

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16537-15, 16537-20, 16537-15-SP
- **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: sgkcck@aol.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

Skin Irrit. 2 H315 Causes skin irritation.

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

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



GHS05 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Glutaraldehyde
- **Hazard statements**
Causes skin irritation.
Causes serious eye damage.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

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

May cause an allergic skin reaction.

· **Precautionary statements**

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

Wash thoroughly after handling.

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: If breathing is difficult, 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).

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

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

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 2

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *2

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%
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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.

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 2)

- 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:** If symptoms persist consult 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.
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

· **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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

- **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:**

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

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

acc. to OSHA HCS

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Reviewed on 09/20/2017

Trade name: *Glutaraldehyde 2.5% in 0.1M 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:	Liquid
Color:	Transparent
Odor:	Specific type
Odor threshold:	Not determined.

· **pH-value at 20 °C (68 °F):** 7.4· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)

· **Flash point:** Not applicable.· **Flammability (solid, gaseous):** Not flammable.· **Ignition temperature:****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 mm Hg)· **Density at 20 °C (68 °F):** 1.01 g/cm³ (8.428 lbs/gal)· **Relative density** Not determined.· **Vapor density** Not determined.· **Evaporation rate** Not determined.· **Solubility in / Miscibility with****Water:** Not miscible or difficult to mix.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Solvent content:**

Organic solvents:	0.0 %
Water:	97.5 %
VOC content:	0.0 g/l / 0.00 lb/gl

(Contd. on page 6)

Safety Data Sheet

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Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M 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 that are relevant for classification:**

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 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.

· **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.

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

- **Ecotoxicological effects:**
- **Remark:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 Water hazard class 2 (Self-assessment): hazardous for water
 Do not allow product to reach ground water, water course or sewage system.
 Danger to drinking water if even small quantities leak into the ground.
 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.

14 Transport information

· UN-Number	Void
· DOT, ADR, IMDG, IATA	Void
· UN proper shipping name	Void
· DOT, ADR, IMDG, IATA	Void
· Transport hazard class(es)	Void
· DOT, ADR, IMDG, IATA	Void
· Class	Void
· Packing group	Void
· DOT, ADR, IMDG, IATA	Void
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

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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(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

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

None of the ingredients is listed.

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

All ingredients are 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

· **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 GHS08

· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

· **Precautionary statements**

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

Wash thoroughly after handling.

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: If breathing is difficult, 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).

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

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Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 8)

If skin irritation or rash occurs: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
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** 09/20/2017 / -

· **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

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

Safety Data Sheet

according to WHS Regulations

Printing date 20.09.2017

Revision: 20.09.2017

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16537-15, 16537-20, 16537-15-SP
- **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: sgkcck@aol.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

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 20.09.2017

Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

- **Label elements**
- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms**



GHS05 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labelling:**
Glutaraldehyde
- **Hazard statements**
Causes skin irritation.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
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: If breathing is difficult, 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).
If skin irritation or rash occurs: Get medical advice/attention.
If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
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%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

AU

(Contd. on page 3)

Safety Data Sheet

according to WHS Regulations

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M 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:** If symptoms persist consult 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 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.
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.
- **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

Safety Data Sheet according to WHS Regulations

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Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

- **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

- **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

AU

(Contd. on page 5)

Safety Data Sheet

according to WHS Regulations

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(Contd. of page 4)

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

· Form:	Liquid
· Colour:	Transparent
· Odour:	Specific type
· Odour threshold:	Not determined.

· **pH-value at 20 °C:** 7.4

· **Change in condition**

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

· **Flash point:** Not applicable.

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

· **Ignition temperature:**

· **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:	1.01 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

· **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

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

· **Viscosity:**

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

· **Solvent content:**

· Organic solvents:	0.0 %
· Water:	97.5 %
· VOC (EC)	0.00 %

· **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.

(Contd. on page 6)

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Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 5)

- **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	2560 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:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
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.

(Contd. on page 7)

Safety Data Sheet

according to WHS Regulations

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| <ul style="list-style-type: none"> · UN-Number · ADG, ADN, IMDG, IATA | not regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · ADG, ADN, IMDG, IATA | not regulated |
| <ul style="list-style-type: none"> · Transport hazard class(es) · ADG, ADN, IMDG, IATA · Class | not regulated |
| <ul style="list-style-type: none"> · Packing group · ADG, IMDG, IATA | not regulated |
| <ul style="list-style-type: none"> · Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · Special precautions for user | Not applicable. |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · UN "Model Regulation": | not regulated |

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

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

- **Hazard pictograms**



GHS05 GHS08

- **Signal word** Danger

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

Glutaraldehyde

- **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

- **Precautionary statements**

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

(Contd. on page 8)

Safety Data Sheet according to WHS Regulations

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

Wash thoroughly after handling.

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: If breathing is difficult, 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).

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

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

Take off contaminated clothing and wash it before reuse.

Wash contaminated clothing before reuse.

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

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

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16537-15, 16537-20, 16537-15-SP
- **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: sgkcck@aol.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

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

Skin Irritation - Category 2 H315 Causes skin irritation.

Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

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



GHS05 GHS08

- **Signal word** *Danger*
- **Hazard-determining components of labeling:**
Glutaraldehyde
- **Hazard statements**
Causes skin irritation.

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

Causes serious eye damage.

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

May cause an allergic skin reaction.

· Precautionary statements

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

Wash thoroughly after handling.

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).

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

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

Take off contaminated clothing and wash it before reuse.

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

· Hazard description:

· WHMIS-symbols:

D2A - Very toxic material causing other toxic effects



· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 0

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



*Health = *2*

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
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CA

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M 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:** If symptoms persist consult 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.
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.
- **Information about storage in one common storage facility:** Not required.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 3)

- **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 limit value: 0.05 ppm
S

EV Ceiling limit value: 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

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M 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:	Liquid
Color:	Transparent
Odor:	Specific type
Odor threshold:	Not determined.

· **pH-value at 20 °C:** 7.4

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C

· **Flash point:** Not applicable.

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

· **Ignition temperature:**

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:	1.01 g/cm ³
Relative density	Not determined.
Vapor density	Not determined.
Evaporation rate	Not determined.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

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

· **Viscosity:**

Dynamic:	Not determined.
Kinematic:	Not determined.

· **Solvent content:**

Organic solvents:	0.0 %
Water:	97.5 %

· **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.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M 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 that are relevant for classification:**

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 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:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 2 (Self-assessment): hazardous for water
 - Do not allow product to reach ground water, water course or sewage system.
 - Danger to drinking water if even small quantities leak into the ground.
 - Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

CA

(Contd. on page 7)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 6)

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.

14 Transport information

· UN-Number	
· DOT, TDG, ADN, IMDG, IATA	Void
· UN proper shipping name	
· DOT, TDG, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, TDG, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· DOT, TDG, IMDG, IATA	Void
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

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 ingredients are listed.	
· 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).	

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 09/20/2017

Reviewed on 09/20/2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 7)

· **Hazard pictograms**



GHS05 GHS08

· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

· **Precautionary statements**

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

Wash thoroughly after handling.

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).

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

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

Take off contaminated clothing and wash it before reuse.

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** 09/20/2017 / -

· **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)

WHMIS: Workplace Hazardous Materials Information System (Canada)

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 20.09.2017

Revision: 20.09.2017

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

- **1.1 Product identifier**
- **Trade name:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- **Article number:** 16537-15, 16537-20, 16537-15-SP
- **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: sgkcck@aol.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

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.

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



GHS05



GHS07



GHS08

- **Signal word** *Danger*

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Contd. of page 1)

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

Glutaraldehyde

· **Hazard statements**

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.

· **Precautionary statements**

P284 [In case of inadequate ventilation] wear respiratory protection.

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).

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	Glutaraldehyde	≤ 2.5%
EINECS: 203-856-5	 Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Acute Tox. 4, H332; Skin Sens. 1, H317	

· **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.

· **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:** If symptoms persist consult doctor.

· **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.

GB

(Contd. on page 3)

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

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: **Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 2)

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.
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.
- **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.

(Contd. on page 4)

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

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: **Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 3)

- **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:	Liquid
· Colour:	Transparent
· Odour:	Specific type
· Odour threshold:	Not determined.

· pH-value at 20 °C:	7.4
-----------------------------	-----

· Change in condition

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

· Flash point:	Not applicable.
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· Flammability (solid, gas):	Not applicable.
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(Contd. on page 5)

GB

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

Printing date 20.09.2017

Revision: 20.09.2017

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(Contd. of page 4)

· Ignition temperature:	
· 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:	1.01 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	0.0 %
Water:	97.5 %
VOC (EC)	0.00 %
· 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.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

111-30-8 Glutaraldehyde

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.

(Contd. on page 6)

GB

Safety data sheet
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Revision: 20.09.2017

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(Contd. of page 5)

- **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:** Harmful to fish
- **Additional ecological information:**
- **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
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.

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.

SECTION 14: Transport information

- | | |
|---------------------------------------|---------------|
| · 14.1 UN-Number | |
| · ADR, ADN, IMDG, IATA | not regulated |
| · 14.2 UN proper shipping name | |
| · ADR, ADN, IMDG, IATA | not regulated |

(Contd. on page 7)

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

Printing date 20.09.2017

Revision: 20.09.2017

Trade name: **Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4**

(Contd. of page 6)

· 14.3 Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	not regulated
· 14.4 Packing group	
· ADR, IMDG, IATA	not regulated
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· UN "Model Regulation":	not regulated

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
- **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**
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H400 Very toxic to aquatic life.
- **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. 4: Acute toxicity – 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
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 审核

1 化学品及企业标识

- 产品识别者
- 化学品中文(英文)名称, 化学品俗名或商品名: **Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4**
- 商品编号: 16537-15, 16537-20, 16537-15-SP
- 相应纯物质或者混合物的相关下位用途及禁止用途 无相关详细资料。
- 原材料的应用/准备工作进行 实验室化学物
- 安全技术说明书内供应商详细信息
- 企业名称:
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: sgkcck@aol.com
www.emsdiasum.com
- 可获取更多资料的部门: Product safety department
- 紧急联系电话号码:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危险性概述

· 紧急情况概述:

透明的, 液体, 吸入可能有害。造成皮肤刺激。造成严重眼损伤。吸入可能导致过敏或哮喘病症状或呼吸困难。可能导致皮肤过敏反应。对水生生物有害。

· GHS危险性类别



健康危害

敏化(呼吸) 第1类

H334 吸入可能导致过敏或哮喘病症状或呼吸困难



腐蚀

严重眼睛损伤/眼睛刺激性 第1类 H318 造成严重眼损伤



皮肤腐蚀/刺激 第2类

H315 造成皮肤刺激

敏化(皮肤) 第1类

H317 可能导致皮肤过敏反应

急性毒性(吸入) 第5类

H333 吸入可能有害

对水环境的危害(急性) 第3类

H402 对水生生物有害

· 标签因素

- **GHS卷标元素** 本产品根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。

(在 2 页继续)

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根据 GB/T 16483-2008, GB/T 17519-2013

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(在 1 页继续)

· 图示



GHS05 GHS08

· 名称 危险

· 标签上辨别危险的成份:

1,5-戊二醛

· 危险字句

吸入可能有害

造成皮肤刺激

造成严重眼损伤

吸入可能导致过敏或哮喘病症状或呼吸困难

可能导致皮肤过敏反应

对水生生物有害

· 警戒字句

· 预防措施

避免吸入粉尘/烟/气体/烟雾/蒸气/喷雾

[在通风不足的情况下]戴呼吸防护装置

· 事故响应

如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗

立即呼叫急救中心/医生

具体治疗(见本标签上的)

· 废弃处置

处置内装物/容器按照地方/区域/国家/国际规章

· 其他有害性

· PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果

· PBT(残留性、生物浓缩性、毒性物质) 不适用的

· vPvB(高残留性、高生物浓缩性物质): 不适用的

3 成分/组成信息

· 混合物

· 描述: 由以下含有无害添加剂的成分组成的混合物

· 危险的成分:

111-30-8	1,5-戊二醛	≤ 2.5%
	敏化(呼吸) 第1类, H334; 皮肤腐蚀/刺激 第1B类, H314; 对水环境的危害(急性) 第1类, H400; 急性毒性(吸入) 第4类, H332; 敏化(皮肤) 第1类, H317; 易燃液体 第4类, H227	

4 急救措施

· 应急措施要领

· 总说明: 中毒的症状可能会在几个小时以后才出现;因此在发生事故之后起码要有 48 小时的医疗观察.

· 吸入:

供给新鲜空气并且确保会叫医生.

万一病人不清醒时,请让病人侧躺以便移动.

· 皮肤接触: 马上用水和肥皂进行彻底的冲洗.

(在 3 页继续)

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(在 2 页继续)

- **眼睛接触:** 张开眼睛在流水下冲洗数分钟. 然后咨询医生.
- **食入:** 如果症状仍然持续, 请咨询医生.
- **给医生的资料:**
- **最重要的急慢性症状及其影响** 无相关详细资料.
- **需要及时的医疗处理及特别处理的症状** 无相关详细资料.

5 消防措施

- **灭火方法**
- **灭火的方法和灭火剂:** 使用适合四周环境的灭火措施.
- **特别危险性** 无相关详细资料.
- **特殊灭火方法**
- **消防人员特殊的防护装备:** 口腔呼吸保护装置.

6 泄漏应急处理

- **保护措施** 没有要求.
- **环境保护措施:**
如果渗入了水源或污水系统, 请通知有关当局.
切勿让其进入下水道/水面或地下水.
- **密封及净化方法和材料:**
吸收液体粘合原料 (沙粒、硅藻土、酸性粘合剂、通用粘合剂、锯屑).
根据第 13 条条款弃置受污染物.
确保有足够的通风装置.
- **参照其他部分**
有关安全处理的资料请参阅第 7 节.
有关个人防护装备的资料请参阅第 8 节.
有关弃置的资料请参阅第 13 节.

7 操作处置与储存

- **操作处置**
- **储存**
确保工作间有良好的通风/排气装置.
防止气溶胶的形成.
- **有关火灾及防止爆炸的资料:** 不需特别的措施.
- **混合危险性等安全储存条件**
- **储存:**
- **储存库和容器须要达到的要求:** 没有特别的要求.
- **有关使用一个普通的储存设施来储存的资料:** 不需要.
- **有关储存条件的更多资料:** 将容器密封.
- **具体的最终用户** 无相关详细资料.

8 接触控制和个体防护

- **工程控制方法:** 没有进一步数据; 见第 7 项.

(在 4 页继续)

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

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(在 3 页继续)

· 控制变数

· 在工作场需要监控的限值成分

111-30-8 1,5-戊二醛

PEL (TW) | PC-TWA: 0.82 mg/m³, 0.2 ppm

· 额外的资料: 制作期间有效的清单将作为基础来使用.

· 泄漏控制

· 个人防护设备:

· 一般保护和卫生措施:

远离食品、饮料和饲料.

立即除去所有的不洁的和被污染的衣服.

在休息之前和工作完毕后请清洗双手.

避免和皮肤接触.

避免和眼睛及皮肤接触.

· 呼吸系统防护:

如果曾短暂接触或在低污染的情况下,请使用呼吸过滤装置. 如果曾深入或较长时间接触,请使用独立的呼吸保护装置.

· 手防护:



保护手套

手套的物料必须是不渗透性的,且能抵抗该产品/物质/添加剂.

基于缺乏测试,对于产品/制剂/化学混合物,并不会提供手套材料的建议

选择手套材料时,请注意材料的渗透时间,渗透率和降解参数

· 手套材料

选择合适的手套不单取决于材料,亦取决于质量特征,以及来自哪一间生产厂家,因为该产品是由很多材料配制而成,手套材料的抵抗力并不可预计,所以,必须在使用之前进行检查

· 渗入手套材料的时间 请向劳保手套生产厂家获取准确的破裂时间并观察实际的破裂时间

· 眼睛防护:



密封的护目镜

9 理化特性

· 有关基本物理及化学特性的信息

· 一般说明

· 外观:

形状: 液体

颜色: 透明的

· 气味: 指定的类型

· 嗅觉阈限 未决定.

· pH值 在 20 °C: 7.4

· 条件的更改

熔点: 未确定的

沸点/初沸点和沸程: 100 °C

(在 5 页继续)

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打印日期 2017.09.20

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化学品中文(英文)名称, 化学品俗名或商品名 : Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 4 页继续)

· 闪点:	不适用的
· 可燃性 (固体、气体):	不适用的
· 点火温度:	
· 分解温度:	未决定.
· 自燃温度:	该产品是不自燃的
· 爆炸的危险性:	该产品并没有爆炸的危险
· 爆炸极限:	
较低:	未决定.
较高:	未决定.
· 蒸气压 在 20 °C:	23 hPa
· 密度 在 20 °C:	1.01 g/cm ³
· 相对密度	未决定.
· 蒸气密度	未决定.
· 蒸发速率	未决定.
· 溶解性	
水:	不能拌和的 或难以拌和
· n-辛醇/水分配系数:	未决定.
· 黏性:	
动态:	未决定.
运动学的:	未决定.
· 溶剂成份:	
有机溶剂:	0.0 %
水:	97.5 %
· 其他信息	无相关详细资料。

10 稳定性和反应性

- 反应性 无相关详细资料。
- 稳定性
- 热分解/要避免的情况: 如果遵照规格使用则不会分解.
- 有害反应可能性 未有已知的危险反应.
- 应避免的条件 无相关详细资料。
- 不相容的物质: 无相关详细资料。
- 危险的分解产物: 未知有危险的分解产品.

11 毒理学信息

- 对毒性学影响的信息
- 急性毒性:

· 与分类相关的 LD/ LC50 值:		
111-30-8 1,5-戊二醛		
口腔	LD50	134 mg/kg (rat)
皮肤	LD50	2560 mg/kg (rabbit)

(在 6 页继续)

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(在 5 页继续)

- **主要的刺激性影响:**
- **皮肤:** 刺激皮肤和粘膜.
- **在眼睛上面:** 强烈的刺激性和造成严重伤害眼睛的危险.
- **致敏作用:**
通过吸入可能造成敏化作用.
通过皮肤接触可能造成敏化作用.
- **更多毒物的资料:**
根据有关配制的一般欧盟分类指南的计算方法 (刊印在最新版本), 该产品显示以下的危险:
有害的
刺激性的

12 生态学信息

- **生态毒性**
- **水生毒性:** 无相关详细资料。
- **持久性和降解性** 无相关详细资料。
- **环境系统习性:**
- **潜在的生物累积性** 无相关详细资料。
- **土壤内移动性** 无相关详细资料。
- **生态毒性的影响:**
- **备注:** 对鱼类有害
- **额外的生态学资料:**
- **总括注解:**
水危害级别 2 (德国规例) (通过名单进行自我评估): 对水是危害的
不要让该产品接触地下水、水道或污水系统。
即使是小量的产品渗入地下也会对饮用水造成危险。
对水中的有机物有危害。
- **PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果**
- **PBT(残留性、生物浓缩性、毒性物质)** 不适用的
- **vPvB(高残留性、高生物浓缩性物质):** 不适用的
- **其他副作用** 无相关详细资料。

13 废弃处置

- **废弃处置方法**
- **建议:** 不能将该产品和家居垃圾一起丢弃. 不要让该产品接触污水系统.
- **受污染的容器和包装:**
- **建议:** 必须根据官方的规章来丢弃.

14 运输信息

- | | |
|-------------------------------|----|
| · 联合国危险货物编号(UN号) | |
| · ADR, ADN, IMDG, IATA | 无效 |
| · UN适当装船名 | |
| · ADR, ADN, IMDG, IATA | 无效 |

(在 7 页继续)

CN

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 审核

化学品中文(英文)名称, 化学品俗名或商品名 : Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 6 页继续)

· 运输危险等级	
· ADR, ADN, IMDG, IATA 级别	无效
· 包装组别	
· ADR, IMDG, IATA	无效
· 危害环境:	不适用的
· 用户特别预防措施	不适用的
· MARPOL73/78(针对船舶引起的海洋污染预防协议)附件书2及根据IBC Code(国际装船货物编码)的大量运送	不适用的
· UN "标准规定":	无效

15 法规信息

- 对相应纯物质或者混合物的安全、保健及环境法规/法律
- 危险化学品安全管理条例

· 危险化学品目录

111-30-8 | 1,5-戊二醛

124-65-2 | 卡可酸钠

· 新化学物质环境管理办法

· 中国现有化学物质名录

111-30-8 | 1,5-戊二醛

7732-18-5 | 水

- GHS卷标元素 本产品根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。

· 图示



GHS05 GHS08

- 名称 危险

· 标签上辨别危险的成份:

1,5-戊二醛

· 危险字句

吸入可能有害

造成皮肤刺激

造成严重眼损伤

吸入可能导致过敏或哮喘病症状或呼吸困难

可能导致皮肤过敏反应

对水生生物有害

· 警戒字句

· 预防措施

避免吸入粉尘/烟/气体/烟雾/蒸气/喷雾

[在通风不足的情况下]戴呼吸防护装置

(在 8 页继续)

化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 审核

化学品中文(英文)名称, 化学品俗名或商品名 : Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 7 页继续)

· 事故响应

如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗
立即呼叫急救中心/医生
具体治疗(见本标签上的)

· 废弃处置

处置内装物/容器按照地方/区域/国家/国际规章

· 化学物质安全性评价: 尚未进行化学物质安全性评价

16 其他信息

该资料是基于我们目前的知识。然而,这并不构成对任何特定产品特性的担保并且不建立一个法律上有效的合同关系。

· 缩写:

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: 持久性生物累积性有毒物质

vPvB: very Persistent and very Bioaccumulative

易燃液体 第4类: Flammable liquids – Category 4

急性毒性(吸入) 第4类: Acute toxicity – Category 4

急性毒性(吸入) 第5类: Acute toxicity – Category 5

皮肤腐蚀/刺激 第1B类: Skin corrosion/irritation – Category 1B

皮肤腐蚀/刺激 第2类: Skin corrosion/irritation – Category 2

严重眼睛损伤/眼睛刺激性 第1类: Serious eye damage/eye irritation – Category 1

敏化(呼吸) 第1类: Respiratory sensitisation – Category 1

敏化(皮肤) 第1类: Skin sensitisation – Category 1

对水环境的危害(急性) 第1类: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

对水环境的危害(急性) 第3类: Hazardous to the aquatic environment - acute aquatic hazard – Category 3

- CN -

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

PUNKT 1: Identifikation af stoffet/blandingen og af selskabet/virksomheden

· 1.1 Produktidentifikator

· **Handelsnavn:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

· **Artikelnummer:** 16537-15, 16537-20, 16537-15-SP

· **1.2 Relevante identificerede anvendelser for stoffet eller blandingen samt anvendelser, der frarådes**
Der står ingen yderligere, relevante informationer til rådighed.

· **Stoffets/præparatets anvendelse** Laboratoriekemikalier

· 1.3 Nærmere oplysninger om leverandøren af sikkerhedsdatabladet

· **Producent/leverandør**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: sgkcck@aol.com

www.emsdiasum.com

· **For yderligere information:** Product safety department

· 1.4 Nødtelefon:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

PUNKT 2: Fareidentifikation

· 2.1 Klassificering af stoffet eller blandingen

· **Klassificering i henhold til forordning (EF) nr. 1272/2008**



GHS08 sundhedsfarer

Resp. Sens. 1 H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.



GHS05 ætsning

Eye Dam. 1 H318 Forårsager alvorlig øjenskade.



GHS07

Skin Irrit. 2 H315 Forårsager hudirritation.

Skin Sens. 1 H317 Kan forårsage allergisk hudreaktion.

STOT SE 3 H335 Kan forårsage irritation af luftvejene.

· 2.2 Mærkningselementer

· **Mærkning i henhold til forordning (EF) nr. 1272/2008**

Dette produkt er klassificeret og mærket iht. CLP-forordningen.

· **Farepiktogrammer**



GHS05



GHS07



GHS08

· **Signalord** Fare

(Fortsættes på side 2)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 1)

· **Farebestemmende komponent(er) til etikettering:**

glutaral

· **Faresætninger**

H315 Forårsager hudirritation.

H318 Forårsager alvorlig øjenskade.

H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.

H317 Kan forårsage allergisk hudreaktion.

H335 Kan forårsage irritation af luftvejene.

· **Sikkerhedssætninger**

P284 [I tilfælde af utilstrækkelig ventilation], anvend åndedrætsværn.

P305+P351+P338 VED KONTAKT MED ØJNENE: Skyl forsigtigt med vand i flere minutter. Fjern eventuelle kontaktlinser, hvis dette kan gøres let. Fortsæt skylning.

P310 Ring omgående til en GIFTINFORMATION/læge.

P321 Særlig behandling (se på denne etiket).

P405 Opbevares under lås.

P501 Bortskaffelse af indholdet/beholderen i henhold til de lokale/regionale/nationale/internationale forskrifter.

· **2.3 Andre farer**

· **Resultater af PBT- og vPvB-vurdering**

· **PBT:** Ikke relevant.





· **vPvB:** Ikke relevant.

PUNKT 3: Sammensætning af/oplysning om indholdsstoffer

· **3.2 Kemisk betegnelse: Blandinger**

· **Beskrivelse:** Blanding med nedenstående stoffer med ufarlige tilsætningsstoffer.

· **Farlige indholdsstoffer:**

CAS: 111-30-8	glutaral	≤ 2,5%
EINECS: 203-856-5	 Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Acute Tox. 4, H332; Skin Sens. 1, H317	

· **Yderligere anvisninger:** Teksten til de anførte farehenvisninger fremgår af kapitel 16.

PUNKT 4: Førstehjælpsforanstaltninger

· **4.1 Beskrivelse af førstehjælpsforanstaltninger**

· **Generelle anvisninger:**

Forgiftningssymptomer kan optræde med mange timers forsinkelse, derfor skal lægeovervågningen vare mindst 48 timer efter et uheld.

· **Efter indånding:**

Rigelig tilførsel af frisk luft. Søg for en sikkerheds skyld læge.

I tilfælde af bevidstløshed skal den tilskadedkomne lægges ned og transporteres i stabilt sideleje.

· **Efter hudkontakt:** Skal omgående vaskes af med vand og sæbe, skyl godt efter.

· **Efter øjenkontakt:** Skyl øjnene med åbent øjenlåg i flere minutter under rindende vand og søg læge.

· **Efter indtagelse:** Søg læge, hvis problemerne er vedvarende.

· **4.2 Vigtigste symptomer og virkninger, både akutte og forsinkede**

Der står ingen yderligere, relevante informationer til rådighed.

· **4.3 Angivelse af om øjeblikkelig lægehjælp og særlig behandling er nødvendig**

Der står ingen yderligere, relevante informationer til rådighed.

DK

(Fortsættes på side 3)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 2)

PUNKT 5: Brandbekæmpelse

- **5.1 Slukningsmidler**
- **Egnede slukningsmidler:** Tilpas foranstaltningerne til brandbekæmpelse efter omgivelserne.
- **5.2 Særlige farer i forbindelse med stoffet eller blandingen**
Der står ingen yderligere, relevante informationer til rådighed.
- **5.3 Anvisninger for brandmandskab**
- **Særlige værnemidler:** Bær åndedrætsværn.

PUNKT 6: Forholdsregler over for udslip ved uheld

- **6.1 Personlige sikkerhedsforanstaltninger, personlige værnemidler og nødprocedurer** Ikke påkrævet.
- **6.2 Miljøbeskyttelsesforanstaltninger:**
I tilfælde af indtrængen i vandløb eller kloaksystem skal de pågældende myndigheder underrettes.
Må ikke udledes i kloaksystemet/overfladevand/grundvand.
- **6.3 Metoder og udstyr til inddæmning og oprensning:**
Opsamles med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, savsmuld).
Kontamineret materiale skal bortskaffes som affald ifølge punkt 13.
Sørg for tilstrækkelig udluftning.
- **6.4 Henvisning til andre punkter**
Information om sikker håndtering se kapitel 7.
Informationer vedrørende personlige værnemidler se kapitel 8.
Informationer om bortskaffelse se kapitel 13.

PUNKT 7: Håndtering og opbevaring

- **7.1 Forholdsregler for sikker håndtering**
Sørg for god udluftning/udsugning på arbejdspladsen.
Undgå aerosoldannelse.
- **Anvisninger vedrørende brand- og eksplosionsbeskyttelse:** Der kræves ingen særlige forholdsregler.
- **7.2 Betingelser for sikker opbevaring, herunder eventuel uforenelighed**
- **Opbevaring:**
- **Krav til opbevaringsrum og beholdere:** Ingen særlige krav.
- **Henvisninger vedrørende opbevaring med andre stoffer:** Ikke påkrævet.
- **Yderligere oplysninger vedrørende opbevaringsbetingelserne:** Hold beholderen tætsluttende lukket.
- **7.3 Særlige anvendelser** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 8: Eksponeringskontrol/personlige værnemidler

- **Yderligere anvisninger vedrørende udformning af tekniske anlæg:** Ingen yderligere oplysninger, se punkt 7.
- **8.1 Kontrolparametre**

· **Indholdsstoffer med arbejdspladsrelaterede grænseværdier, der skal overvåges:**

111-30-8 glutaral

GV	Loftværdi: 0,8 mg/m ³ , 0,2 ppm
L	

- **Yderligere anvisninger:** Baseret på de lister, der var gældende på tidspunktet for udarbejdelsen.

(Fortsættes på side 4)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 3)

- **8.2 Eksponeringskontrol**
- **Personlige værnemidler:**
- **Generelle forholdsregler vedrørende beskyttelse og hygiejne:**
Skal holdes borte fra føde- og drikkevarer og foderstoffer.
Forurenet, gennemvædet tøj skal det tages af med det samme.
Vask hænder inden der holdes pause og ved arbejdsophør.
Undgå kontakt med huden.
Undgå kontakt med øjne og hud.
- **Åndedrætsværn:**
Ved kortvarig eller ringe belastning skal der benyttes åndedrætsværn med filter, ved intensiv eller længere eksponering skal der benyttes luftforsynet åndedrætsværn.
- **Håndbeskyttelse:**



Beskyttelseshandsker

- Handskematerialet skal være uigennemtrængeligt og kunne tåle produktet/stoffet/præparatet.
På grund af manglende tests kan der ikke anbefales noget handskemateriale til produktet/præparatet/kemikalieblandingen.
Ved valg af handskematerialet skal der tages højde for gennemtrængningstider, permeabilitetstal og nedbrydning.
- **Handskemateriale:**
Valg af en egnet handske afhænger ikke blot af materialet, men også af yderligere kvalitetskriterier og er forskelligt fra den ene fabrikant til den anden. Da produktet er et præparat af flere forskellige stoffer, kan handskematerialernes bestandighed ikke beregnes på forhånd og skal derfor efterprøves inden brugen.
 - **Handskematerialets gennemtrængningstid**
Hos handskefabrikanten skal man forespørge om den nøjagtige gennemtrængningstid og overholde denne.
 - **Øjenbeskyttelse:**



Tætsluttende beskyttelsesbriller

PUNKT 9: Fysiske og kemiske egenskaber

- **9.1 Oplysninger om grundlæggende fysiske og kemiske egenskaber**
- **Generelle oplysninger**
- **Udseende:**

Form:	Væske
Farve:	Gennemskinnelig
- **Lugt:** Artstypisk
- **Lugttærskel:** Ikke bestemt.
- **pH-værdi ved 20 °C:** 7,4
- **Tilstandsændring**

Smeltepunkt/frysepunkt:	Ikke bestemt.
Begyndelseskogepunkt og kogepunktsinterval:	100 °C
- **Flammepunkt:** Ikke relevant.
- **Antændelighed (fast stof, luftart):** Ikke relevant.

(Fortsættes på side 5)

DK

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 4)

· Antændelsepunkt:	
· Dekomponeringstemperatur:	Ikke bestemt.
· Selvantændelsestemperatur:	Produktet er ikke selvantændeligt.
· Eksplorative egenskaber:	Produktet er ikke eksplosivt.
· Eksplønsionsgrænser:	
Nedre:	Ikke bestemt.
Øvre:	Ikke bestemt.
· Damptryk ved 20 °C:	23 hPa
· Densitet ved 20 °C:	1,01 g/cm ³
· Relativ massefylde:	Ikke bestemt.
· Dampmassefylde:	Ikke bestemt.
· Fordampningshastighed	Ikke bestemt.
· Opløselighed i/blandbarhed med vand:	Ikke eller kun lidt blandbar.
· Fordelingskoefficient: n-oktanol/vand:	Ikke bestemt.
· Viskositet:	
dynamisk:	Ikke bestemt.
kinematisk:	Ikke bestemt.
· Opløsningsmiddelindhold:	
Organiske opløsningsmidler:	0,0 %
Vand	97,5 %
VOC (EU)	0,00 %
· 9.2 Andre oplysninger	Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Der står ingen yderligere, relevante informationer til rådighed.
- **10.2 Kemisk stabilitet**
- **Termisk nedbrydning/forhold, der bør undgås** Ingen nedbrydning ved formålsbestemt brug.
- **10.3 Risiko for farlige reaktioner** Der er ikke kendskab til nogen farlige reaktioner.
- **10.4 Forhold, der skal undgås** Der står ingen yderligere, relevante informationer til rådighed.
- **10.5 Materialer, der skal undgås:** Der står ingen yderligere, relevante informationer til rådighed.
- **10.6 Farlige nedbrydningsprodukter:** Der er ikke kendskab til nogen farlige nedbrydningsprodukter.

PUNKT 11: Toksikologiske oplysninger

- **11.1 Oplysninger om toksikologiske virkninger**
- **Akut toksicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

· **Klassificeringsrelevante LD/LC50-værdier:**

111-30-8 glutaral

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 mg/kg (rabbit)

(Fortsættes på side 6)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 5)

- **Primær irritationsvirkning:**
- **Hudætsning/-irritation**
Forårsager hudirritation.
- **Alvorlig øjenskade/øjenirritation**
Forårsager alvorlig øjenskade.
- **Respiratorisk sensibilisering eller hudsensibilisering**
Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.
Kan forårsage allergisk hudreaktion.
- **CMR-virkninger (kræftfremkaldende egenskaber, mutagenitet og reproduktionstoksicitet)**
- **Kimcellemutagenitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Kræftfremkaldende egenskaber**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Reproduktionstoksicitet**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Enkel STOT-eksponering**
Kan forårsage irritation af luftvejene.
- **Gentagne STOT-eksponeringer**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.
- **Aspirationsfare**
Kriterierne for klassificering kan på grundlag af de foreliggende data ikke anses for at være opfyldt.

PUNKT 12: Miljøoplysninger

- **12.1 Toksicitet**
- **Toksicitet i vand:** Der står ingen yderligere, relevante informationer til rådighed.
- **12.2 Persistens og nedbrydelighed** Der står ingen yderligere, relevante informationer til rådighed.
- **12.3 Bioakkumuleringspotentiale** Der står ingen yderligere, relevante informationer til rådighed.
- **12.4 Mobilitet i jord** Der står ingen yderligere, relevante informationer til rådighed.
- **Økotoksicitet**
- **Bemærkning:** Skadelig for fisk.
- **Yderligere økologiske oplysninger:**
- **Generelle anvisninger:**
Fareklasse for vand 2 (Selvklassificering): vandforurenende
Må ikke udledes i grundvandet, vandløb eller kloaksystemet.
Risiko for forurening af drikkevandet allerede ved udslip af små mængder i undergrunden.
skadelig for vandorganismer
- **12.5 Resultater af PBT- og vPvB-vurdering**
- **PBT:** Ikke relevant.
- **vPvB:** Ikke relevant.
- **12.6 Andre negative virkninger** Der står ingen yderligere, relevante informationer til rådighed.

PUNKT 13: Bortskaffelse

- **13.1 Metoder til affaldsbehandling**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsaffald. Må ikke udledes i kloaksystemet.
- **Urensede emballager:**
- **Anbefaling:** Bortskaffes i overensstemmelse med myndighedernes forskrifter.

DK

(Fortsættes på side 7)

Sikkerhedsdatablad

ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 6)

PUNKT 14: Transportoplysninger

· 14.1 UN-nummer · ADR, ADN, IMDG, IATA	Ikke relevant
· 14.2 UN-forsendelsesbetegnelse (UN proper shipping name) · ADR, ADN, IMDG, IATA	Ikke relevant
· 14.3 Transportfareklasse(r) · ADR, ADN, IMDG, IATA · klasse	Ikke relevant
· 14.4 Emballagegruppe · ADR, IMDG, IATA	Ikke relevant
· 14.5 Miljøfarer:	Ikke relevant.
· 14.6 Særlige forsigtighedsregler for brugeren	Ikke relevant.
· 14.7 Bulktransport i henhold til bilag II til MARPOL og IBC-koden	Ikke relevant.
· UN "Model Regulation":	Ikke relevant

PUNKT 15: Oplysninger om regulering

- 15.1 Særlige bestemmelser/særlig lovgivning for stoffet eller blandingen med hensyn til sikkerhed, sundhed og miljø
- Direktiv 2012/18/EU
- Navngivne farlige stoffer - BILAG I Ingen af indholdsstofferne er optaget i listen.
- Forordning (EF) nr. 1907/2006 BILAG XVII Begrænsninger: 3
- Nationale forskrifter:
- MAL-Code: 5-5
- 15.2 Kemikaliesikkerhedsvurdering: Der er ikke udført kemikaliesikkerhedsvurdering.

PUNKT 16: Andre oplysninger

Alle ovenstående angivelser er baseret på vores aktuelle viden, udgør dog ikke nogen tilsikring af produktgenskaber og stifter heller ikke noget kontraktligt retsforhold.

· Risikoangivelser

H314 Forårsager svære forbrændinger af huden og øjenskader.

H317 Kan forårsage allergisk hudreaktion.

H332 Farlig ved indånding.

H334 Kan forårsage allergi- eller astmasymptomer eller åndedrætsbesvær ved indånding.

H400 Meget giftig for vandlevende organismer.

· Forkortelser og 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)

Måleteknisk Arbejdshygiejnisk Luftbehov

(Fortsættes på side 8)

Sikkerhedsdatablad
ifølge 1907/2006/EF, Artikel 31

Trykdato: 20.09.2017

Revision: 20.09.2017

Handelsnavn: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Fortsat fra side 7)

*LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 4: Akut toksicitet – Kategori 4**Skin Corr. 1B: Hudætsning/hudirritation – Kategori 1B**Skin Irrit. 2: Hudætsning/hudirritation – Kategori 2**Eye Dam. 1: Alvorlige øjenskader/øjenirritation – Kategori 1**Resp. Sens. 1: Respiratorisk sensibilisering – Kategori 1**Skin Sens. 1: Hudsensibilisering – Kategori 1**STOT SE 3: Specifik målorgantoksicitet (enkelt eksponering) – Kategori 3**Aquatic Acute 1: Farlig for vandmiljøet - akut fare for vandmiljøet – Kategori 1*

DK

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

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

· 1.1 Productidentificatie

· **Handelsnaam:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

· **Artikelnummer:** 16537-15, 16537-20, 16537-15-SP

· 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: sgkcck@aol.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

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.

· 2.2 Etiketteringselementen

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

Het product is geïdentificeerd en geëtiketteerd volgens de CLP-verordening.

(Vervolg op blz. 2)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 1)

· Gevarenpictogrammen



GHS05 GHS07 GHS08

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

Glutaaraldehyd

· Gevarenaanduidingen

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.

· Veiligheidsaanbevelingen

P284 [Bij ontoereikende ventilatie] adembescherming dragen.

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).

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	Glutaaraldehyd	≤ 2,5%
EINECS: 203-856-5	⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; ⚠ Acute Tox. 4, H332; Skin Sens. 1, H317	

· Aanvullende gegevens:

De woordelijke inhoud van de opgegeven aanwijzingen inzake de mogelijke gevaren is te vinden in hoofdstuk 16.

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.

(Vervolg op blz. 3)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 2)

- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
- **Na inslikken:** Als de klachten niet minderen, een 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 brandweertieners**
- **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 Milieuvoorzorgsmaatregelen:**
Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.
Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 Insluitings- 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.
- **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.

(Vervolg op blz. 4)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 3)

- **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 ademhalingstoestel 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

RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**
- **Algemene gegevens**
- **Voorkomen:**

Vorm:	Vloeistof
Kleur:	Doorschijnend
Geur:	Typisch voor de soort
Geurdrempelwaarde:	Niet bepaald.
- **pH-waarde bij 20 °C:** 7,4
- **Toestandsverandering**

Smelt-/vriespunt:	Niet bepaald.
Beginkookpunt en kooktraject:	100 °C
- **Vlampunt:** Niet bruikbaar.

(Vervolg op blz. 5)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 4)

· Ontvlambaarheid (vast, gas):	Niet bruikbaar.
· Ontstekingstemperatuur:	
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:	1,01 g/cm ³
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingsnelheid	Niet bepaald.
· Oplosbaarheid in/mengbaarheid met Water:	Niet resp. gering mengbaar.
· Verdelingscoëfficiënt: n-octanol/water:	Niet bepaald.
· Viscositeit	
Dynamisch:	Niet bepaald.
Kinematisch:	Niet bepaald.
· Oplosmiddelgehalte:	
Organisch oplosmiddel:	0,0 %
Water:	97,5 %
VOC (EG)	0,00 %
· 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.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingproducten:** Geen gevaarlijke ontbindingsproducten bekend.

RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· **Indelingsrelevantie LD/LC50-waarden:**

111-30-8 Glutaaraldehyd

Oraal	LD50	134 mg/kg (rat)
Dermaal	LD50	2560 mg/kg (rabbit)

(Vervolg op blz. 6)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 5)

- **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:** Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): B(3) schadelijk voor in water levende organismen
Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water
Niet lozen in grondwater, in oppervlaktewater of in riolering.
Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.
schadelijk voor in het water levende organismen
- **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.

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, ADN, IMDG, IATA** Niet van toepassing

(Vervolg op blz. 7)

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 6)

· **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
· ADR, ADN, IMDG, IATA Niet van toepassing

· **14.3 Transportgevarenklasse(n)**

· ADR, ADN, IMDG, IATA
· klasse

Niet van toepassing

· **14.4 Verpakkingsgroep:**

· ADR, IMDG, IATA

Niet van toepassing

· **14.5 Milieugevaren:**

Niet bruikbaar.

· **14.6 Bijzondere voorzorgen voor de gebruiker**

Niet bruikbaar.

· **14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code**

Niet bruikbaar.

· **VN "Model Regulation":**

Niet van toepassing

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.

· **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

· **Nationale voorschriften:**

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL): B(3) schadelijk voor in water levende organismen

· **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 produkteigenschappen en vestigen geen contractuele rechtsbetrekking.

· **Relevante zinnen**

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H317 Kan een allergische huidreactie veroorzaken.

H332 Schadelijk bij inademing.

H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.

H400 Zeer giftig voor in het water levende organismen.

(Vervolg op blz. 8)

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

datum van de druk: 20.09.2017

Herziening van: 20.09.2017

Handelsnaam: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Vervolg van blz. 7)

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

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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 toxiciteit – Categorie 4

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

STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3

Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1

NL

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

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

- **1.1 Identificateur de produit**
- **Nom du produit:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- **Code du produit:** 16537-15, 16537-20, 16537-15-SP
- **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: sgkcck@aol.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 des lésions oculaires graves.



GHS07

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.

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



GHS05



GHS07



GHS08

- **Mention d'avertissement** Danger

(suite page 2)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

Nom du produit: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(suite de la page 1)

· **Composants dangereux déterminants pour l'étiquetage:**

glutaral

· **Mentions de danger**

H315 Provoque une irritation cutanée.

H318 Provoque des lésions oculaires graves.

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.

· **Conseils de prudence**

P284 [Lorsque la ventilation du local est insuffisante] porter un équipement de protection respiratoire.

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).

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	glutaral	≤ 2,5%
EINECS: 203-856-5	 Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 4, H332; Skin Sens. 1, H317	

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

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:** Si les troubles persistent, consulter un médecin.

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

(suite page 3)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

Nom du produit: *Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4*

(suite de la page 2)

- **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.
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.
- **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.

(suite page 4)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

Nom du produit: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(suite de la page 3)

· 8.1 Paramètres de contrôle

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

111-30-8 glutaral

VME	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.

· 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:

Translucide

· Odeur:

Typique

· Seuil olfactif:

Non déterminé.

(suite page 5)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

Nom du produit: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(suite de la page 4)

· valeur du pH à 20 °C:	7,4
· Changement d'état Point de fusion/point de congélation:	Non déterminé.
Point initial d'ébullition et intervalle d'ébullition:	100 °C
· Point d'éclair	Non applicable.
· Inflammabilité (solide, gaz):	Non applicable.
· Température d'inflammation:	
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:	1,01 g/cm ³
· Densité relative	Non déterminé.
· Densité de vapeur:	Non déterminé.
· Taux d'évaporation:	Non déterminé.
· Solubilité dans/miscibilité avec l'eau:	Pas ou peu miscible
· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité: Dynamique:	Non déterminé.
Cinématique:	Non déterminé.
· Teneur en solvants: Solvants organiques:	0,0 %
Eau:	97,5 %
VOC (CE)	0,00 %
· 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

FR

(suite page 6)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

Nom du produit: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(suite de la page 5)

RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

· **Valeurs LD/LC50 déterminantes pour la classification:**

111-30-8 glutaral

Oral	LD50	134 mg/kg (rat)
Dermique	LD50	2560 mg/kg (lapin)

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**
Provoque une irritation cutanée.
- **Lésions oculaires graves/irritation oculaire**
Provoque des lésions oculaires graves.
- **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)**
- **Mutagenicité 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.
- **Effets écotoxiques:**
- **Remarque:** Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**
Catégorie de pollution des eaux 2 (D) (Classification propre): polluant
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.
Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.
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.

FR

(suite page 7)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

Révision: 20.09.2017

Nom du produit: *Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4*

(suite de la page 6)

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.

RUBRIQUE 14: Informations relatives au transport

· 14.1 Numéro ONU · ADR, ADN, IMDG, IATA	néant
· 14.2 Désignation officielle de transport de l'ONU · ADR, ADN, IMDG, IATA	néant
· 14.3 Classe(s) de danger pour le transport · ADR, ADN, IMDG, IATA · Classe	néant
· 14.4 Groupe d'emballage · ADR, IMDG, IATA	néant
· 14.5 Dangers pour l'environnement:	Non applicable.
· 14.6 Précautions particulières à prendre par l'utilisateur	Non applicable.
· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· "Règlement type" de l'ONU:	néant

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
- **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**
- H314 Provoque des brûlures de la peau et des lésions oculaires graves.
- H317 Peut provoquer une allergie cutanée.
- H332 Nocif par inhalation.
- H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
- H400 Très toxique pour les organismes aquatiques.

(suite page 8)

Fiche de données de sécurité

selon 1907/2006/CE, Article 31

Date d'impression : 20.09.2017

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Nom du produit: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(suite de la page 7)

· 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. 4: Toxicité aiguë – Catégorie 4**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**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*

FR

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

überarbeitet am: 20.09.2017

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

- **1.1 Produktidentifikator**
- **Handelsname:** Glutaraldehyde 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4
- **Artikelnummer:** 16537-15, 16537-20, 16537-15-SP
- **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: sgkcck@aol.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

Skin Irrit. 2 H315 Verursacht Hautreizungen.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

(Fortsetzung auf Seite 2)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

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Handelsname: Glutaraldehyd 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 1)

- **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**
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.
- **Sicherheitshinweise**
P284 [Bei unzureichender Belüftung] Atemschutz tragen.
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).
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	Glutaral	≤ 2,5%
EINECS: 203-856-5	Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 4, H332; Skin Sens. 1, H317	

- **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.

(Fortsetzung auf Seite 3)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

überarbeitet am: 20.09.2017

Handelsname: Glutaraldehyde 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 2)

- 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:** Bei anhaltenden Beschwerden Arzt konsultieren.
- **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.
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.
- **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 Betriebssicherheitsverordnung (BetrSichV):** -

(Fortsetzung auf Seite 4)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

überarbeitet am: 20.09.2017

Handelsname: Glutaraldehyde 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 3)

· **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
-----	--

· **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 unluftunabhängiges 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.

· **Augenschutz:**



Dichtschließende Schutzbrille

DE

(Fortsetzung auf Seite 5)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

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Handelsname: Glutaraldehyde 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 4)

ABSCHNITT 9: Physikalische und chemische Eigenschaften

· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften

· Allgemeine Angaben

· Aussehen:

Form:	Flüssigkeit
Farbe:	Durchscheinend
Geruch:	Arttypisch
Geruchsschwelle:	Nicht bestimmt.

· pH-Wert bei 20 °C: 7,4

· Zustandsänderung

Schmelzpunkt/Gefrierpunkt:	Nicht bestimmt.
Siedebeginn und Siedebereich:	100 °C

· Flammpunkt: Nicht anwendbar.

· Entzündbarkeit (fest, gasförmig): Nicht anwendbar.

· Zündtemperatur:

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:	1,01 g/cm ³
Relative Dichte	Nicht bestimmt.
Dampfdichte	Nicht bestimmt.
Verdampfungsgeschwindigkeit	Nicht bestimmt.

· Löslichkeit in / Mischbarkeit mit

Wasser: Nicht bzw. wenig mischbar.

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

· Viskosität:

Dynamisch:	Nicht bestimmt.
Kinematisch:	Nicht bestimmt.

· Lösemittelgehalt:

Organische Lösemittel:	0,0 %
Wasser:	97,5 %
VOC (EU)	0,00 %

· 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.

(Fortsetzung auf Seite 6)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

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Handelsname: Glutaraldehyd 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 5)

- **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** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

· Einstufungsrelevante LD/LC50-Werte:

111-30-8 Glutaral

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 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.
- **Ökotoxische Wirkungen:**
- **Bemerkung:** Schädlich für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 2 (Selbsteinstufung): wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.
Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.
schädlich für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

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Handelsname: Glutaraldehyde 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 6)

- **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.

ABSCHNITT 14: Angaben zum Transport

- **14.1 UN-Nummer**
- **ADR, ADN, IMDG, IATA** entfällt
- **14.2 Ordnungsgemäße UN-Versandbezeichnung**
- **ADR, ADN, IMDG, IATA** entfällt
- **14.3 Transportgefahrenklassen**
- **ADR, ADN, IMDG, IATA**
- **Klasse** entfällt
- **14.4 Verpackungsgruppe**
- **ADR, IMDG, IATA** entfällt
- **14.5 Umweltgefahren:** Nicht anwendbar.
- **14.6 Besondere Vorsichtsmaßnahmen für den Verwender** Nicht anwendbar.
- **14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code** Nicht anwendbar.
- **UN "Model Regulation":** entfällt

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

- **Nationale Vorschriften:**

- **Technische Anleitung Luft:**

Klasse	Anteil in %
Wasser	97,5
I	2,4

- **Wassergefährdungsklasse: WGK 2 (Selbsteinstufung):** wassergefährdend.
- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

DE

(Fortsetzung auf Seite 8)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 20.09.2017

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Handelsname: Glutaraldehyde 2.5% in 0.1M Natrium Cacodylate Buffer, pH 7.4

(Fortsetzung von Seite 7)

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**

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H332 Gesundheitsschädlich bei Einatmen.

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

H400 Sehr giftig für Wasserorganismen.

· **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. 4: Akute Toxizität – Kategorie 4

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

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

Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1

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

Stampato il: 20.09.2017

Revisione: 20.09.2017

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

· **Articolo numero:** 16537-15, 16537-20, 16537-15-SP

· **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: sgkcck@aol.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

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.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

(continua a pagina 2)

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

Stampato il: 20.09.2017

Revisione: 20.09.2017

Denominazione commerciale: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 1)

· **Pittogrammi di pericolo**



GHS05 GHS07 GHS08

· **Avvertenza Pericolo**

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

glutarale

· **Indicazioni di pericolo**

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.

· **Consigli di prudenza**

P284 [Quando la ventilazione del locale è insufficiente] indossare un apparecchio di protezione respiratoria.

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).

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	glutarale	≤ 2,5%
EINECS: 203-856-5	Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 4, H332; Skin Sens. 1, H317	

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

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.

(continua a pagina 3)

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

Stampato il: 20.09.2017

Revisione: 20.09.2017

Denominazione commerciale: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 2)

- **Contatto con gli occhi:**
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte e consultare il medico.
- **Ingestione:** Se il dolore persiste consultare 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.
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.
- **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.

(continua a pagina 4)

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

Stampato il: 20.09.2017

Revisione: 20.09.2017

Denominazione commerciale: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 3)

· **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

SEZIONE 9: Proprietà fisiche e chimiche

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

· **Indicazioni generali**

· **Aspetto:**

· **Forma:** Liquido

· **Colore:** Traslucido

· **Odore:** Tipico

· **Soglia olfattiva:** Non definito.

(continua a pagina 5)

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

Stampato il: 20.09.2017

Revisione: 20.09.2017

Denominazione commerciale: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 4)

· valori di pH a 20 °C:	7,4
· Cambiamento di stato	
Punto di fusione/punto di congelamento:	Non definito.
Punto di ebollizione iniziale e intervallo di ebollizione:	100 °C
· Punto di infiammabilità:	Non applicabile.
· Infiammabilità (solidi, gas):	Non applicabile.
· Temperatura di accensione:	
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:	1,01 g/cm ³
· Densità relativa	Non definito.
· Densità di vapore:	Non definito.
· Velocità di evaporazione	Non definito.
· Solubilità in/Miscibilità con acqua:	Poco e/o non miscibile.
· Coefficiente di ripartizione: n-ottanolo/acqua:	Non definito.
· Viscosità:	
Dinamica:	Non definito.
Cinematica:	Non definito.
· Tenore del solvente:	
Solventi organici:	0,0 %
Acqua:	97,5 %
VOC (CE)	0,00 %
· 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.
- 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.

(continua a pagina 6)

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

Stampato il: 20.09.2017

Revisione: 20.09.2017

Denominazione commerciale: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 5)

SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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

111-30-8 glutarale

Orale	LD50	134 mg/kg (rat)
Cutaneo	LD50	2560 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:** Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.
nocivo per gli organismi acquatici
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

IT

(continua a pagina 7)

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

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Revisione: 20.09.2017

Denominazione commerciale: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(Segue da pagina 6)

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.

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|------------------|
| · 14.1 Numero ONU | |
| · ADR, ADN, IMDG, IATA | non applicabile |
| · 14.2 Nome di spedizione dell'ONU | |
| · ADR, ADN, IMDG, IATA | non applicabile |
| · 14.3 Classi di pericolo connesso al trasporto | |
| · ADR, ADN, IMDG, IATA | |
| · Classe | non applicabile |
| · 14.4 Gruppo di imballaggio | |
| · ADR, IMDG, IATA | non applicabile |
| · 14.5 Pericoli per l'ambiente: | Non applicabile. |
| · 14.6 Precauzioni speciali per gli utilizzatori | Non applicabile. |
| · 14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC | Non applicabile. |
| · UN "Model Regulation": | non applicabile |

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
- **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.

- **Frasei rilevanti**
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H317 Può provocare una reazione allergica cutanea.
- H332 Nocivo se inalato.
- H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
- H400 Molto tossico per gli organismi acquatici.
- **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)

(continua a pagina 8)

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

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(Segue da pagina 7)

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. 4: Tossicità acuta – Categoria 4

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

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

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

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

IT

물질안전보건자료 GHS에 따라

기압점: 2017.09.20

개정: 2017.09.20

1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- **상품번호:** 16537-15, 16537-20, 16537-15-SP
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실 화학품
- **안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보**
- **제조사/수입자/유통업자 정보:**
 Electron Microscopy Sciences
 1560 Industry Road
 USA-Hatfield, PA 19440
 Tel: 215-412-8400 Fax: 215-412-8450
 email: sgkcck@aol.com
 www.emsdiasum.com

 Samchang Commercial Co., Ltd.
 Yeo Eui Do
 PO Box 1110
 Seoul, Korea
 Tel: 82 2 703 3040
 Fax: 82 2 717 3298
- **추가적인 정보 획득 가능:** Product safety department
- **비상연락 전화번호:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 유해성·위험성

- **순물질 또는 혼합물의 분류**



건강에 위험

호흡기 과민성 - 구분 1 H334 흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음



부식

심한 눈 손상성/눈 자극성 - 구분 1 H318 눈에 심한 손상을 일으킴



피부 부식성/피부 자극성 - 구분 2 H315 피부에 자극을 일으킴

피부 과민성 - 구분 1 H317 알레르기성 피부 반응을 일으킬 수 있음

- **라벨표기 요소**
- **GHS 라벨 요소**

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

(2 쪽에 계속)

물질안전보건자료

GHS에 따라

기압점: 2017.09.20

개정: 2017.09.20

제품명: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(1 쪽부터 계속)

· 그림문자



GHS05 GHS08

· 신호어 위험

· 상표상에 명확히 위험성이 표시된 성분:

Glutaraldehyde

· 유해·위험 문구

피부에 자극을 일으킴

눈에 심한 손상을 일으킴

흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음

알레르기성 피부 반응을 일으킬 수 있음

· 예방조치 문구

(분진·흙·가스·미스트·증기·스프레이)의 흡입을 피하십시오.

환기가 잘 되지 않는 경우 호흡기 보호구를 착용하십시오.

눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으십시오.

즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하십시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 기타 유해성

· PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과

· PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.

· vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

3 구성성분의 명칭 및 함유량

· **화학적 특성:** 혼합물

· **설명:** 무해한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소:

111-30-8	Glutaraldehyde	≤ 2.5%
	⚠️ 호흡기 과민성 - 구분 1, H334; ⚠️ 피부 부식성/피부 자극성 - 구분 1, H314; ⚠️ 수생환경 유해성 - 급성 1, H400; ⚠️ 급성 독성 - 흡입 - 구분 4, H332; 피부 과민성 - 구분 1, H317	

4 응급조치 요령

· 응급조치요령 내용

· 일반적 정보:

중독 증상은 몇 시간이 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 헹군다.

· 눈에 들어갔을 때: 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 의사와 상담한다.

· 먹었을 때: 증상이 지속될 경우에는 의사와 상담한다.

· 기타 의사의 주의사항:

· 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.

(3 쪽에 계속)

물질안전보건자료

GHS에 따라

기압점: 2017.09.20

개정: 2017.09.20

제품명: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

· **즉각적인 의료처치 및 특별치료가 필요함을 시사하는 징후** 추가적인 정보가 존재하지 않습니다. (2 쪽부터계속)

5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:** 주 변 환 경에 맞는 화 재 진 화방법을 사용한다.
- **본 화학물질이나 혼합물에서 발생하는 특별 유해성** 추가적인 정보가 존재하지 않습니다.
- **소방관에 대한 권고사항**
- **화재 진압 시 착용할 보호구 및 예방조치:** 호흡보호장비설치.

6 누출 사고 시 대처방법

- **개인적 예방조치, 보호장비 및 응급처치 절차** 필요없음.
- **환경 관련 예방조치:**
하천이나 하수도로 유입되었을 경우 해당관청에 보고한다.
하수도망/해수면위의물/지하수로도달하지않게한다.
- **밀폐 및 정화 방법과 소재:**
액체가 혼합된 물질 (모래, 규조토, 산성결합물, 일반결합물, 톱밥)에 흡입되도록 한다.
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.
충분한 환기가 되도록 한다.
- **타 섹션 참조**
안전관리에 대한 정보는 제7 장 을 참고하시오.
개인 보호 장비에 대한 정보는 제8 장 을 참고하시오.
쓰레기 처리에 대한 정보는 제13 장 을 참고하시오.

7 취급 및 저장방법

- **취급:**
- **안전 취급을 위한 예방조치**
작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.
연무질이 형성되는 것을 피한다.
- **화재 및 폭발 사고 예방대책에 관한 정보:** 특별한 조치가 필요없음.
- **혼합위험성 등 안전 저장 조건**
- **보관:**
- **안전한 저장 방법:** 특별한 요구사항이 없음.
- **하나의 공동 보관 시설에 대한 보관 관련 정보:** 필요없음
- **보관 조건에 관한 추가적인 정보:** 용기를 새지 않게 밀폐한 채 보관한다.
- **구체적 최종 사용자** 추가적인 정보가 존재하지 않습니다.

8 노출방지 및 개인보호구

· **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시오.

· **통제 변수**

· **화학물질의 노출기준, 생물학적 노출기준 등:**

111-30-8 Glutaraldehyde

TLV (KR) | 최고노출기준: 0.2 mg/m³, 0.05 ppm

(4 쪽에계속)

물질안전보건자료

GHS에 따라

기압점: 2017.09.20

개정: 2017.09.20

제품명: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(3 쪽부터계속)

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

· **추가정보:** 제조할 당시에 유효한 목록을 기초로 사용했다.

· **노출 통제**

· **개인 보호구**

· **일반적보호조치및위생조치:**

· 식료품, 음료수와 사료로부터 멀리떨어뜨려 놓는다.

· 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.

· 휴식전이나 작업이 끝날때마다 손을 씻는다.

· 피부와의 접촉을 피한다.

· 눈과 피부와의 접촉은 피한다.

· **호흡기 보호:**

· 단시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

· **손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.

테스트를 하지않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.

투과 시간, 침투율과 저하를 고려해서 장갑 재료를 선택한다.

· **장갑의재료**

· 적합한장갑의선택은재질차이뿐만아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

· **장갑재료의투과시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**



확조이는보안경

9 물리화학적 특성

· **기본 물리 및 화학적 특성에 대한 정보**

· **일반정보**

· **외형**

· 물리적 상태:	액체
· 색:	투명한
· 냄새:	대표적인종류
· 후각역치	알맞지않다.

· pH 의경우 20 °C: 7.4

· **상태변화**

· 녹는점/어는점:	맞지않는
· 초기 끓는점과 끓는점 범위:	100 °C

(5 쪽에계속)

물질안전보건자료

GHS에 따라

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(4 쪽부터계속)

· 인화점:	해당사항 없음.
· 인화성(고체, 기체):	해당사항 없음.
· 점화온도:	
· 분해 온도:	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	이제품은폭발위험성이없다
· 인화 또는 폭발 범위의 상한/하한 아래로:	알맞지않다.
위로:	알맞지않다.
· 증기압 의경우 20 °C:	23 hPa
· 밀도 의경우 20 °C:	1.01 g/cm ³
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 속도:	알맞지않다.
· 용해도: 물:	각각의경우에따라서는거의혼합할수없는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도: 역화성:	알맞지않다.
동점성:	알맞지않다.
· 용매내용물 유기용매:	0.0 %
물:	97.5 %
VOC (EU)	0.00 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:

· LD/LC50-수치에 따른 분류:		
111-30-8 Glutaraldehyde		
구강의	LD50	134 mg/kg (rat)
피부의	LD50	2560 mg/kg (rabbit)

(6 쪽에계속)

물질안전보건자료

GHS에 따라

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(6 쪽부터계속)

<ul style="list-style-type: none"> · 교통 위험 클래스 · ADR, ADN, IMDG, IATA · 등급 누락되다
<ul style="list-style-type: none"> · 용기등급 · ADR, IMDG, IATA 누락되다
<ul style="list-style-type: none"> · 환경적 유해물질: 해당사항 없음.
<ul style="list-style-type: none"> · 이용자 특별 예방조치 해당사항 없음.
<ul style="list-style-type: none"> · MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송 해당사항 없음.
<ul style="list-style-type: none"> · UN "모범 규제": 누락되다

15 법적 규제현황

<ul style="list-style-type: none"> · 산업안전보건법에 의한 규제: 		
<ul style="list-style-type: none"> · 제조 등 금지물질: 	어떠한내용물도 목록화되어있지않다	
<ul style="list-style-type: none"> · 허가대상물질: 	어떠한내용물도 목록화되어있지않다	
<ul style="list-style-type: none"> · 관리대상유해물질: 	111-30-8 Glutaraldehyde	
<ul style="list-style-type: none"> · 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률 		
<ul style="list-style-type: none"> · Korean Existing Chemical Inventory 		
111-30-8	Glutaraldehyde	KE-27969
124-65-2	sodium dimethylarsinate	KE-11204
7732-18-5	Deionized Water, Reagent Grade A.C.S.	KE-35400
<ul style="list-style-type: none"> · 화학물질관리법 		
<ul style="list-style-type: none"> · 사고대비물질 		
어떠한내용물도 목록화되어있지않다		
<ul style="list-style-type: none"> · 금지물질 		
어떠한내용물도 목록화되어있지않다		
<ul style="list-style-type: none"> · 제한물질 		
어떠한내용물도 목록화되어있지않다		
<ul style="list-style-type: none"> · 유독물질 		
111-30-8	Glutaraldehyde	
<ul style="list-style-type: none"> · 허가물질 		
111-30-8	Glutaraldehyde	

· **GHS 라벨 요소**
 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.

(8 쪽에 계속)

물질안전보건자료

GHS에 따라

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(7 쪽부터계속)

· 그림문자



GHS05 GHS08

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

Glutaraldehyde

· 유해.위험 문구

피부에 자극을 일으킴

눈에 심한 손상을 일으킴

흡입시 알레르기성 반응, 천식 또는 호흡 곤란을 일으킬 수 있음

알레르기성 피부 반응을 일으킬 수 있음

· 예방조치 문구

(분진·흡·가스·미스트·증기·스프레이)의 흡입을 피하십시오.

환기가 잘 되지 않는 경우 호흡기 보호구를 착용하십시오.

눈에 묻으면 몇 분간 물로 조심해서 씻으십시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으십시오.

즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하십시오.

현지/지역/국가/국제 규정에 따라서 내용물/용기 노출

· 화학물질 안전성 평가: 화학물질 안전성 평가가 수행되지 않음

16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은 기술하지않았으며계약적인법률관계에기반을두고있지도않다

· 최초 작성일자: 2017.09.20

· 개정 횟수 및 최종 개정일자: 1 / 2017.09.20

· 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

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 審核

1 化學品及企業標識

- 產品識別者
- 化學品中文(英文)名稱, 化學品俗名或商品名: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4
- 商品編號: 16537-15, 16537-20, 16537-15-SP
- 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: sgkcck@aol.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 危險性概述

· 緊急情況概述:

透明的, 液體, 吸入可能有害。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。對水生生物有害。

· 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



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

急毒性物質(吸入) 第5級 H333 吸入可能有害

水環境之危害物質(急毒性) 第3級 H402 對水生生物有害

· 標識因素

- 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。

(在 2 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

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化學品中文(英文)名稱, 化學品俗名或商品名: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 1 頁繼續)

· 圖示



GHS05 GHS08

· 名稱 危險

· 標籤上辨別危險的成份:

1,5- 戊二醛

· 危險字句

吸入可能有害

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

對水生生物有害

· 警戒字句

· 預防措施

避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

著用呼吸防護具。

· 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, 取出隱形眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

專項處置(參見本標示)。

· 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/組成資訊

· 混合物

· 描述: 由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	≤ 2.5%
	⚠ 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; ⚠ 急毒性物質(吸入) 第4級, H332; 皮膚過敏物質 第1級, H317; 易燃液體 第4級, H227	

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,請讓病人側躺以便移動。

· 皮膚接觸: 馬上用水和肥皂進行徹底的沖洗。

(在 3 頁繼續)

物質安全資料表

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(在 2 頁繼續)

- **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:** 如果症狀仍然持續, 請諮詢醫生.
- **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 消防措施

- **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 洩漏應急處理

- **保護措施** 沒有要求.
- **環境保護措施:**
如果滲入了水源或汗水系統, 請通知有關當局.
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 操作處置與儲存

- **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.
- **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 接觸控制和個體防護

- **工程控制方法:** 沒有進一步數據, 見第 7 項.

(在 4 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 審核

化學品中文(英文)名稱, 化學品俗名或商品名: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 3 頁繼續)

· 控制變數

· 在工作場需要監控的限值成分

111-30-8 1,5- 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

9 理化特性

· 有關基本物理及化學特性的資訊

· 一般說明

· 外觀:

形狀: 液體

顏色: 透明的

· 氣味: 指定的類型

· 嗅覺閾限 未決定。

· pH值 在 20 °C: 7.4

· 條件的更改

熔點: 未確定的

沸點/初沸點和沸程: 100 °C

(在 5 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 審核

化學品中文(英文)名稱, 化學品俗名或商品名 : Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 4 頁繼續)

· 閃點:	不適用的
· 可燃性 (固體、氣體):	不適用的
· 點火溫度:	
· 分解溫度:	未決定.
· 自燃溫度:	該產品是不自燃的
· 爆炸的危險性:	該產品並沒有爆炸的危險
· 爆炸極限:	
較低:	未決定.
較高:	未決定.
· 蒸氣壓 在 20 °C:	23 hPa
· 密度 在 20 °C:	1.01 g/cm ³
· 相對密度	未決定.
· 蒸氣密度	未決定.
· 蒸發速率	未決定.
· 溶解性	
水:	不能拌和的 或難以拌和
· n-辛醇/水分配係數:	未決定.
· 黏性:	
動態:	未決定.
運動學的:	未決定.
· 溶劑成份:	
有機溶劑:	0.0 %
水:	97.5 %
· 其他資訊	無相關詳細資料。

10 穩定性和反應性

- 反應性 無相關詳細資料。
- 穩定性
- 熱分解/要避免的情況: 如果遵照規格使用則不會分解.
- 有害反應可能性 未有已知的危險反應.
- 應避免的條件 無相關詳細資料。
- 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 毒理學資訊

- 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 1,5- 戊二 醛

口腔 LD50 134 mg/kg (rat)

皮膚 LD50 2560 mg/kg (rabbit)

(在 6 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 審核

化學品中文(英文)名稱, 化學品俗名或商品名 : Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 5 頁繼續)

- **主要的刺激性影響:**
- **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:**
根據有關配制的—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 生態學資訊

- **生態毒性**
- **水生毒性:** 無相關詳細資料。
- **持久性和降解性** 無相關詳細資料。
- **環境系統習性:**
- **潛在的生物累積性** 無相關詳細資料。
- **土壤內移動性** 無相關詳細資料。
- **生態毒性的影響:**
- **備注:** 對魚類有害
- **額外的生態學資料:**
- **總括注解:**
水危害級別 2 (德國規例) (通過名單進行自我評估): 對水是危害的
不要讓該產品接觸地下水、水道或汗水系統。
即使是小量的產品滲入地下也會對飲用水造成危險。
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
- **其他副作用** 無相關詳細資料。

13 廢棄處置

- **廢棄處置方法**
- **建議:** 不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:** 必須根據官方的規章來丟棄.

14 運輸資訊

- | | |
|-------------------------------|----|
| · 聯合國危險貨物編號(UN號) | |
| · ADR, ADN, IMDG, IATA | 無效 |
| · UN適當裝船名 | |
| · ADR, ADN, IMDG, IATA | 無效 |

(在 7 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

打印日期 2017.09.20

在 2017.09.20 審核

化學品中文(英文)名稱, 化學品俗名或商品名: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(在 6 頁繼續)

· 運輸危險等級	
· ADR, ADN, IMDG, IATA 級別	無效
· 包裝組別	
· ADR, IMDG, IATA	無效
· 危害環境:	不適用的
· 用戶特別預防措施	不適用的
· MARPOL73/78(針對船舶引起的海洋污染預防協約) 附件書2及根據IBC Code(國際裝船貨物編碼)的大量運送	不適用的
· UN "標準規定":	無效

15 法規資訊

· 對相應純物質或者混合物的安全、保健及環境法規/法律

· 中國現有化學物質名錄

111-30-8	1,5- 戊二 醛
7732-18-5	水

· 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



GHS05 GHS08

· 名稱 危險

· 標籤上辨別危險的成份:

1,5- 戊二 醛

· 危險字句

吸入可能有害

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

對水生生物有害

· 警戒字句

· 預防措施

避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

著用呼吸防護具。

· 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)。

· 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。

(在 8 頁繼續)

物質安全資料表

根據 GB/T 16483-2008, GB/T 17519-2013

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(在 7 頁繼續)

· **化學物質安全性評價:** 尚未進行化學物質安全性評價

16 其他資訊

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

急性物質(吸入) 第4級: Acute toxicity – Category 4

急性物質(吸入) 第5級: Acute toxicity – Category 5

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

水環境之危害物質(急性) 第1級: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

水環境之危害物質(急性) 第3級: Hazardous to the aquatic environment - acute aquatic hazard – Category 3

-TW-

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.09.2017

Revisión: 20.09.2017

SECCIÓN 1: Identificación de la sustancia o la mezcla y de la sociedad o la empresa

· 1.1 Identificador del producto

· **Nombre comercial:** Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

· **Número del artículo:** 16537-15, 16537-20, 16537-15-SP

· **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: sgkcck@aol.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

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.

· 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.

(se continua en página 2)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.09.2017

Revisión: 20.09.2017

Nombre comercial: **Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4**

(se continua en página 1)

· **Pictogramas de peligro**

GHS05 GHS07 GHS08

· **Palabra de advertencia Peligro**· **Componentes peligrosos a indicar en el etiquetaje:**

glutaral

· **Indicaciones de peligro**

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.

· **Consejos de prudencia**

P284 [En caso de ventilación insuficiente,] llevar equipo de protección respiratoria.

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Aclarar cuidadosamente con agua durante varios minutos. Quitar las lentes de contacto, si lleva y resulta fácil. Seguir aclarando.

P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.

P321 Se necesita un tratamiento específico (ver en esta etiqueta).

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	glutaral	≤ 2,5%
EINECS: 203-856-5	Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Acute Tox. 4, H332; Skin Sens. 1, H317	

· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

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.

(se continua en página 3)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.09.2017

Revisión: 20.09.2017

Nombre comercial: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(se continua en página 2)

- **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 un médico si los trastornos persisten.
- **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.
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 item 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.
- **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.

(se continua en página 4)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

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Revisión: 20.09.2017

Nombre comercial: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(se continua en página 3)

· 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

SECCIÓN 9: Propiedades físicas y químicas

· 9.1 Información sobre propiedades físicas y químicas básicas

· Datos generales

· Aspecto:

Forma:

Líquido

Color:

Transparente

· Olor:

Específico

· Umbral olfativo:

No determinado.

(se continua en página 5)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.09.2017

Revisión: 20.09.2017

Nombre comercial: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(se continua en página 4)

· valor pH a 20 °C:	7,4
· Cambio de estado Punto de fusión/punto de congelación:	Indeterminado.
Punto inicial de ebullición e intervalo de ebullición:	100 °C
· Punto de inflamación:	No aplicable.
· Inflamabilidad (sólido, gas):	No aplicable.
· Temperatura de ignición:	
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:	1,01 g/cm ³
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Poco o no mezclable.
· Coefficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad: Dinámica:	No determinado.
Cinemática:	No determinado.
· Concentración del disolvente: Disolventes orgánicos:	0,0 %
Agua:	97,5 %
VOC (CE)	0,00 %
· 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.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

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(se continua en página 6)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.09.2017

Revisión: 20.09.2017

Nombre comercial: **Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4**

(se continua en página 5)

SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

- **Valores LD/LC50 (dosis letal /dosis letal = 50%) relevantes para la clasificación:**

111-30-8 glutaral

Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2560 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:** Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 2 (autoclasificación): peligroso para el agua
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.
Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.
nocivo para organismos acuáticos
- **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.

ES

(se continua en página 7)

Ficha de datos de seguridad

según 1907/2006/CE, Artículo 31

fecha de impresión 20.09.2017

Revisión: 20.09.2017

Nombre comercial: Glutaraldehyde 2.5% in 0.1M Sodium Cacodylate Buffer, pH 7.4

(se continua en página 6)

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.

SECCIÓN 14: Información relativa al transporte

- | | |
|---|---------------|
| · 14.1 Número ONU | |
| · ADR, ADN, IMDG, IATA | suprimido |
| · 14.2 Designación oficial de transporte de las Naciones Unidas | |
| · ADR, ADN, IMDG, IATA | suprimido |
| · 14.3 Clase(s) de peligro para el transporte | |
| · ADR, ADN, IMDG, IATA | |
| · Clase | suprimido |
| · 14.4 Grupo de embalaje | |
| · ADR, IMDG, IATA | suprimido |
| · 14.5 Peligros para el medio ambiente: | No aplicable. |
| · 14.6 Precauciones particulares para los usuarios | No aplicable. |
| · 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC | No aplicable. |
| · "Reglamentación Modelo" de la UNECE: | suprimido |

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
- **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.

- **Frases relevantes**
- H314 Provoca quemaduras graves en la piel y lesiones oculares graves.
- H317 Puede provocar una reacción alérgica en la piel.
- H332 Nocivo en caso de inhalación.
- H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.
- H400 Muy tóxico para los organismos acuáticos.
- **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)

(se continua en página 8)

Ficha de datos de seguridad
según 1907/2006/CE, Artículo 31

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(se continua en página 7)

*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. 4: Toxicidad aguda – Categoría 4**Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B**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**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*

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