases de risque citées, se référer au chapitre 16.

FR

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 2)

RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Remarques générales:**

Les symptômes d'intoxication peuvent apparaître après de nombreuses heures seulement; une surveillance médicale est donc nécessaire au moins 48 heures après un accident.

· **Après inhalation:**

Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.

En cas d'inconscience, coucher et transporter la personne en position latérale stable.

· **Après contact avec la peau:** Laver immédiatement à l'eau et au savon et bien rincer.

· **Après contact avec les yeux:**

Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières et consulter un médecin.

· **Après ingestion:** Consulter immédiatement un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**

· **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

Pas d'autres informations importantes disponibles.

· **5.3 Conseils aux pompiers**

· **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

· **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.

· **6.2 Précautions pour la protection de l'environnement:**

En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.

Diluer avec beaucoup d'eau.

Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.

· **6.3 Méthodes et matériel de confinement et de nettoyage:**

Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).

Evacuer les matériaux contaminés en tant que déchets conformément au point 13.

Assurer une aération suffisante.

· **6.4 Référence à d'autres rubriques**

Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.

Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.

Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

RUBRIQUE 7: Manipulation et stockage

· **7.1 Précautions à prendre pour une manipulation sans danger**

Veiller à une bonne ventilation/aspiration du poste de travail.

Eviter la formation d'aérosols.

· **Préventions des incendies et des explosions:** Aucune mesure particulière n'est requise.

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 3)

- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

- **Indications complémentaires pour l'agencement des installations techniques:**
Sans autre indication, voir point 7.

- **8.1 Paramètres de contrôle**

- **Composants présentant des valeurs-seuil à surveiller par poste de travail:**

111-30-8 glutaral

VLEP	Valeur momentanée: 0,8 mg/m ³ , 0,2 ppm
	Valeur à long terme: 0,4 mg/m ³ , 0,1 ppm

- **Remarques supplémentaires:**
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.
Retirer immédiatement les vêtements souillés ou humectés.
Se laver les mains avant les pauses et en fin de travail.
Eviter tout contact avec la peau.
Eviter tout contact avec les yeux et avec la peau.
- **Protection respiratoire:**
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

- **Matériau des gants**

Le choix de gants appropriés dépend non seulement du matériau, mais aussi d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre. Puisque le produit représente une préparation composée de plusieurs substances, la résistance des matériaux des gants ne peut pas être calculée à l'avance et doit, alors, être contrôlée avant l'utilisation.

- **Temps de pénétration du matériau des gants**

Le temps de pénétration exact est à déterminer par le fabricant des gants de protection et à respecter.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 4)

· **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

· **9.1 Informations sur les propriétés physiques et chimiques essentielles**

· **Indications générales**

· **Aspect:**

Forme:	Liquide
Couleur:	Selon désignation produit
· Odeur:	Caractéristique
· Seuil olfactif:	Non déterminé.

· **valeur du pH à 20 °C:** 7,4

· **Changement d'état**

Point de fusion/point de congélation:	0 °C
Point initial d'ébullition et intervalle d'ébullition:	100 °C

· **Point d'éclair** Non applicable.

· **Inflammabilité (solide, gaz):** Non applicable.

· **Température de décomposition:** Non déterminé.

· **Température d'auto-inflammabilité:** Le produit ne s'enflamme pas spontanément.

· **Propriétés explosives:** Le produit n'est pas explosif.

· **Limites d'explosion:**

Inférieure:	Non déterminé.
Supérieure:	Non déterminé.

· **Pression de vapeur à 20 °C:** 23 hPa

· Densité à 20 °C:	1 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux d'évaporation:	Non déterminé.

· **Solubilité dans/miscibilité avec l'eau:** Entièrement miscible

· **Coefficient de partage: n-octanol/eau:** Non déterminé.

· **Viscosité:**

Dynamique:	Non déterminé.
Cinématique:	Non déterminé.

· **Teneur en solvants:**

Eau:	95,0 %
VOC (CE)	0,00 %

Teneur en substances solides: 0,0 %

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 5)

· 9.2 Autres informations

Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

- **10.1 Réactivité** Pas d'autres informations importantes disponibles.
- **10.2 Stabilité chimique**
- **Décomposition thermique/conditions à éviter:** Pas de décomposition en cas d'usage conforme.
- **10.3 Possibilité de réactions dangereuses** Aucune réaction dangereuse connue.
- **10.4 Conditions à éviter** Pas d'autres informations importantes disponibles.
- **10.5 Matières incompatibles:** Pas d'autres informations importantes disponibles.
- **10.6 Produits de décomposition dangereux:** Pas de produits de décomposition dangereux connus

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**
Nocif par inhalation.

· Valeurs LD/LC50 déterminantes pour la classification:

111-30-8 glutaral

Oral	LD50	134 mg/kg (rat)
Dermique	LD50	2.560 mg/kg (lapin)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque une irritation cutanée.
- **Lésions oculaires graves/irritation oculaire**
Provoque de graves lésions des yeux.
- **Sensibilisation respiratoire ou cutanée**
Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**
Peut irriter les voies respiratoires.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.

(suite page 7)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4


(suite de la page 6)

- **Effets écotoxiques:**
- **Remarque:**
Toxique chez les poissons.
Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 3 (D) (Classification propre): très polluant
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations, même pas en petite quantité.
Danger pour l'eau potable dès fuite d'une quantité minimale dans le sous-sol.
Dans les eaux, également toxique pour les poissons et le plancton.
Toxique pour les organismes aquatiques.
Nocif pour les organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

RUBRIQUE 13: Considérations relatives à l'élimination

- **13.1 Méthodes de traitement des déchets**
- **Recommandation:** Ne doit pas être évacué avec les ordures ménagères. Ne pas laisser pénétrer dans les égouts.
- **Emballages non nettoyés:**
- **Recommandation:** Evacuation conformément aux prescriptions légales.
- **Produit de nettoyage recommandé:** Eau, éventuellement avec des produits de nettoyage

RUBRIQUE 14: Informations relatives au transport

- | | |
|--|--|
| <ul style="list-style-type: none"> · 14.1 Numéro ONU · ADR, IMDG, IATA | UN1760 |
| <ul style="list-style-type: none"> · 14.2 Désignation officielle de transport de l'ONU · ADR · IMDG, IATA | 1760 LIQUIDE CORROSIF, N.S.A. (glutaral)
CORROSIVE LIQUID, N.O.S. (Glutaraldehyde) |
| <ul style="list-style-type: none"> · 14.3 Classe(s) de danger pour le transport · ADR, IMDG, IATA | <div style="text-align: center;">  </div> |
| <ul style="list-style-type: none"> · Classe · Étiquette | 8 Matières corrosives.
8 |
| <ul style="list-style-type: none"> · 14.4 Groupe d'emballage · ADR, IMDG, IATA | II |
| <ul style="list-style-type: none"> · 14.5 Dangers pour l'environnement: | Non applicable. |
| <ul style="list-style-type: none"> · 14.6 Précautions particulières à prendre par l'utilisateur · Numéro d'identification du danger (Indice Kemler): · No EMS: | Attention: Matières corrosives.
80
F-A,S-B |

(suite page 8)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 7)

· Segregation groups	Acids
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR	
· Quantités limitées (LQ)	1L
· Quantités exceptées (EQ)	Code: E2 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 500 ml
· Catégorie de transport	2
· Code de restriction en tunnels	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Règlement type" de l'ONU:	UN 1760 LIQUIDE CORROSIF, N.S.A. (GLUTARAL), 8, II

RUBRIQUE 15: Informations relatives à la réglementation

- 15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement
- Directive 2012/18/UE
- Substances dangereuses désignées - ANNEXE I Aucun des composants n'est compris.
- RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII Conditions de limitation: 3

· Règlement (CE) N° 649/2012

124-65-2	dimethylarsinate de sodium	Annex I Part I
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- 15.2 Évaluation de la sécurité chimique: Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

Ces indications sont fondées sur l'état actuel de nos connaissances, mais ne constituent pas une garantie quant aux propriétés du produit et ne donnent pas lieu à un rapport juridique contractuel.

· Phrases importantes

H301 Toxique en cas d'ingestion.

H302 Nocif en cas d'ingestion.

H314 Provoque des brûlures de la peau et de graves lésions des yeux.

H317 Peut provoquer une allergie cutanée.

H330 Mortel par inhalation.

H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.

H335 Peut irriter les voies respiratoires.

H400 Très toxique pour les organismes aquatiques.

H411 Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

(suite page 9)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 30.06.2020

Révision: 30.06.2020

Nom du produit: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(suite de la page 8)

· Acronymes et abréviations:*ADR: Accord européen sur le transport des marchandises dangereuses par Route**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**GHS: Globally Harmonised System of Classification and Labelling of Chemicals**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Toxicité aiguë - voie orale – Catégorie 3**Acute Tox. 4: Toxicité aiguë - voie orale – Catégorie 4**Acute Tox. 2: Toxicité aiguë - inhalation – Catégorie 2**Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B**Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2**Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1**Resp. Sens. 1: Sensibilisation respiratoire – Catégorie 1**Skin Sens. 1: Sensibilisation cutanée – Catégorie 1**Skin Sens. 1A: Sensibilisation cutanée – Catégorie 1A**STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3**Aquatic Acute 1: Dangers pour le milieu aquatique- toxicité aiguë pour le milieu aquatique – Catégorie 1**Aquatic Chronic 2: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 2**Aquatic Chronic 3: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 3*

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

ABSCHNITT 1: Bezeichnung des Stoffs beziehungsweise des Gemischs und des Unternehmens

- **1.1 Produktidentifikator**
- **Handelsname:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Artikelnummer:** 16539-06, 16539-07, 16539-08
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

Tel: +49(0)89 18 93 668-0
safety@scienceservices.de

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS08 Gesundheitsgefahr

Resp. Sens. 1 H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.



GHS05 Ätzwirkung

Eye Dam. 1 H318 Verursacht schwere Augenschäden.



GHS07

Acute Tox. 4 H332 Gesundheitsschädlich bei Einatmen.

Skin Irrit. 2 H315 Verursacht Hautreizungen.

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

Handelsname: Glutaraldehyd 4% in 0.1M in Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 1)

Skin Sens. 1 *H317 Kann allergische Hautreaktionen verursachen.*

STOT SE 3 *H335 Kann die Atemwege reizen.*

Aquatic Chronic 3 *H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.*

· 2.2 Kennzeichnungselemente

· Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS05 GHS07 GHS08

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

Glutaral

· Gefahrenhinweise

H332 Gesundheitsschädlich bei Einatmen.

H315 Verursacht Hautreizungen.

H318 Verursacht schwere Augenschäden.

H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.

H317 Kann allergische Hautreaktionen verursachen.

H335 Kann die Atemwege reizen.

H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.

· Sicherheitshinweise

P305+P351+P338 BEI KONTAKT MIT DEN AUGEN: Einige Minuten lang behutsam mit Wasser spülen. Eventuell vorhandene Kontaktlinsen nach Möglichkeit entfernen. Weiter spülen.

P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

P362+P364 Kontaminierte Kleidung ausziehen und vor erneutem Tragen waschen.

P405 Unter Verschluss aufbewahren.

P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

· 3.2 Chemische Charakterisierung: Gemische

· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

· Gefährliche Inhaltsstoffe:

CAS: 111-30-8 EINECS: 203-856-5	Glutaral ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	Natriumkakodylat ⚠ Acute Tox. 4, H302	≤2,5%

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

Handelsname: Glutaraldehyde 4% in 0.1M in Nodium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 2)

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

· **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**

· **Allgemeine Hinweise:**

Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.

· **Nach Einatmen:**

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

· **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.

· **Nach Augenkontakt:**

Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.

· **Nach Verschlucken:** Sofort Arzt aufsuchen.

· **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**

Keine weiteren relevanten Informationen verfügbar.

· **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

· **5.1 Löschmittel**

· **Geeignete Löschmittel:** Feuerlöschmaßnahmen auf die Umgebung abstimmen.

· **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**

Keine weiteren relevanten Informationen verfügbar.

· **5.3 Hinweise für die Brandbekämpfung**

· **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

· **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Nicht erforderlich.

· **6.2 Umweltschutzmaßnahmen:**

Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.

Mit viel Wasser verdünnen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

· **6.3 Methoden und Material für Rückhaltung und Reinigung:**

Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

Für ausreichende Lüftung sorgen.

· **6.4 Verweis auf andere Abschnitte**

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

Informationen zur Entsorgung siehe Abschnitt 13.

ABSCHNITT 7: Handhabung und Lagerung

· **7.1 Schutzmaßnahmen zur sicheren Handhabung**

Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.

Aerosolbildung vermeiden.

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

Handelsname: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 3)

- **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebsicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**

· **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

111-30-8 Glutaral

AGW	Langzeitwert: 0,2 mg/m ³ , 0,05 ml/m ³ 2(1);AGS, Sah, Y
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- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
 Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
 Beschmutzte, getränkte Kleidung sofort ausziehen.
 Vor den Pausen und bei Arbeitsende Hände waschen.
 Berührung mit der Haut vermeiden.
 Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**
 Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition umluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

Auswahl des Handschuhmaterials unter Beachtung der Durchbruchzeiten, Permeationsraten und der Degradation.

- **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich. Da das Produkt eine Zubereitung aus mehreren Stoffen darstellt, ist die Beständigkeit von Handschuhmaterialien nicht vorausberechenbar und muß deshalb vor dem Einsatz überprüft werden.

- **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

Handelsname: Glutaraldehyde 4% in 0.1M in Nodium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 4)

· **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· **9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**

· **Allgemeine Angaben**

· **Aussehen:**

Form:	Flüssig
Farbe:	Gemäß Produktbezeichnung
· Geruch:	Charakteristisch
· Geruchsschwelle:	Nicht bestimmt.

· **pH-Wert bei 20 °C:** 7,4

· **Zustandsänderung**

Schmelzpunkt/Gefrierpunkt:	0 °C
Siedebeginn und Siedebereich:	100 °C

· **Flammpunkt:** Nicht anwendbar.

· **Entzündbarkeit (fest, gasförmig):** Nicht anwendbar.

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Das Produkt ist nicht selbstentzündlich.

· **Explosive Eigenschaften:** Das Produkt ist nicht explosionsgefährlich.

· **Explosionsgrenzen:**

Untere:	Nicht bestimmt.
Obere:	Nicht bestimmt.

· **Dampfdruck bei 20 °C:** 23 hPa

· Dichte bei 20 °C:	1 g/cm ³
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht bestimmt.
· Verdampfungsgeschwindigkeit	Nicht bestimmt.

· **Löslichkeit in / Mischbarkeit mit Wasser:** Vollständig mischbar.

· **Verteilungskoeffizient: n-Octanol/Wasser:** Nicht bestimmt.

· **Viskosität:**

Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.

· **Lösemittelgehalt:**

Wasser:	95,0 %
VOC (EU)	0,00 %

Festkörpergehalt: 0,0 %

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

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Handelsname: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 5)

· 9.2 Sonstige Angaben

Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 10: Stabilität und Reaktivität

- **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.
- **10.2 Chemische Stabilität**
- **Thermische Zersetzung / zu vermeidende Bedingungen:**
Keine Zersetzung bei bestimmungsgemäßer Verwendung.
- **10.3 Möglichkeit gefährlicher Reaktionen** Keine gefährlichen Reaktionen bekannt.
- **10.4 Zu vermeidende Bedingungen** Keine weiteren relevanten Informationen verfügbar.
- **10.5 Unverträgliche Materialien:** Keine weiteren relevanten Informationen verfügbar.
- **10.6 Gefährliche Zersetzungsprodukte:** Keine gefährlichen Zersetzungsprodukte bekannt.

ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität**
Gesundheitsschädlich bei Einatmen.

· Einstufungsrelevante LD/LC50-Werte:

111-30-8 Glutaral

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2.560 mg/kg (rabbit)

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung**
Verursacht schwere Augenschäden.
- **Sensibilisierung der Atemwege/Haut**
Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.
Kann allergische Hautreaktionen verursachen.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**
Kann die Atemwege reizen.
- **Spezifische Zielorgan-Toxizität bei wiederholter Exposition**
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Aspirationsgefahr** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

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Handelsname: Glutaraldehyde 4% in 0.1M in Nodium Cacodylate Buffer, pH 7.4


(Fortsetzung von Seite 6)

- **Ökotoxische Wirkungen:**
- **Bemerkung:**
Giftig für Fische.
Schädlich für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 3 (Selbsteinstufung): stark wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.
Trinkwassergefährdung bereits beim Auslaufen geringster Mengen in den Untergrund.
In Gewässern auch giftig für Fische und Plankton.
giftig für Wasserorganismen
schädlich für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.
- **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

ABSCHNITT 14: Angaben zum Transport

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA | <p style="text-align: right;">UN1760</p> |
| <ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG, IATA | <p style="text-align: right;">1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G. (Glutaral)
CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)</p> |
| <ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG, IATA | <div style="text-align: center;">  </div> <p style="text-align: right;">8 Ätzende Stoffe
8</p> |
| <ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA | <p style="text-align: right;">II</p> |
| <ul style="list-style-type: none"> · 14.5 Umweltgefahren: | <p style="text-align: right;">Nicht anwendbar.</p> |
| <ul style="list-style-type: none"> · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl): | <p style="text-align: right;">Achtung: Ätzende Stoffe
80</p> |

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

Handelsname: Glutaraldehyde 4% in 0.1M in Nodium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 7)

- **EMS-Nummer:** F-A,S-B
- **Segregation groups** Acids
- **Stowage Category** B
- **Stowage Code** SW2 Clear of living quarters.

- **14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code** Nicht anwendbar.

· **Transport/weitere Angaben:**

- **ADR**
- **Begrenzte Menge (LQ)** 1L
- **Freigestellte Mengen (EQ)** Code: E2
Höchste Nettomenge je Innenverpackung: 30 ml
Höchste Nettomenge je Außenverpackung: 500 ml
- **Beförderungskategorie** 2
- **Tunnelbeschränkungscode** E

- **IMDG**
- **Limited quantities (LQ)** 1L
- **Excepted quantities (EQ)** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

- **UN "Model Regulation":** UN 1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G. (GLUTARAL), 8, II

ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I** Keiner der Inhaltsstoffe ist enthalten.
- **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3

· **Verordnung (EU) Nr. 649/2012**

124-65-2 Natriumkakodylat

Annex I Part I

- **Nationale Vorschriften:**
- **Technische Anleitung Luft:**

Klasse	Anteil in %
Wasser	95,0
I	4,0

- **Wassergefährdungsklasse: WGK 3 (Selbsteinstufung):** stark wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

ABSCHNITT 16: Sonstige Angaben

Die Angaben stützen sich auf den heutigen Stand unserer Kenntnisse, sie stellen jedoch keine Zusicherung von Produkteigenschaften dar und begründen kein vertragliches Rechtsverhältnis.

- **Relevante Sätze**
H301 Giftig bei Verschlucken.

(Fortsetzung auf Seite 9)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 30.06.2020

überarbeitet am: 30.06.2020

Handelsname: Glutaraldehyd 4% in 0.1M in Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 8)

H302 Gesundheitsschädlich bei Verschlucken.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H330 Lebensgefahr bei Einatmen.

H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.

H335 Kann die Atemwege reizen.

H400 Sehr giftig für Wasserorganismen.

H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.

Abkürzungen und Akronyme:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akute Toxizität - oral – Kategorie 3

Acute Tox. 4: Akute Toxizität - oral – Kategorie 4

Acute Tox. 2: Akute Toxizität - inhalativ – Kategorie 2

Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B

Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2

Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1

Resp. Sens. 1: Sensibilisierung der Atemwege – Kategorie 1

Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1

Skin Sens. 1A: Sensibilisierung der Haut – Kategorie 1A

STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3

Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1

Aquatic Chronic 2: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 2

Aquatic Chronic 3: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 3

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

SEZIONE 1: Identificazione della sostanza o della miscela e della società/impresa

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

· **Articolo numero:** 16539-06, 16539-07, 16539-08

· **1.2 Usi identificati pertinenti della sostanza o della miscela e usi sconsigliati**

Non sono disponibili altre informazioni.

· **Utilizzazione della Sostanza / del Preparato** Prodotti chimici per laboratorio

· **1.3 Informazioni sul fornitore della scheda di dati di sicurezza**

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

· **Informazioni fornite da:** Product safety department

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

· **2.1 Classificazione della sostanza o della miscela**

· **Classificazione secondo il regolamento (CE) n. 1272/2008**



GHS08 pericolo per la salute

Resp. Sens. 1 H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.



GHS05 corrosione

Eye Dam. 1 H318 Provoca gravi lesioni oculari.



GHS07

Acute Tox. 4 H332 Nocivo se inalato.

Skin Irrit. 2 H315 Provoca irritazione cutanea.

Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.

STOT SE 3 H335 Può irritare le vie respiratorie.

Aquatic Chronic 3 H412 Nocivo per gli organismi acquatici con effetti di lunga durata.

(continua a pagina 2)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 1)

· **2.2 Elementi dell'etichetta**

· **Etichettatura secondo il regolamento (CE) n. 1272/2008**

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS05 GHS07 GHS08

· **Avvertenza Pericolo**

· **Componenti pericolosi che ne determinano l'etichettatura:**

glutarale

· **Indicazioni di pericolo**

H332 Nocivo se inalato.

H315 Provoca irritazione cutanea.

H318 Provoca gravi lesioni oculari.

H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.

H317 Può provocare una reazione allergica cutanea.

H335 Può irritare le vie respiratorie.

H412 Nocivo per gli organismi acquatici con effetti di lunga durata.

· **Consigli di prudenza**

P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI:** sciacquare accuratamente per parecchi minuti.

Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P310

Contattare immediatamente un CENTRO ANTIVELENI/un medico.

P321

Trattamento specifico (vedere su questa etichetta).

P362+P364

Togliere tutti gli indumenti contaminati e lavarli prima di indossarli nuovamente.

P405

Conservare sotto chiave.

P501

Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**

· **Descrizione:** Miscela delle seguenti sostanze con additivi non pericolosi.

· **Sostanze pericolose:**

CAS: 111-30-8 EINECS: 203-856-5	glutarale ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	dimetilarsinato di sodio ⚠ Acute Tox. 4, H302	≤2,5%

· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

(continua a pagina 3)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 2)

SEZIONE 4: Misure di primo soccorso

· **4.1 Descrizione delle misure di primo soccorso**

· **Indicazioni generali:**

I sintomi di avvelenamento possono comparire dopo molte ore, per tale motivo è necessaria la sorveglianza di un medico nelle 48 ore successive all'incidente.

· **Inalazione:**

Portare il soggetto in zona molto ben areata e per sicurezza consultare un medico.

Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.

· **Contatto con la pelle:** *Lavare immediatamente con acqua e sapone sciacquando accuratamente.*

· **Contatto con gli occhi:**

Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.

· **Ingestione:** *Chiamare subito il medico.*

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** *Non sono disponibili altre informazioni.*

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

SEZIONE 5: Misure antincendio

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:** *Adottare provvedimenti antiincendio nei dintorni della zona colpita.*

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** *Non sono disponibili altre informazioni.*

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** *Indossare il respiratore.*

SEZIONE 6: Misure in caso di rilascio accidentale

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** *Non necessario.*

· **6.2 Precauzioni ambientali:**

In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.

Diluire abbondantemente con acqua.

Impedire infiltrazioni nella fognatura/nelle acque superficiali/nelle acque freatiche.

· **6.3 Metodi e materiali per il contenimento e per la bonifica:**

Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

· **7.1 Precauzioni per la manipolazione sicura**

Accurata ventilazione/aspirazione nei luoghi di lavoro.

Evitare la formazione di aerosol.

· **Indicazioni in caso di incendio ed esplosione:** *Non sono richiesti provvedimenti particolari.*

· **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**

· **Stoccaggio:**

· **Requisiti dei magazzini e dei recipienti:** *Non sono richiesti requisiti particolari.*

· **Indicazioni sullo stoccaggio misto:** *Non necessario.*

(continua a pagina 4)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 3)

- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **8.1 Parametri di controllo**

· **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:**

111-30-8 glutarale

TWA	Limite Ceiling: 0,2 mg/m ³ , 0,05 ppm sen, A4
-----	---

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

· 8.2 Controlli dell'esposizione

· Mezzi protettivi individuali:

· Norme generali protettive e di igiene del lavoro:

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Evitare il contatto con la pelle.
- Evitare il contatto con gli occhi e la pelle.

· Maschera protettiva:

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

· Guanti protettivi:



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.

A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.

Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

· Materiale dei guanti

La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro. Poiché il prodotto rappresenta una formulazione di più sostanze, la stabilità dei materiali dei guanti non è calcolabile in anticipo e deve essere testata prima dell'impiego

· Tempo di permeazione del materiale dei guanti

Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.

· Occhiali protettivi:



Occhiali protettivi a tenuta

IT

(continua a pagina 5)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 4)

SEZIONE 9: Proprietà fisiche e chimiche

· **9.1 Informazioni sulle proprietà fisiche e chimiche fondamentali**

· **Indicazioni generali**

· **Aspetto:**

Forma:

Liquido

Colore:

In conformità con la denominazione del prodotto

· **Odore:**

Caratteristico

· **Soglia olfattiva:**

Non definito.

· **valori di pH a 20 °C:**

7,4

· **Cambiamento di stato**

Punto di fusione/punto di congelamento:

0 °C

Punto di ebollizione iniziale e intervallo di ebollizione:

100 °C

· **Punto di infiammabilità:**

Non applicabile.

· **Infiammabilità (solidi, gas):**

Non applicabile.

· **Temperatura di decomposizione:**

Non definito.

· **Temperatura di autoaccensione:**

Prodotto non autoinfiammabile.

· **Proprietà esplosive:**

Prodotto non esplosivo.

· **Limiti di infiammabilità:**

Inferiore:

Non definito.

Superiore:

Non definito.

· **Tensione di vapore a 20 °C:**

23 hPa

· **Densità a 20 °C:**

1 g/cm³

· **Densità relativa**

Non definito.

· **Densità di vapore:**

Non definito.

· **Velocità di evaporazione**

Non definito.

· **Solubilità in/Miscibilità con acqua:**

Completamente miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:** Non definito.

· **Viscosità:**

Dinamica:

Non definito.

Cinematica:

Non definito.

· **Tenore del solvente:**

Acqua:

95,0 %

VOC (CE)

0,00 %

Contenuto solido:

0,0 %

· **9.2 Altre informazioni**

Non sono disponibili altre informazioni.

SEZIONE 10: Stabilità e reattività

· **10.1 Reattività** Non sono disponibili altre informazioni.

· **10.2 Stabilità chimica**

· **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.

· **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.

(continua a pagina 6)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 5)

- **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.
- **10.5 Materiali incompatibili:** Non sono disponibili altre informazioni.
- **10.6 Prodotti di decomposizione pericolosi:** Non sono noti prodotti di decomposizione pericolosi.

SEZIONE 11: Informazioni tossicologiche

· **11.1 Informazioni sugli effetti tossicologici**

- **Tossicità acuta**
Nocivo se inalato.

· **Valori LD/LC50 rilevanti per la classificazione:**

111-30-8 glutarale

Orale	LD50	134 mg/kg (rat)
Cutaneo	LD50	2.560 mg/kg (rabbit)

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**
Provoca irritazione cutanea.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca gravi lesioni oculari.
- **Sensibilizzazione respiratoria o cutanea**
Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**
Può irritare le vie respiratorie.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:**
Tossico per i pesci.
Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 3 (D) (Autoclassificazione): molto pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di quantità minime di prodotto.
Tossico per pesci e plancton.
tossico per gli organismi acquatici
nocivo per gli organismi acquatici

(continua a pagina 7)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4


(Segue da pagina 6)

- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

- **13.1 Metodi di trattamento dei rifiuti**
- **Consigli:** Non smaltire il prodotto insieme ai rifiuti domestici Non immettere nelle fognature.
- **Imballaggi non puliti:**
- **Consigli:** Smaltimento in conformità con le disposizioni amministrative.
- **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|--|
| · 14.1 Numero ONU
· ADR, IMDG, IATA | UN1760 |
| · 14.2 Nome di spedizione dell'ONU
· ADR
· IMDG, IATA | 1760 LIQUIDO CORROSIVO, N.A.S. (glutarale)
CORROSIVE LIQUID, N.O.S. (Glutaraldehyde) |
| · 14.3 Classi di pericolo connesso al trasporto
· ADR, IMDG, IATA | |
|  | |
| · Classe
· Etichetta | 8 Materie corrosive
8 |
| · 14.4 Gruppo di imballaggio
· ADR, IMDG, IATA | II |
| · 14.5 Pericoli per l'ambiente: | Non applicabile. |
| · 14.6 Precauzioni speciali per gli utilizzatori
· N° identificazione pericolo (Numero Kemler):
· Numero EMS:
· Segregation groups
· Stowage Category
· Stowage Code | Attenzione: Materie corrosive
80
F-A,S-B
Acids
B
SW2 Clear of living quarters. |
| · 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC | Non applicabile. |
| · Trasporto/ulteriori indicazioni: | |
| · ADR
· Quantità limitate (LQ)
· Quantità esenti (EQ)

· Categoria di trasporto | 1L
Codice: E2
Quantità massima netta per imballaggio interno: 30 ml
Quantità massima netta per imballaggio esterno: 500 ml

2 |

(continua a pagina 8)

Scheda di dati di sicurezza
ai sensi del regolamento 1907/2006/CE, Articolo 31

Stampato il: 30.06.2020

Revisione: 30.06.2020

Denominazione commerciale: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 7)

· Codice di restrizione in galleria	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1760 LIQUIDO CORROSIVO, N.A.S. (GLUTARALE), 8, II

SEZIONE 15: Informazioni sulla regolamentazione

- **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**
- **Direttiva 2012/18/UE**
- **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3

- **Regolamento (UE) N. 649/2012**

124-65-2	dimetilarsinato di sodio	Annex I Part I
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- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

I dati sono riportati sulla base delle nostre conoscenze attuali, non rappresentano tuttavia alcuna garanzia delle caratteristiche del prodotto e non motivano alcun rapporto giuridico contrattuale.

- **Frase rilevanti**

- H301 Tossico se ingerito.
- H302 Nocivo se ingerito.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H317 Può provocare una reazione allergica cutanea.
- H330 Letale se inalato.
- H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
- H335 Può irritare le vie respiratorie.
- H400 Molto tossico per gli organismi acquatici.
- H411 Tossico per gli organismi acquatici con effetti di lunga durata.

- **Abbreviazioni e acronimi:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 3: Tossicità acuta per via orale – Categoria 3
- Acute Tox. 4: Tossicità acuta per via orale – Categoria 4
- Acute Tox. 2: Tossicità acuta per inalazione – Categoria 2
- Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B
- Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2
- Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1

(continua a pagina 9)

Scheda di dati di sicurezza
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(Segue da pagina 8)

Resp. Sens. 1: Sensibilizzazione delle vie respiratorie – Categoria 1

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

Skin Sens. 1A: Sensibilizzazione della pelle – Categoria 1A

STOT SE 3: Tossicità specifica per organi bersaglio (esposizione singola) – Categoria 3

Aquatic Acute 1: Pericoloso per l'ambiente acquatico - pericolo acuto per l'ambiente acquatico – Categoria 1

Aquatic Chronic 2: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 2

Aquatic Chronic 3: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 3

IT

물질안전보건자료

GHS에 따라라따

인쇄일자: 2020.06.30

개정: 2020.06.30

제품명: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(1 쪽부터계속)

- 피부 부식성/피부 자극성 - 구분 2 H315 피부에 자극을 일으킴
- 피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음
- 특정표적장기 독성 - 1회 노출 - 구분 3 H335 호흡 자극성을 일으킬 수 있음
- 수생환경 유해성 - 만성3 H412 장기적 영향에 의해 수생생물에 유해함

라벨표가요소요소

라벨표가요소요소

본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

그림문자



GHS05 GHS07 GHS08

신호어 위험

상표상에명확히위험성이표시된성분:

- 글루타르알데히드
- sodium dimethylarsinate

유해위험성

- 흡입하면 유해함
- 피부에 자극을 일으킴
- 눈에 심한 손상을 일으킴
- 흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음
- 알레르기성 피부 반응을 일으킬 수 있음
- 호흡 자극성을 일으킬 수 있음
- 장기적 영향에 의해 수생생물에 유해함

예방조치

- 눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.
- 즉시 독성물질센터/병원 연락 필요.
- (라벨 참조) 처치를 하시오.
- 오염된 의복은 벗고 다시 사용 전 세척하십시오.
- 밀봉하여 저장 하시오.
- (지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기 하시오.

기타기타

- PBT(잔류성, 생물농축성, 독성물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 지정 여부 결과
- PBT(잔류성, 생물농축성, 독성물질) 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질) 해당사항 없음.

3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

설명설명 설명한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소요소

111-30-8	글루타르알데히드	>2.5-≤10%
	<ul style="list-style-type: none"> 급성 독성 - 경구 - 구분 3, H301; 급성 독성 - 흡입 - 구분 2, H330; 호흡기 과민성 - 구분 1, H334; 피부 부식성/피부 자극성 - 구분 1, H314; 수생환경 유해성 - 급성 1, H400; 수생환경 유해성 - 만성2, H411; 피부 과민성 - 구분 1, H317; 특정표적장기 독성 - 1회 노출 - 구분 3, H335 	

(3 쪽에계속)

물질안전보건자료

GHS에 따라 라다

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124-65-2	sodium dimethylarsinate	(2 쪽부터 계속)
급성 독성 - 경구 - 구분 3, H301		≤2.5%

4 응급조치 요령

- **응급조치요령 내용내용**
- **일반정보정보**
중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.
- **흡입했을 때:**
신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.
- **눈에 눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 의사와 상담한다
- **먹었을 때:** 즉시 의사의 도움을 구한다.
- **기타 기타 사항의 주의사항:**
가장 가장 중요한 응급 대응 정보에 영향을 미치지 않는 정보가 존재하지 않습니다.
· **즉각적인 의료 처치 및 특별 치료가 필요함을 시사하는 징후 정확적인 정보가 존재하지 않습니다.**

5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:** 주변 환경에 맞는 화재 진화 방법을 사용한다.
- **본 화학 물질이나 혼합물에서 발생 가능한 특별한 위험 특성** 추가적인 정보가 존재하지 않습니다.
- **소방 관에 대한 신고 사항**
- **화재 화제 화제 관련 사용할 보호구 및 예방 조치:** 호흡 보호 장비 설치.

6 누출 사고 시 대처방법

- **개인적 예방 조치, 보호 장비 및 응급 처치 절차 필요 없음.**
- **환경 환경 관련 예방 조치:**
하천이나 하수도로 유입되었을 경우 해당 관청에 보고한다.
많은 물로 희석 시킨다.
하수도망/해수면 위 의 물/지하 수도로 도달하지 않게 한다.
- **밀폐 밀폐 용기 및 포장재 소재 소재**
액체가 혼합된 물질 (모래, 규조토, 산성 결합 물, 일반 결합 물, 톱밥)에 흡입되도록 한다.
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.
- **식별 식별 정보 참조**
안전 관리에 대한 정보는 제 7 장 을 참고 하시오.
개인 보호 장비에 대한 정보는 제 8 장 을 참고 하시오.
쓰레기 처리에 대한 정보는 제 13 장 을 참고 하시오.

7 취급 및 저장방법

- **취급 취급 취급**
- **안전 안전 예방을 위한 예방 조치**
작업장에서는 통풍이 잘 되고 습기 제거가 잘 되게 주의한다.
연무질이 형성되는 것을 피한다.

(4 쪽에 계속)

물질안전보건자료 GHS에 따라라다

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제품명: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(3 쪽부터계속)

화재·폭발·폭발·대체·관련·정보별 한 조 치 가 필 요 없 음.

- 혼합 위험성 등 안전 정보 조건
- 보관 조건
- 안전 정보 별 한 요구 사항 이 없 음.
- 하 나 의 공 통 공 통 사 실 에 대 한 대 한 정보 별 한 정보 없 음
- 보 관 조 건 에 관 한 추 가 정 보 정 보 기 를 새 지 않 게 밀 폐 한 채 보 관 한 다.
- 구 체 적 최 종 최 종 자 추 가 적 인 정보 가 존 재 하 지 않 습 니 다.

8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없 음. 항 목 7 을 참 고 하 시 오.

통제 통제 통제 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:	
111-30-8 글루타르알데히드	
TLV (KR)	최고노출기준: 0.05 ppm
REL (US)	최고노출기준: 0.8 mg/m ³ , 0.2 ppm See Pocket Guide App. C
TLV (US)	최고노출기준: 0.2 mg/m ³ , 0.05 ppm DSEN;RSEN ;activated or inactivated

- 추 가 정 보 정 보 조 할 당 시 에 유 효 한 목 록 을 기 초 로 사 용 했 다.

노출 통제 통제 통제

개인 개인 보호 구

- **일반적 보호 조치 및 위생 조치:**
 · 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
 · 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
 · 휴식 전 이 나 작업이 끝날 때 마다 손 을 씻 는 다.
 · 피부와의 접촉을 피한다.
 · 눈과 피부와의 접촉은 피한다.
- **호흡기 보호 보호**
 · 단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡 보호 장비를 사용한다.

보 수 보호 보호



보 호 용 장 갑

장갑재질은 제품 / 원료 / 조제를 통과시키지 않아야 하고, 내구성이 있어야 한다.
 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합물에 적합한 장갑재질에 대한 추천이 없다.
 투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑 의 재료**

적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업종에 따라서도 다르게 선정되어야 한다. 제품은 다양한 재료로부터의 조제로 이루어지는 것이기 때문에, 장갑재질의 안정성은 사전에 예측되어질 수 있는 것이 아니고, 반드시 사용 전에 (그 안전성이) 체크되어야 한다.

- **장갑 재료의 투과 시간** 정확한 관통 시간은 보호 장갑 제조자에 의하여 인지도되고, 준수되어야 한다.

(5 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2020.06.30

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제품명: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

보통 보호보호

(4 쪽부터계속)



꼭조이는보안경

9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보	
외형외형의형	액체의
· 물리적 상태상태	제품 표시에 따름
· 색:	특색있는
· 냄새냄새냄새	알맞지않다.
· 후각역치	
· pH 의경우 20 °C:	7.4
· 상태변화	
· 녹는점/어는점:	0 °C
· 초기초기 끓는 점과 끓는점범위범위	100 °C
· 인화점:	해당사항 없음.
· 인화성고체기체기체	해당사항 없음.
분해분해온도	
· 자기점화:	알맞지않다.
· 폭발위험:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
인화 인화 인화 폭발 위험성 상한 상한 하한	
· 아래로:	알맞지않다.
· 위로위로위로	알맞지않다.
· 증기압 의경우 20 °C:	23 hPa
밀도밀도 밀도 의경우 20 °C:	
· 비중비중비중	1 g/cm ³
· 증기밀도:	알맞지않다.
· 증발 증발 증발 속도	알맞지않다.
· 용해도:	
· 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
점도점도점도	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매 내용물	
· 물:	95.0 %
· VOC (EU)	0.00 %
· 고체양 함량함량	0.0 %

(6 쪽에계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2020.06.30

개정: 2020.06.30

제품명: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(5 쪽부터계속)

기타 정보 정보 추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 유해 반응의 가능성 / 피해 야한 조건 규정 에 따라 사용 할 경우 해체는 없다
- 유해 반응 가능성 위험한 반응으로는 알려지지 않았다.
- 피해 야한 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 유해 물질 추가적인 정보가 존재하지 않습니다.
- 유해 분해 물질: 위험성 있는 분해물들은 알려지지 않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성 독성 독성

· LD/LC50-수 체에 대한 분류		
111-30-8 글루타르알데히드		
구강의	LD50	134 mg/kg (rat)
피부의	LD50	2,560 mg/kg (rabbit)

- 일체적 자극 효과
- 피부 피부 부작상 또는 자극 성: 피부와 점막 을 자극 한다.
- 심한 심한 부작상 또는 자극 성: 심각한 안구 상처 의 위험 이 있는 강한 자극
- 감각 화:
 - 호흡 을 통한 감각 화 가능성 이 있다.
 - 피부 접촉 을 통하여 감각 화 가능성 이 있다.
- 추가적인 독성에 관한 정보
- 이제 품은 유럽 공동체 의 공동 분류 원칙 의 합법 적 인 절차 에 근거 하여 최근 에 발 호 된 원 고 에서 아래 위험 들 의 사전 준비 에 대 하여 제시 하고 있다.
- 건강 에 해로운
- 자극적인

12 환경에 미치는 영향

- 독성 독성 독성
- 수생 독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
 - 생물 농축 잠재성 추가적인 정보가 존재하지 않습니다.
 - 토양 내 이동성 추가적인 정보가 존재하지 않습니다.
- 생태 독성:
 - 추가적인 생태학 정보 정보
- 의견 의견 의견
- 어류 에 독 이 됨
- 어류 에 해 로움
- 추가적인 생태학 정보 정보
- 일반 일반 독성 특징
- 수질 오염 등급 3 (자체 등급 분류): 심하게 수질 오염 이 된
- 지하 수나, 하천 으로 또는 하수 도망 에 도달 하지 않게 한다. 역시 극 소수 의 양 이라도 안 된다.
- 지하 수로 아주 미세 한 양 이 유 입 되었 을 경우 엔 이미 식 수 오염 상태 이다

(7 쪽에 계속)

물질안전보건자료

GHS에 따라

인쇄일자: 2020.06.30

개정: 2020.06.30

제품명: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(6 쪽부터 계속)

하천에서는역시물고기나플랑크톤게는독성이있다.
 물속의유기체에독이되는것
 물속의유기체에해가되는것
 · PBT(잔류성, 생물농축성, 독성물질물질) 및 vPvB(고 잔류성, 고 생물농축성 물질)에 해당하며 결과
 · PBT(잔류성, 생물농축성, 독성물질물질)에 해당사항 없음.
 · vPvB(고 잔류성, 고 생물농축성 물질)에 해당사항 없음.
 기타기타 부가용 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- 폐기물 처리 방법
 권고 권고 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장포장
 권고 권고 단속의지침에입각한쓰레기처리.
- 추천 세정제: 경우에따라서세제가첨가된물

14 운송에 필요한 정보

유엔 유엔 유엔 번호 · ADR, IMDG, IATA	UN1760
적정적정 적정명 · ADR · IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. (글루타르알데히드) CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)
교통 교통 교통 위험 클래스 · ADR, IMDG, IATA <div style="text-align: center; margin: 10px 0;">  </div>	8 부식작용하는물질 8
등급 등급 등급 · 위험물 라벨라벨 · 용기등급 · ADR, IMDG, IATA	II
· 환경적 유해물질:	해당사항 없음.
· 이동시 특별 예방 조치 위험 위험 위험 코드 · E 번호 번호 · Segregation groups · Stowage Category · Stowage Code	경고: 부식작용하는물질 80 F-A,S-B Acids B SW2 Clear of living quarters.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크 물질 운송	해당사항 없음.

(8 쪽에 계속)

물질안전보건자료

GHS에 따라 라다

인쇄일자: 2020.06.30

개정: 2020.06.30

제품명: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(7 쪽부터 계속)

· 운송/추가정보	
· ADR	1L
한정량 (제한량 수량)	Code: E2
· Excepted quantities (EQ)	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
운송 위험분류 구분	2
터널 제한 코드	E
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2
	Maximum net quantity per inner packaging: 30 ml
	Maximum net quantity per outer packaging: 500 ml
· UN 번호	UN 1760 CORROSIVE LIQUID, N.O.S. (글루타르알데히드), 8, II

15 법적 규제 현황

· 산업안전보건법에 의한 유해물질 규제		
제조제조물질:		
어떠한 내용물도 목록화 되어있지 않다		
· 허가대상물질:		
어떠한 내용물도 목록화 되어있지 않다		
· 관리대상유해물질:		
111-30-8	글루타르알데히드	
· 작업환경측정 대상 유해인자		
111-30-8	글루타르알데히드	1A1
· 특수건강검진 대상 유해인자		
111-30-8	글루타르알데히드	1A2
해당 해당 물질 또는 혼합물에 대한 국내 안전보건규제 관련 법률		
· Korean Existing Chemical Inventory		
7732-18-5	물	KE-35400
111-30-8	글루타르알데히드	KE-27969
124-65-2	sodium dimethylarsinate	KE-11204
· 화학물질관리법		
· 사고대비물질		
어떠한 내용물도 목록화 되어있지 않다		
· 금지물질		
어떠한 내용물도 목록화 되어있지 않다		
· 제한물질		
어떠한 내용물도 목록화 되어있지 않다		
· 유독물질		
111-30-8	글루타르알데히드	

(9 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2020.06.30

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(9 쪽부터계속)

· 약어와 두문자어:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

KR

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

Disemak semula pada 30.06.2020

1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Nombor artikel:** 16539-06, 16539-07, 16539-08
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** Tiada maklumat lanjut yang diperoleh.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal risalah data keselamatan**
- **Pengilang/Pembekal:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Maklumat lanjut dapat diperoleh daripada:** Product safety department
- **Nombor telefon kecemasan:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Pengenalan bahaya

- **Pengelasan bahan atau campuran**



Bahaya kesihatan

Pem. Naf. 1 H334 Boleh menyebabkan gejala alahan atau asma atau kesukaran bernafas jika tersedut.



Kakisan

Kros. Mata 1 H318 Menyebabkan kerosakan mata yang serius.



Toks. Akut 4 H332 Memudaratkan jika tersedut.

Kreng. Kulit 2 H315 Menyebabkan kerengsaan kulit.

Pem. Kulit 1 H317 Boleh menyebabkan tindak balas alahan kulit.

STOT SE 3 H335 Boleh menyebabkan kerengsaan pernafasan.

Akuatik Kronik 3 H412 Memudaratkan kepada hidupan akuatik dengan kesan kekal berpanjangan.

- **Melabelkan unsur**
- **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).
- **Piktogram bahaya**



GHS05



GHS07



GHS08

- **Kata isyarat Bahaya**

(Bersambung ke halaman 2)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

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Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 1)

· **Komponen pelabelan yang menentukan bahaya:**

1,5-pentanadial
sodium dimethylarsinate

· **Pernyataan Bahaya**

Memudaratkan jika tertedut.

Menyebabkan kerengsaan kulit.

Menyebabkan kerosakan mata yang serius.

Boleh menyebabkan gejala alahan atau asma atau kesukaran bernafas jika tertedut.

Boleh menyebabkan tindak balas alahan kulit.

Boleh menyebabkan kerengsaan pernafasan.

Memudaratkan kepada hidupan akuatik dengan kesan kekal berpanjangan.

· **Pernyataan Berjaga-jaga**

Jika pengalihudaraan tidak mencukupi, pakai perlindungan pernafasan.

JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

Segera hubungi PUSAT RACUN/doktor.

Rawatan khas (lihat label ini).

Simpan di tempat berkunci.

Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

· **Bahaya lain**

· **Keputusan penilaian PBT dan vPvB**

· **PBT:** Tidak berkenaan

· **vPvB:** Tidak berkenaan

3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

· **Ciri kimia: Campuran**

· **Keterangan:** Campuran bahan disenaraikan di bawah bersama dengan bahan tambah tidak berbahaya.

· **Komponen berbahaya :**

111-30-8	1,5-pentanadial ☠ Toks. Akut 3, H301; Toks. Akut 2, H330; ☠ Pem. Naf. 1, H334; ☠ Skin Corr. 1, H314; ☠ Akuatik Akut 1, H400; Akuatik Kronik 2, H411; ☠ Pem. Kulit 1, H317; STOT SE 3, H335	>2.5-≤10%
124-65-2	sodium dimethylarsinate ☠ Toks. Akut 3, H301	≤2.5%

4 Langkah-langkah pertolongan cemas

· **Keterangan langkah pertolongan cemas**

· **Maklumat am:**

Gejala keracunan boleh berlaku selepas beberapa jam, maka rawatan perubatan hendaklah diberikan sekurang-kurangnya 48 jam selepas kemalangan.

· **Jika tertedut:**

Berikan udara bersih dan pastikan rawatan doktor diperoleh.

Jika mangsa tidak sedarkan diri, letakkan pesakit dengan stabil dalam kedudukan mengiring untuk diangkat.

· **Jika terkena kulit:** Segera basuh dengan air dan sabun serta bilas bersih-bersih.

· **Jika terkena mata:**

Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit. Kemudian hubungi doktor.

· **Jika tertelan:** Segera hubungi doctor.

· **Maklumat untuk doktor:**

· **Gejala dan kesan paling penting, akut dan lewat** Tiada maklumat lanjut yang diperoleh.

(Bersambung ke halaman 3)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

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Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 2)

- **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**
Tiada maklumat lanjut yang diperoleh.

5 Langkah-langkah pemadaman kebakaran

- **Bahan pemadam api**
- **Agan pemadam yang sesuai:** Gunakan kaedah pemadaman kebakaran yang sesuai dengan keadaan sekeliling.
- **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperoleh.
- **Panduan kepada pemadam kebakaran**
- **Kelengkapan perlindungan:** Peralatan perlindungan pernafasan mulut.

6 Langkah-langkah pelepasan tidak sengaja

- **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan** Tidak diperlukan.
- **Langkah perlindungan alam sekitar:**
Hubungi pihak berkuasa berkaitan jika berlaku peresapan masuk ke dalam saluran air atau sistem pembetulan. Cairkan dengan air yang banyak.
Jangan biarkannya memasuki pembentung/air permukaan atau tanah.
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**
Serap dengan bahan cecair pengikat (pasir, diatomit, pengikat asid, pengikat semesta, habuk papan)
Lupuskan bahan tercemar sebagai sisa mengikut perkara 13.
Pastikan pengalihudaraan mencukupi.
- **Rujukan ke bahagian lain**
Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.
Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.
Lihat Bahagian 13 untuk maklumat pelupusan.

7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**
Pastikan pengalihudaraan/ekzos yang mencukupi di tempat kerja.
Elakkan pembentukan aerosol.
- **Maklumat kebakaran dan perlindungan daripada letupan:** Tiada langkah berjaga-jaga yang khusus diperlukan.
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** Tiada keperluan khusus.
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:** Pastikan bekas sentiasa bertutup rapat.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperoleh.

8 Kawalan pendedahan dan perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** Tiada maklumat lanjut, lihat perkara 7.
- **Parameter kawalan**

- **Ramuan dengan nilai had yang memerlukan pemantauan di tempat kerja:**

	111-30-8 1,5-pentanadial
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PEL	had siling: 0.21 mg/m ³ , 0.05 ppm
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(Bersambung ke halaman 4)

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

Disemak semula pada 30.06.2020

Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 3)

· **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.

· **Kawalan pendedahan**

· **Kelengkapan perlindungan diri:**

· **Langkah perlindungan dan kebersihan am:**

Jauhkan daripada makanan, minuman dan makanan haiwan.

Segera tanggalkan semua pakaian yang tercemar dan kotor.

Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.

Elakkan daripada terkena kulit.

Elakkan daripada terkena mata dan kulit.

· **Perlindungan pernafasan:**

Jika berlaku pendedahan sekejap atau sedikit pencemaran, gunakan alat penapis pernafasan. Jika berlaku pendedahan yang intensif atau berpanjangan, gunakan alat pernafasan perlindungan serba lengkap.

· **Perlindungan tangan:**



Sarung tangan pelindung.

Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.

Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.

Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.

· **Bahan sarung tangan**

Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain. Memandangkan produk merupakan suatu sediaan daripada beberapa bahan, ketahanan bahan sarung tangan tidak boleh dipastikan terlebih dahulu, oleh itu sarung tangan hendaklah diperiksa sebelum digunakan.

· **Jangka masa penyerapan bahan sarung tangan**

Waktu kemunculan yang tepat hendaklah diperoleh pengeluar sarung tangan pelindung dan hendaklah dipatuhi.

· **Perlindungan mata:**



Gogal bertutup rapat

9 Sifat fizikal dan kimia

· **Maklumat tentang ciri fizik dan kimia**

· **Maklumat Am**

· **Rupa:**

Bentuk:

Bendalir

Warna:

Mengikut spesifikasi produk

· **Bau:**

Ciri

· **Ambang bau**

Tidak ditentukan.

· **Nilai pH pada 20 °C:**

7.4

· **Perubahan pada keadaan**

Takat lebur/takat beku

0 °C

Takat didih awal dan julat didih

100 °C

· **Takat kilat:**

Tidak berkenaan

(Bersambung ke halaman 5)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

Disemak semula pada 30.06.2020

Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 4)

· Kemudahbakaran (pepejal, gas)	Tidak berkenaan
· Suhu penguraian:	Tidak ditentukan.
· Suhu pengautocucuhan	Produk tidak tercucuh sendiri
· Bahaya letupan:	Produk tidak ada bahaya letupan.
· Had letupan :	
Bawah:	Tidak ditentukan.
Atas:	Tidak ditentukan.
· Tekanan wap pada 20 °C:	23 hPa
· Ketumpatan pada 20 °C:	1 g/cm ³
· Ketumpatan bandingan	Tidak ditentukan.
· Ketumpatan wap	Tidak ditentukan.
· Kadar penyejatan	Tidak ditentukan.
· Keterlarutan dalam / Keterlarutcampuran dengan Air:	Terlarut campur sepenuhnya.
· Pekali sekatan: n-oktanol/air	Tidak ditentukan.
· Kelikatan:	
Dinamik:	Tidak ditentukan.
Kinematik:	Tidak ditentukan.
· Kandungan pelarut:	
Air:	95.0 %
Kandungan pepejal:	0.0 %
· Maklumat lain	Tiada maklumat lanjut yang diperolehi.

10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperolehi.
- **Kestabilan kimia**
- **Penguraian terma/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperolehi.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperolehi.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**

· **Nilai LD/LC50 yang berkaitan untuk pengelasan:**

111-30-8 1,5-pentanadiol

Oral	LD50	134 mg/kg (rat)
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Derma	LD50	2,560 mg/kg (rabbit)
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- **Kesan kerengsaan primer:**
- **Kakisan atau kerengsaan kulit** Merengsa kepada kulit dan mukus membran.
- **Kerosakan atau kerengsaan mata yang serius** Perengsa yang kuat dengan bahaya kecederaan mata yang teruk.

(Bersambung ke halaman 6)

Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

Disemak semula pada 30.06.2020

Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 5)

- **Pemakaian pernafasan / kulit**
Pemakaian mungkin berlaku melalui penyedutan.
Pemakaian mungkin berlaku jika terkena kulit.
- **Maklumat tambahan toksikologi:**
Produk menunjukkan bahaya berikut mengikut kaedah pengiraan Garis Panduan Pengelasan Am EU bagi Sediaan seperti yang dikeluarkan dalam versi terbaru:
Memudaratkan
Perengsa

12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperoleh.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperoleh.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperoleh.
- **Mobiliti di dalam tanah** Tiada maklumat lanjut yang diperoleh.
- **Kesan ekotoksik:**
- **Catatan:**
Toksik kepada ikan.
Memudaratkan kepada ikan.
- **Maklumat tambahan ekologi:**
- **Nota am:**
Bahaya air kelas 3 (Peraturan Jerman) (Penilaian sendiri): amat berbahaya kepada air
Jangan biarkan produk memasuki air tanah, saluran air atau sistem pembetulan, walaupun sedikit.
Bahaya kepada air minuman walaupun dalam amat sedikit produk kebocoran yang memasuki tanah
Juga beracun kepada ikan dan plankton dalam jasad air
Toksik kepada organisma akuatik
Memudaratkan organisma akuatik
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan
- **Kesan buruk yang lain** Tiada maklumat lanjut yang diperoleh.

13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembetulan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi
- **Agen pencuci yang disyorkan:** Air, jika perlu, digunakan bersama dengan agen pencuci.

14 Maklumat pengangkutan

- **Nombor UN**
- **ADR, IMDG, IATA** UN1760

(Bersambung ke halaman 7)


Helaiian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

Disemak semula pada 30.06.2020

Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 6)

<ul style="list-style-type: none"> · Nama penghantaran UN yang betul · ADR · IMDG, IATA 	<p>1760 CORROSIVE LIQUID, N.O.S. (1,5-pentanadial) CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)</p>
<ul style="list-style-type: none"> · pengangkutan kelas bahaya · ADR, IMDG, IATA 	
	
<ul style="list-style-type: none"> · Kelas · Label 	<p>8 Bahan mengakis. 8</p>
<ul style="list-style-type: none"> · Kumpulan pembungkusan · ADR, IMDG, IATA 	<p>II</p>
<ul style="list-style-type: none"> · Hazard persekitaran: 	<p>Tidak berkenaan</p>
<ul style="list-style-type: none"> · Langkah perlindungan khas untuk pengguna · Kod bahaya (Kemler): · Nombor EMS: · Segregation groups · Stowage Category · Stowage Code 	<p>Amaran: Bahan mengakis. 80 F-A,S-B Acids B SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC 	<p>Tidak berkenaan</p>
<ul style="list-style-type: none"> · Pengangkutan/Maklumat Tambahan: 	
<ul style="list-style-type: none"> · ADR · Excepted quantities (EQ) 	<p>Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> · "Peraturan Model" UN: 	<p>UN 1760 CORROSIVE LIQUID, N.O.S. (1,5-PENTANADIAL), 8, II</p>

15 Maklumat pengawalseliaan

· Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut

· Senarai Rujukan Bahan Berbahaya Alam Sekitar

111-30-8	1,5-pentanadial
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· Unsur label GHS Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).

(Bersambung ke halaman 8)

-MY

Helaian Data Keselamatan menurut P.U.(A) 310/2013

Tarikh cetak 30.06.2020

Disemak semula pada 30.06.2020

Nama dagang: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Sambungan halaman 7)

· **Piktogram hazard**



· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

1,5-pentanadial

sodium dimethylarsinate

· **Pernyataan hazard**

Memudaratkan jika tertedut.

Menyebabkan kerengsaan kulit.

Menyebabkan kerosakan mata yang serius.

Boleh menyebabkan gejala alahan atau asma atau kesukaran bernafas jika tertedut.

Boleh menyebabkan tindak balas alahan kulit.

Boleh menyebabkan kerengsaan pernafasan.

Memudaratkan kepada hidupan akuatik dengan kesan kekal berpanjangan.

· **Pernyataan langkah perlindungan**

Jika pengalihudaraan tidak mencukupi, pakai perlindungan pernafasan.

JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Terusakan membilas.

Segera hubungi PUSAT RACUN/doktor.

Rawatan khas (lihat label ini).

Simpan di tempat berkunci.

Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

· **Penilaian keselamatan bahan kimia:** Penilaian Keselamatan Bahan Kimia belum dilakukan.

16 Maklumat lain

Maklumat ini berdasarkan maklumat kami yang terkini. Walau bagaimanapun, ini tidak akan menjadi jaminan bagi apa-apa ciri produk yang khusus dan tidak akan mewujudkan hubungan kontraktual yang sah dari segi undang-undang.

· **Singkatan dan akronim:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Toks. Akut 3: Ketoksikan akut – Kategori 3

Toks. Akut 2: Ketoksikan akut – Kategori 2

Toks. Akut 4: Ketoksikan akut – Kategori 4

Skin Corr. 1: Kakisan atau kerengsaan kulit – Kategori 1

Kreng. Kulit 2: Kakisan atau kerengsaan kulit – Kategori 2

Kros. Mata 1: Kerosakan mata atau kerengsaan mata yang serius – Kategori 1

Pem. Naf. 1: Pemekaan pernafasan – Kategori 1

Pem. Kulit 1: Pemekaan kulit – Kategori 1

STOT SE 3: Ketoksikan organ sasaran khusus (pendedahan tunggal) – Kategori 3

Akuatik Akut 1: Berbahaya kepada persekitaran akuatik - bahaya akut – Kategori 1

Akuatik Kronik 2: Berbahaya kepada persekitaran akuatik - bahaya kronik – Kategori 2

Akuatik Kronik 3: Berbahaya kepada persekitaran akuatik - bahaya kronik – Kategori 3

安全資料表

據根根據據據性化學品標示及通識規則

打印日期 2020.06.30

在 2020.06.30 審核

1 化學品與廠商資料

- 產品識別者
- 化學品中文名稱名稱名稱化學品俗名或商品名: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- 商品編號: 16539-06, 16539-07, 16539-08
- 相應純物質或者混合物的相關下位用途及禁止用途 無相關詳細資料。
- 原材料的應用/準備工作進行 實驗室化學物
- 安全技術說明書內供應商詳細信息
- 企業名稱:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- 可獲取更多資料的部門: Product safety department
- 緊急聯繫電話號碼:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危害辨識資料

· 緊急情況概述:

根據產品規格，流體，吞食可能有害。吸入有害。造成皮膚刺激。造成嚴重眼睛損傷。吸入可能導致過敏或哮喘病症狀或呼吸困難。可能造成皮膚過敏。可能造成呼吸道刺激。對水生生物有毒。對水生生物有害並具有長期持續影響。

· GHS危險性類別



健康危險

呼吸道過敏物質 第1級

H334 吸入可能導致過敏或哮喘病症狀或呼吸困難



腐蝕

嚴重損傷/刺激眼睛物質 第1級

H318 造成嚴重眼睛損傷



急毒性物質(吸入) 第4級

H332 吸入有害

腐蝕/刺激皮膚物質 第2級

H315 造成皮膚刺激

皮膚過敏物質 第1級

H317 可能造成皮膚過敏

特定標的器官系統毒性物質(單一暴露) 第3級 H335 可能造成呼吸道刺激

急毒性物質(吞食) 第5級

H303 吞食可能有害

水環境之危害物質(急毒性) 第2級

H401 對水生生物有毒

水環境之危害物質(慢毒性) 第3級

H412 對水生生物有害並具有長期持續影響

· 標籤因素

- GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

(在 2 頁繼續)

安全資料表

據根據危險性化學品標示及通識規則

打印日期 2020.06.30

在 2020.06.30 審核

化學品中文名稱名稱：化學品俗名或商品名： Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

圖示圖示圖示

(在 1 頁繼續)



GHS05 GHS07 GHS08

名稱名稱名稱

· 標籤上辨別危險的成份:

1,5- 戊二 醛

卡可酸 鈉

· 危險字句

吞食可能有害

吸入有害

造成皮膚刺激

造成嚴重眼睛損傷

吸入可能導致過敏或哮喘病症狀或呼吸困難

可能造成皮膚過敏

可能造成呼吸道刺激

對水生生物有毒

對水生生物有害並具有長期持續影響

· 警戒字句

· 事故響應

如進入眼睛：用水小心清洗數分鐘。如帶隱形眼鏡且可方便地取出，取出隱型眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

專項處置(參見本標示)。

脫掉沾染的衣服，清洗後方可重新使用

· 安全貯存

加鎖存放。

· 廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

· 其他有害性

· PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質)評價結果

· PBT(殘留性、生物濃縮性、毒性物質) 不適用的

· vPvB(高殘留性、高生物濃縮性物質): 不適用的

3 成分辨識資料

· 混合物

描述描述描述以下含有無害添加劑的成分組成的混合物

· 危險的成分:

111-30-8	1,5- 戊二 醛 急毒性物質(吞食) 第3級, H301; 急毒性物質(吸入) 第2級, H330; 呼吸道過敏物質 第1級, H334; 腐蝕/刺激皮膚物質 第1B級, H314; 水環境之危害物質(急毒性) 第1級, H400; 水環境之危害物質(慢毒性) 第2級, H411; 皮膚過敏物質 第1級, H317; 特定標的器官系統毒性物質(單一暴露) 第3級, H335; 易燃液體 第4級, H227; 急毒性物質(皮膚) 第5級, H313	>2.5-≤10%
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(在 3 頁繼續)

安全資料表

據根根據據性化學品標示及通識規則


打印日期 2020.06.30

在 2020.06.30 審核

化學品中文名稱名稱, 化學品俗名或商品名: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

124-65-2

卡可酸 鈉

 急毒性物質(吞食) 第3級, H301

(在 2 頁繼續)

≤2.5%

4 急救措施

· 應急措施要領

· **總說明:** 中毒的症狀可能會在幾個小時以後才出現;因此在發生事故之後起碼要有 48 小時的醫療觀察。

吸入

· 供給新鮮空氣並且確保會叫醫生。

· 萬一病人不清醒時,請讓病人側趟以便移動。

· **皮膚接觸:** 馬上用水和肥皂進行徹底的沖洗。

· **眼睛接觸:** 張開眼睛在流水下沖洗數分鐘, 然後諮詢醫生。

食入

· 食入食入食入上召喚醫生。

· 給醫生的資料:

· **最重要的急慢性症狀及其影響** 無相關詳細資料。

· **需要及時的醫療處理及特別處理的症狀** 無相關詳細資料。

5 滅火措施

· 滅火方法

· **滅火的方法和滅火劑:** 使用適合四周環境的滅火措施。

· **特別危險性** 無相關詳細資料。

· 特殊滅火方法

· **消防人員特殊的防護裝備:** 口腔呼吸保護裝置。

6 洩漏處理方法

· **保護措施** 沒有要求。

· 環境保護措施:

· 如果滲入了水源或汙水系統,請通知有關當局。

· 用大量的水進行稀釋。

· 切勿讓其進入下水道/水面或地下水。

· 密封及淨化方法和材料:

· 吸收液體粘合原料(沙粒、矽藻土、酸性粘合劑、通用粘合劑、鋸屑)。

· 根據第 13 條條款棄置受汙染物。

· 確保有足夠的通風裝置。

· 參照其他部分

· 有關安全處理的資料請參閱第 7 節。

· 有關個人保護裝備的資料請參閱第 8 節。

· 有關棄置的資料請參閱第 13 節。

7 安全處置與儲存方法

· 操作處置

儲存

· 確保工作間有良好的通風/排氣裝置。

· 防止氣溶膠的形成。

· **有關火災及防止爆炸的資料:** 不需特別的措施。

(在 4 頁繼續)

安全資料表

據根據危險性化學品標示及通識規則

打印日期 2020.06.30

在 2020.06.30 審核

化學品中文名稱名稱, 化學品俗名或商品名: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(在 3 頁繼續)

- **混合危險性等安全儲存條件**
- **儲存**
- **儲存庫和容器須要達到的要求:** 沒有特別的要求.
- **有關使用一個普通的儲存設施來儲存的資料:** 不需要.
- **有關儲存條件的更多資料:** 將容器密封.
- **具體的最終用戶** 無相關詳細資料.

8 暴露預防措施

- **工程控制方法:** 沒有進一步數據, 見第 7 項.

· 控制變數

- **在工作場需要監控的限值成分**

111-30-8 戊二醛

PEL (TW) | PC-TWA: 0.82 mg/m³, 0.2 ppm

- **額外的資料:** 制作期間有效的清單將作為基礎來使用.
- **遺漏控制**
- **個人防護設備:**
- **一般保護和衛生措施:**
 - 遠離食品、飲料和飼料.
 - 立即除去所有的不潔的和被污染的衣服.
 - 在休息之前和工作完畢後請清洗雙手.
 - 避免和皮膚接觸.
 - 避免和眼睛及皮膚接觸.
- **呼吸系統防護:**
 - 如果會短暫接觸或在低污染的情況下, 請使用呼吸過濾裝置. 如果會深入或較長時間接觸, 請使用獨立的呼吸保護裝置.
- **手防護:**



保護手套

手套的物料必須是不滲透性的, 且能抵抗該產品/物質/添加劑.
基於缺乏測試, 對於產品/制劑/化學混合物, 並不會提供手套材料的建議
選擇手套材料時, 請注意材料的滲透時間, 滲濾率和降解參數

· 手套材料

選擇合適的手套不單取決於材料, 亦取決於質量特征, 以及來自哪一間生產廠家, 因為該產品是由很多材料
配制而成, 手套材料的抵抗力並不可預計, 所以, 必須在使用之前進行檢查

- **滲入手套材料的時間** 請向勞保手套生產廠家獲取準確的破裂時間並觀察實際的破裂時間
- **眼睛防護:**



密封的護目鏡

-TW-

(在 5 頁繼續)

安全資料表

據根據據據性化學品標示及通識規則

打印日期 2020.06.30

在 2020.06.30 審核

化學品中文名稱名稱名稱化學品俗名或商品名： Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(在 5 頁繼續)

- **不相容的物質:** 無相關詳細資料。
- **危險的分解產物:** 未知有危險的分解產品。

11 毒性資料

- **對毒性學影響的資訊**
- **急性毒性:**

- **與分類相關的 LD/ LC50 值:**

111-30-8 戊二醛

口腔	LD50	134 mg/kg (rat)
皮膚	LD50	2,560 mg/kg (rabbit)

重要的刺激劑影響:

皮膚皮膚皮膚刺激皮膚和粘膜。

- **在眼睛上面:** 強烈的刺激性和造成嚴重傷害眼睛的危險。

致敏致敏致敏作用

- 通過吸入可能造成敏化作用。
- 通過皮膚接觸可能造成敏化作用。

· 更多毒物的資料:

根據有關配製的一般歐盟分類指南的計算方法 (刊印在最新版本),該產品顯示以下的危險:
有害的
刺激性的

12 生態資料

- **毒態毒性毒性**

- **水生毒性:** 無相關詳細資料。

持久性和持久性降解性相關詳細資料。

- **環境系統習性:**

- **潛在的累積性:** 無相關詳細資料。

土壤土壤動植物性相關詳細資料。

- **生態毒性的影響:**

- **備注:**

- 對魚類有毒
- 對魚類有害

- **額外的生態學資料:**

括總括注解

- 水危害級別 3 (德國規例) (通過名單進行自我評估): 對水是極其危害的
即使是少量, 不要讓該產品接觸地下水、水道或汗水系統。
即使是極其少量的產品滲入地下也會對飲用水造成危險。
對水體中的魚和浮遊生物也有毒害。
對水中的有機物有毒。
對水中的有機物有危害。

- **PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質) 評價結果**

- **PBT(殘留性、生物濃縮性、毒性物質)** 不適用的

- **vPvB(高殘留性、高生物濃縮性物質):** 不適用的

其他其他其他用無相關詳細資料。

-TW-

(在 7 頁繼續)

安全資料表

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(在 6 頁繼續)

13 廢棄處置方法

· 廢棄處置方法

建議建議建議能將該產品和家居垃圾一起丟棄. 不要讓該產品接觸汗水系統.

· 受污染的容器和包裝:

建議建議建議須根據官方的規章來丟棄.

建議建議建議洗滌如有必要請使用水及清潔劑進行清潔.

14 運送資料

聯合聯合國危險貨物編號(UN號)

· ADR, IMDG, IATA UN1760

適當適當罐名

· ADR 1760 CORROSIVE LIQUID, N.O.S. (1,5- 戊二 醛)

· IMDG, IATA CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)

運輸運輸危險等級

· ADR, IMDG, IATA



· 級別

8 腐 蝕 性 物 質

標籤標籤標籤

8

· 包裝組別

· ADR, IMDG, IATA II

· 危害環境:

不適用的

· 用戶特別預防措施

警告: 腐 蝕 性 物 質

· 危險編碼:

80

· 危險號碼號碼

F-A,S-B

· Segregation groups

Acids

· Stowage Category

B

· Stowage Code

SW2 Clear of living quarters.

· MARPOL73/78(針對船舶引起的海洋污染預防協約協約

件附件書根據根據國際國際貨物運輸規則) 大量大量

運送運送運送

不適用的

運輸運輸運輸外的資料:

· ADR

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· IMDG

· Limited quantities (LQ)

1L

(在 8 頁繼續)

安全資料表

據根根據據據性化學品標示及通識規則

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在 2020.06.30 審核

化學品中文名稱名稱名稱化學品俗名或商品名： Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(在 7 頁繼續)

· Excepted quantities (EQ)

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· UN "標準規定":

UN 1760 CORROSIVE LIQUID, N.O.S. (1,5- 戊二 醛), 8, II

15 法規資料

- 對相應純物質或者混合物的安全、保健及環境法規/法律
- 優先管理化學品之指定及運作管理辦法

附表附表對於未滿十八歲娠娠娠娠後未滿女年女性變工具危害性之化學品

沒有列出成份

二條二條二條二條二條

沒有列出成份

三條二條二條二條二條

111-30-8 | 1,5- 戊二 醛

· 新化學物質及既有化學物質資料登錄辦法 英

沒有列出成份

國現國現國現國現國現

7732-18-5 | 水

111-30-8 | 1,5- 戊二 醛

· TCSCA

列管編號編號編號

沒有列出成份

· 毒性分類

沒有列出成份

· 管制濃度 (w/w %)

沒有列出成份

· 大量運作基準基公斤)

沒有列出成份

· 新化學物質及既有化學物質資料登錄辦法, 附表六

沒有列出成份

· TCSI - Taiwan Chemical Substance Inventory

列出所有成分

· GHS標識元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

圖示圖示圖示



GHS05



GHS07



GHS08

名稱名稱名稱

(在 9 頁繼續)

安全資料表

據根根據據性化學品標示及通識規則

打印日期 2020.06.30

在 2020.06.30 審核

化學品中文名稱名稱, 化學品俗名或商品名: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(在 8 頁繼續)

標籤上辨別危險的成份:

1,5- 戊二 醛

卡可酸 鈉

危險字句

吞食可能有害

吸入有害

造成皮膚刺激

造成嚴重眼睛損傷

吸入可能導致過敏或哮喘病症狀或呼吸困難

可能造成皮膚過敏

可能造成呼吸道刺激

對水生生物有毒

對水生生物有害並具有長期持續影響

警戒字句

事故響應

如進入眼睛：用水小心清洗數分鐘。如帶隱形眼鏡且可方便地取出，取出隱型眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

專項處置(參見本標示)。

脫掉沾染的衣服，清洗後方可重新使用

安全貯存

加鎖存放。

廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

化學物質安全性評價: 尚未進行化學物質安全性評價

16 其他資料

該資料是基於我們目前的知識。然而,這並不構成對任何特定產品特性的擔保並且不建立一個法律上有效的合同關係。

縮寫:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: 持久性生物累積性有毒物質

vPvB: very Persistent and very Bioaccumulative

易燃液體 第4級: Flammable liquids – Category 4

急毒性物質(吞食) 第3級: Acute toxicity – Category 3

急毒性物質(皮膚) 第5級: Acute toxicity – Category 5

急毒性物質(吸入) 第2級: Acute toxicity – Category 2

急毒性物質(吸入) 第4級: Acute toxicity – Category 4

腐蝕/刺激皮膚物質 第1B級: Skin corrosion/irritation – Category 1B

腐蝕/刺激皮膚物質 第2級: Skin corrosion/irritation – Category 2

嚴重損傷/刺激眼睛物質 第1級: Serious eye damage/eye irritation – Category 1

呼吸道過敏物質 第1級: Respiratory sensitisation – Category 1

皮膚過敏物質 第1級: Skin sensitisation – Category 1

特定標的器官系統毒性物質(單一暴露) 第3級: Specific target organ toxicity (single exposure) – Category 3

水環境之危害物質(急毒性) 第1級: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

水環境之危害物質(急毒性) 第2級: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

水環境之危害物質(慢性) 第2級: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

水環境之危害物質(慢性) 第3級: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** *Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*

· **Número del artículo:** 16539-06, 16539-07, 16539-08

· **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**
No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

Tel: 215-412-8400 Fax: 215-412-8450

email: info@emsdiasum.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS08 peligro para la salud

Resp. Sens. 1 H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.



GHS05 corrosión

Eye Dam. 1 H318 Provoca lesiones oculares graves.



GHS07

Acute Tox. 4 H332 Nocivo en caso de inhalación.

Skin Irrit. 2 H315 Provoca irritación cutánea.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

STOT SE 3 H335 Puede irritar las vías respiratorias.

Aquatic Chronic 3 H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

(se continua en página 2)

Ficha de datos de seguridad según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(se continua en página 1)

· **2.2 Elementos de la etiqueta**

· **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008**

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· **Pictogramas de peligro**



GHS05 GHS07 GHS08

· **Palabra de advertencia Peligro**

· **Componentes peligrosos a indicar en el etiquetaje:**

glutaral

· **Indicaciones de peligro**

H332 Nocivo en caso de inhalación.

H315 Provoca irritación cutánea.

H318 Provoca lesiones oculares graves.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H317 Puede provocar una reacción alérgica en la piel.

H335 Puede irritar las vías respiratorias.

H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

· **Consejos de prudencia**

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.

P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.

P321 Se necesita un tratamiento específico (ver en esta etiqueta).

P362+P364 Quitar las prendas contaminadas y lavarlas antes de volver a usarlas.

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· **2.3 Otros peligros**

· **Resultados de la valoración PBT y mPmB**

· **PBT:** No aplicable.

· **mPmB:** No aplicable.

SECCIÓN 3: Composición/información sobre los componentes

· **3.2 Caracterización química: Mezclas**

· **Descripción:** Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

· **Componentes peligrosos:**

CAS: 111-30-8 EINECS: 203-856-5	glutaral Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	dimetilarsinato de sodio Acute Tox. 4, H302	≤2,5%

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: *Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*

(se continua en página 2)

SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**

· **Instrucciones generales:**

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· **En caso de inhalación del producto:**

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· **En caso de contacto con la piel:** *Lavar inmediatamente con agua y jabón y enjuagar bien.*

· **En caso de con los ojos:**

Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.

· **En caso de ingestión:** *Consultar inmediatamente un médico.*

· **4.2 Principales síntomas y efectos, agudos y retardados** *No existen más datos relevantes disponibles.*

· **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente** *No existen más datos relevantes disponibles.*

SECCIÓN 5: Medidas de lucha contra incendios

· **5.1 Medios de extinción**

· **Sustancias extintoras apropiadas:** *Combatir los incendios con medidas adaptados al ambiente circundante.*

· **5.2 Peligros específicos derivados de la sustancia o la mezcla** *No existen más datos relevantes disponibles.*

· **5.3 Recomendaciones para el personal de lucha contra incendios**

· **Equipo especial de protección:** *Colocarse la protección respiratoria.*

SECCIÓN 6: Medidas en caso de vertido accidental

· **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** *No es necesario.*

· **6.2 Precauciones relativas al medio ambiente:**

Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.

Diluir con mucha agua.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

· **6.3 Métodos y material de contención y de limpieza:**

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

· **6.4 Referencia a otras secciones**

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

SECCIÓN 7: Manipulación y almacenamiento

· **7.1 Precauciones para una manipulación segura**

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Evitar la formación de aerosoles.

· **Prevención de incendios y explosiones:** *No se requieren medidas especiales.*

· **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**

· **Almacenamiento:**

· **Exigencias con respecto al almacén y los recipientes:** *No se requieren medidas especiales.*

· **Normas en caso de un almacenamiento conjunto:** *No es necesario.*

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(se continua en página 3)

- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

· 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

111-30-8 glutaral

LEP	Valor de corta duración: 0,2 mg/m ³ , 0,05 ppm
	Sen

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· 8.2 Controles de la exposición

· Equipo de protección individual:

· Medidas generales de protección e higiene:

- Mantener alejado de alimentos, bebidas y alimentos para animales.
- Quitarse de inmediato la ropa ensuciada o impregnada.
- Lavarse las manos antes de las pausas y al final del trabajo.
- Evitar el contacto con la piel.
- Evitar el contacto con los ojos y la piel.

· Protección respiratoria:

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

· Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· Protección de ojos:



Gafas de protección herméticas

ES

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: *Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*

(se continua en página 4)

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:

Líquido

Color:

Según denominación del producto

· Olor:

Característico

· Umbral olfativo:

No determinado.

· valor pH a 20 °C:

7,4

· Cambio de estado

Punto de fusión/punto de congelación:

0 °C

Punto inicial de ebullición e intervalo de ebullición:

100 °C

· Punto de inflamación:

No aplicable.

· Inflamabilidad (sólido, gas):

No aplicable.

· Temperatura de descomposición:

No determinado.

· Temperatura de auto-inflamación:

El producto no es autoinflamable.

· Propiedades explosivas:

El producto no es explosivo.

· Límites de explosión:

Inferior:

No determinado.

Superior:

No determinado.

· Presión de vapor a 20 °C:

23 hPa

· Densidad a 20 °C:

1 g/cm³

· Densidad relativa

No determinado.

· Densidad de vapor

No determinado.

· Tasa de evaporación:

No determinado.

· Solubilidad en / miscibilidad con agua:

Completamente mezclable.

· Coeficiente de reparto: n-octanol/agua:

No determinado.

· Viscosidad:

Dinámica:

No determinado.

Cinemática:

No determinado.

· Concentración del disolvente:

Agua:

95,0 %

VOC (CE)

0,00 %

Contenido de cuerpos sólidos:

0,0 %

· 9.2 Otros datos

No existen más datos relevantes disponibles.

SECCIÓN 10: Estabilidad y reactividad

· 10.1 Reactividad No existen más datos relevantes disponibles.

· 10.2 Estabilidad química

· Descomposición térmica / condiciones que deben evitarse: No se descompone al emplearse adecuadamente.

· 10.3 Posibilidad de reacciones peligrosas No se conocen reacciones peligrosas.

· 10.4 Condiciones que deben evitarse No existen más datos relevantes disponibles.

(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(se continua en página 5)

- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**
Nocivo en caso de inhalación.

- **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

111-30-8 glutaral

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2.560 mg/kg (rabbit)

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**
Provoca irritación cutánea.
- **Lesiones o irritación ocular graves**
Provoca lesiones oculares graves.
- **Sensibilización respiratoria o cutánea**
Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**
Puede irritar las vías respiratorias.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:**
Tóxico para peces.
Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 3 (autoclasificación): muy peligroso para el agua
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados, ni siquiera en pequeñas cantidades.
Una cantidad ínfima vertida en el subsuelo ya representa un peligro para el agua potable.
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.
tóxico para organismos acuáticos
nocivo para organismos acuáticos

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(se continua en página 6)

- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN1760
- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 1760 LÍQUIDO CORROSIVO, N.E.P. (glutaral)
- **IMDG, IATA** CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)
- **14.3 Clase(s) de peligro para el transporte**
- **ADR, IMDG, IATA**
-
- **Clase** 8 Materias corrosivas
- **Etiqueta** 8
- **14.4 Grupo de embalaje**
- **ADR, IMDG, IATA** II
- **14.5 Peligros para el medio ambiente:** No aplicable.
- **14.6 Precauciones particulares para los usuarios** Atención: Materias corrosivas
- **Número de identificación de peligro (Número Kemler):** 80
- **Número EMS:** F-A,S-B
- **Segregation groups** Acids
- **Stowage Category** B
- **Stowage Code** SW2 Clear of living quarters.
- **14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC** No aplicable.
- **Transporte/datos adicionales:**
- **ADR**
- **Cantidades limitadas (LQ)** 1L
- **Cantidades exceptuadas (EQ)** Código: E2
Cantidad neta máxima por envase interior: 30 ml
Cantidad neta máxima por embalaje exterior: 500 ml

(se continua en página 8)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(se continua en página 7)

· Categoría de transporte	2
· Código de restricción del túnel	E
<hr/>	
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Reglamentación Modelo" de la UNECE:	UN 1760 LÍQUIDO CORROSIVO, N.E.P. (GLUTARAL), 8, II

SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** ninguno de los componentes está incluido en una lista
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones:** 3

· **Reglamento (UE) No 649/2012**

124-65-2	dimetilarsinato de sodio	Annex I Part I
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- **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Frasas relevantes**

H301 Tóxico en caso de ingestión.

H302 Nocivo en caso de ingestión.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H317 Puede provocar una reacción alérgica en la piel.

H330 Mortal en caso de inhalación.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H335 Puede irritar las vías respiratorias.

H400 Muy tóxico para los organismos acuáticos.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· **Abreviaturas y acrónimos:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Toxicidad aguda - oral - Categoría 3

Acute Tox. 4: Toxicidad aguda - oral - Categoría 4

Acute Tox. 2: Toxicidad aguda - por inhalación - Categoría 2

Skin Corr. 1B: Corrosión o irritación cutáneas - Categoría 1B

(se continua en página 9)

Ficha de datos de seguridad
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fecha de impresión 30.06.2020

Revisión: 30.06.2020

Nombre comercial: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(se continua en página 8)

Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2

Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1

Resp. Sens. 1: Sensibilización respiratoria – Categoría 1

Skin Sens. 1: Sensibilización cutánea – Categoría 1

Skin Sens. 1A: Sensibilización cutánea – Categoría 1A

STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3

Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1

Aquatic Chronic 2: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 2

Aquatic Chronic 3: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 3

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

AVSNITT 1: Namnet på ämnet/blandningen och bolaget/företaget

- **1.1 Produktbeteckning**
- **Handelsnamn:** Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4
- **Artikelnummer:** 16539-06, 16539-07, 16539-08
- **1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från**
Ingen ytterligare relevant information finns till förfogande.
- **Ämnets användning / tillredningen** Laboratoriekemikalier
- **1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad**
- **Tillverkare/leverantör:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Område där upplysningar kan inhämtas:** Product safety department
- **1.4 Telefonnummer för nödsituationer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

AVSNITT 2: Farliga egenskaper

- **2.1 Klassificering av ämnet eller blandningen**
- **Klassificering enligt förordning (EG) nr 1272/2008**



GHS08 hälsofara

Resp. Sens. 1 H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.



GHS05 frätande

Eye Dam. 1 H318 Orsakar allvarliga ögonskador.



GHS07

Acute Tox. 4 H332 Skadligt vid inandning.

Skin Irrit. 2 H315 Irriterar huden.

Skin Sens. 1 H317 Kan orsaka allergisk hudreaktion.

STOT SE 3 H335 Kan orsaka irritation i luftvägarna.

Aquatic Chronic 3 H412 Skadliga långtidseffekter för vattenlevande organismer.

- **2.2 Märkningsuppgifter**
- **Märkning enligt förordning (EG) nr 1272/2008** Produkten är klassificerad och märkt enligt CLP-förordningen.

(Fortsättning på sida 2)

Säkerhetsdatablad

enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyd 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsättning från sida 1)

· **Faropiktogram**

GHS05 GHS07 GHS08

· **Signalord Fara**· **Riskbestämmande komponenter för etikettering:**

Glutaraldehyd

· **Faroangivelser**

H332 Skadligt vid inandning.

H315 Irriterar huden.

H318 Orsakar allvarliga ögonskador.

H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.

H317 Kan orsaka allergisk hudreaktion.

H335 Kan orsaka irritation i luftvägarna.

H412 Skadliga långtidseffekter för vattenlevande organismer.

· **Skyddsangivelser**P305+P351+P338 **VID KONTAKT MED ÖGONEN:** Skölj försiktigt med vatten i flera minuter. Ta ur eventuella kontaktlinser om det går lätt. Fortsätt att skölja.

P310 Kontakta genast GIFTINFORMATIONSCENTRALEN/läkare.

P321 Särskild behandling (se på etiketten).

P362+P364 Ta av nedstänkta kläder och tvätta dem innan de används igen.

P405 Förvaras inlåst.

P501 Innehållet / behållaren avfallshanteras enligt lokala / regionala / nationella / internationella föreskrifter.

· **2.3 Andra faror**· **Resultat av PBT- och vPvB-bedömningen**· **PBT:** Ej användbar.· **vPvB:** Ej användbar.

AVSNITT 3: Sammansättning/information om beståndsdelar

· **3.2 Kemisk karakterisering: Blandningar**· **Beskrivning:** Blandning bestående av nedan upplistade ämnen med ofarliga tillsatser.· **Farliga ingredienser:**

CAS: 111-30-8 EINECS: 203-856-5	Glutaraldehyd ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	sodium dimethylarsinate ⚠ Acute Tox. 4, H302	≤2,5%

· **Ytterligare hänvisningar:** De angivna farohänvisningarnas ordalydelse framgår av kapitel 16.

AVSNITT 4: Åtgärder vid första hjälpen

· **4.1 Beskrivning av åtgärder vid första hjälpen**· **Allmänna hänvisningar:**

Förgiftningssymptom kan uppträda först efter många timmar. Av denna anledning krävs läkarövervakning i minst 48 timmar efter ett olycksfall.

(Fortsättning på sida 3)

Säkerhetsdatablad

enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsättning från sida 2)

- **Vid inandning:**
Riklig tillförsel av friskluft, kontakta läkare för säkerhets skull.
Vid medvetslöshet lägg och transportera patient stabilt i framstupa sidoläge.
- **Vid kontakt med huden:** Tvätta omedelbart med vatten och tvål och spola därefter noggrant.
- **Vid kontakt med ögonen:** Spola ögonen öppna i flera minuter under rinnande vatten och kontakta läkare.
- **Vid förtäring:** Kontakta läkare omedelbart.
- **4.2 De viktigaste symptomen och effekterna, både akuta och fördröjda**
Ingen ytterligare relevant information finns till förfogande.
- **4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs**
Ingen ytterligare relevant information finns till förfogande.

AVSNITT 5: Brandbekämpningsåtgärder

- **5.1 Släckmedel**
- **Lämpliga släckningsmedel:** Anpassa brandbekämpningsåtgärderna till omgivningen.
- **5.2 Särskilda faror som ämnet eller blandningen kan medföra**
Ingen ytterligare relevant information finns till förfogande.
- **5.3 Råd till brandbekämpningspersonal**
- **Speciell skyddsutrustning:** Använd andningsskyddsutrustning.

AVSNITT 6: Åtgärder vid oavsiktliga utsläpp

- **6.1 Personliga skyddsåtgärder, skyddsutrustning och åtgärder vid nödsituationer** Erfordras ej.
- **6.2 Miljöskyddsåtgärder:**
När produkten kommit in i vattendrag eller avloppsnät, skall vederbörande myndigheter underrättas.
Blanda ut med mycket vatten.
Förhindra produkten att tränga ner i avloppsnät/ytvatten/grundvatten.
- **6.3 Metoder och material för inneslutning och sanering:**
Sug upp med vätskebindande material (sand, kiselgur, syrabindemedel, universalbindemedel, sågspån).
Omhänderta förorenat material som avfall enligt punkt 13.
Se till att ventilationen är tillräcklig.
- **6.4 Hänvisning till andra avsnitt**
Information beträffande säker hantering se kapitel 7.
Information beträffande personlig skyddsutrustning se kapitel 8.
Information beträffande avfallshantering se kapitel 13.

AVSNITT 7: Hantering och lagring

- **7.1 Försiktighetsmått för säker hantering**
Sörj för god ventilation/utsug på arbetsplatsen.
Undvik bildning av aerosol.
- **Hänvisningar beträffande brand- och explosionsskydd:** Inga speciella åtgärder krävs.
- **7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet**
- **Lagring:**
- **Krav på lagerutrymmen och behållare:** Inga speciella krav.
- **Hänvisningar beträffande sammanlagring:** Erfordras ej.
- **Ytterligare uppgifter till lagringsvillkoren:** Förvara behållaren tätt tillsluten.
- **7.3 Specifik slutanvändning** Ingen ytterligare relevant information finns till förfogande.

SE

(Fortsättning på sida 4)

Säkerhetsdatablad

enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyd 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsättning från sida 3)

AVSNITT 8: Begränsning av exponeringen/personligt skydd

· **Ytterligare hänvisningar beträffande utformning av tekniska anläggningar:** Inga övriga uppgifter, se punkt 7.

· **8.1 Kontrollparametrar**

· **Ämnen med yrkeshygieniska gränsvärden som bör övervakas:**

111-30-8 Glutaraldehyd

OEL	Korttidsvärde: 0,4 mg/m ³ , 0,1 ppm
S	

· **Ytterligare hänvisningar:** De vid framställningen gällande listorna har använts som utgångspunkt.

· **8.2 Begränsning av exponeringen**

· **Personlig skyddsutrustning:**

· **Allmänna skydds- och hygienåtgärder:**

Undvik kontakt med livsmedel, drycker och fodermedel.

Nedsmutsade, indränkta klädesplagg skall omedelbart tas av.

Tvätta händerna före raster och efter arbetet.

Undvik kontakt med huden.

Undvik kontakt med ögonen och huden.

· **Andningsskydd:**

Vid kortvarig eller ringa belastning - använd andningsfilterutrustning; vid intensiv resp. längre exponering - använd andningsskyddsutrustning som är oberoende av omgivningsluften.

· **Handskydd:**



Skyddshandskar

Handskmaterialet måste vara tätt och beständigt mot produkt/ämne/tillredning.

Handskmaterialrekommendationer kan inte ges för produkt/tillredning/kemikalielösning, då inga tester genomförts.

Val av handskmaterial beaktande penetrationstider, permeationskvoter och degradation.

· **Handskmaterial**

Val av lämplig handske är inte enbart beroende av material utan även av andra kvalitetskriterier och varierar från en tillverkare till nästa. Då produkten bereds av flera material, kan handskmaterialets beständighet inte förutses och måste därför kontrolleras före användningen.

· **Handskmaterialets penetreringstid**

Exakt penetrationstid fastställs av skyddshandskarnas tillverkare och skall beaktas.

· **Ögonskydd:**



Tättslutande skyddsglasögon

AVSNITT 9: Fysikaliska och kemiska egenskaper

· **9.1 Information om grundläggande fysikaliska och kemiska egenskaper**

· **Allmänna uppgifter**

· **Utseende:**

Form:

Flytande

Färg:

Enligt produktbeteckning

· **Lukt:**

Karaktéristisk

(Fortsättning på sida 5)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsättning från sida 4)

· Luktröskel:	Ej bestämd.
· pH-värde vid 20 °C:	7,4
· Tillståndsändring Smältpunkt/frys punkt:	0 °C
Initial kokpunkt och kokpunktsintervall:	100 °C
· Flampunkt:	Ej användbar.
· Brandfarlighet (fast form, gas):	Ej användbar.
· Sönderfallstemperatur:	Ej bestämd.
· Självantändningstemperatur:	Produkten är ej självantändande.
· Explosiva egenskaper:	Produkten är ej explosiv.
· Explosionsgränser: Nedre:	Ej bestämd.
Övre:	Ej bestämd.
· Ångtryck vid 20 °C:	23 hPa
· Densitet vid 20 °C:	1 g/cm ³
· Relativ densitet	Ej bestämd.
· Ångdensitet	Ej bestämd.
· Avdunstningshastighet:	Ej bestämd.
· Löslighet i / blandbarhet med Vatten:	Fullständigt blandbar.
· Fördelningskoefficient: n-oktanol/vatten:	Ej bestämd.
· Viskositet: Dynamisk:	Ej bestämd.
Kinematisk:	Ej bestämd.
· Lösningsmedelhalt: Vatten:	95,0 %
VOC (EG)	0,00 %
· Andel av fasta partiklar:	0,0 %
· 9.2 Annan information	Ingen ytterligare relevant information finns till förfogande.

AVSNITT 10: Stabilitet och reaktivitet

- **10.1 Reaktivitet** Ingen ytterligare relevant information finns till förfogande.
- **10.2 Kemisk stabilitet**
- **Termisk sönderdelning / förhållanden som bör undvikas:** Inget sönderfall vid ändamålsenlig användning.
- **10.3 Risken för farliga reaktioner** Inga farliga reaktioner kända.
- **10.4 Förhållanden som ska undvikas** Ingen ytterligare relevant information finns till förfogande.
- **10.5 Oförenliga material:** Ingen ytterligare relevant information finns till förfogande.
- **10.6 Farliga sönderdelningsprodukter:** Inga farliga sönderfallsprodukter kända.

SE

(Fortsättning på sida 6)

Säkerhetsdatablad

enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsättning från sida 5)

AVSNITT 11: Toxikologisk information

· 11.1 Information om de toxikologiska effekterna

· Akut toxicitet

Skadligt vid inandning.

· Klassificeringsrelevanta LD/LC50-värden:

111-30-8 Glutaraldehyd

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2.560 mg/kg (rabbitt)

· Primär reningseffekt:

· Frätande/irriterande på huden

Irriterar huden.

· Allvarlig ögonskada/ögonirritation

Orsakar allvarliga ögonskador.

· Luftvägs-/hudsensibilisering

Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.

Kan orsaka allergisk hudreaktion.

· CMR-effekter (cancerframkallande, mutagena och reproduktionstoxiska egenskaper)

· Mutagenitet i könsceller

Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

· Cancerogenitet Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

· Reproduktionstoxicitet

Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

· Specifik organtoxicitet – enstaka exponering

Kan orsaka irritation i luftvägarna.

· Specifik organtoxicitet – upprepad exponering

Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

· Fara vid aspiration Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

AVSNITT 12: Ekologisk information

· 12.1 Toxicitet

· Akvatisk toxicitet: Ingen ytterligare relevant information finns till förfogande.

· 12.2 Persistens och nedbrytbarhet Ingen ytterligare relevant information finns till förfogande.

· 12.3 Bioackumuleringsförmåga Ingen ytterligare relevant information finns till förfogande.

· 12.4 Rörlighet i jord Ingen ytterligare relevant information finns till förfogande.

· Ekotoxiska effekter:

· Kommentar:

Giftig för fisk.

Skadlig för fisk.

· Ytterligare ekologiska hänvisningar:

· Allmänna hänvisningar:

Vattenföroreningsklass 3 (Självtvärdering): stor risk för vattenförorening.

Låt ej tränga ner i grundvatten, vattendrag eller avlopps nätet, inte ens i små mängder.

Risk för förorening av dricksvattnet redan när mycket små mängder tränger ner i marken.

I vattendrag även giftig för fisk och plankton.

Giftig för vattenorganismer

Skadlig för vattenorganismer

· 12.5 Resultat av PBT- och vPvB-bedömningen

· PBT: Ej användbar.

· vPvB: Ej användbar.

(Fortsättning på sida 7)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4


(Fortsättning från sida 6)

· **12.6 Andra skadliga effekter** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 13: Avfallshantering

- **13.1 Avfallsbehandlingsmetoder**
- **Rekommendation:** Får inte deponeras ihop med hushållsavfall. Får inte tömmas i avloppsnätet.
- **Ej rengjorda förpackningar:**
- **Rekommendation:** Avfallshanteras enligt myndigheters föreskrifter.
- **Rekommenderat rengöringsmedel:** Vatten, eventuellt med tillsats av rengöringsmedel.

AVSNITT 14: Transportinformation

- | | |
|--|---|
| · 14.1 UN-nummer | |
| · ADR, IMDG, IATA | UN1760 |
| · 14.2 Officiell transportbenämning | |
| · ADR | 1760 FRÄTANDE VÄTSKA , N.O.S. (Glutaraldehyd) |
| · IMDG, IATA | CORROSIVE LIQUID, N.O.S. (Glutaraldehyde) |
| · 14.3 Faroklass för transport | |
| · ADR, IMDG, IATA | |
| |  |
| · Klass | 8 Frätande ämnen |
| · Etikett | 8 |
| · 14.4 Förpackningsgrupp | |
| · ADR, IMDG, IATA | II |
| · 14.5 Miljöfaror: | Ej användbar. |
| · 14.6 Särskilda skyddsåtgärder | Varning: Frätande ämnen |
| · Farlighetsnummer (Kemler-tal): | 80 |
| · EMS-nummer: | F-A,S-B |
| · Segregation groups | Acids |
| · Stowage Category | B |
| · Stowage Code | SW2 Clear of living quarters. |
| · 14.7 Bulktransport enligt bilaga II till Marpol 73/78 och IBC-koden | Ej användbar. |
| · Transport / ytterligare uppgifter: | |
| · ADR | 1L |
| · Begränsade mängder (LQ) | Kod: E2 |
| · Reducerade mängder (EQ) | Högsta nettomängd per innerförpackning: 30 ml
Högsta nettomängd per ytterförpackning: 500 ml |
| · Transportkategori | 2 |
| · Tunnelrestriktionskod | E |

(Fortsättning på sida 8)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(Fortsättning från sida 7)

· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· UN "Model Regulation":	UN 1760 FRÄTANDE VÄTSKA , N. O. S. (GLUTARALDEHYD), 8, II

AVSNITT 15: Gällande föreskrifter

- **15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö**
- **Direktiv 2012/18/EU**
- **Namngivna farliga ämnen - BILAGA I** Inga beståndsdelar är listade.
- **Förordning (EG) nr 1907/2006 BILAGA XVII Villkor: 3**

· **Förordning (EU) nr 649/2012**

124-65-2 | sodium dimethylarsinate

Annex I Part I

- **15.2 Kemikaliesäkerhetsbedömning:** En kemikaliesäkerhetsbedömning har ej gjorts.

AVSNITT 16: Annan information

Uppgifterna är baserade på våra aktuella kunskaper. De representerar emellertid ingen som helst garanti beträffande produkttegenskaper och utgör ingen grund för ett avtalat rättsförhållande.

· **Relevanta fraser**

H301 Giftigt vid förtäring.

H302 Skadligt vid förtäring.

H314 Orsakar allvarliga frätskador på hud och ögon.

H317 Kan orsaka allergisk hudreaktion.

H330 Dödligt vid inandning.

H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.

H335 Kan orsaka irritation i luftvägarna.

H400 Mycket giftigt för vattenlevande organismer.

H411 Giftigt för vattenlevande organismer med långtidseffekter.

· **Förkortningar och akronymer:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akut toxicitet - oral – Kategori 3

Acute Tox. 4: Akut toxicitet - oral – Kategori 4

Acute Tox. 2: Akut toxicitet - inhalation – Kategori 2

Skin Corr. 1B: Frätande eller irriterande på huden – Kategori 1B

Skin Irrit. 2: Frätande eller irriterande på huden – Kategori 2

Eye Dam. 1: Allvarlig ögonskada eller ögonirritation – Kategori 1

Resp. Sens. 1: Luftvägssensibilisering – Kategori 1

(Fortsättning på sida 9)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 30.06.2020

Omarbetad: 30.06.2020

Handelsnamn: Glutaraldehyd 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4*Skin Sens. 1: Hudsensibilisering – Kategori 1**Skin Sens. 1A: Hudsensibilisering – Kategori 1A**STOT SE 3: Specifik organtoxicitet (enstaka exponering) – Kategori 3**Aquatic Acute 1: Farligt för vattenmiljön - akut fara – Kategori 1**Aquatic Chronic 2: Farligt för vattenmiljön - fara för skadliga långtidseffekter – Kategori 2**Aquatic Chronic 3: Farligt för vattenmiljön - fara för skadliga långtidseffekter – Kategori 3*

(Fortsättning från sida 8)

SE

แผ่นข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

1 การปฐษึสารเดี่ยวหรือสารผสม และผู้ผลิต

- 1.1 ลักษณะเฉพาะของผลิตภัณฑ์
- ชื่อทางการค้า **Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4**
- เลขที่รายชื่อ 16539-06, 16539-07, 16539-08
- 1.2 สารหรือสารผสมที่เกี่ยวข้องที่ระบุให้ใช้และที่ไม่ควรรให้ใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- การประยุกต์ใช้สาร/ การทำ เคมีภัณฑ์ห้องทดลอง
- 1.3 รายละเอียดของผู้จัดหาข้อมูลด้านความปลอดภัย
- ผู้ผลิต/ ผู้จัดหา
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- ข้อมูลรายละเอียดเพิ่มเติมหาได้จาก Product safety department
- 1.4 หมายเลขโทรศัพท์ฉุกเฉิน:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 การปฐษึความเป็นอันตราย

- 2.1 การจำแนกประเภทของสารหรือสารผสม
- การแบ่งประเภทตามข้อบังคับจีเอสดีจีเอสที่ 1272/2008



สิ่งอันตรายต่อสุขภาพ

Resp. Sens. 1 H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า



การกัดกร่อน

Eye Dam. 1 H318 เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส



Acute Tox. 4 H332 ให้โทษหากสูดหายใจเข้า

Skin Irrit. 2 H315 เป็นสาเหตุให้เกิดการระคายเคืองผิวหนัง

Skin Sens. 1 H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

STOT SE 3 H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

Aquatic Chronic 3 H412 ให้โทษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบระยะยาว

- 2.2 องค์ประกอบของฉลาก
- ฉลากตามระเบียบ (EC) เลขที่ 1272/2008 ผลิตภัณฑ์ได้รับการจัดประเภทและติดฉลากตามข้อบังคับของ CLP
- ภาพสัญลักษณ์สิ่งที่เป็นอันตราย



GHS05



GHS07



GHS08

(ต่อที่หน้า 2)

TH

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(ต่อหน้า 1)

- **สัญญาณคำ อันตราย**
- **ส่วนประกอบที่ระบุอันตรายบนฉลาก**
กลูตารัลดีไฮด์
- **ประกาศสิ่งที่อันตราย**
H332 ให้โทษหากสูดหายใจเข้า
H315 เป็นสาเหตุให้เกิดการระคายเคืองผิวหนัง
H318 เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส
H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า
H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้
H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ
H412 ให้โทษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบระยะยาว
- **ประกาศการป้องกันระดับระงับภัย**
P305+P351+P338 หากเข้าตา : ชะล้างน้ำอย่างระมัดระวังเป็นเวลาหลายๆนาทีถอดคอนแทกซ์เลนส์ถ้ายังอยู่ที่เดิมและสะดวกที่จะทำก็ให้ชะล้างต่อไป
P310 โทรศัพท์ถึงศูนย์พิษวิทยา/แพทย์ ทันที
P321 การบำบัดรักษาเฉพาะ (ดูฉลาก)
P362+P364 ถอดเสื้อผ้าที่เปื้อนและซักก่อนที่จะนำกลับมาใช้ใหม่
P405 เก็บในที่ใส่กุญแจปิด
P501 ทิ้งสิ่งที่ยบรรจุ/ภาชนะที่ยบรรจุตามกฎหมายของท้องถิ่น/แคว้น/ในประเทศ/ระหว่างประเทศ
- **2.3 อันตรายอื่นๆ**
- **ผลของ PBT และการประเมิน vPvB**
- **PBT:** ไม่สามารถใช้ได้
- **vPvB:** ไม่สามารถใช้ได้

3 องค์ประกอบและข้อมูลเกี่ยวกับส่วนผสม

- **3.2 คุณลักษณะทางเคมี: ส่วนผสม**
- **คำอธิบาย** ส่วนผสมของสารในรายการข้างล่างพร้อมสารเติมแต่งที่ไม่เป็นอันตราย

· ส่วนประกอบที่มีอันตราย

CAS: 111-30-8 EINECS: 203-856-5	กลูตารัลดีไฮด์ Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2.5-≤10%
CAS: 124-65-2 EINECS: 204-708-2	sodium dimethylarsinate Acute Tox. 4, H302	≤2.5%

- **ข้อมูลรายละเอียดเสริม** สำหรับข้อความที่ระบุในรายการวลีความเสี่ยงที่อ้างอิงถึงในส่วนที่ 16

4 มาตรการปฐมพยาบาล

- **4.1 คำอธิบายถึงมาตรการปฐมพยาบาล**
- **ข้อมูลรายละเอียดทั่วไป**
อาการจากพิษอาจเกิดขึ้นหลังจากนั้นหลายชั่วโมงดังนั้นจะต้องเฝ้าติดตามดูอาการทางการแพทย์อย่างน้อย 48 ชั่วโมงหลังจากอุบัติเหตุ
- **หลังจากการสูดหายใจเข้าไป**
หาบริเวณที่มีอากาศบริสุทธิ์และเพื่อให้มันใจติดต่อแพทย์
ในกรณีที่คุณไม่รู้สึกตัวให้ขนย้ายคนไข้อย่างมั่นคงในท่าตะแคงด้านข้าง
- **หลังจากการสัมผัสผิวหนัง** ล้างด้วยน้ำและสบู่แล้วฟอกให้ทั่วทันที
- **หลังจากการสัมผัสดวงตา** ชะตาที่เปิดอยู่ใต้น้ำที่กำลังไหลเป็นเวลาหลายนาที่จากนั้นให้ปรึกษาแพทย์
- **หลังจากการกลืนเข้าไป:** พบแพทย์โดยทันที
- **4.2 อาการสำคัญส่วนใหญ่และผลกระทบ ทั้งชนิดเฉียบพลันและค่อยๆ แสดงอาการ**
ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

(ต่อหน้า 3)

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

- 4.3 ข้อบ่งชี้ของอาการที่ต้องเข้ารับการรักษามาจากแพทย์ทันทีและการบำบัดพิเศษที่จำเป็น ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

(ต่อที่หน้า 2)

5 มาตรการผจญเพลิง

- 5.1 สารที่ใช้ดับเพลิง
- สารดับเพลิงที่เหมาะสม ใช้วิธีดับเพลิงที่เหมาะสมกับสภาพแวดล้อม
- 5.2 อันตรายเฉพาะอย่างที่เกิดจากสารหรือส่วนผสม ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 5.3 คำแนะนำสำหรับพนักงานดับเพลิง
- อุปกรณ์ป้องกันภัย อุปกรณ์ป้องกันซึ่งเหมาะสำหรับการหายใจทางปาก

6 มาตรการจัดการเมื่อมีการหกหรือไหลของสาร

- 6.1 การป้องกันส่วนบุคคล อุปกรณ์ป้องกัน และขั้นตอนดำเนินการเมื่อเกิดกรณีฉุกเฉิน ไม่ได้กำหนด
- 6.2 การให้ความคุ้มครองสิ่งแวดล้อมล่วงหน้า:
แจ้งผู้มีอำนาจที่เกี่ยวข้องในกรณีที่เกิดการไหลซึมเข้าลำน้ำหรือระบบระบายน้ำ ทำให้เจือจางด้วยน้ำมากๆ
อย่าปล่อยให้เข้าไปในท่อน้ำทิ้ง/ น้ำบนดินหรือใต้ดิน
- 6.3 วิธีดำเนินการและวัสดุสำหรับการบรรจและการทำความสะอาด:
ดูดซับด้วยวัสดุที่สามารถยึดของเหลวไว้ (ทรายโตะอะไตไมท์ตัวยึดเกาะกรดตัวยึดทั่วๆ ไปซีลีเยอ)
ทิ้งวัสดุที่ปนเปื้อนเป็นของเสียตามรายการในบัญชี 13
ตรวจให้แน่ใจว่ามีการระบายอากาศที่ดีพอ
- 6.4 การอ้างอิงถึงส่วนอื่น
ดูข้อมูลรายละเอียดเรื่องความปลอดภัยในการขนถ่ายจากส่วนที่ 7
ดูข้อมูลรายละเอียดเรื่องอุปกรณ์ป้องกันส่วนบุคคลจากส่วนที่ 8
ดูข้อมูลรายละเอียดเรื่องการจัดเก็บจากส่วนที่ 13

7 การขนถ่าย เคลื่อนย้าย ใช้งาน และเก็บรักษา

- 7.1 การป้องกันล่วงหน้าสำหรับการจัดการด้านความปลอดภัย
ทำให้แน่ใจว่าสถานที่ทำงานมีการระบายอากาศ/ ไอเสียที่ดี
ป้องกันการเกิดละอองสารฟุ้ง
- ข้อมูลรายละเอียดเกี่ยวกับการป้องกันอัคคีภัยและการระเบิด ไม่มีมาตรการพิเศษ
- 7.2 เงื่อนไขในการเก็บรักษาอย่างปลอดภัย, รวมถึงสิ่งที่เข้ากันไม่ได้ใดๆ
- การจัดเก็บ
- ข้อกำหนดที่ต้องปฏิบัติตามสำหรับห้องเก็บและภาชนะบรรจุ ไม่มีข้อกำหนดพิเศษ
- ข้อมูลรายละเอียดด้านการจัดเก็บในสถานที่จัดเก็บรวม ไม่ได้กำหนด
- ข้อมูลรายละเอียดเพิ่มเติมด้านสภาพการจัดเก็บ เก็บโดยปิดผนึกอย่างแน่นหนา
- 7.3 การระบุถึงการสิ้นสุดการใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

8 การควบคุมการสัมผัสและการป้องกันส่วนบุคคล

- ข้อมูลรายละเอียดเสริมสำหรับการออกแบบสิ่งอำนวยความสะดวกทางเทคนิค ไม่มีข้อมูลนอกเหนือจากนี้ดูรายการ 7 (ต่อที่หน้า 4)

TH

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(ต่อหน้า 3)

8.1 การควบคุมตัวแปร

ส่วนผสมพร้อมคำขอเบดที่ต้องเฝ้าดูในสถานที่ปฏิบัติงาน

111-30-8 กลูตารัลดีไฮด์

REL (US) Ceiling limit value: 0.8 mg/m³, 0.2 ppm
See Pocket Guide App. C

TLV (US) Ceiling limit value: 0.2 mg/m³, 0.05 ppm
DSEN;RSEN ;activated or inactivated

ข้อมูลรายละเอียดเสริม รายการถูกต้องระหว่างที่จัดทำโดยอาศัยการใช้งานเป็นหลัก

8.2 การควบคุมการสัมผัส

อุปกรณ์ป้องกันภัยส่วนบุคคล

มาตรการการป้องกันและสุขอนามัยทั่วไป

เก็บให้ห่างจากสิ่งของที่เป็นอาหาร เครื่องดื่ม และอาหารสัตว์

ให้ถอดเสื้อผ้าที่เปื้อนและเจือปนออกทันที

ล้างมือก่อนที่จะหยุดพักและเมื่อสิ้นสุดเวลาทำงาน

หลีกเลี่ยงการสัมผัสถูกผิวหนัง

หลีกเลี่ยงการสัมผัสถูกตาและผิวหนัง

การป้องกันการสูดหายใจเข้าไป

ในกรณีที่อยู่เป็นเวลาสั้นหรืออากาศเป็นพิษระดับต่ำ ใช้หน้ากากกรองเพื่อช่วยหายใจในกรณีที่มีความเข้มข้นสูงหรืออยู่เป็นเวลานาน ให้ใช้เครื่องป้องกันที่มีอุปกรณ์ช่วยหายใจในตัว

การป้องกันมือ



ถุงมือป้องกัน

วัสดุของถุงมือจะต้องไม่ให้อากาศผ่านเข้าออกและทนทานต่อผลิตภัณฑ์/ สาร/ การผลิต

เนื่องจากขาดการทดสอบจึงไม่มีคำแนะนำสำหรับวัสดุที่ใช้ทำถุงมือสำหรับผลิตภัณฑ์/ การผลิต/ ของผสมเคมี

เลือกวัสดุสำหรับถุงมือโดยพิจารณาจากเวลาที่ใช้ในการซึมผ่านอัตราการแพร่และการเสื่อม

วัสดุที่ใช้ทำถุงมือ

การเลือกใช้ถุงมือที่เหมาะสมไม่เพียงแต่ขึ้นอยู่กับวัสดุแต่ยังขึ้นกับมาตรฐานด้านคุณภาพและข้อแตกต่างระหว่างผู้ผลิตแต่ละแห่ง โดยที่ผลิตภัณฑ์เตรียมมาจากสารหลายชนิดความทนทานของวัสดุถุงมือไม่สามารถที่จะคำนวณล่วงหน้า ดังนั้นจึงต้องตรวจสอบกับการใช้งาน

เวลาที่ใช้ในการทะลุผ่านวัสดุที่ใช้ทำถุงมือ

ผู้ผลิตถุงมือป้องกันจะต้องทดสอบหาเวลาแน่นอนที่ใช้ในการทะลุผ่านและจะต้องมีการตรวจสอบติดตาม

การป้องกันตา



แว่นตาที่ขอบปิดสนิท

9 คุณสมบัติทางกายภาพและทางเคมี

9.1 ข้อมูลคุณสมบัติพื้นฐานทางกายภาพและเคมี

ข้อมูลรายละเอียดทั่วไป

ลักษณะ :

รูปสีฐาน

ของไหล

สี

ตามรายละเอียดของผลิตภัณฑ์

กลิ่นกลิ่นกลิ่น

ลักษณะพิเศษ

เกณฑ์กลิ่น :

ไม่ได้กำหนดไว้.

(ต่อหน้า 5)

แผนข้อมูลความปลอดภัย

มาตาม GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(ต่อหน้า 4)

ค่าค่า pH ที่ 20 °C	7.4
· การเปลี่ยนสภาวะ จุดหลอมเหลว/ ขอบเขตการหลอมละลาย จุดเดือด/ ขอบเขตการเดือด	0 °C 100 °C
· จุดวาบไฟ	ไม่สามารถใช้ได้
· ความสามารถติดไฟ (ของแข็งแกส)	ไม่สามารถใช้ได้
· อุณหภูมิสลายตัว	ไม่ได้กำหนดไว้.
· การเผาไหม้ด้วยตัวเอง	ผลิตภัณฑ์ไม่เป็นสารจุดไฟติดด้วยตัวเอง
· อันตรายจากการระเบิด	ผลิตภัณฑ์ไม่ได้มีอันตรายจากการระเบิด
· ขอบเขตการระเบิด ขั้นต่ำ ขั้นสูง	ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้.
· ความดันไอ ที่ 20 °C	23 hPa
· ความหนาแน่น ที่ 20 °C · ความหนาแน่นสัมพัทธ์ · ความหนาแน่นของไอ · อัตราการระเหย	1 g/cm ³ ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้.
· ความสามารถในการละลายใน / ความสามารถผสมเป็นส ารละลายเนื้อเดียวทุกส่วนผสมกับ น้ำน่าน้ำ	ผสมกันได้อย่างเต็มที่
· สัมประสิทธิ์การแยกตัวอินทรีย์/อินทรีย์/น้ำ	ไม่ได้กำหนดไว้.
· ความหนืด (ไดนามิก) พลศาสตร์ (คิเนเมติก) จลนศาสตร์	ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้.
· ปริมาณส่วนประกอบตัวทำละลาย น้ำน่าน้ำ VOC (EC)	95.0 % 0.00 %
· ส่วนประกอบที่เป็นของแข็ง · 9.2 ข้อมูลอื่นๆ	0.0 % ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

10 ความเสถียรและการเกิดปฏิกิริยา

- 10.1 ปฏิกิริยาได้ตอบ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.2 เสถียรภาพทางเคมี
- การสลายตัวด้วยความร้อน / เงื่อนไขที่ต้องหลีกเลี่ยง ไม่มีการสลายตัวถ้าใช้ตามรายละเอียดที่ระบุไว้
- 10.3 ความเป็นไปได้ของการเกิดปฏิกิริยาอันตราย ไม่มีปฏิกิริยาเป็นอันตรายที่รู้จัก
- 10.4 เงื่อนไขเพื่อการหลีกเลี่ยง ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.5 วัสดุที่เข้ากันไม่ได้: ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.6 อันตรายจากการสลายตัวของผลิตภัณฑ์: ไม่มีสารจากการสลายตัวที่เป็นอันตรายที่รู้จัก

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(ต่อหน้า 6)

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(ต่อหน้า 5)

11 ข้อมูลด้านพิษวิทยา

11.1 ข้อมูลเกี่ยวกับผลกระทบทางพิษวิทยา

· **ความเป็นพิษอย่างสาหัส:**
ให้โทษหากสูดหายใจเข้า

· **การจัดแบ่งตามค่า LD/LC50**

111-30-8 กลูตารัลดีไฮด์

ทางปาก	LD50	134 mg/kg (rat)
ทางผิวหนัง	LD50	2,560 mg/kg (rabbit)

· **อาการระคายเคืองเบื้องต้น**

· **บนผิวหนัง**

เป็นสาเหตุให้เกิดการระคายเคืองผิวหนัง

· **ที่ดวงตา**

เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส

· **การทำให้แพ้**

อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า

อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

12 ข้อมูลด้านนิเวศวิทยา

12.1 ความเป็นพิษ

· **ความเป็นพิษที่เกี่ยวกับน้ำ** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

· **12.2 การคงอยู่และการย่อยสลาย** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

· **12.3 การสะสมทางชีวภาพที่อาจเกิดขึ้น** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

· **12.4 การเปลี่ยนแปลงในดิน** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

· **ผลกระทบด้านพิษต่อระบบนิเวศน์**

· **ข้อสังเกต**

เป็นพิษสำหรับปลา

เป็นอันตรายกับปลา

· **ข้อมูลรายละเอียดเสริมเกี่ยวกับนิเวศวิทยา**

· **หมายเหตุทั่วไป**

เป็นอันตรายต่อน้ำชั้น 3 (กฎข้อบังคับของเยอรมัน)(การประเมินค่าด้วยตัวเอง):เป็นอันตรายสูงสุดกับน้ำ

อย่าปล่อยให้ผลิตภัณฑ์ไปถึงน้ำผิวดินเส้นทางน้ำหรือระบบระบายน้ำเสียแม้ว่าจะเป็นปริมาณเล็กน้อยเท่านั้น

เป็นอันตรายต่อน้ำดื่มแม้จะรั่วลงในพื้นดินเป็นปริมาณที่น้อยมากก็ตาม

เป็นพิษกับปลาและแพลงก์ตอนในผิวน้ำ

มีพิษต่อสิ่งมีชีวิตในน้ำ

เป็นอันตรายต่อสิ่งมีชีวิตในน้ำ

· **12.5 ผลของ PBT และการประเมิน vPvB**

· **PBT:** ไม่สามารถใช้ได้

· **vPvB:** ไม่สามารถใช้ได้

· **12.6 ผลข้างเคียงอื่นๆ** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

13 ข้อพิจารณาในการกำจัด

13.1 วิธีการกำจัดของเสีย

· **คำแนะนำ** ต้องไม่ทิ้งไปพร้อมกับขยะจากบ้านเรือนอย่าปล่อยให้ผลิตภัณฑ์เข้าถึงระบบระบายน้ำเสีย

· **ภาชนะบรรจุที่ยังไม่ได้ล้างทำความสะอาด**

· **คำแนะนำ** การกำจัดจะต้องทำตามกฎระเบียบที่เป็นทางการ

(ต่อหน้า 7)

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แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30


การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

· สารทำความสะอาดที่แนะนำ น้ำถ้าจำเป็นใช้คู่กับสารทำความสะอาด

(ต่อหน้า 6)

14 ข้อมูลการขนส่ง

· 14.1 เลขที่ UN · ADR, IMDG, IATA	UN1760
· 14.2 ชื่อการจัดส่งสินค้าที่เหมาะสมของ UN · ADR · IMDG, IATA	1760 CORROSIVE LIQUID, N.O.S. (กลูตารัลดีไฮด์) CORROSIVE LIQUID, N.O.S. (Glutaraldehyde)
· 14.3 ชั้นเรียนอันตรายจากการขนส่ง · ADR, IMDG, IATA	
	
· ประเภท · ผลากสิ่งที่เป็นอันตราย	8 สารกัดกร่อน 8
· 14.4 กลุ่มของภาชนะบรรจุ · ADR, IMDG, IATA	II
· 14.5 สิ่งที่เป็นอันตรายต่อสภาพแวดล้อม	ไม่สามารถใช้ได้
· 14.6 การป้องกันพิเศษล่วงหน้าสำหรับผู้ใช้ · รหัสความอันตราย: · หมายเลข EMS · Segregation groups · Stowage Category · Stowage Code	คำเตือน !: สารกัดกร่อน 80 F-A,S-B Acids B SW2 Clear of living quarters.
· 14.7 การขนส่งขนาดใหญ่ตามภาคผนวกของของ MARPOL73/78 และรหัส IBC	ไม่สามารถใช้ได้
· การขนส่ง/ข้อมูลรายละเอียดเสริม	
· ADR · ปริมาณที่จำกัด (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· หมวดหมู่การขนส่ง · รหัสควบคุมการผ่านอุโมงค์	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· “กฎระเบียบต้นแบบ” ของ IBC	UN 1760 CORROSIVE LIQUID, N.O.S. (กลูตารัลดีไฮด์), 8, II

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(ต่อหน้า 8)

แผ่นข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

(ต่อที่หน้า 7)

15 ข้อมูลด้านกฎข้อบังคับ

- 15.1 ความปลอดภัย สุขภาพและระเบียบ/กฎหมายสิ่งแวดล้อมโดยเฉพาะของสารหรือสารผสม
- บัญชีรายชื่อวัตถุอันตราย

· กรมวิชาการเกษตร

ไม่มีส่วนผสมใดอยู่ในรายการ

· กรมประมง

111-30-8 | กลูตารัลดีไฮด์

ชนิดที่ 3

· กรมปศุสัตว์

ไม่มีส่วนผสมใดอยู่ในรายการ

· อาหารและยา

111-30-8 | กลูตารัลดีไฮด์

ชนิดที่ 3

· กรมโรงงานอุตสาหกรรม

ไม่มีส่วนผสมใดอยู่ในรายการ

· กรมธุรกิจพลังงาน

ไม่มีส่วนผสมใดอยู่ในรายการ

- 15.2 การประเมินความปลอดภัยของสารเคมี: ไม่ได้ดำเนินการตามการประเมินความปลอดภัยของสารเคมี

16 ข้อมูลอื่นๆ

ข้อมูลรายละเอียดนี้ใช้ความรู้ปัจจุบันของเราเป็นหลักอย่างไรก็ตามข้อมูลนี้ไม่ใช่การรับประกันจากสถาบันต่อคุณสมบัติเฉพาะของผลิตภัณฑ์และไม่สามารถยืนยันการบังคับใช้ตามกฎหมายที่เกี่ยวข้องกับสัญญา

· รหัสที่เกี่ยวข้องกับ

H301 มีพิษหากกลืนเข้าไป

H302 เป็นอันตรายหากกลืนเข้าไป

H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา

H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

H330 เป็นอันตรายถึงชีวิตหากสูดหายใจเข้า

H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า

H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

H400 มีพิษมากต่อสิ่งมีชีวิตในน้ำ

H411 มีพิษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบต่อระยะยาว

· คำย่อและชื่อย่อที่ผสมขึ้น

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1: Skin corrosion/irritation – Category 1

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

(ต่อที่หน้า 9)

แผ่นข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2020.06.30

การปรับปรุงใหม่ : 2020.06.30

ชื่อทางการค้า Glutaraldehyde 4% in 0.1M in Sodium Cacodylate Buffer, pH 7.4

Skin Sens. 1A: Skin sensitisation – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

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