

# Safety Data Sheet

acc. to OSHA HCS

Printing date 10/08/2021

Reviewed on 10/08/2021

## 1 Identification

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Article number:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **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.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Danger

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

Glutaraldehyde

- **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

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*May cause an allergic skin reaction.*

*May cause respiratory irritation.*

**· Precautionary statements**

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

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

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

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

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

*If on skin: Wash with plenty of water.*

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

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Call a poison center/doctor if you feel unwell.*

*Specific treatment (see on this label).*

*Take off contaminated clothing and wash it before reuse.*

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

*If eye irritation persists: Get medical advice/attention.*

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

*Wash contaminated clothing before reuse.*

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

*Store locked up.*

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

**· Classification system:**

**· NFPA ratings (scale 0 - 4)**



*Health = 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-≤10%
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**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

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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.  
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. If symptoms persist, 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.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· <b>PAC-1:</b>		
111-30-8	Glutaraldehyde	0.2 ppm
· <b>PAC-2:</b>		
111-30-8	Glutaraldehyde	1 ppm
· <b>PAC-3:</b>		
111-30-8	Glutaraldehyde	5 ppm

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**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

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## 7 Handling and storage

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

## 8 Exposure controls/personal protection

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

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

### 111-30-8 Glutaraldehyde

REL	Ceiling limit value: 0.8 mg/m <sup>3</sup> , 0.2 ppm See Pocket Guide App. C
TLV	Ceiling limit value: 0.2 mg/m <sup>3</sup> , 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 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.

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· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Fluid
· <b>Color:</b>	According to product specification
· <b>Odor:</b>	Characteristic
· <b>Odor threshold:</b>	Not determined.

· **pH-value at 20 °C (68 °F):** 7.4

· **Change in condition**

· <b>Melting point/Melting range:</b>	0 °C (32 °F)
· <b>Boiling point/Boiling range:</b>	100 °C (212 °F)

· **Flash point:** Not applicable.

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

· **Decomposition temperature:** Not determined.

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

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

· **Explosion limits:**

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

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

· **Density at 20 °C (68 °F):** 1 g/cm<sup>3</sup> (8.345 lbs/gal)

· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with**

· **Water:** Fully miscible.

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

· **Viscosity:**

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**

· **Water:** 97.5 %

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· <b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal
· <b>Solids content:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

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

## 11 Toxicological information

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

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

### 111-30-8 Glutaraldehyde

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

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **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.

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- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 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.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

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

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADR, ADN, IMDG, IATA</b></li> <li>· <b>Class</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	Void
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> </ul>	Not applicable.
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>	Not applicable.

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· 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):**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

7732-18-5	Deionized Water, Reagent Grade A.C.S.	ACTIVE
111-30-8	Glutaraldehyde	ACTIVE

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

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

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS07    GHS08

- **Signal word** Danger

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

Glutaraldehyde

· **Hazard statements**

Harmful if inhaled.

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**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

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*Causes skin irritation.*

*Causes serious eye irritation.*

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

*May cause an allergic skin reaction.*

*May cause respiratory irritation.*

· **Precautionary statements**

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

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

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

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

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

*If on skin: Wash with plenty of water.*

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

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Call a poison center/doctor if you feel unwell.*

*Specific treatment (see on this label).*

*Take off contaminated clothing and wash it before reuse.*

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

*If eye irritation persists: Get medical advice/attention.*

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

*Wash contaminated clothing before reuse.*

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

*Store locked up.*

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

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

## 16 Other information

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

· **Date of preparation / last revision** 10/08/2021 / -

· **Abbreviations and acronyms:**

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

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*ACGIH: American Conference of Governmental Industrial Hygienists*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

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

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*NIOSH: National Institute for Occupational Safety*

*OSHA: Occupational Safety Health*

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

**Acute Tox. 4: Acute toxicity – Category 4**

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

**Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A**

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*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*

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US

# Safety Data Sheet

## according to WHS Regulations

Printing date 08.10.2021

Revision: 08.10.2021

### 1 Identification

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Article number:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **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.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

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

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## according to WHS Regulations

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Trade name: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

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· **Hazard pictograms**

GHS07 GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:***Glutaraldehyde*· **Hazard statements***Harmful if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.**May cause respiratory irritation.*· **Precautionary statements***Avoid breathing dust/fume/gas/mist/vapours/spray.**Wash thoroughly after handling.**Use only outdoors or in a well-ventilated area.**Contaminated work clothing should not be allowed out of the workplace.**Wear protective gloves / eye protection / face protection.**Wear respiratory protection.**IF ON SKIN: Wash with plenty of water.**IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Call a POISON CENTER/doctor if you feel unwell.**Specific treatment (see on this label).**Take off contaminated clothing and wash it before reuse.**If skin irritation or rash occurs: Get medical advice/attention.**If eye irritation persists: Get medical advice/attention.**If experiencing respiratory symptoms: Call a POISON CENTER/doctor.**Wash contaminated clothing before reuse.**Store in a well-ventilated place. Keep container tightly closed.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Other hazards**· **Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

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

111-30-8	Glutaraldehyde	>2.5-≤10%
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· **SVHC**

111-30-8	Glutaraldehyde	
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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

### 4 First Aid Measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, 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.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and Storage

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

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

### 8 Exposure controls and personal protection

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

- **Control parameters**

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

#### 111-30-8 Glutaraldehyde

WES	Peak limitation: 0.41 mg/m <sup>3</sup> , 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 eyes and skin.

- **Respiratory protection:**

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

- **Protection of hands:**



Protective gloves

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

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

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

- **Material of gloves**

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

- **Penetration time of glove material**

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

(Contd. on page 5)

AU

# Safety Data Sheet

according to WHS Regulations

Printing date 08.10.2021

Revision: 08.10.2021

Trade name: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE 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:**

· <b>Form:</b>	Fluid
· <b>Colour:</b>	According to product specification
· <b>Odour:</b>	Characteristic
· <b>Odour threshold:</b>	Not determined.

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

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

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

· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.

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

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

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

· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.

· **Solvent content:**

· <b>Water:</b>	97.5 %
· <b>VOC (EC)</b>	0.00 %

· **Solids content:** 0.0 %

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# Safety Data Sheet

## according to WHS Regulations

Printing date 08.10.2021

Revision: 08.10.2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 5)

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

### 10 Stability and Reactivity

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

### 11 Toxicological Information

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

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

#### 111-30-8 Glutaraldehyde

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

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

### 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 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.

(Contd. on page 7)



## Safety Data Sheet according to WHS Regulations

Printing date 08.10.2021

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**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 6)

*Also poisonous for fish and plankton in water bodies.*

*Toxic for aquatic organisms*

*Harmful to aquatic organisms*

**· Results of PBT and vPvB assessment**

**· PBT:** Not applicable.

**· vPvB:** Not applicable.

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

### 13 Disposal considerations

**· Waste treatment methods**

**· Recommendation**

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

**· Uncleaned packaging:**

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

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

### 14 Transport information

**· UN-Number**

**· ADG, IMDG, IATA** not regulated

**· UN proper shipping name**

**· ADG, IMDG, IATA** not regulated

**· Transport hazard class(es)**

**· ADG, ADN, IMDG, IATA**

**· Class** not regulated

**· Packing group**

**· ADG, IMDG, IATA** not regulated

**· Environmental hazards:** Not applicable.

**· Special precautions for user** Not applicable.

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

**· UN "Model Regulation":** not regulated

### 15 Regulatory information

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

**· Australian Inventory of Industrial Chemicals**

All ingredients are listed.

**· Standard for the Uniform Scheduling of Medicines and Poisons**

111-30-8	Glutaraldehyde	S2, S5, S6
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**· Australia: Priority Existing Chemicals**

111-30-8	Glutaraldehyde
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**· GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).

(Contd. on page 8)

# Safety Data Sheet

## according to WHS Regulations

Printing date 08.10.2021

Revision: 08.10.2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 7)

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** *Danger*

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

*Glutaraldehyde*

· **Hazard statements**

*Harmful if inhaled.*

*Causes skin irritation.*

*Causes serious eye irritation.*

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

*May cause an allergic skin reaction.*

*May cause respiratory irritation.*

· **Precautionary statements**

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

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

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

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

*Wear respiratory protection.*

*IF ON SKIN: Wash with plenty of water.*

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

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Call a POISON CENTER/doctor if you feel unwell.*

*Specific treatment (see on this label).*

*Take off contaminated clothing and wash it before reuse.*

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

*If eye irritation persists: Get medical advice/attention.*

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

*Wash contaminated clothing before reuse.*

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

*Store locked up.*

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

· **Directive 2012/18/EU**

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

· **National regulations:**

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57**

111-30-8	Glutaraldehyde
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· **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.*

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**Safety Data Sheet**  
according to WHS Regulations

Printing date 08.10.2021

Revision: 08.10.2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 8)

**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*

*SVHC: Substances of Very High Concern*

*vPvB: very Persistent and very Bioaccumulative*

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

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

*Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A*

*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*

AU

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

### 1 Identification

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Article number:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **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 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.



GHS07

Acute Toxicity (Inhalation) - Category 4

H332 Harmful if inhaled.

Skin Irritation - Category 2

H315 Causes skin irritation.

Eye Irritation - Category 2A

H319 Causes serious eye irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure -  
Category 3

H335 May cause respiratory irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS07



GHS08

- **Signal word** Danger

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

Glutaraldehyde

- **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

(Contd. on page 2)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 1)

*Causes serious eye irritation.*

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

*May cause an allergic skin reaction.*

*May cause respiratory irritation.*

**· Precautionary statements**

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

*Wash thoroughly after handling.*

*Use only outdoors or in a well-ventilated area.*

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

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

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

*If on skin: Wash with plenty of water.*

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

*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*Call a poison center/doctor if you feel unwell.*

*Specific treatment (see on this label).*

*Take off contaminated clothing and wash it before reuse.*

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

*If eye irritation persists: Get medical advice/attention.*

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

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

*Store locked up.*

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

**· Classification system:**

**· NFPA ratings (scale 0 - 4)**



Health = 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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\* Actual concentration ranges are withheld as a trade secret.

### 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.

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# Safety Data Sheet

## according to HPR, Schedule 1

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**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 2)

- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, 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.  
Dilute with plenty of water.  
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

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

CA

(Contd. on page 4)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 3)

### 8 Exposure controls/ Personal protection

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

· **Control parameters**

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

#### 111-30-8 Glutaraldehyde

EL Ceiling: 0.05 ppm  
S(D), S(R)

EV Ceiling: 0.05 ppm  
activated and inactivated

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the 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

### 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· **Form:**

Fluid

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CA

## Safety Data Sheet

according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 4)

· <b>Color:</b>	According to product specification
· <b>Odor:</b>	Characteristic
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value at 20 °C:</b>	7.4
· <b>Change in condition</b>	
· <b>Melting point/Melting range:</b>	0 °C
· <b>Boiling point/Boiling range:</b>	100 °C
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Product is not selfigniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Water:</b>	97.5 %
· <b>Solids content:</b>	0.0 %
· <b>Other information</b>	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.

CA

(Contd. on page 6)



# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

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### 11 Toxicological information

· **Information on toxicological effects**

· **Acute toxicity:**

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

#### 111-30-8 Glutaraldehyde

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

· **Primary irritant effect:**

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

· **on the eye:** Irritating effect.

· **Sensitization:**

Sensitization possible through inhalation.

Sensitization possible through skin contact.

· **Additional toxicological information:**

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

Harmful

Irritant

· **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

· **Toxicity**

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

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

· **Behavior in environmental systems:**

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

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

· **Ecotoxicological effects:**

· **Remark:**

Toxic for fish

Harmful to fish

· **Additional ecological information:**

· **General notes:**

Water hazard class 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.

Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

(Contd. on page 7)

CA

## Safety Data Sheet according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 6)

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

### 13 Disposal considerations

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

### 14 Transport information

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

### 15 Regulatory information

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

· <b>Section 355 (extremely hazardous substances):</b>		
None of the ingredients is listed.		
· <b>Section 313 (Specific toxic chemical listings):</b>		
None of the ingredients is listed.		
· <b>TSCA (Toxic Substances Control Act):</b>		
7732-18-5	Deionized Water, Reagent Grade A.C.S.	ACTIVE
111-30-8	Glutaraldehyde	ACTIVE
· <b>Canadian substance listings:</b>		
· <b>Canadian Domestic Substances List (DSL)</b>		
7732-18-5	Deionized Water, Reagent Grade A.C.S.	
111-30-8	Glutaraldehyde	

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# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 7)

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

None of the ingredients is listed.

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

111-30-8 | Glutaraldehyde

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

· **Hazard pictograms**



GHS07    GHS08

· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

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

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

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

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Call a poison center/doctor if you feel unwell.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

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

If eye irritation persists: Get medical advice/attention.

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

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

Store locked up.

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

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

## 16 Other information

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

· **Date of the latest revision of the safety data sheet** 10/08/2021 / -

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

(Contd. on page 9)

**Safety Data Sheet**  
according to HPR, Schedule 1

Printing date 10/08/2021

Reviewed on 10/08/2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 8)

*IATA: International Air Transport Association*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*NFPA: National Fire Protection Association (USA)*  
*HMIS: Hazardous Materials Identification System (USA)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*

CA

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.10.2021

Revision: 08.10.2021

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

- **1.1 Product identifier**
- **Trade name:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Article number:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **UFI:** R171-D0HW-Q00T-V8RY
- **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.



GHS07

Acute Tox. 4      H332 Harmful if inhaled.  
 Skin Irrit. 2      H315 Causes skin irritation.  
 Eye Irrit. 2      H319 Causes serious eye irritation.  
 Skin Sens. 1      H317 May cause an allergic skin reaction.  
 STOT SE 3      H335 May cause respiratory irritation.

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

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



GHS07    GHS08

- **Signal word** *Danger*

(Contd. on page 2)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.10.2021

Revision: 08.10.2021

Trade name: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 1)

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

Glutaraldehyde

- **Hazard statements**

H332 Harmful if inhaled.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

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

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H412 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves / eye protection / face protection.

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.**

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-≤10%
EINECS: 203-856-5	<ul style="list-style-type: none"> <li>⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411;</li> <li>⚠ Skin Sens. 1A, H317; STOT SE 3, H335</li> </ul>	

- **SVHC**

111-30-8	Glutaraldehyde
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- **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. If symptoms persist, 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.

(Contd. on page 3)

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 08.10.2021

Revision: 08.10.2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 2)

- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

## SECTION 5: Firefighting measures

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

## SECTION 6: Accidental release measures

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

## SECTION 7: Handling and storage

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

## SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **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 <sup>3</sup> , 0.05 ppm
	Long-term value: 0.2 mg/m <sup>3</sup> , 0.05 ppm
	Sen

(Contd. on page 4)

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

Printing date 08.10.2021

Revision: 08.10.2021

Trade name: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 3)

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

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

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

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· **Form:**

Fluid

· **Colour:**

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value at 20 °C:**

7.4

· **Change in condition**

· **Melting point/freezing point:**

0 °C

· **Initial boiling point and boiling range:**

100 °C

· **Flash point:**

Not applicable.

· **Flammability (solid, gas):**

Not applicable.

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

Printing date 08.10.2021

Revision: 08.10.2021

Trade name: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 4)

· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Water:</b>	97.5 %
· <b>VOC (EC)</b>	0.00 %
· <b>Solids content:</b>	0.0 %
· <b>9.2 Other information</b>	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**  
Harmful if inhaled.

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

**111-30-8 Glutaraldehyde**

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

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

(Contd. on page 6)

GB

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

Printing date 08.10.2021

Revision: 08.10.2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 5)

- **Serious eye damage/irritation**  
Causes serious eye irritation.
- **Respiratory or skin sensitisation**  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**  
May cause respiratory irritation.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 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.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

GB

(Contd. on page 7)

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

Printing date 08.10.2021

Revision: 08.10.2021

Trade name: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 6)

### SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	not regulated
· 14.2 UN proper shipping name · ADR, IMDG, IATA	not regulated
· 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
· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II None of the ingredients is listed.
· National regulations: · Other regulations, limitations and prohibitive regulations
· Substances of very high concern (SVHC) according to REACH, Article 57 111-30-8   Glutaraldehyde
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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

- **Relevant phrases**  
H301 Toxic if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H330 Fatal if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

(Contd. on page 8)

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

Printing date 08.10.2021

Revision: 08.10.2021

**Trade name: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Contd. of page 7)

**· 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*

*SVHC: Substances of Very High Concern*

*vPvB: very Persistent and very Bioaccumulative*

*Acute Tox. 3: Acute toxicity - oral – Category 3*

*Acute Tox. 2: Acute toxicity - inhalation – Category 2*

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

*Skin Corr. 1B: Skin corrosion/irritation – Category 1B*

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

*Eye Irrit. 2: Serious eye damage/eye irritation – Category 2*

*Resp. Sens. 1: Respiratory sensitisation – Category 1*

*Skin Sens. 1: Skin sensitisation – Category 1*

*Skin Sens. 1A: Skin sensitisation – Category 1A*

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

*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*

*Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

*Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

GB

# 化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2021.10.08

在 2021.10.08 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 PHOSPHATE BUFFER, PH 7.4
- **商品编号:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **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:**

根据产品规格, 流体, 吸入有害。造成皮肤刺激。造成严重眼刺激。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。可引起呼吸道刺激。对水生生物有毒。对水生生物有害并具有长期持续影响。

- **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



急性毒性(吸入) 第4类

H332 吸入有害

皮肤腐蚀/刺激 第2类

H315 造成皮肤刺激

严重眼损伤/眼刺激 类别2A

H319 造成严重眼刺激

敏化(皮肤) 第1类

H317 可能导致皮肤过敏反应

特定靶器官系统毒性(单次接触) 第3类 H335 可引起呼吸道刺激

对水环境的危害(急性) 第2类

H401 对水生生物有毒

对水环境的危害(慢性) 第3类

H412 对水生生物有害并具有长期持续影响

- **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)

# 化学品安全技术说明书

根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2021.10.08

在 2021.10.08 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 PHOSPHATE BUFFER, PH 7.4

(在 1 页继续)

## · 图示



GHS07 GHS08

## · 名称 危险

## · 标签上辨别危险的成份:

1,5-戊二醛 (&gt;2.5-≤10 %)

## · 危险字句

吸入有害  
造成皮肤刺激  
造成严重眼刺激  
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  
可引起呼吸道刺激  
对水生生物有毒  
对水生生物有害并具有长期持续影响

## · 警戒字句

## · 预防措施

避免吸入粉尘/烟/气体/烟雾/蒸气/喷雾  
戴防护手套/防护眼罩/防护面具  
[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

## · 安全储存

存放处须加锁

## · 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 ◆ 急性毒性(经口) 第3类, H301; 急性毒性(吸入) 第2类, H330; ◆ 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; 对水环境的危害(慢性) 第2类, H411; ◆ 敏化(皮肤) 第1A类, H317; 特定靶器官系统毒性(单次接触) 第3类, H335; 易燃液体 第4类, H227; 急性毒性(经皮肤) 第5类, H313	>2.5-≤10%
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CN

(在 3 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 2021.10.08

在 2021.10.08 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 PHOSPHATE BUFFER, PH 7.4

(在 2 页继续)

### 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.
- **眼睛接触:** 张开眼睛在流水下冲洗数分钟. 如果症状仍然持续,请咨询医生.
- **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.
  - 用大量的水进行稀释.
  - 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.

(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

打印日期 2021.10.08

在 2021.10.08 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 PHOSPHATE BUFFER, PH 7.4

(在 3 页继续)

- **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.
- **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/m<sup>3</sup>, 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:** 流体
- **颜色:** 根据产品规格
- **气味:** 有特性的

(在 5 页继续)



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(在 4 页继续)

· 嗅觉阈限	未决定.
· pH值 在 20 °C:	7.4
· 条件的更改	
· 熔点:	0 °C
· 沸点/初沸点和沸程:	100 °C
· 闪点:	不适用的
· 可燃性 (固体、气体):	不适用的
· 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 g/cm <sup>3</sup>
· 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:	完全可拌和的
· 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:	
· 水:	97.5 %
· 固体成份:	0.0 %
· 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。

CN

(在 6 页继续)

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BUFFER, PH 7.4

(在 5 页继续)

## 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	2,560 mg/kg (rabbit)

#### · 主要的刺激性影响:

- **皮肤:** 刺激皮肤和粘膜.
- **在眼睛上面:** 刺激的影响.
- **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:

对鱼类有毒  
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): 对水是危险的  
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。  
对水体中的鱼和浮游生物也有毒害。  
对水体中的有机物有毒。  
对水体中的有机物有害。

#### · 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.

(在 7 页继续)

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(在 6 页继续)

- **受污染的容器和包装:**
- **建议:** 必须根据官方的规章来丢弃.
- **建议的清洗剂:** 如有必要请使用水及清洁剂进行清洁.

## 14 运输信息

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

### · 新化学物质环境管理办法

### · 中国现有化学物质名录

列出所有成分

- 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



GHS07 GHS08

- 名称 危险
- 标签上辨别危险的成份:  
1,5-戊二醛 (>2.5-≤10 %)
- 危险字句  
吸入有害

(在 8 页继续)

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(在 7 页继续)

造成皮肤刺激  
造成严重眼刺激  
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  
可引起呼吸道刺激  
对水生生物有毒  
对水生生物有害并具有长期持续影响

**· 警戒字句****· 预防措施**

避免吸入粉尘/烟/气体/烟雾/蒸气/喷雾  
戴防护手套/防护眼罩/防护面具  
[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

**· 安全储存**

存放处须加锁

**· 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(经口) 第3类: Acute toxicity – Category 3

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

急性毒性(吸入) 第2类: Acute toxicity – Category 2

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

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

严重眼损伤/眼刺激 类别2A: Serious eye damage/eye irritation – Category 2A

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

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

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

特定靶器官系统毒性(单次接触) 第3类: Specific target organ toxicity (single exposure) – Category 3

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2类: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

对水环境的危害(慢性) 第2类: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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

# Bezpečnostní list

## podle 1907/2006/ES, Článek 31

Datum vydání: 08.10.2021

Revize: 08.10.2021

### ODDÍL 1: Identifikace látky/směsi a společnosti/podniku

- **1.1 Identifikátor výrobku**
- **Obchodní označení:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Číslo výrobku:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **UFI:** R171-D0HW-Q00T-V8RY
- **1.2 Příslušná určená použití látky nebo směsi a nedoporučená použití**  
Další relevantní informace nejsou k dispozici.
- **Použití látky / přípravku** Laboratorní chemikálie
- **1.3 Podrobné údaje o dodavateli bezpečnostního listu**
- **Identifikace výrobce/dovozce:**  
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
- **Obor poskytující informace:** Product safety department
- **1.4 Telefonní číslo pro naléhavé situace:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ODDÍL 2: Identifikace nebezpečnosti

- **2.1 Klasifikace látky nebo směsi**
- **Klasifikace v souladu s nařízením (ES) č. 1272/2008**



GHS08 nebezpečnost pro zdraví

Resp. Sens. 1      H334 Při vdechování může vyvolat příznaky alergie nebo astmatu nebo dýchací potíže.



GHS07

Acute Tox. 4      H332 Zdraví škodlivý při vdechování.  
 Skin Irrit. 2      H315 Dráždí kůži.  
 Eye Irrit. 2      H319 Způsobuje vážné podráždění očí.  
 Skin Sens. 1      H317 Může vyvolat alergickou kožní reakci.  
 STOT SE 3      H335 Může způsobit podráždění dýchacích cest.

Aquatic Chronic 3      H412 Škodlivý pro vodní organismy, s dlouhodobými účinky.

- **2.2 Prvky označení**
- **Označování v souladu s nařízením (ES) č. 1272/2008** Produkt je klasifikován a označen podle nařízení CLP.
- **Výstražné symboly nebezpečnosti**



GHS07



GHS08

- **Signální slovo** Nebezpečí

(pokračování na straně 2)

# Bezpečnostní list

## podle 1907/2006/ES, Článek 31

Datum vydání: 08.10.2021

Revize: 08.10.2021

**Obchodní označení: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(pokračování strany 1)

**· Nebezpečné komponenty k etiketování:**

Glutaraldehyd

**· Standardní věty o nebezpečnosti**

H332 Zdraví škodlivý při vdechování.

H315 Dráždí kůži.

H319 Způsobuje vážné podráždění očí.

H334 Při vdechování může vyvolat příznaky alergie nebo astmatu nebo dýchací potíže.

H317 Může vyvolat alergickou kožní reakci.

H335 Může způsobit podráždění dýchacích cest.

H412 Škodlivý pro vodní organismy, s dlouhodobými účinky.

**· Pokyny pro bezpečné zacházení**

P261 Zamezte vdechování prachu/dýmu/plynu/mlhy/par/aerosolů.

P280 Používejte ochranné rukavice / ochranné brýle / obličejový štít.

P284 [V případě nedostatečného větrání] používejte vybavení pro ochranu dýchacích cest.

P305+P351+P338 PŘI ZASAŽENÍ OČÍ: Několik minut opatrně vyplachujte vodou. Vyjměte kontaktní čočky, jsou-li nasazeny a pokud je lze vyjmout snadno. Pokračujte ve vyplachování.

P405 Skladujte uzamčené.

P501 Obsah/nádobu likvidujte v souladu s místními/regionálními/národními/mezinárodními předpisy.








**· 2.3 Další nebezpečnost**
**· Výsledky posouzení PBT a vPvB**
**· PBT:** Nedá se použít.

**· vPvB:** Nedá se použít.

### ODDÍL 3: Složení/informace o složkách

**· 3.2 Chemická charakteristika: Směsi**
**· Popis:** Směs obsahuje následně látky bez nebezpečných příměsí.

**· Výrobek obsahuje tyto nebezpečné látky:**

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

**· SVHC**

111-30-8	Glutaraldehyd
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**· Dodatečná upozornění:** Znění uvedených údajů o nebezpečnosti látky je uvedeno v kapitole 16.

### ODDÍL 4: Pokyny pro první pomoc

**· 4.1 Popis první pomoci**
**· Všeobecné pokyny:**

Příznaky otravy se mohou projevit až po mnoha hodinách, proto je nutný lékařský dohled nejméně 48 hodin po nehodě.

**· Při nadýchání:**

Bohatý přívod čerstvého vzduchu a pro jistotu vyhledat lékaře.

Při bezvědomí uložit a přepravit ve stabilní poloze na boku.

**· Při styku s kůží:** Ihned omýt vodou a mýdlem a dobře opláchnout.

**· Při zasažení očí:**

Oči s otevřenými víčky vyplachovat po více minut proudem tekoucí vody. Při přetrvávajících potížích se poradit s lékařem.

**· Při požití:** Při přetrvávajících potížích konzultovat s lékařem.

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(pokračování strany 2)

- **4.2 Nejdůležitější akutní a opožděné symptomy a účinky** Další relevantní informace nejsou k dispozici.
- **4.3 Pokyn týkající se okamžité lékařské pomoci a zvláštního ošetření**  
Další relevantní informace nejsou k dispozici.

### ODDÍL 5: Opatření pro hašení požáru

- **5.1 Hasiva**
- **Vhodná hasiva:** Způsob hašení přizpůsobit podmínkám v okolí.
- **5.2 Zvláštní nebezpečnost vyplývající z látky nebo směsi** Další relevantní informace nejsou k dispozici.
- **5.3 Pokyny pro hasiče**
- **Zvláštní ochranné prostředky pro hasiče:** Použít ochranný dýchací přístroj.

### ODDÍL 6: Opatření v případě náhodného úniku

- **6.1 Opatření na ochranu osob, ochranné prostředky a nouzové postupy** Není nutné.
- **6.2 Opatření na ochranu životního prostředí:**  
Při vniknutí do kanalizace nebo vodního toku informovat příslušné orgány.  
Zředit velkým množstvím vody.  
Nenechat proniknout do kanalizace/povrchových vod/podzemních vod.
- **6.3 Metody a materiál pro omezení úniku a pro čištění:**  
Sebrat s materiály, vázícími kapaliny (písek, šterkový písek, pojidla kyselin, universální pojidla, piliny).  
Kontaminovaný materiál odstranit jako odpad podle bodu 13.  
Zajistit dostatečné větrání.
- **6.4 Odkaz na jiné oddíly**  
Informace o bezpečnému zacházení viz kapitola 7.  
Informace o osobní ochranné výstroji viz kapitola 8.  
Informace k odstranění viz kapitola 13.

### ODDÍL 7: Zacházení a skladování

- **7.1 Opatření pro bezpečné zacházení**  
Na pracovišti zabezpečit dobré větrání a odsávání.  
Zamezit vytváření aerosolů.
- **Upozornění k ochraně před ohněm a explozí:** Nejsou nutná žádná zvláštní opatření.
- **7.2 Podmínky pro bezpečné skladování látek a směsí včetně neslučitelných látek a směsí**
- **Pokyny pro skladování:**
- **Požadavky na skladovací prostory a nádoby:** Žádné zvláštní požadavky.
- **Upozornění k hromadnému skladování:** Není nutné.
- **Další údaje k podmínkám skladování:** Nádrž držet neprodyšně uzavřenou.
- **7.3 Specifické konečné / specifická konečná použití** Další relevantní informace nejsou k dispozici.

### ODDÍL 8: Omezování expozice / osobní ochranné prostředky

- **Technická opatření:** Žádné další údaje, viz bod 7.

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### · 8.1 Kontrolní parametry

#### · Kontrolní parametry:

#### 111-30-8 Glutaraldehyd

NPK	Krátkodobá hodnota: 0,4 mg/m <sup>3</sup> Dlouhodobá hodnota: 0,2 mg/m <sup>3</sup> I, S
-----	--

· **Další upozornění:** Jako podklad sloužily při zhotovení platné listiny.

### · 8.2 Omezování expozice

#### · Osobní ochranné prostředky:

#### · Všeobecná ochranná a hygienická opatření:

Zdržovat od potravin, nápojů a krmiv.

Zašpiněné, nasáknuté šaty ihned vysvléci.

Před přestávkami a po práci umýt ruce.

Zamezit styku s pokožkou a zrakem.

#### · Ochrana dýchacích orgánů:

Při krátkodobém nebo nízkém zatížení použít dýchací přístroj s filtrem, při intenzivním nebo delším zatížení se musí použít dýchací přístroj nezávislý na okolním vzduchu.

#### · Ochrana rukou:



Ochranné rukavice

Materiál rukavic musí být nepropustný a odolný proti produktu / látce / směsi.

Vzhledem k tomu, že chybí testy, není možné doporučit materiál rukavic pro produkt / přípravek / chemickou směs.

Výběr materiálu rukavic proveďte podle času průniku, permeability a degradace.

#### · Materiál rukavic

Správný výběr rukavic nezávisí jen na materiálu, ale také na dalších kritériích, která se liší podle výrobce. Protože je výrobek směs více látek, nelze materiál rukavic předem vypočítat a je nutno udělat před použitím zkoušku.

#### · Doba průniku materiálem rukavic

Je nutno u výrobce rukavic zjistit a dodržovat přesné časy průniku materiálem ochranných rukavic.

#### · Ochrana očí:



Uzavřené ochranné brýle

## ODDÍL 9: Fyzikální a chemické vlastnosti

### · 9.1 Informace o základních fyzikálních a chemických vlastnostech

#### · Všeobecné údaje

#### · Vzhled:

· Skupenství:

Kapalná

· Barva:

Podle označení produktu

· Zápach:

Charakteristický

· Prahová hodnota zápachu:

Není určeno.

· Hodnota pH při 20 °C:

7,4

· Změna stavu

· Bod tání/bod tuhnutí:

0 °C

(pokračování na straně 5)



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(pokračování strany 4)

· <b>Počáteční bod varu a rozmezí bodu varu:</b>	100 °C
· <b>Bod vzplanutí:</b>	Nedá se použít.
· <b>Hořlavost (pevné látky, plyny):</b>	Nedá se použít.
· <b>Teplota rozkladu:</b>	Není určeno.
· <b>Teplota samovznícení:</b>	Produkt není samozápalný.
· <b>Výbušné vlastnosti:</b>	U produktu nehrozí nebezpečí exploze.
· <b>Meze výbušnosti:</b>	
· <b>Dolní mez:</b>	Není určeno.
· <b>Horní mez:</b>	Není určeno.
· <b>Tlak páry při 20 °C:</b>	23 hPa
· <b>Hustota při 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relativní hustota</b>	Není určeno.
· <b>Hustota páry:</b>	Není určeno.
· <b>Rychlost odpařování</b>	Není určeno.
· <b>Rozpuštěnost ve / směsitelnost s vodě:</b>	Úplně mísitelná.
· <b>Rozdělovací koeficient: n-oktanol/voda:</b>	Není určeno.
· <b>Viskozita:</b>	
· <b>Dynamicky:</b>	Není určeno.
· <b>Kinematicky:</b>	Není určeno.
· <b>Obsah ředidel:</b>	
· <b>Voda:</b>	97,5 %
· <b>VOC (EC)</b>	0,00 %
· <b>Obsah netěkavých složek:</b>	0,0 %
· <b>9.2 Další informace</b>	Další relevantní informace nejsou k dispozici.

### ODDÍL 10: Stálost a reaktivita

- **10.1 Reaktivita** Další relevantní informace nejsou k dispozici.
- **10.2 Chemická stabilita**
- **Termický rozklad / Podmínky, kterých je nutno se vyvarovat:**  
Nedochází k rozkladu při doporučeném způsobu použití.
- **10.3 Možnost nebezpečných reakcí** Žádné nebezpečné reakce nejsou známy.
- **10.4 Podmínky, kterým je třeba zabránit** Další relevantní informace nejsou k dispozici.
- **10.5 Neslučitelné materiály:** Další relevantní informace nejsou k dispozici.
- **10.6 Nebezpečné produkty rozkladu:** Nejsou známy žádné nebezpečné produkty při rozkladu.

### ODDÍL 11: Toxikologické informace

- **11.1 Informace o toxikologických účincích**
- **Akutní toxicita**  
Zdraví škodlivý při vdechování.

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**· Zařazení relevantní hodnoty LD/LC 50:**

**111-30-8 Glutaraldehyd**

Orálně	LD50	134 mg/kg (rat)
Pokožkou	LD50	2.560 mg/kg (rabbit)

- **Primární dráždivé účinky:**
- **Žíravost/dráždivost pro kůži**  
Dráždí kůži.
- **Vážné poškození očí / podráždění očí**  
Způsobuje vážné podráždění očí.
- **Senzibilizace dýchacích cest / senzibilizace kůže**  
Při vdechování může vyvolat příznaky alergie nebo astmatu nebo dýchací potíže.  
Může vyvolat alergickou kožní reakci.
- **Účinky CMR (karcinogenita, mutagenita a toxicita pro reprodukci)**
- **Mutagenita v zárodečných buňkách** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Karcinogenita** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Toxicita pro reprodukci** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Toxicita pro specifické cílové orgány – jednorázová expozice**  
Může způsobit podráždění dýchacích cest.
- **Toxicita pro specifické cílové orgány – opakovaná expozice**  
Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.
- **Nebezpečnost při vdechnutí** Na základě dostupných údajů nejsou kritéria pro klasifikaci splněna.

### ODDÍL 12: Ekologické informace

- **12.1 Toxicita**
- **Aquatická toxicita:** Další relevantní informace nejsou k dispozici.
- **12.2 Perzistence a rozložitelnost** Další relevantní informace nejsou k dispozici.
- **12.3 Bioakumulační potenciál** Další relevantní informace nejsou k dispozici.
- **12.4 Mobilita v půdě** Další relevantní informace nejsou k dispozici.
- **Ekotoxické účinky:**
- **Poznámka:**  
Jedovatý pro ryby.  
Škodlivý pro ryby.
- **Další ekologické údaje:**
- **Všeobecná upozornění:**  
Třída ohrožení vody 2 (Samozářazení): ohrožuje vodu  
Nesmí vniknout do spodní vody, povodí nebo kanalizace.  
Ohrožuje pitnou vodu už při proniknutí malého množství do zeminy.  
V povodích je také jedovatá pro ryby a plankton.  
jedovatá pro vodní organismy  
škodlivá pro vodní organismy
- **12.5 Výsledky posouzení PBT a vPvB**
- **PBT:** Nedá se použít.
- **vPvB:** Nedá se použít.
- **12.6 Jiné nepříznivé účinky** Další relevantní informace nejsou k dispozici.

### ODDÍL 13: Pokyny pro odstraňování

- **13.1 Metody nakládání s odpady**
- **Doporučení:** Nesmí se odstraňovat společně s odpady z domácnosti. Nepřipustit únik do kanalizace.

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- **Kontaminované obaly:**
- **Doporučení:** Odstranění podle příslušných předpisů.
- **Doporučený čisticí prostředek:** Voda, případně s přísadami čisticích prostředků.

### ODDÍL 14: Informace pro přepravu

- |  |                 |
|--|-----------------|
| · 14.1 UN číslo  |                 |
| · ADR, IMDG, IATA  | odpadá          |
| · 14.2 Oficiální (OSN) pojmenování pro přepravu                        |                 |
| · ADR, IMDG, IATA  | odpadá          |
| · 14.3 Třída/třídy nebezpečnosti pro přepravu                          |                 |
| · ADR, ADN, IMDG, IATA   |                 |
| · třída  | odpadá          |
| · 14.4 Obalová skupina   |                 |
| · ADR, IMDG, IATA  | odpadá          |
| · 14.5 Nebezpečnost pro životní prostředí:                             | Nedá se použít. |
| · 14.6 Zvláštní bezpečnostní opatření pro uživatele                    | Nedá se použít. |
| · 14.7 Hromadná přeprava podle přílohy II úmluvy MARPOL a předpisu IBC | Nedá se použít. |
| · UN "Model Regulation":   | odpadá          |

### ODDÍL 15: Informace o předpisech

- 15.1 Předpisy týkající se bezpečnosti, zdraví a životního prostředí/specifické právní předpisy týkající se látky nebo směsi
- Rady 2012/18/EU
- Nebezpečné látky jmenovitě uvedené - **PŘÍLOHA I** Žádná z obsažených látek není na seznamu.
- Rady (ES) č. 1907/2006 **PŘÍLOHA XVII** Omezující podmínky: 3

- Směrnice 2011/65/EU o omezení používání některých nebezpečných látek v elektrických a elektronických zařízeních - Příloha II

Žádná z obsažených látek není na seznamu.

- Národní předpisy:
- Jiná ustanovení, omezení a zákazy
- Látky vzbuzující mimořádné obavy (SVHC) podle REACH, čl. 57

111-30-8 | Glutaraldehyd

- 15.2 Posouzení chemické bezpečnosti: Posouzení chemické bezpečnosti nebylo provedeno.

### ODDÍL 16: Další informace

Údaje se opírají o dnešní stav našich vědomostí, nepředstavují však záruku vlastností produktu a nevznikají tak žádné smluvní právní vztahy.

- **Relevantní věty**
- H301 Toxický při požití.

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H314 Způsobuje těžké poleptání kůže a poškození očí.

H317 Může vyvolat alergickou kožní reakci.

H330 Při vdechování může způsobit smrt.

H334 Při vdechování může vyvolat příznaky alergie nebo astmatu nebo dýchací potíže.

H335 Může způsobit podráždění dýchacích cest.

H400 Vysoce toxický pro vodní organismy.

H411 Toxický pro vodní organismy, s dlouhodobými účinky.

**· Zkratky a akronymy:**

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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akutní toxicita - orální – Kategorie 3

Acute Tox. 2: Akutní toxicita - inhalační – Kategorie 2

Acute Tox. 4: Akutní toxicita - inhalační – Kategorie 4

Skin Corr. 1B: Žíravost/dráždivost pro kůži – Kategorie 1B

Skin Irrit. 2: Žíravost/dráždivost pro kůži – Kategorie 2

Eye Irrit. 2: Vážné poškození očí / podráždění očí – Kategorie 2

Resp. Sens. 1: Senzibilizace dýchacích cest – Kategorie 1

Skin Sens. 1: Senzibilizace kůže – Kategorie 1

Skin Sens. 1A: Senzibilizace kůže – Kategorie 1A

STOT SE 3: Toxicita pro specifické cílové orgány (jednorázová expozice) – Kategorie 3

Aquatic Acute 1: Nebezpečnost pro vodní prostředí - akutní nebezpečnost pro vodní prostředí – Kategorie 1

Aquatic Chronic 2: Nebezpečnost pro vodní prostředí - dlouhodobá nebezpečnost pro vodní prostředí – Kategorie 2

Aquatic Chronic 3: Nebezpečnost pro vodní prostředí - dlouhodobá nebezpečnost pro vodní prostředí – Kategorie 3

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 08.10.2021

Herziening van: 08.10.2021

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

- **1.1 Productidentificatie**
- **Handelsnaam:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Artikelnummer:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **UFI:** R171-D0HW-Q00T-V8RY
- **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 verstreker 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.



GHS07

Acute Tox. 4      H332 Schadelijk bij inademing.  
 Skin Irrit. 2      H315 Veroorzaakt huidirritatie.  
 Eye Irrit. 2      H319 Veroorzaakt ernstige oogirritatie.  
 Skin Sens. 1      H317 Kan een allergische huidreactie veroorzaken.  
 STOT SE 3      H335 Kan irritatie van de luchtwegen veroorzaken.

.....

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

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

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 08.10.2021

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(Vervolg van blz. 1)

· **Gevarenpictogrammen**



GHS07 GHS08

· **Signaalwoord** Gevaar

· **Gevaaraanduidende componenten voor de etikettering:**

Glutaaraldehyd

· **Gevarenaanduidingen**

H332 Schadelijk bij inademing.

H315 Veroorzaakt huidirritatie.

H319 Veroorzaakt ernstige oogirritatie.

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

H317 Kan een allergische huidreactie veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

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

· **Veiligheidsaanbevelingen**

P261 Inademing van stof/rook/gas/nevel/damp/spuitnevel vermijden.

P280 Beschermende handschoenen / oogbescherming / gelaatsbescherming dragen.

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.

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-≤10%
EINECS: 203-856-5	Acute Tox. 3, H301; Acute Tox. 2, H330;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400; Aquatic Chronic 2, H411;  Skin Sens. 1A, H317; STOT SE 3, H335	

· **SVHC**

111-30-8	Glutaaraldehyd
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· **Aanvullende gegevens:**

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

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

### RUBRIEK 4: Eerstehulpmaatregelen

#### · 4.1 Beschrijving van de eerstehulpmaatregelen

##### · Algemene informatie:

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

##### · Na het inademen:

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

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

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

##### · Na oogcontact:

De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een 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, beschermingsmiddelen en noodprocedures

##### · 6.2 Milieuvoorzorgsmaatregelen:

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

Met veel water verdunnen.

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

#### · 6.3 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.

(Vervolg op blz. 4)



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(Vervolg van blz. 3)

- **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.
- **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 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

NL

(Vervolg op blz. 5)



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### RUBRIEK 9: Fysische en chemische eigenschappen

#### · 9.1 Informatie over fysische en chemische basiseigenschappen

##### · Algemene gegevens

##### · Voorkomen:

##### · Vorm:

Vloeibaar

##### · Kleur:

Volgens de produktbeschrijving

##### · Geur:

Karakteristiek

##### · Geurdrempelwaarde:

Niet bepaald.

##### · pH-waarde bij 20 °C:

7,4

##### · Toestandsverandering

##### · Smelt-/vriespunt:

0 °C

##### · Beginkookpunt en kooktraject:

100 °C

##### · Vlampunt:

Niet bruikbaar.

##### · Ontvlambaarheid (vast, gas):

Niet bruikbaar.

##### · Ontledingstemperatuur:

Niet bepaald.

##### · Zelfontbrandingstemperatuur:

Het produkt ontbrandt niet uit zichzelf.

##### · Ontploffingseigenschappen:

Het produkt is niet ontploffingsgevaarlijk.

##### · Ontploffingsgrenzen:

##### · Onderste:

Niet bepaald.

##### · Bovenste:

Niet bepaald.

##### · Dampspanning bij 20 °C:

23 hPa

##### · Dichtheid bij 20 °C:

1 g/cm<sup>3</sup>

##### · Relatieve dichtheid

Niet bepaald.

##### · Dampdichtheid

Niet bepaald.

##### · Verdampingssnelheid

Niet bepaald.

##### · Oplosbaarheid in/mengbaarheid met

##### · Water:

Volledig mengbaar.

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

##### · Viscositeit

##### · Dynamisch:

Niet bepaald.

##### · Kinematisch:

Niet bepaald.

##### · Oplosmiddelgehalte:

##### · Water:

97,5 %

##### · VOC (EG)

0,00 %

##### · Gehalte aan vaste bestanddelen:

0,0 %

##### · 9.2 Overige informatie

Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

#### · 10.1 Reactiviteit Geen verdere relevante informatie verkrijgbaar.

#### · 10.2 Chemische stabiliteit

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

· 10.3 Mogelijke gevaarlijke reacties Geen gevaarlijke reacties bekend.

· 10.4 Te vermijden omstandigheden Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 6)

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(Vervolg van blz. 5)

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

## RUBRIEK 11: Toxicologische informatie

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

### · Indelingsrelevantie LD/LC50-waarden:

#### 111-30-8 Glutaaraldehyd

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

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

## RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:**  
Giftig voor vissen.  
Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)  
Gevaar voor water klasse 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.  
In oppervlaktewater ook giftig voor vissen en plankton.  
giftig voor in het water levende organismen  
schadelijk voor in het water levende organismen

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

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

### RUBRIEK 13: Instructies voor verwijdering

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

### RUBRIEK 14: Informatie met betrekking tot het vervoer

- |   |                     |
|---|---------------------|
| · <b>14.1 VN-nummer</b>   |                     |
| · <b>ADR, IMDG, IATA</b>  | Niet van toepassing |
| · <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b>      |                     |
| · <b>ADR, IMDG, IATA</b>  | Niet van toepassing |
| · <b>14.3 Transportgevarenklasse(n)</b>   |                     |
| · <b>ADR, ADN, IMDG, IATA</b>   |                     |
| · <b>klasse</b>   | Niet van toepassing |
| · <b>14.4 Verpakkingsgroep:</b>   |                     |
| · <b>ADR, IMDG, IATA</b>  | Niet van toepassing |
| · <b>14.5 Milieugevaren:</b>  | Niet bruikbaar.     |
| · <b>14.6 Bijzondere voorzorgen voor de gebruiker</b>                             | Niet bruikbaar.     |
| · <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b> | Niet bruikbaar.     |
| · <b>VN "Model Regulation":</b>   | 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.

(Vervolg op blz. 8)

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

geen der bestanddelen staat op de lijst.

· **Lijst van Potentieel Zeer Zorgwekkende Stoffen**

111-30-8 | Glutaaraldehyd

· **Richtlijn 2012/18/EU**

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

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

· **Richtlijn 2011/65/EU betreffende beperking van het gebruik van bepaalde gevaarlijke stoffen in elektrische en elektronische apparatuur - Bijlage II**

geen der bestanddelen staat op de lijst.

· **Nationale voorschriften:**

· **Gevaarklasse v. water:**

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

· **Aanvullende voorschriften, beperkingen en verbodsverordeningen**

· **Zeer zorgwekkende stoffen (SVHC) volgens REACH, artikel 57**

111-30-8 | Glutaaraldehyd

· **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**

H301 Giftig bij inslikken.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H317 Kan een allergische huidreactie veroorzaken.

H330 Dodelijk bij inademing.

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

H335 Kan irritatie van de luchtwegen veroorzaken.

H400 Zeer giftig voor in het water levende organismen.

H411 Giftig voor in het water levende organismen, met langdurige gevolgen.

· **Afkortingen en acroniemen:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxiciteit - oraal – Categorie 3

Acute Tox. 2: Acute toxiciteit - inademing – Categorie 2

Acute Tox. 4: Acute toxiciteit - inademing – Categorie 4

Skin Corr. 1B: Huidcorrosie/-irritatie – Categorie 1B

Skin Irrit. 2: Huidcorrosie/-irritatie – Categorie 2

Eye Irrit. 2: Ernstig oogletsel/oogirritatie – Categorie 2

(Vervolg op blz. 9)

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*Resp. Sens. 1: Sensibilisatie van de luchtwegen – Categorie 1**Skin Sens. 1: Sensibilisatie van de huid – Categorie 1**Skin Sens. 1A: Sensibilisatie van de huid – Categorie 1A**STOT SE 3: Specifieke doelorgaantoxiciteit bij eenmalige blootstelling – Categorie 3**Aquatic Acute 1: Gevaar voor het aquatisch milieu - acuut aquatisch gevaar – Categorie 1**Aquatic Chronic 2: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 2**Aquatic Chronic 3: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 3*

NL

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 08.10.2021

Révision: 08.10.2021

### 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 PHOSPHATE BUFFER, PH 7.4
- **Code du produit:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **UFI:** R171-D0HW-Q00T-V8RY
- **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.



GHS07

Acute Tox. 4      H332 Nocif par inhalation.  
 Skin Irrit. 2      H315 Provoque une irritation cutanée.  
 Eye Irrit. 2      H319 Provoque une sévère irritation des yeux.  
 Skin Sens. 1      H317 Peut provoquer une allergie cutanée.  
 STOT SE 3      H335 Peut irriter les voies respiratoires.

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

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



GHS07    GHS08

- **Mention d'avertissement** Danger

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# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 08.10.2021

Révision: 08.10.2021

**Nom du produit: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(suite de la page 1)

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

glutaral

· **Mentions de danger**

H332 Nocif par inhalation.

H315 Provoque une irritation cutanée.

H319 Provoque une sévère irritation des yeux.

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

H317 Peut provoquer une allergie cutanée.

H335 Peut irriter les voies respiratoires.

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

· **Conseils de prudence**

P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.

P280 Porter des gants de protection / un équipement de protection des yeux / un équipement de protection du visage.

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.

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-≤10%
EINECS: 203-856-5	 Acute Tox. 3, H301;  Acute Tox. 2, H330;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Aquatic Chronic 2, H411;  Skin Sens. 1A, H317; STOT SE 3, H335	

· **SVHC**

111-30-8	glutaral
----------	----------

· **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.

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(suite de la page 2)

- **Après contact avec les yeux:**  
Rincer les yeux, pendant plusieurs minutes, sous l'eau courante en écartant bien les paupières. Si les troubles persistent, 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.
- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**  
Pas d'autres informations importantes disponibles.

### RUBRIQUE 5: Mesures de lutte contre l'incendie

- **5.1 Moyens d'extinction**
- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.
- **5.2 Dangers particuliers résultant de la substance ou du mélange**  
Pas d'autres informations importantes disponibles.
- **5.3 Conseils aux pompiers**
- **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

### RUBRIQUE 6: Mesures à prendre en cas de dispersion accidentelle

- **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.
- **6.2 Précautions pour la protection de l'environnement:**  
En cas de pénétration dans les eaux ou les égouts, avertir les autorités compétentes.  
Diluer avec beaucoup d'eau.  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).  
Évacuer 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.  
Éviter 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.

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# Fiche de données de sécurité

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(suite de la page 3)

### RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

· **Indications complémentaires pour l'agencement des installations techniques:**

Sans autre indication, voir point 7.

· **8.1 Paramètres de contrôle**

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

**111-30-8 glutaral**

VLEP Valeur momentanée: 0,8 mg/m<sup>3</sup>, 0,2 ppm

Valeur à long terme: 0,4 mg/m<sup>3</sup>, 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 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

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**Fiche de données de sécurité**  
selon 1907/2006/CE, Article 31

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**Nom du produit: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(suite de la page 4)

· <b>Couleur:</b>	Selon désignation produit
· <b>Odeur:</b>	Caractéristique
· <b>Seuil olfactif:</b>	Non déterminé.
· <b>valeur du pH à 20 °C:</b>	7,4
· <b>Changement d'état</b>	
· <b>Point de fusion/point de congélation:</b>	0 °C
· <b>Point initial d'ébullition et intervalle d'ébullition:</b>	100 °C
· <b>Point d'éclair</b>	Non applicable.
· <b>Inflammabilité (solide, gaz):</b>	Non applicable.
· <b>Température de décomposition:</b>	Non déterminé.
· <b>Température d'auto-inflammabilité:</b>	Le produit ne s'enflamme pas spontanément.
· <b>Propriétés explosives:</b>	Le produit n'est pas explosif.
· <b>Limites d'explosion:</b>	
· <b>Inférieure:</b>	Non déterminé.
· <b>Supérieure:</b>	Non déterminé.
· <b>Pression de vapeur à 20 °C:</b>	23 hPa
· <b>Densité à 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Densité relative</b>	Non déterminé.
· <b>Densité de vapeur:</b>	Non déterminé.
· <b>Taux d'évaporation:</b>	Non déterminé.
· <b>Solubilité dans/miscibilité avec l'eau:</b>	Entièrement miscible
· <b>Coefficient de partage: n-octanol/eau:</b>	Non déterminé.
· <b>Viscosité:</b>	
· <b>Dynamique:</b>	Non déterminé.
· <b>Cinématique:</b>	Non déterminé.
· <b>Teneur en solvants:</b>	
· <b>Eau:</b>	97,5 %
· <b>VOC (CE)</b>	0,00 %
· <b>Teneur en substances solides:</b>	0,0 %
· <b>9.2 Autres informations</b>	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

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(suite page 6)

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### RUBRIQUE 11: Informations toxicologiques

· **11.1 Informations sur les effets toxicologiques**

· **Toxicité aiguë**

Nocif par inhalation.

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

**111-30-8 glutaral**

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

· **Effet primaire d'irritation:**

· **Corrosion cutanée/irritation cutanée**

Provoque une irritation cutanée.

· **Lésions oculaires graves/irritation oculaire**

Provoque une sévère irritation des yeux.

· **Sensibilisation respiratoire ou cutanée**

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

Peut provoquer une allergie cutanée.

· **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**

· **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:**

Toxique chez les poissons.

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.

Dans les eaux, également toxique pour les poissons et le plancton.

Toxique pour les organismes aquatiques.

Nocif pour les organismes aquatiques.

· **12.5 Résultats des évaluations PBT et VPVB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

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· **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

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### **RUBRIQUE 13: Considérations relatives à l'élimination**

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

### **RUBRIQUE 14: Informations relatives au transport**

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

· **Directive 2011/65/UE relative à la limitation de l'utilisation de certaines substances dangereuses dans les équipements électriques et électroniques – Annexe II**

Aucun des composants n'est compris.

- **Prescriptions nationales:**
- **Autres prescriptions, restrictions et règlements d'interdiction**

· **Substances extrêmement préoccupantes (SVHC) selon REACH, article 57**

111-30-8 | glutaral

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# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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**Nom du produit: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(suite de la page 7)

· **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

### RUBRIQUE 16: Autres informations

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

· **Phrases importantes**

H301 Toxique en cas d'ingestion.

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

H317 Peut provoquer une allergie cutanée.

H330 Mortel par inhalation.

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

H335 Peut irriter les voies respiratoires.

H400 Très toxique pour les organismes aquatiques.

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

· **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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Toxicité aiguë - voie orale – Catégorie 3

Acute Tox. 2: Toxicité aiguë - inhalation – Catégorie 2

Acute Tox. 4: Toxicité aiguë - inhalation – Catégorie 4

Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B

Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2

Eye Irrit. 2: Lésions oculaires graves/irritation oculaire – Catégorie 2

Resp. Sens. 1: Sensibilisation respiratoire – Catégorie 1

Skin Sens. 1: Sensibilisation cutanée – Catégorie 1

Skin Sens. 1A: Sensibilisation cutanée – Catégorie 1A

STOT SE 3: Toxicité spécifique pour certains organes cibles (exposition unique) – Catégorie 3

Aquatic Acute 1: Dangers pour le milieu aquatique- toxicité aiguë pour le milieu aquatique – Catégorie 1

Aquatic Chronic 2: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 2

Aquatic Chronic 3: Dangers pour le milieu aquatique- toxicité à long terme pour le milieu aquatique – Catégorie 3

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 08.10.2021

überarbeitet am: 08.10.2021

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

· **1.1 Produktidentifikator**

· **Handelsname:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

· **Artikelnummer:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10

· **UFI:** R171-D0HW-Q00T-V8RY

· **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

· **Auskunfteibereich:** 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.



GHS07

Acute Tox. 4

H332 Gesundheitsschädlich bei Einatmen.

Skin Irrit. 2

H315 Verursacht Hautreizungen.

Eye Irrit. 2

H319 Verursacht schwere Augenreizung.

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

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

- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008**  
Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.
- **Gefahrenpiktogramme**



GHS07 GHS08

- **Signalwort Gefahr**
- **Gefahrbestimmende Komponenten zur Etikettierung:**  
Glutaral
- **Gefahrenhinweise**  
H332 Gesundheitsschädlich bei Einatmen.  
H315 Verursacht Hautreizungen.  
H319 Verursacht schwere Augenreizung.  
H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.  
H317 Kann allergische Hautreaktionen verursachen.  
H335 Kann die Atemwege reizen.  
H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.
- **Sicherheitshinweise**  
P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.  
P280 Schutzhandschuhe / Augenschutz / Gesichtsschutz tragen.  
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.  
P405 Unter Verschluss aufbewahren.  
P501 Entsorgung des Inhalts / des Behälters gemäß den örtlichen / regionalen / nationalen / internationalen Vorschriften.
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

- **3.2 Chemische Charakterisierung: Gemische**
- **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

- **Gefährliche Inhaltsstoffe:**

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

111-30-8	Glutaral
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- **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

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(Fortsetzung auf Seite 3)



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### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

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

##### · **Allgemeine Hinweise:**

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

##### · **Nach Einatmen:**

Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.

Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.

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

##### · **Nach Augenkontakt:**

Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden 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.

Mit viel Wasser verdünnen.

Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.

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

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

Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.

Für ausreichende Lüftung sorgen.

#### · 6.4 Verweis auf andere Abschnitte

Informationen zur sicheren Handhabung siehe Abschnitt 7.

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.

Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

#### · 7.1 Schutzmaßnahmen zur sicheren Handhabung

Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.

Aerosolbildung vermeiden.

#### · **Hinweise zum Brand- und Explosionsschutz:** Keine besonderen Maßnahmen erforderlich.

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- **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):** -
- **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 <sup>3</sup> , 0,05 ml/m <sup>3</sup> 2(I);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 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.

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**· Augenschutz:**


Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

**· 9.1 Angaben zu den grundlegenden physikalischen und chemischen Eigenschaften**
**· Allgemeine Angaben**
**· Aussehen:**

· <b>Form:</b>	Flüssig
· <b>Farbe:</b>	Gemäß Produktbezeichnung
· <b>Geruch:</b>	Charakteristisch
· <b>Geruchsschwelle:</b>	Nicht bestimmt.

**· pH-Wert bei 20 °C:** 7,4

**· Zustandsänderung**

· <b>Schmelzpunkt/Gefrierpunkt:</b>	0 °C
· <b>Siedebeginn und Siedebereich:</b>	100 °C

**· Flammpunkt:** Nicht anwendbar.

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

**· Zersetzungstemperatur:** Nicht bestimmt.

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

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

**· Explosionsgrenzen:**

· <b>Untere:</b>	Nicht bestimmt.
· <b>Obere:</b>	Nicht bestimmt.

**· Dampfdruck bei 20 °C:** 23 hPa

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

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

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

**· Viskosität:**

· <b>Dynamisch:</b>	Nicht bestimmt.
· <b>Kinematisch:</b>	Nicht bestimmt.

**· Lösemittelgehalt:**

· <b>Wasser:</b>	97,5 %
· <b>VOC (EU)</b>	0,00 %

**· Festkörpergehalt:** 0,0 %

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**· 9.2 Sonstige Angaben**

Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

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

### ABSCHNITT 11: Toxikologische Angaben

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

**· Einstufungsrelevante LD/LC50-Werte:**

**111-30-8 Glutaral**

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

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**  
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung**  
Verursacht schwere Augenreizung.
- **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.

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- **Ökotoxische Wirkungen:**
- **Bemerkung:**  
*Giftig für Fische.  
 Schädlich für Fische.*
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**  
*Wassergefährdungsklasse 2 (Selbsteinstufung): deutlich wassergefährdend  
 Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen.  
 Trinkwassergefährdung bereits beim Auslaufen geringer Mengen in den Untergrund.  
 In Gewässern auch giftig für Fische und Plankton.  
 giftig für Wasserorganismen  
 schädlich für Wasserorganismen*
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

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

### ABSCHNITT 14: Angaben zum Transport

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

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### 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

- **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**

Keiner der Inhaltsstoffe ist enthalten.

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

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

- **Wassergefährdungsklasse:** WGK 2 (Selbsteinstufung): deutlich wassergefährdend.
- **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**

- **Besonders besorgniserregende Stoffe (SVHC) gemäß REACH, Artikel 57**

111-30-8	Glutaral
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- **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

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

- **Relevante Sätze**

H301 Giftig bei Verschlucken.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H330 Lebensgefahr bei Einatmen.

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

H335 Kann die Atemwege reizen.

H400 Sehr giftig für Wasserorganismen.

H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.

- **Abkürzungen und Akronyme:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

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

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

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

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*Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B*  
*Skin Irrit. 2: Hautreizende/-ätzende Wirkung – Kategorie 2*  
*Eye Irrit. 2: Schwere Augenschädigung/Augenreizung – Kategorie 2*  
*Resp. Sens. 1: Sensibilisierung der Atemwege – Kategorie 1*  
*Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1*  
*Skin Sens. 1A: Sensibilisierung der Haut – Kategorie 1A*  
*STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3*  
*Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1*  
*Aquatic Chronic 2: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 2*  
*Aquatic Chronic 3: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 3*

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

Stampato il: 08.10.2021

Revisione: 08.10.2021

### 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 PHOSPHATE BUFFER, PH 7.4
- **Articolo numero:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **UFI:** R171-D0HW-Q00T-V8RY
- **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
- **Società 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.



GHS07

Acute Tox. 4      H332 Nocivo se inalato.  
Skin Irrit. 2      H315 Provoca irritazione cutanea.  
Eye Irrit. 2      H319 Provoca grave irritazione oculare.  
Skin Sens. 1      H317 Può provocare una reazione allergica cutanea.  
STOT SE 3      H335 Può irritare le vie respiratorie.

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

- **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

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(Segue da pagina 1)

· **Pittogrammi di pericolo**

GHS07 GHS08

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

glutarale

· **Indicazioni di pericolo**

H332 Nocivo se inalato.

H315 Provoca irritazione cutanea.

H319 Provoca grave irritazione oculare.

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

H317 Può provocare una reazione allergica cutanea.

H335 Può irritare le vie respiratorie.

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

· **Consigli di prudenza**

P261 Evitare di respirare la polvere/i fumi/i gas/la nebbia/i vapori/gli aerosol.

P280 Indossare guanti / occhiali di protezione / protezione per il viso.

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.

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-≤10%
EINECS: 203-856-5	Acute Tox. 3, H301; Acute Tox. 2, H330;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400; Aquatic Chronic 2, H411;  Skin Sens. 1A, H317; STOT SE 3, H335	

· **SVHC**

111-30-8	glutarale
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· **Ulteriori indicazioni:** Il testo dell'avvertenza dei pericoli citati può essere appreso dal capitolo 16

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(continua a pagina 3)



**Scheda di dati di sicurezza**  
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#### **SEZIONE 4: Misure di primo soccorso**

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

· **Indicazioni generali:**

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

· **Inalazione:**

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

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

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

· **Contatto con gli occhi:**

*Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore 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.*

*Diluire abbondantemente con acqua.*

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

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

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

*Smaltimento del materiale contaminato conformemente al punto 13.*

*Provvedere ad una sufficiente areazione.*

· **6.4 Riferimento ad altre sezioni**

*Per informazioni relative ad una 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.*

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**Scheda di dati di sicurezza**  
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- **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.
- **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 <sup>3</sup> , 0,05 ppm sen, A4
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- **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 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

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**Scheda di dati di sicurezza**  
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**Denominazione commerciale: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

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### SEZIONE 9: Proprietà fisiche e chimiche

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

**· Indicazioni generali**

· **Aspetto:**

· **Forma:**

Liquido

· **Colore:**

In conformità con la denominazione del prodotto

· **Odore:**

Caratteristico

· **Soglia olfattiva:**

Non definito.

· **valori di pH a 20 °C:**

7,4

**· Cambiamento di stato**

· **Punto di fusione/punto di congelamento:**

0 °C

· **Punto di ebollizione iniziale e intervallo di ebollizione:** 100 °C

· **Punto di infiammabilità:**

Non applicabile.

· **Infiammabilità (solidi, gas):**

Non applicabile.

· **Temperatura di decomposizione:**

Non definito.

· **Temperatura di autoaccensione:**

Prodotto non autoinfiammabile.

· **Proprietà esplosive:**

Prodotto non esplosivo.

**· Limiti di infiammabilità:**

· **Inferiore:**

Non definito.

· **Superiore:**

Non definito.

· **Tensione di vapore a 20 °C:**

23 hPa

· **Densità a 20 °C:**

1 g/cm<sup>3</sup>

· **Densità relativa**

Non definito.

· **Densità di vapore:**

Non definito.

· **Velocità di evaporazione**

Non definito.

· **Solubilità in/Miscibilità con**

· **acqua:**

Completamente miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:**

Non definito.

· **Viscosità:**

· **Dinamica:**

Non definito.

· **Cinematica:**

Non definito.

· **Tenore del solvente:**

· **Acqua:**

97,5 %

· **VOC (CE)**

0,00 %

· **Contenuto solido:**

0,0 %

· **9.2 Altre informazioni**

Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

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

· **10.2 Stabilità chimica**

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

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

· **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.

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

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

### SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta**  
Nocivo se inalato.

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

#### 111-30-8 glutarale

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

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

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:**  
Tossico per i pesci.  
Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 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.  
Tossico per pesci e plancton.  
tossico per gli organismi acquatici  
nocivo per gli organismi acquatici

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

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

### **SEZIONE 13: Considerazioni sullo smaltimento**

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

### **SEZIONE 14: Informazioni sul trasporto**

- |  |                  |
|--|------------------|
| · <b>14.1 Numero ONU</b><br>· <b>ADR, IMDG, IATA</b>   | non applicabile  |
| · <b>14.2 Nome di spedizione dell'ONU</b><br>· <b>ADR, IMDG, IATA</b>                                      | non applicabile  |
| · <b>14.3 Classi di pericolo connesso al trasporto</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Classe</b> | non applicabile  |
| · <b>14.4 Gruppo di imballaggio</b><br>· <b>ADR, IMDG, IATA</b>  | non applicabile  |
| · <b>14.5 Pericoli per l'ambiente:</b>   | Non applicabile. |
| · <b>14.6 Precauzioni speciali per gli utilizzatori</b>  | Non applicabile. |
| · <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b>                        | Non applicabile. |
| · <b>UN "Model Regulation":</b>  | 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
- **Direttiva 2011/65/UE sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche - Allegato II**
- Nessuno dei componenti è contenuto.

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

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- **Disposizioni nazionali:**

- **Ulteriori disposizioni, limitazioni e decreti proibitivi**

- **Sostanze estremamente preoccupanti (SVHC) ai sensi della regolamento REACH, articolo 57**

111-30-8	glutarale
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- **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

## SEZIONE 16: Altre informazioni

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

- **Frasi rilevanti**

H301 Tossico se ingerito.

H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

H317 Può provocare una reazione allergica cutanea.

H330 Letale se inalato.

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

H335 Può irritare le vie respiratorie.

H400 Molto tossico per gli organismi acquatici.

H411 Tossico per gli organismi acquatici con effetti di lunga durata.

- **Abbreviazioni e acronimi:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Tossicità acuta per via orale – Categoria 3

Acute Tox. 2: Tossicità acuta per inalazione – Categoria 2

Acute Tox. 4: Tossicità acuta per inalazione – Categoria 4

Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B

Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2

Eye Irrit. 2: Gravi lesioni oculari/irritazione oculare – Categoria 2

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

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

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

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

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

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

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

# 安全データシート

## JIS Z 7253:2012 による

印刷日: 2021.10.08

改訂日: 2021.10.08

### 1 化学品及び会社情報

- ・製品識別子
- ・商品名: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- ・製品番号: 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- ・該当純物質または混合物の関連特定用途及び使用禁止用途 追加的な関連情報は得られていません。
- ・成分の利用/調合 実験用化学物質
- ・安全データシートの供給元の詳細情報
- ・製造者/納入者:  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkck@aol.com  
www.emsdiasum.com
- ・その他の情報問い合わせ先: Product safety department
- ・緊急通報用電話番号:  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 危険有害性の要約

- ・純物質または混合物の分類



健康に危険

感受性(呼吸器) 区分1

H334 吸入するとアレルギー, ぜん(喘)息又は呼吸困難を起こすおそれ



急性毒性(吸入) 区分4

H332 吸入すると有害

皮膚腐食性/刺激性 区分2

H315 皮膚刺激

重篤な眼の損傷性/眼刺激性 区分2A

H319 強い眼刺激

感受性(皮膚) 区分1

H317 アレルギー性皮膚反応を起こすおそれ

特定標的臓器有害性(単回暴露) 区分3

H335 呼吸器への刺激のおそれ

水生環境有害性(急性毒性) 区分2

H401 水生生物に毒性

水生環境有害性(慢性毒性) 区分3

H412 長期継続的影響によって水生生物に有害

- ・ラベル要素

- ・GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

- ・危険図表



GHS07 GHS08

- ・表示語 危険

(2ページに続く)



# 安全データシート

## JIS Z 7253:2012 による

印刷日: 2021.10.08

改訂日: 2021.10.08

商品名: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(1ページの続き)

### 危険と定められた成分をラベル表示:

Glutaraldehyde

### 危険文句

吸入すると有害

皮膚刺激

強い眼刺激

吸入するとアレルギー、ぜん（喘）息又は呼吸困難を起こすおそれ

アレルギー性皮膚反応を起こすおそれ

呼吸器への刺激のおそれ

水生生物に毒性

長期継続的影響によって水生生物に有害

### 注意文句

粉じん/煙/ガス/ミスト/蒸気/スプレーの吸入を避けること。

保護手袋/目保護帯/顔保護面の着用

【換気が不十分な場合】呼吸用保護具を着用すること。

眼に入った場合：水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。

施錠して保管すること。

現地/地域/国/国際規定に従い内容物・容器の露出

### その他の危険性

PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント

PBT (残留性、生物濃縮性、毒性物質): 情報なし

vPvB (高残留性、高生物濃縮性物質): 情報なし

## 3 組成及び成分情報

化学的特性: 混合物

説明: 危険のない混ぜ合わせかたをした以下成分からなる混合物

### 危険な含有成分:

111-30-8	Glutaraldehyde	>2.5-≤10%
	⚠ 急性毒性(経口) 区分3, H301; 急性毒性(吸入) 区分2, H330; ⚠ 感作性(呼吸器) 区分1, H334; ⚠ 皮膚腐食性/刺激性 区分1B, H314; ⚠ 水生環境有害性(急性毒性) 区分1, H400; 水生環境有害性(慢性毒性) 区分2, H411; ⚠ 感作性(皮膚) 区分1A, H317; 特定標的臓器有害性(単回暴露) 区分3, H335; 引火性液体 区分4, H227	

## 4 応急措置

### 応急手当処置に関する説明

#### 一般情報:

中毒症状は時間がかかり経過した後に現れる場合もあるため、事故後最低48時間は医師の監視のもとで過ごすこと

#### 吸い込んだ場合:

外気を十分に送り込み、安全のため医師を呼ぶ

意識不明の場合には安定させた状態で横向きに寝かせ、移送する

#### 皮膚が触れた場合: 即刻石鹸と水で洗い、よくすすぐ

#### 眼に入った場合:

瞼を開けたまま、流水で何分間か眼をすすぎ、状態がよくなる場合には医者に相談する

#### 飲み込んだ場合: 状態が好転しない場合には医師に相談する

#### 医師への指示事項:

最も重要な急性及び慢性の症状及び影響 追加的な関連情報は得られていません。

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・何らかの即時医療処置及び特別治療の必要性を示す兆候 追加的な関連情報は得られていません。  
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### 5 火災時の措置

- ・消火剤
- ・適切な消火剤: 周辺の状況に合わせた消火措置を取る
- ・本化学物質または混合物から発生する特別な危険性 追加的な関連情報は得られていません。
- ・消防士向けアドバイス
- ・特別な保護装備: 呼吸保護マスクを着用

### 6 漏出時の措置

- ・個人的予防措置、保護具及び応急処置法 必要ない
- ・環境関連予防措置:  
河川、下水処理施設に流れ込んだ場合には関係当局に連絡する  
大量の水で薄める  
下水処理施設、地上水あるいは地下水に達しないようにする
- ・封じ込め及び浄化のための方法及び材料:  
液体吸収材 (砂、珪藻土、酸結合剤、ユニバーサル結合剤、おがくず) で吸収する  
13 項に下がい汚染材は廃棄物として処理する  
十分な換気を心がける
- ・他のセクションへの言及  
安全な取り扱い方に関しては 7 項を参照  
人の保護装備の情報に関しては 8 項を参照  
廃棄処分にに関しては 13 項参照

### 7 取り扱い及び保管上の注意

- ・取り扱い方:
- ・安全操作のための予防措置  
作業場では十分な換気、埃を吸い取るよう心がける  
エアゾールの発生を防ぐ
- ・火災および爆発防止に関する注意事項: 特別な措置は必要ない
- ・混融危険性を含めた安全貯蔵条件
- ・保管:  
保管スペースおよび容器に関する要求事項: 特別な要求事項なし  
同じ場所に保管する際の注意事項: 必要ない  
保管条件に関するその他の注意事項: 容器は密閉した状態に保つ  
特定の最終用途 追加的な関連情報は得られていません。

### 8 ばく露防止及び保護措置

- ・技術設備の形体に関する追加注意事項: その他の申し立てなし、7 項参照

#### 管理パラメーター

- ・作業場において限界値の監視を要する成分:

111-30-8 Glutaraldehyde

OEL 最大許容濃度: 0.03 ppm

- ・追加注意事項: 生成時に有効なリストがもとなっている

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### ・ 暴露管理

#### ・ 人的保護装備:

#### ・ 一般防止措置および衛生措置:

- 食物、飲み物、飼料からは遠ざける
- 汚れのしみ込んだ衣類は即刻脱ぐ
- 休憩の前、作業終了後には手を洗う
- 眼に入らないよう、また皮膚に接触しないよう注意する

#### ・ 呼吸保護器具:

- 短時間もしくは負担が小さい場合には呼吸フィルター付装置を、集中的にあるいは長時間触れる場合には、酸素ポンペ付き呼吸保護装備を使用すること

#### ・ 手の保護:



保護手袋

手袋の材質は物質/材料/調合剤に対して耐性であり、成分を通すことがあってはならないテストをおこなっていないため、物質/調合剤/化合物を取り扱う際の手袋の材質として勧められるものはない

浸透時間、透過性および劣化の点を留意しながら手袋の材質を選択する

#### ・ 手袋材

適当な手袋は材質だけではなく、その他の品質によっても変わり、各メーカーによって異なる。調合する際の物質は複数の成分から生成されるため、手袋材の耐久性は予想できない。このため使用前には必ずチェックしなければならない

#### ・ 手袋材の浸透時間

正確な浸透時間については保護手袋メーカーに問い合わせ、それを遵守すること

#### ・ 眼の保護:



密閉式保護めがね

## 9 物理的及び化学的性質

### ・ 基本的な物理及び化学特性に関する情報

#### ・ 一般指示事項

#### ・ 外観

- ・ 形: 液状
- ・ 色: 製品説明書どおり
- ・ におい: 特徴的
- ・ 嗅覚閾値: 決まっていない.

・ pH-値 約 20 °C: 7.4

#### ・ 状態の変化

- ・ 融点/融解範囲: 0 °C
- ・ 沸点/沸点範囲: 100 °C

・ 引火点: 情報なし

・ 発火性 (個体、気体): 情報なし

・ 分解温度: 決まっていない.

・ 自然発火性: プロダクトは自然発火しない

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・爆発の危険:	プロダクトは爆発する危険はない
・爆発限界:	
・下限:	決まっていない.
・上限:	決まっていない.
・蒸気圧 約 20 °C:	23 hPa
・密度 約 20 °C:	1 g/cm <sup>3</sup>
・相対的密度	決まっていない.
・蒸気密度	決まっていない.
・気化速度	決まっていない.
・以下成分における消和性/との混和性	
・水:	完全に混合できる
・分配係数 (n-オクタノール/水):	決まっていない.
・粘性:	
・力学的:	決まっていない.
・運動性:	決まっていない.
・溶剤含有量:	
・水:	97.5 %
・固形物含有量:	0.0 %
・他の情報	追加的な関連情報は得られていません。

## 10 安定性及び反応性

- ・反応性 追加的な関連情報は得られていません。
- ・化学的安定性
- ・熱分解/回避すべき条件: 規定どおりの使用では分解しない
- ・危険反応の可能性 危険な反応は起きていない
- ・避けるべき条件 追加的な関連情報は得られていません。
- ・不適合物質: 追加的な関連情報は得られていません。
- ・危険な分解生成物: 危険な分解プロダクトはない

## 11 有害性情報

- ・毒性学的影響に関する情報
- ・急性毒性:

・分類上の LD/LC50 値:		
111-30-8 Glutaraldehyde		
口	LD50	134 mg/kg (rat)
皮膚	LD50	2,560 mg/kg (rabbit)

- ・初期刺激作用:
- ・皮膚において: 皮膚と粘膜を刺激
- ・眼において: 刺激作用
- ・感作作用:
- 吸い込むことで感作作用がある場合あり
- 皮膚接触によって感作作用の可能性あり

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### ・毒性に関する補足注意事項:

調査に関するEUの最新の一般分類ガイドラインの計算によれば、プロダクトでは以下の危険が見込まれる  
 毒性がある  
 刺激的

## 12 環境影響情報

### ・毒性

・水生生物に対する毒性: 追加的な関連情報は得られていません。

・持続性及び分解性 追加的な関連情報は得られていません。

### ・環境システムにおける作用:

・生体内蓄積能 追加的な関連情報は得られていません。

・土壌内移動性 追加的な関連情報は得られていません。

### ・生態毒性作用:

#### ・注:

魚類に対して毒性が高い

魚類にたいして毒性がある

### ・その他のエコロジーに関する注意事項:

#### ・一般注意事項:

水への危険度分類2(ドイツの規定)(自己査定): 水に対する危険性あり

地下水、河川あるいは下水設備に流してはならない

地下に少量流れ込んでも飲料水を汚染する

水域においては魚やプランクトンにも毒性がある

水生生物にとり毒性が高い

水生生物にとり毒性がある

・PBT (残留性、生物濃縮性、毒性物質) 及び vPvB (高残留性、高生物濃縮性物質) アセスメント

・PBT (残留性、生物濃縮性、毒性物質): 情報なし

・vPvB (高残留性、高生物濃縮性物質): 情報なし

・他の副作用 追加的な関連情報は得られていません。

## 13 廃棄上の注意

### ・廃棄物処理方法

・勧告: 家庭ごみとはいっしょに処分できない。下水処理施設に流してはならない

### ・洗浄されていないパッケージ:

・勧告: 関係当局の規則に従って処分する

・推薦する洗剤: 水、場合に応じて洗剤も使って

## 14 輸送上の注意

・UN 番号

・ADR, IMDG, IATA 無効

・国連出荷正式名

・ADR, IMDG, IATA 無効

・輸送の危険性クラス

・ADR, ADN, IMDG, IATA

・分類 無効

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・パッケージの分類 ・ADR, IMDG, IATA	無効
・環境危険:	情報なし
・ユーザー用特別予防措置	情報なし
・マルポール条約 ( MARPOL73/78) 付属書II及び IBCコードに準じたバルク輸送	情報なし
・UN "模範規制:	無効

### 15 適用法令

- ・該当純物質または混合物に対する安全、衛生及び環境規制・法律
- ・化審法

#### ・既存化学物質

111-30-8	Glutaraldehyde	2-509
7782-85-6	Disodium Orthophosphate Heptahydrate	1-497
10049-21-5	Sodium Phosphate Monobasic Monohydrate	1-497

#### ・特定化学物質

内容成分はリストアップされていない

#### ・監視化学物質、旧第二種監視化学物質、旧第三種監視化学物質

111-30-8	Glutaraldehyde	旧第二
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#### ・優先評価化学物質

内容成分はリストアップされていない

#### ・白物質

内容成分はリストアップされていない

#### ・既存化学物質安全性点検結果 ( 分解性・蓄積性 )

111-30-8	Glutaraldehyde	
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#### ・既存化学物質安全性点検結果 ( 毒性 )

内容成分はリストアップされていない

#### ・PRTR 制度 - 第一種指定化学物質

111-30-8	Glutaraldehyde	85
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#### ・PRTR 制度 - 第二種指定化学物質

内容成分はリストアップされていない

#### ・毒物及び劇物取締法:劇物

内容成分はリストアップされていない

#### ・毒物及び劇物取締法:有機シアン化合物から除かれるもの

内容成分はリストアップされていない

#### ・毒物及び劇物取締法:毒物

内容成分はリストアップされていない

#### ・毒物及び劇物取締法:特定毒物

内容成分はリストアップされていない

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- ・労働安全衛生法

- ・危険物

- ・爆発性の物 ( 施行令別表第 1 第 1 号 )

内容成分はリストアップされていない

- ・発火性の物 ( 施行令別表第 1 第 2 号 )

内容成分はリストアップされていない

- ・酸化性の物 ( 施行令別表第 1 第 3 号 )

内容成分はリストアップされていない

- ・引火性の物 ( 施行令別表第 1 第 4 号 )

内容成分はリストアップされていない

- ・可燃性のガス ( 施行令別表第 1 第 5 号 )

内容成分はリストアップされていない

- ・特定化学物質等

- ・第一類物質

内容成分はリストアップされていない

- ・第二類物質

内容成分はリストアップされていない

- ・第三類物質

内容成分はリストアップされていない

- ・名称等を通知すべき有害物 ( 別表第 9 )

111-30-8 | Glutaraldehyde

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- ・製造許可物質

内容成分はリストアップされていない

- ・鉛中毒予防規則 ( 施行令別表第 4 )

内容成分はリストアップされていない

- ・四アルキル鉛中毒予防規則 ( 施行令別表第 5 )

内容成分はリストアップされていない

- ・有機溶剤中毒予防規則第 ( 施行令別表第 6 の 2 )

- ・第一種有機溶剤等

内容成分はリストアップされていない

- ・第二種有機溶剤等

内容成分はリストアップされていない

- ・第三種有機溶剤等

内容成分はリストアップされていない

- ・強い変異原性が認められた化学物質

111-30-8 | Glutaraldehyde

- ・消防法

111-30-8 | Glutaraldehyde

- ・海洋汚染防止法

111-30-8 | Glutaraldehyde

- ・特定物質等の規制等によるオゾン層の保護に関する法律

- ・特定物質代替物質

内容成分はリストアップされていない

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## ・ 特定物質

内容成分はリストアップされていない

## ・ 大気汚染防止法

111-30-8 | Glutaraldehyde

## ・ 水質汚濁防止法

## ・ 有害物質

内容成分はリストアップされていない

## ・ 指定物質

内容成分はリストアップされていない

## ・ GHS ラベル要素

本製品はGHS(化学品の分類および表示に関する世界調和システム)により分類及び表示されています。

## ・ 危険図表



GHS07 GHS08

## ・ 表示語 危険

## ・ 危険と定められた成分をラベル表示:

Glutaraldehyde

## ・ 危険文句

吸入すると有害

皮膚刺激

強い眼刺激

吸入するとアレルギー、ぜん(喘)息又は呼吸困難を起こすおそれ

アレルギー性皮膚反応を起こすおそれ

呼吸器への刺激のおそれ

水生生物に毒性

長期継続的影響によって水生生物に有害

## ・ 注意文句

粉じん/煙/ガス/ミスト/蒸気/スプレーの吸入を避けること。

保護手袋/目保護帯/顔保護面 の着用

【換気が不十分な場合】呼吸用保護具を着用すること。

眼に入った場合: 水で数分間注意深く洗うこと。次にコンタクトレンズを着用していて容易に外せる場合は外すこと。その後も洗浄を続けること。

施錠して保管すること。

現地/地域/国/国際規定に従い内容物・容器の露出

## ・ 化学物質の安全性評価: 化学物質安全性評価が遂行されていない

## 16 その他の情報

この情報は現在の我々の認識に基づいている。ただし、プロダクトの特性を保証するものではなく、また契約において法的根拠にはならない

## ・ 縮約と二文字語:

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)

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LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

PRTR/化管法: 化学物質排出把握管理促進法

引火性液体 区分4: Flammable liquids – Category 4

急性毒性(経口) 区分3: Acute toxicity – Category 3

急性毒性(吸入) 区分2: Acute toxicity – Category 2

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

皮膚腐食性/刺激性 区分1B: Skin corrosion/irritation – Category 1B

皮膚腐食性/刺激性 区分2: Skin corrosion/irritation – Category 2

重篤な眼の損傷性/眼刺激性 区分2A: Serious eye damage/eye irritation – Category 2A

感作性(呼吸器) 区分1: Respiratory sensitisation – Category 1

感作性(皮膚) 区分1: Skin sensitisation – Category 1

感作性(皮膚) 区分1A: Skin sensitisation – Category 1A

特定標的臓器有害性(単回暴露) 区分3: Specific target organ toxicity (single exposure) – Category 3

水生環境有害性(急性毒性) 区分1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

水生環境有害性(急性毒性) 区分2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

水生環境有害性(慢性毒性) 区分2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

水生環境有害性(慢性毒性) 区分3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

JP



# 물질안전보건자료

## GHS에 따라

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개정: 2021.10.08

### 1 화학제품과 회사에 관한 정보

- **제품 식별자**
- **제품명: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**
- **상품번호:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도** 추가적인 정보가 존재하지 않습니다.
- **제품의 권고 용도와 사용상의 제한:** 실험실화학품
- **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  
  
 -----  
 Daedok Science, Co. Ltd.  
 34141 E10 Korea Advanced Institute of Science  
 Guseong-Dong, Yuseong-gu, Daejeon,  
 Korea  
 Phone: 82 42 710 2091  
 Fax: 82 42 367 0005  
 Website: www.labsmro.com
- **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 흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음



급성 독성 - 흡입 - 구분 4

H332 흡입하면 유해함

피부 부식성/피부 자극성 - 구분 2

H315 피부에 자극을 일으킴

심한 눈 손상성/눈 자극성 - 구분 2

H319 눈에 심한 자극을 일으킴

피부 과민성 - 구분 1

H317 알레르기성 피부 반응을 일으킬 수 있음

특정표적장기 독성 - 1회 노출 - 구분 3

H335 호흡 자극성을 일으킬 수 있음

(2 쪽에 계속)

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수생환경 유해성 - 만성3

H412 장기적 영향에 의해 수생생물에 유해함

**· 라벨표기 요소**

**· GHS 라벨 요소**

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

**· 그림문자**



GHS07 GHS08

**· 신호어 위험**

**· 상표상에명확히위험성이표시된성분:**

글루타르알데히드

**· 유해.위험 문구**

흡입하면 유해함

피부에 자극을 일으킴

눈에 심한 자극을 일으킴

흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음

알레르기성 피부 반응을 일으킬 수 있음

호흡 자극성을 일으킬 수 있음

장기적 영향에 의해 수생생물에 유해함

**· 예방조치 문구**

분진·흡·가스·미스트·증기·스프레이의 흡입을 피하십시오.

보호장갑 / 눈 보호대 / 안면 보호구 착용.

호흡 보호구를 착용하십시오.

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

밀봉하여 저장하십시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

**· 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.

**· 위험 요소:**

111-30-8	글루타르알데히드 <div style="font-size: small; padding: 2px;"> <span style="color: red;">⚠</span> 급성 독성 - 경구 - 구분 3, H301; <span style="color: red;">⚠</span> 급성 독성 - 흡입 - 구분 2, H330; <span style="color: red;">⚠</span> 호흡기 과민성 - 구분 1, H334; <span style="color: red;">⚠</span> 피부 부식성/피부 자극성 - 구분 1, H314; <span style="color: red;">⚠</span> 수생환경 유해성 - 급성 1, H400; 수생환경 유해성 - 만성2, H411; <span style="color: red;">⚠</span> 피부 과민성 - 구분 1, H317; 특정표적장기 독성 - 1회 노출 - 구분 3, H335                 </div>	>2.5-≤10%
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KR

(3 쪽에계속)

# 물질안전보건자료

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### 4 응급조치 요령

#### · 응급조치요령 내용

##### · 일반적 정보:

중독 증상은 몇 시간 이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.

##### · 흡입했을 때:

신선한 공기를 쐬고 나서 반드시 의료진의 도움을 구한다.  
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

##### · 피부에 접촉했을 때:

즉시 물과 비누로 씻고 잘 행군다.

##### · 눈에 들어갔을 때:

흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 증상이 지속될 경우에는 의사와 상담한다.

##### · 먹었을 때:

증상이 지속될 경우에는 의사와 상담한다.

##### · 기타 의사의 주의사항:

· 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.  
· 즉각적인 의료 처치 및 특별 치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

#### · 소화제

- 적절한 소화제: 주변 환경에 맞는 화재 진화 방법을 사용한다.
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.
- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

### 6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 필요없음.
- 환경 관련 예방조치:  
하천이나 하수도로 유입되었을 경우 해당 관청에 보고한다.  
많은 물로 희석 시킨다.  
하수도망/해수면 위 의물/지하수로도 달하지 않게 한다.
- 밀폐 및 정화 방법과 소재:  
액체가 혼합된 물질(모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.  
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.  
충분한 환기가 되도록 한다.
- 타 섹션 참조  
안전 관리에 대한 정보는 제7 장을 참고하십시오.  
개인 보호 장비에 대한 정보는 제8 장을 참고하십시오.  
쓰레기 처리에 대한 정보는 제13 장을 참고하십시오.

### 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 예방 대책에 관한 정보: 특별한 조치가 필요없음.
- 혼합 위험성 등 안전 저장 조건
- 보관:  
· 안전한 저장 방법: 특별한 요구사항이 없음.

(4 쪽에 계속)

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- 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음
- 보관 조건에 관한 추가적인 정보: 용기를새지않게밀폐한채보관한다.
- 구체적인 최종 사용자 추가적인 정보가 존재하지 않습니다.

### 8 노출방지 및 개인보호구

- **첨단시설 디자인에 대한 추가정보:** 더 이상 의 자료는 없음. 항 목 7 을 참고하시 오.

· 통제 변수

- 화학물질의 노출기준, 생물학적 노출기준 등:

**111-30-8 글루타르알데히드**

TLV (KR)	최고노출기준: 0.05 ppm
REL (US)	최고노출기준: 0.8 mg/m <sup>3</sup> , 0.2 ppm See Pocket Guide App. C
TLV (US)	최고노출기준: 0.2 mg/m <sup>3</sup> , 0.05 ppm DSEN;RSEN ;activated or inactivated

- **추 가 정보:** 제 조 할 당 시에 유 효 한 목 록을 기 초로 사 용 했 다.

· 노출 통제

· 개인 보호구

· **일반적보호조치및위생조치:**

- 식료 품, 음 료 수와 사 료 로 부 터 멀 리 떨 어 뜨 려 놓 는 다.
- 더 러 워 지 거 나 음 료 수 가 물 은 옷 은 즉 시 탈 의 한 다.
- 휴 식 전 이 나 작 업 이 끝 날 때 마 다 손 을 씻 는 다.
- 눈 과 피 부 와 의 접 촉 은 피 한 다.

· **호흡기 보호:**

- 단 시 간 또 는 경 미 한 오 염 의 경 우 에 는 호 흡 여 과 기 를 사 용 한 다. 심 각 한 또 는 장 기 간 노 출 시 에 는 호 흡 보 호 장 비 를 사 용 한 다.

· **손 보호:**



보호용 장갑

- 장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성있어야한다.
- 테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
- 투과 시간, 침투율 과 저하를 고 려해 서 장 갑 재 료 를 선택 한 다.

· **장갑의재료**

- 적합장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어져야한다.

- **장 갑 재 료 의 투 과 시 간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

· **눈 보호:**



확조이는보안경

KR

(5 쪽에계속)

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### 9 물리화학적 특성

· 기본 물리 및 화학적 특성에 대한 정보	
· 일반정보	
· 외형	
· 물리적 상태:	액체의
· 색:	제 품 표 시 에 따름
· 냄새:	특색있는
· 후각역치	알맞지않다.
· pH 의경우 20 °C:	7.4
· 상태변화	
· 녹는점/어는점:	0 °C
· 초기 끓는점과 끓는점 범위:	100 °C
· 인화점:	해당사항 없음.
· 인화성(고체, 기체):	해당사항 없음.
· 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 g/cm <sup>3</sup>
· 비중:	알맞지않다.
· 증기밀도:	알맞지않다.
· 증발 속도:	알맞지않다.
· 용해도:	
· 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매내용물	
· 물:	97.5 %
· VOC (EU)	0.00 %
· 고체의 함량:	0.0 %
· 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 위험한 반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.

(6 쪽에계속)

# 물질안전보건자료

## GHS에 따라

인쇄일자: 2021.10.08

개정: 2021.10.08

**제품명: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(5 쪽부터계속)

- **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 글루타르알데히드**

구강의	LD50	134 mg/kg (rat)
피부의	LD50	2,560 mg/kg (rabbit)

- **일차적 자극 효과:**
- **피부 부식성 또는 자극성:** 피부와점막을자극한다.
- **심한 눈 손상 또는 자극성:** 자극
- **감각화:**  
호흡을통한감각화가가능성이있다.  
피부접촉을통하여감각화가가능성이있다.
- **추가적인 독성에 관한 정보:**  
이제품은유럽공동체의공동분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전준비에대하여제시하고있다.  
건강에해로운  
자극적인

### 12 환경에 미치는 영향

- **독성**
- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성** 추가적인 정보가 존재하지 않습니다.
- **생태독성:**
- **의견:**  
어류에독이됨  
어류에해로움
- **추가적인 생태학 정보:**
- **일반 특징:**  
수질오염등급 2 (자체등급분류): 수질오염이된  
지하수나, 하천으로또는하수도망에도달하지않게한다.  
지하수로경미한양이유입되었을경우엔이미식수오염상태이다  
하천에서는역시물고기나플랑크톤게는독성이있다.  
물속의유기체에독이되는것  
물속의유기체에해가되는것
- **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.
- **기타 부작용** 추가적인 정보가 존재하지 않습니다.

KR

(7 쪽에계속)

# 물질안전보건자료

## GHS에 따라

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**제품명: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(6 쪽부터계속)

### 13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장:
- 권고: 당국의지침에입각한쓰레기처리.
- 추천 세정제: 경우에따라서세제가첨가된물

### 14 운송에 필요한 정보

· 유엔 번호	
· ADR, IMDG, IATA	누락되다
· UN 적정 선적명	
· ADR, IMDG, IATA	누락되다
· 교통 위험 클래스	
· ADR, ADN, IMDG, IATA	
· 등급	누락되다
· 용기등급	
· ADR, IMDG, IATA	누락되다
· 환경적 유해물질:	해당사항 없음.
· 이용자 특별 예방조치	해당사항 없음.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송	해당사항 없음.
· UN "모범 규제":	누락되다

### 15 법적 규제현황

· 산업안전보건법에 의한 규제:		
· 제조 등 금지물질:	어떠한내용물도목록화되어있지않다	
· 허가대상물질:	어떠한내용물도목록화되어있지않다	
· 관리대상유해물질:	111-30-8   글루타르알데히드	
· 작업환경측정 대상 유해인자	111-30-8   글루타르알데히드	1A1
· 특수건강진단 대상 유해인자	111-30-8   글루타르알데히드	1A2
· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법률		
· Korean Existing Chemical Inventory		
7732-18-5	물	KE-35400
111-30-8	글루타르알데히드	KE-27969

(8 쪽에계속)

# 물질안전보건자료

## GHS에 따라

인쇄일자: 2021.10.08

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(7 쪽부터계속)

**· 화학물질관리법**

**· 사고대비물질**

어떠한내용물도목록화되어있지않다

**· 금지물질**

어떠한내용물도목록화되어있지않다

**· 제한물질**

어떠한내용물도목록화되어있지않다

**· 유독물질**

111-30-8 글루타르알데히드

**· 허가물질**

111-30-8 글루타르알데히드

**· 등록 또는 신고 면제대상 화학물질**

7732-18-5 물

**· ‘21년까지 등록하여야 할 암, 돌연변이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 기존화학물질**

어떠한내용물도목록화되어있지않다

**· 중점관리물질의 지정**

**· 표1 중점관리물질(제2조 관련)**

어떠한내용물도목록화되어있지않다

**· 표2 중점관리물질(제2조 관련)**

어떠한내용물도목록화되어있지않다

**· GHS 라벨 요소**

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

**· 그림문자**



GHS07 GHS08

**· 신호어 위험**

**· 상표상에명확히위험성이표시된성분:**

글루타르알데히드

**· 유해·위험 문구**

흡입하면 유해함

피부에 자극을 일으킴

눈에 심한 자극을 일으킴

흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음

알레르기성 피부 반응을 일으킬 수 있음

호흡 자극성을 일으킬 수 있음

장기적 영향에 의해 수생생물에 유해함

**· 예방조치 문구**

분진·흙·가스·미스트·증기·스프레이의 흡입을 피하십시오.

보호장갑 / 눈 보호대 / 안면 보호구 착용.

호흡 보호구를 착용하십시오.

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

밀봉하여 저장하십시오.

(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

(9 쪽에계속)



# 물질안전보건자료

## GHS에 따라

인쇄일자: 2021.10.08

개정: 2021.10.08

**제품명: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

· **화학물질 안전성 평가:** 화학물질 안전성 평가가 수행되지 않음

(8 쪽부터계속)

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은기술하지않았으며계약적인법률관계에기반을두고있지도않다

- **최초 작성일자:** 2021.10.08
- **개정 횟수 및 최종 개정일자:** 1 / 2021.10.08
- **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

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

Tarikh cetak 08.10.2021

Disemak semula pada 08.10.2021

## 1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Nombor artikel:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** Tiada maklumat lanjut yang diperolehi.
- **Penggunaan bahan/sediaan** Bahan kimia makmal
- **Perincian pembekal risalah data keselamatan**
- **Pengilang/Pembekal:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- **Maklumat lanjut dapat diperolehi daripada:** Product safety department
- **Nombor telefon kecemasan:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Pengenalan bahaya

- **Pengelasan bahan atau campuran**



Bahaya kesihatan

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



Toks. Akut 4      H332 Memudaratkan jika tersedut.  
 Kreng. Kulit 2    H315 Menyebabkan kerengsaan kulit.  
 Kreng. Mata 2    H319 Menyebabkan kerengsaan mata yang serius.  
 Pem. Kulit 1      H317 Boleh menyebabkan tindak balas alahan kulit.  
 STOT SE 3        H335 Boleh menyebabkan kerengsaan pernafasan.

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

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



GHS07    GHS08

- **Kata isyarat Bahaya**
- **Komponen pelabelan yang menentukan bahaya:**  
1,5-pentanadial
- **Pernyataan Bahaya**  
Memudaratkan jika tersedut.

(Bersambung ke halaman 2)

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

Tarikh cetak 08.10.2021

Disemak semula pada 08.10.2021

**Nama dagang: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sambungan halaman 1)

Menyebabkan kerengsaan kulit.

Menyebabkan kerengsaan mata yang serius.

Boleh menyebabkan gejala alahan atau asma atau kesukaran bernafas jika tersedut.

Boleh menyebabkan tindak balas alahan kulit.

Boleh menyebabkan kerengsaan pernafasan.

Memudaratkan kepada hidupan akuatik dengan kesan kekal berpanjangan.

• **Pernyataan Berjaga-jaga**

Elakkan daripada tersedut habuk/wasap/gas/kabus/wap/semburan.

Pakai sarung tangan pelindung / perlindungan mata / perlindungan muka.

Jika pengalihudaraan tidak mencukupi, pakai perlindungan pernafasan.

**JIKA TERKENA MATA:** Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.

Simpan di tempat berkunci.

Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

• **Bahaya lain**

• **Keputusan penilaian PBT dan vPvB**

• **PBT:** Tidak berkenaan

• **vPvB:** Tidak berkenaan

### 3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

• **Ciri kimia:** Campuran

• **Keterangan:** Campuran bahan disenaraikan di bawah bersama dengan bahan tambah tidak berbahaya.

• **Komponen berbahaya :**

111-30-8	1,5-pentanadial ☠ Toks. Akut 3, H301; Toks. Akut 2, H330; ☠ Pem. Naf. 1, H334; ☠ Skin Corr. 1, H314; ☠ Akuatik Akut 1, H400; Akuatik Kronik 2, H411; ☠ Pem. Kulit 1, H317; STOT SE 3, H335	>2.5-≤10%
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### 4 Langkah-langkah pertolongan cemas

• **Keterangan langkah pertolongan cemas**

• **Maklumat am:**

Gejala keracunan boleh berlaku selepas beberapa jam, maka rawatan perubatan hendaklah diberikan sekurang-kurangnya 48 jam selepas kemalangan.

• **Jika tersedut:**

Berikan udara bersih dan pastikan rawatan doktor diperoleh.

Jika mangsa tidak sedarkan diri, letakkan pesakit dengan stabil dalam kedudukan mengiring untuk diangkat.

• **Jika terkena kulit:** Segera basuh dengan air dan sabun serta bilas bersih-bersih.

• **Jika terkena mata:**

Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit. Jika gejala berterusan, hubungi doktor.

• **Jika tertelan:** Jika gejala berterusan, hubungi doktor.

• **Maklumat untuk doktor:**

• **Gejala dan kesan paling penting, akut dan lewat** Tiada maklumat lanjut yang diperoleh.

• **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**

Tiada maklumat lanjut yang diperoleh.

MY

(Bersambung ke halaman 3)

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

Tarikh cetak 08.10.2021

Disemak semula pada 08.10.2021

**Nama dagang: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sambungan halaman 2)

### 5 Langkah-langkah pepadaman kebakaran

- **Bahan pemadam api**
- **Agan pemadam yang sesuai:** Gunakan kaedah pepadaman kebakaran yang sesuai dengan keadaan sekeliling.
- **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperoleh.
- **Panduan kepada pemadam kebakaran**
- **Kelengkapan perlindungan:** Peralatan perlindungan pernafasan mulut.

### 6 Langkah-langkah pelepasan tidak sengaja

- **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan** Tidak diperlukan.
- **Langkah perlindungan alam sekitar:**  
Hubungi pihak berkuasa berkaitan jika berlaku peresapan masuk ke dalam saluran air atau sistem pembedungan. Cairkan dengan air yang banyak.  
Jangan biarkannya memasuki pembentung/air permukaan atau tanah.
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**  
Serap dengan bahan cecair pengikat (pasir, diatomit, pengikat asid, pengikat semesta, habuk papan)  
Lupuskan bahan tercemar sebagai sisa mengikut perkara 13.  
Pastikan pengalihudaraan mencukupi.
- **Rujukan ke bahagian lain**  
Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.  
Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.  
Lihat Bahagian 13 untuk maklumat pelupusan.

### 7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**  
Pastikan pengalihudaraan/ekzos yang mencukupi di tempat kerja.  
Elakkan pembentukan aerosol.
- **Maklumat kebakaran dan perlindungan daripada letupan:** Tiada langkah berjaga-jaga yang khusus diperlukan.
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** Tiada keperluan khusus.
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:** Pastikan bekas sentiasa bertutup rapat.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperoleh.

### 8 Kawalan pendedahan dan perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** Tiada maklumat lanjut, lihat perkara 7.
- **Parameter kawalan**

· **Ramuan dengan nilai had yang memerlukan pemantauan di tempat kerja:**

**111-30-8 1,5-pentanadial**

PEL had siling: 0.21 mg/m<sup>3</sup>, 0.05 ppm

- **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.

(Bersambung ke halaman 4)

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

Tarikh cetak 08.10.2021

Disemak semula pada 08.10.2021

**Nama dagang: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sambungan halaman 3)

- **Kawalan pendedahan**
- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**  
 Jauhkan daripada makanan, minuman dan makanan haiwan.  
 Segera tanggalkan semua pakaian yang tercemar dan kotor.  
 Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.  
 Elakkan daripada terkena mata dan kulit.
- **Perlindungan pernafasan:**  
 Jika berlaku pendedahan sekejap atau sedikit pencemaran, gunakan alat penapis pernafasan. Jika berlaku pendedahan yang intensif atau berpanjangan, gunakan alat pernafasan perlindungan serba lengkap.
- **Perlindungan tangan:**



Sarung tangan pelindung.

Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.  
 Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.  
 Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.

- **Bahan sarung tangan**  
 Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain. Memandangkan produk merupakan suatu sediaan daripada beberapa bahan, ketahanan bahan sarung tangan tidak boleh dipastikan terlebih dahulu, oleh itu sarung tangan hendaklah diperiksa sebelum digunakan.
- **Jangka masa penyerapan bahan sarung tangan**  
 Waktu kemunculan yang tepat hendaklah diperoleh pengeluar sarung tangan pelindung dan hendaklah dipatuhi.
- **Perlindungan mata:**



Gogal bertutup rapat

### 9 Sifat fizikal dan kimia

- **Maklumat tentang ciri fizik dan kimia**
- **Maklumat Am**
- **Rupa:**
- **Bentuk:** Bendalir
- **Warna:** Mengikut spesifikasi produk
- **Bau:** Ciri
- **Ambang bau:** Tidak ditentukan.
- **Nilai pH pada 20 °C:** 7.4
- **Perubahan pada keadaan**
- **Takat lebur/takat beku:** 0 °C
- **Takat didih awal dan julat didih:** 100 °C
- **Takat kilat:** Tidak berkenaan
- **Kemudahbakaran (pepejal, gas):** Tidak berkenaan
- **Suhu penguraian:** Tidak ditentukan.

(Bersambung ke halaman 5)

MY

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

Tarikh cetak 08.10.2021

Disemak semula pada 08.10.2021

**Nama dagang: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sambungan halaman 4)

· <b>Suhu pengautocucuhan</b>	Produk tidak terucuh sendiri
· <b>Bahaya letupan:</b>	Produk tidak ada bahaya letupan.
· <b>Had letupan :</b>	
· <b>Bawah:</b>	Tidak ditentukan.
· <b>Atas:</b>	Tidak ditentukan.
· <b>Tekanan wap pada 20 °C:</b>	23 hPa
· <b>Ketumpatan pada 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Ketumpatan bandingan</b>	Tidak ditentukan.
· <b>Ketumpatan wap</b>	Tidak ditentukan.
· <b>Kadar penyejatan</b>	Tidak ditentukan.
· <b>Keterlarutan dalam / Keterlarutcampuran dengan</b>	
· <b>Air:</b>	Terlarut campur sepenuhnya.
· <b>Pekali sekatan: n-oktanol/air</b>	Tidak ditentukan.
· <b>Kelikatan:</b>	
· <b>Dinamik:</b>	Tidak ditentukan.
· <b>Kinematik:</b>	Tidak ditentukan.
· <b>Kandungan pelarut:</b>	
· <b>Air:</b>	97.5 %
· <b>Kandungan pepejal:</b>	0.0 %
· <b>Maklumat lain</b>	Tiada maklumat lanjut yang diperoleh.

### 10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperoleh.
- **Kestabilan kimia**
- **Penguraian terma/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperoleh.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperoleh.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

### 11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**

· **Nilai LD/LC50 yang berkaitan untuk pengelasan:**

**111-30-8 1,5-pentanadial**

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

- **Kesan kerengsaan primer:**
- **Kakisan atau kerengsaan kulit** Merengsa kepada kulit dan mukus membran.
- **Kerosakan atau kerengsaan mata yang serius** Kesan merengsa.
- **Pemekaan pernafasan / kulit**  
Pemekaan mungkin berlaku melalui penyedutan.  
Pemekaan mungkin berlaku jika terkena kulit.

(Bersambung ke halaman 6)

MY

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

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(Sambungan halaman 5)

· **Maklumat tambahan toksikologi:**

Produk menunjukkan bahaya berikut mengikut kaedah pengiraan Garis Panduan Pengelasan Am EU bagi Sediaan seperti yang dikeluarkan dalam versi terbaru:

Memudaratkan  
Perengsa

### 12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperoleh.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperoleh.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperoleh.
- **Mobiliti di dalam tanah** Tiada maklumat lanjut yang diperoleh.
- **Kesan ekotoksik:**
- **Catatan:**  
Toksik kepada ikan.  
Memudaratkan kepada ikan.
- **Maklumat tambahan ekologi:**
- **Nota am:**  
Bahaya air kelas 2 (Peraturan Jerman) (Penilaian sendiri): berbahaya kepada air  
Jangan biarkan produk memasuki air tanah, saluran air atau sistem pembetulan.  
Bahaya kepada air minuman walaupun amat sedikit produk memasuki tanah.  
Juga beracun kepada ikan dan plankton dalam jasad air  
Toksik kepada organisma akuatik  
Memudaratkan organisma akuatik
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan
- **Kesan buruk yang lain** Tiada maklumat lanjut yang diperoleh.

### 13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**  
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembetulan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi
- **Agen pencuci yang disyorkan:** Air, jika perlu, digunakan bersama dengan agen pencuci.

### 14 Maklumat pengangkutan

- |  |           |
|--|-----------|
| · <b>Nombor UN</b>                       |           |
| · <b>ADR, IMDG, IATA</b>                 | Tidak sah |
| · <b>Nama penghantaran UN yang betul</b> |           |
| · <b>ADR, IMDG, IATA</b>                 | Tidak sah |

(Bersambung ke halaman 7)

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

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Disemak semula pada 08.10.2021

**Nama dagang: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sambungan halaman 6)

· <i>pengangkutan kelas bahaya</i>	
· <i>ADR, ADN, IMDG, IATA</i>	
· <i>Kelas</i>	Tidak sah
· <i>Kumpulan pembungkusan</i>	
· <i>ADR, IMDG, IATA</i>	Tidak sah
· <i>Hazard persekitaran:</i>	Tidak berkenaan
· <i>Langkah perlindungan khas untuk pengguna</i>	Tidak berkenaan
· <i>Pengangkutan dalam pukat menurut Lampiran II MARPOL73/78 dan Kod IBC</i>	Tidak berkenaan
· <i>"Peraturan Model" UN:</i>	Tidak sah

### 15 Maklumat pengawalseliaan

· *Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut*

· *Senarai Rujukan Bahan Berbahaya Alam Sekitar*

111-30-8	1,5-pentanadial
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· *Unsur label GHS Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).*

· *Piktogram hazard*



GHS07    GHS08

· *Perkataan isyarat Bahaya*

· *Komponen pelabelan yang menentukan bahaya:*

*1,5-pentanadial*

· *Pernyataan hazard*

*Memudaratkan jika tertedut.*

*Menyebabkan kerengsaan kulit.*

*Menyebabkan kerengsaan mata yang serius.*

*Boleh menyebabkan gejala alahan atau asma atau kesukaran bernafas jika tertedut.*

*Boleh menyebabkan tindak balas alahan kulit.*

*Boleh menyebabkan kerengsaan pernafasan.*

*Memudaratkan kepada hidupan akuatik dengan kesan kekal berpanjangan.*

· *Pernyataan langkah perlindungan*

*Elakkan daripada tertedut habuk/wasap/gas/kabus/wap/semburan.*

*Pakai sarung tangan pelindung / perlindungan mata / perlindungan muka.*

*Jika pengalihudaraan tidak mencukupi, pakai perlindungan pernafasan.*

*JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.*

*Simpan di tempat berkunci.*

*Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.*

· *Penilaian keselamatan bahan kimia: Penilaian Keselamatan Bahan Kimia belum dilakukan.*

MY

(Bersambung ke halaman 8)



## **Helaiian Data Keselamatan** menurut P.U.(A) 310/2013

Tarikh cetak 08.10.2021

Disemak semula pada 08.10.2021

**Nama dagang: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sambungan halaman 7)

### **16 Maklumat lain**

Maklumat ini berdasarkan maklumat kami yang terkini. Walau bagaimanapun, ini tidak akan menjadi jaminan bagi apa-apa ciri produk yang khusus dan tidak akan mewujudkan hubungan kontraktual yang sah dari segi undang-undang.

· **Singkatan dan akronim:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Toks. Akut 3: Ketoksikan akut – Kategori 3

Toks. Akut 2: Ketoksikan akut – Kategori 2

Toks. Akut 4: Ketoksikan akut – Kategori 4

Skin Corr. 1: Kakisan atau kerengsaan kulit – Kategori 1

Kreng. Kulit 2: Kakisan atau kerengsaan kulit – Kategori 2

Kreng. Mata 2: Kerosakan mata atau kerengsaan mata yang serius – Kategori 2

Pem. Naf. 1: Pemekaan pernafasan – Kategori 1

Pem. Kulit 1: Pemekaan kulit – Kategori 1

STOT SE 3: Ketoksikan organ sasaran khusus (pendedahan tunggal) – Kategori 3

Akuatik Akut 1: Berbahaya kepada persekitaran akuatik - bahaya akut – Kategori 1

Akuatik Kronik 2: Berbahaya kepada persekitaran akuatik - bahaya kronik – Kategori 2

Akuatik Kronik 3: Berbahaya kepada persekitaran akuatik - bahaya kronik – Kategori 3

# 安全資料表

## 根據 危害性化學品標示及通識規則

打印日期 2021.10.08

在 2021.10.08 審核

### 1 化學品與廠商資料

- 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 PHOSPHATE BUFFER, PH 7.4**
- 商品編號: 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- 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 危害辨識資料

#### · 緊急情況概述:

根據產品規格, 流體, 吸入有害。造成皮膚刺激。造成嚴重眼睛刺激。吸入可能導致過敏或哮喘病症狀或呼吸困難。可能造成皮膚過敏。可能造成呼吸道刺激。對水生生物有毒。對水生生物有害並具有長期持續影響。

#### · GHS危險性類別



健康危險

呼吸道過敏物質 第1級

H334 吸入可能導致過敏或哮喘病症狀或呼吸困難



急毒性物質(吸入) 第4級

H332 吸入有害

腐蝕/刺激皮膚物質 第2級

H315 造成皮膚刺激

嚴重損傷/刺激眼睛物質 第2A級

H319 造成嚴重眼睛刺激

皮膚過敏物質 第1級

H317 可能造成皮膚過敏

特定標的器官系統毒性物質(單一暴露) 第3級

H335 可能造成呼吸道刺激

水環境之危害物質(急毒性) 第2級

H401 對水生生物有毒

水環境之危害物質(慢毒性) 第3級

H412 對水生生物有害並具有長期持續影響

#### · 標籤因素

- GHS標籤元素 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

(在 2 頁繼續)

# 安全資料表

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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 PHOSPHATE BUFFER, PH 7.4

(在 1 頁繼續)

## · 圖示



GHS07 GHS08

## · 名稱 危險

## · 標籤上辨別危險的成份:

1,5- 戊二 醛

## · 危險字句

吸入有害

造成皮膚刺激

造成嚴重眼睛刺激

吸入可能導致過敏或哮喘病症狀或呼吸困難

可能造成皮膚過敏

可能造成呼吸道刺激

對水生生物有毒

對水生生物有害並具有長期持續影響

## · 警戒字句

## · 預防措施

避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

戴防護手套/防護眼罩/防護面具。

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。

## · 安全貯存

加鎖存放。

## · 廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

## · 其他有害性

· PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質)評價結果

· PBT(殘留性、生物濃縮性、毒性物質) 不適用的

· vPvB(高殘留性、高生物濃縮性物質): 不適用的

### 3 成分辨識資料

## · 混合物

· 描述: 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 急毒性物質(吞食) 第3級, H301; 急毒性物質(吸入) 第2級, H330;  呼吸道過敏物質 第1級, H334;  腐蝕/刺激皮膚物質 第1B級, H314;  水環境之危害物質(急毒性) 第1級, H400; 水環境之危害物質(慢毒性) 第2級, H411;  皮膚過敏物質 第1級, H317; 特定標的器官系統毒性物質(單一暴露) 第3級, H335; 易燃液體 第4級, H227; 急毒性物質(皮膚) 第5級, H313	>2.5-≤10%
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-TW

(在 3 頁繼續)

# 安全資料表

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(在 2 頁繼續)

### 4 急救措施

- **應急措施要領**
- **總說明:** 中毒的症狀可能會在幾個小時以後才出現;因此在發生事故之後起碼要有 48 小時的醫療觀察.
- **吸入:**
  - 供給新鮮空氣並且確保會叫醫生.
  - 萬一病人不清醒時,請讓病人側趟以便移動.
- **皮膚接觸:** 馬上用水和肥皂進行徹底的沖洗.
- **眼睛接觸:** 張開眼睛在流水下沖洗數分鐘. 如果症狀仍然持續,請諮詢醫生.
- **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 滅火措施

- **滅火方法**
- **滅火的方法和滅火劑:** 使用適合四周環境的滅火措施.
- **特別危險性** 無相關詳細資料.
- **特殊滅火方法**
- **消防人員特殊的防護裝備:** 口腔呼吸保護裝置.

### 6 洩漏處理方法

- **保護措施** 沒有要求.
- **環境保護措施:**
  - 如果滲入了水源或汗水系統,請通知有關當局.
  - 用大量的水進行稀釋.
  - 切勿讓其進入下水道/水面或地下水.
- **密封及淨化方法和材料:**
  - 吸收液體粘合原料 (沙粒、矽藻土、酸性粘合劑、通用粘合劑、鋸屑).
  - 根據第 13 條條款棄置受汙染物.
  - 確保有足夠的通風裝置.
- **參照其他部分**
  - 有關安全處理的資料請參閱第 7 節.
  - 有關個人保護裝備的資料請參閱第 8 節.
  - 有關棄置的資料請參閱第 13 節.

### 7 安全處置與儲存方法

- **操作處置**
- **儲存**
  - 確保工作間有良好的通風/排氣裝置.
  - 防止氣溶膠的形成.
- **有關火災及防止爆炸的資料:** 不需特別的措施.
- **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.

(在 4 頁繼續)

# 安全資料表

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(在 3 頁繼續)

- 有關儲存條件的更多資料: 將容器密封.
- 具體的最終用戶 無相關詳細資料.

### 8 暴露預防措施

- 工程控制方法: 沒有進一步數據, 見第 7 項.
- 控制變數

· 在工作場需要監控的限值成分

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PEL (TW) | PC-TWA: 0.82 mg/m<sup>3</sup>, 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汙染的衣服.
    - 在休息之前和工作完畢後請清洗雙手.
    - 避免和眼睛及皮膚接觸.
  - 呼吸系統防護:
    - 如果曾短暫接觸或在低汙染的情況下, 請使用呼吸過濾裝置. 如果曾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 物理及化學性質

- 有關基本物理及化學特性的資訊
- 一般說明
- 外觀:
- 形狀: 流體
- 顏色: 根據產品規格
- 氣味: 有特性的

(在 5 頁繼續)

# 安全資料表

## 根據 危害性化學品標示及通識規則

打印日期 2021.10.08

在 2021.10.08 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 PHOSPHATE BUFFER, PH 7.4**

(在 4 頁繼續)

· 嗅覺閾限	未決定.
· pH值 在 20 °C:	7.4
· 條件的更改	
· 熔點:	0 °C
· 沸點/初沸點和沸程:	100 °C
· 閃點:	不適用的
· 可燃性 (固體、氣體):	不適用的
· 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 g/cm <sup>3</sup>
· 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:	完全可拌和的
· 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:	
· 水:	97.5 %
· 固體成份:	0.0 %
· 其他資訊	無相關詳細資料。

### 10 安定性及反應性

- 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.

-TW-

(在 6 頁繼續)

# 安全資料表

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(在 5 頁繼續)

### 11 毒性資料

- 對毒性學影響的資訊
- 急性毒性:

- 與分類相關的 LD/ LC50 值:

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口腔	LD50	134 mg/kg (rat)
皮膚	LD50	2,560 mg/kg (rabbit)

- 主要的刺激性影響:
- 皮膚: 刺激皮膚和粘膜.
- 在眼睛上面: 刺激的影響.
- 致敏作用:  
通過吸入可能造成敏化作用.  
通過皮膚接觸可能造成敏化作用.
- 更多毒物的資料:  
根據有關配製的一般歐盟分類指南的計算方法 (刊印在最新版本), 該產品顯示以下的危險:  
有害的  
刺激性的

### 12 生態資料

- 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:  
對魚類有毒  
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。  
對水體中的魚和浮遊生物也有毒害。  
對水中的有機物有毒。  
對水中的有機物有危害。
- PBT(殘留性、生物濃縮性、毒性物質) 及 vPvB(高殘留性、高生物濃縮性物質) 評價結果
- PBT(殘留性、生物濃縮性、毒性物質) 不適用的
- vPvB(高殘留性、高生物濃縮性物質): 不適用的
- 其他副作用 無相關詳細資料。

### 13 廢棄處置方法

- 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.

(在 7 頁繼續)

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BUFFER, PH 7.4**

(在 6 頁繼續)

- **受污染的容器和包裝:**
- **建議:** 必須根據官方的規章來丟棄.
- **建議的清洗劑:** 如有必要請使用水及清潔劑進行清潔.

### 14 運送資料

· <b>聯合國危險貨物編號(UN號)</b>	
· ADR, IMDG, IATA	無效
· <b>UN適當裝船名</b>	
· ADR, IMDG, IATA	無效
· <b>運輸危險等級</b>	
· ADR, ADN, IMDG, IATA	
· <b>級別</b>	無效
· <b>包裝組別</b>	
· ADR, IMDG, IATA	無效
· <b>危害環境:</b>	不適用的
· <b>用戶特別預防措施</b>	不適用的
· <b>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</b>	不適用的
· <b>UN "標準規定":</b>	無效

### 15 法規資料

· <b>對相應純物質或者混合物的安全、保健及環境法規/法律 優先管理化學品之指定及運作管理辦法</b>	
· <b>附表一-對於未滿十八歲及妊娠或分娩後未滿一年女性勞工具危害性之化學品</b>	
沒有列出成份	
· <b>第二條第二款第一目</b>	
沒有列出成份	
· <b>第二條第二款第二目</b>	
111-30-8   1,5- 戊二 醛	
· <b>新化學物質及既有化學物質資料登錄辦法 英</b>	
沒有列出成份	
· <b>中國現有化學物質名錄</b>	
列出所有成份	
· <b>TCSCA</b>	
· <b>列管編號</b>	
沒有列出成份	
· <b>毒性分類</b>	
沒有列出成份	

(在 8 頁繼續)



# 安全資料表

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(在 7 頁繼續)

· **管制濃度 ( w/w % )**

沒有列出成份

· **大量運作基準 ( 公斤 )**

沒有列出成份

· **新化學物質及既有化學物質資料登錄辦法, 附表六**

沒有列出成份

· **TCSI - Taiwan Chemical Substance Inventory**

列出所有成份

· **GHS標籤元素** 本產品根據化學物質分類及標記全球協調制度(GHS)進行了分類及標記。

· **圖示**



GHS07 GHS08

· **名稱** 危險

· **標籤上辨別危險的成份:**

1,5- 戊二 醛

· **危險字句**

吸入有害

造成皮膚刺激

造成嚴重眼睛刺激

吸入可能導致過敏或哮喘病症狀或呼吸困難

可能造成皮膚過敏

可能造成呼吸道刺激

對水生生物有毒

對水生生物有害並具有長期持續影響

· **警戒字句**

· **預防措施**

避免吸入粉塵/煙/氣體/煙霧/蒸氣/噴霧。

戴防護手套/防護眼罩/防護面具。

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。

· **安全貯存**

加鎖存放。

· **廢棄處置**

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

· **化學物質安全性評價:** 尚未進行化學物質安全性評價

## 16 其他資料

該資料是基於我們目前的知識。然而,這並不構成對任何特定產品特性的擔保並且不建立一個法律上有效的合同關係。

· **縮寫:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

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# 安全資料表

## 根據 危害性化學品標示及通識規則

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在 2021.10.08 審核

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(在 8 頁繼續)

ELINCS: European List of Notified Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: 持久性生物累積性有毒物質

vPvB: very Persistent and very Bioaccumulative

易燃液體 第4級: Flammable liquids – Category 4

急毒性物質(吞食) 第3級: Acute toxicity – Category 3

急毒性物質(皮膚) 第5級: Acute toxicity – Category 5

急毒性物質(吸入) 第2級: Acute toxicity – Category 2

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

腐蝕/刺激皮膚物質 第1B級: Skin corrosion/irritation – Category 1B

腐蝕/刺激皮膚物質 第2級: Skin corrosion/irritation – Category 2

嚴重損傷/刺激眼睛物質 第2A級: Serious eye damage/eye irritation – Category 2A

呼吸道過敏物質 第1級: Respiratory sensitisation – Category 1

皮膚過敏物質 第1級: Skin sensitisation – Category 1

特定標的器官系統毒性物質(單一暴露) 第3級: Specific target organ toxicity (single exposure) – Category 3

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

水環境之危害物質(急毒性) 第2級: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

水環境之危害物質(慢毒性) 第2級: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

水環境之危害物質(慢毒性) 第3級: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

TW

# Паспорт безопасности в соответствии с ГОСТ 30333-2007

Дата печати: 08.10.2021

Дата редактирования: 08.10.2021

## 1 Идентификация химической продукции и сведения о производителе или поставщике

- **Идентификатор продукта**
- **Торговое наименование:** GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4
- **Артикульный номер:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- **Соответствующие установленные применения вещества или смеси и не рекомендуемые области использования**  
Отсутствует какая-либо соответствующая информация.
- **Применение вещества / препарата** Лабораторные химикаты
- **Подробная информация поставщика паспорта безопасности**
- **Производитель / Поставщик:**  
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
- **Отдел, предоставляющий информацию:** Product safety department
- **Номер телефона экстренной связи:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Идентификация опасности (опасностей)

- **Классификация вещества или смеси**



опасность для здоровья

Респираторная синбилизация 1      H334 При вдыхании может вызывать аллергические или астматические симптомы или затруднение дыхания.



Острая токсичность 4	H332 Наносит вред при вдыхании.
Раздражение кожи 2	H315 Вызывает раздражение кожи.
Раздражение глаз 2A	H319 Вызывает серьезное раздражение глаз.
СТОМ - однократно 3	H335 Может вызывать раздражение дыхательных путей.
Острая токсичность для воды 2	H401 Токсично для водных организмов.
Хроническая токсичность для воды 3	H412 Вредно для водных организмов с долгосрочными последствиями.

- **Элементы маркировки**
- **Элементы маркировки в соответствии с СГС**  
Данный продукт классифицируется и маркируется в соответствии с Согласованной на глобальном уровне системой классификации и маркировки химических веществ (GHS).

(Продолжение на странице 2)

# Паспорт безопасности

## в соответствии с ГОСТ 30333-2007

Дата печати: 08.10.2021

Дата редактирования: 08.10.2021

**Торговое наименование: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Продолжение страницы 1)

· **Пиктограммы, обозначающие опасности**



GHS07 GHS08

· **Сигнальное слово** Опасно

· **Компоненты этикетки, указывающие на опасность:**

Glutaraldehyde

· **Предупреждения об опасности**

Наносит вред при вдыхании.

Вызывает раздражение кожи.

Вызывает серьезное раздражение глаз.

При вдыхании может вызывать аллергические или астматические симптомы или затруднение дыхания.

Может вызывать раздражение дыхательных путей.

Токсично для водных организмов.

Вредно для водных организмов с долгосрочными последствиями.

· **Меры предосторожности**

Избегать вдыхания пыли/дыма/газа/тумана/паров/распылителей жидкости.

Пользоваться защитными перчатками и средствами защиты глаз/лица.

[В случае недостаточной вентиляции] пользоваться средствами защиты органов дыхания.

**ПРИ ПОПАДАНИИ В ГЛАЗА:** Осторожно промыть глаза водой в течение нескольких минут. Снять контактные линзы, если вы пользуетесь ими и если это легко сделать. Продолжить промывание глаз.

Хранить под замком.

Утилизировать содержимое / тару в соответствии с местными / региональными / национальными / международными предписаниями.

· **Другие опасные факторы**

· **Результаты оценки PBT (устойчивое биоаккумулятивное токсическое вещество) и vPvB (очень устойчивое биоаккумулятивное вещество)**

· **PBT:** Неприменимо.

· **vPvB:** Неприменимо.

### 3 Состав (информация о компонентах)

· **Химическая характеристика:** Смеси

· **Описание:** Смесь из веществ, перечисленных ниже, с неопасными добавками.

· **Содержащиеся опасные вещества:**

111-30-8	Glutaraldehyde	>2,5-≤10%
	<p>⚠ Острая токсичность 3, H301; Острая токсичность 2, H330;</p> <p>⚠ Респираторная синсбилизация 1, H334; ⚠ Разъедание кожи 1B, H314;</p> <p>⚠ Острая токсичность для воды 1, H400; Хроническая токсичность для воды 2, H411; ⚠ СТОМ - однократно 3, H335; Воспламеняющаяся жидкость 4, H227;</p> <p>⚠ Острая токсичность 5, H313</p>	

· **Дополнительные указания:** Текст приведенных указаний на факторы риска см. в Главе 16.

RU

(Продолжение на странице 3)

# Паспорт безопасности в соответствии с ГОСТ 30333-2007

Дата печати: 08.10.2021

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(Продолжение страницы 2)

## 4 Меры первой помощи

- **Описание мер первой медицинской помощи**

- **Общие указания:**

Симптомы отравления могут проявиться даже спустя много часов, поэтому имеется необходимость в медицинском надзоре в течение как минимум 48 часов после аварии (несчастного случая).

- **После вдыхания:**

Обеспечить доступ свежего воздуха и для надёжности вызвать врача.

При потере сознания (обморочном состоянии) положить пациента на бок в стабильном положении для транспортировки.

- **После контакта с кожей:** Немедленно промыть с помощью воды и мыла, хорошо сполоснуть.

- **После контакта с глазами:**

Промойте открытый глаз под проточной водой в течение нескольких минут. При сохранении симптомов обратитесь к врачу.

- **После проглатывания:** При сохранении симптомов обратиться к врачу за консультацией.

- **Указания для врача:**

- **Наиболее важные симптомы и эффекты, как немедленные, так и проявляющиеся впоследствии**

Отсутствует какая-либо соответствующая информация.

- **Указание на необходимость оперативной медицинской помощи и специального режима**

Отсутствует какая-либо соответствующая информация.

## 5 Меры и средства обеспечения пожаровзрывобезопасности

- **Средства пожаротушения**

- **Надлежащие средства тушения:**

Предпринять меры по тушению пожара, соответствующие окружающим условиям.

- **Особые опасности, создаваемые веществом или смесью**

Отсутствует какая-либо соответствующая информация.

- **Рекомендации для пожарных**

- **Защитное оснащение:** Применение устройства защиты дыхательных путей.

## 6 Меры по предотвращению и ликвидации аварийных и чрезвычайных ситуаций и их последствий

- **Меры по обеспечению личной безопасности, защитное снаряжение и порядок действий в чрезвычайной ситуации**

Не требуется.

- **Меры по защите окружающей среды:**

При попадании в водоёмы или в канализационную систему проинформировать об этом соответствующие службы.

Разбавить большим количеством воды.

Не допускать попадания в канализационную систему / поверхностные или грунтовые воды.

- **Методы и материалы для локализации и очистки:**

Собрать при помощи связывающего жидкость материала (песка, кизельгура, кислотно-вяжущего средства, универсальных вяжущих средств, опилок).

Утилизировать заражённый материал как отходы в соответствии с Пунктом 13.

Обеспечить достаточную вентиляцию.

- **Ссылки на другие разделы**

Информация по безопасному обращению - в Главе 7.

Информация по индивидуальному защитному снаряжению - в Главе 8.

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Информация по утилизации - в Главе 13.

(Продолжение страницы 3)

### 7 Правила хранения химической продукции и обращения с ней при погрузочно-разгрузочных работах

- **Обращение с веществом:**
- **Меры предосторожности по безопасному обращению**  
Обеспечить хорошую вентиляцию / вытяжку на рабочем месте.  
Не допускать образования аэрозолей.
- **Указания по защите от пожаров и взрывов:** Нет необходимости в каких-либо специальных мерах.
- **Условия безопасного хранения, включая несовместимости**
- **Хранение:**
- **Требования, предъявляемые к складским помещениям и таре:**  
Никаких особых требований не предъявляется.
- **Указания по совместимости с другими веществами при хранении:** Не требуется.
- **Дальнейшие данные по условиям хранения:** Держать ёмкости плотно закрытыми.
- **Характерное конечное применение (или применения)**  
Отсутствует какая-либо соответствующая информация.

### 8 Средства контроля за опасным воздействием и средства индивидуальной защиты

- **Дополнительные указания по структуре технических устройств:**  
Никаких дополнительных данных; см. Пункт 7.

- **Параметры контроля**

- **Составляющие компоненты с предельными значениями, требующие мониторинга на рабочих местах:**

<b>111-30-8 Glutaraldehyde</b>	
PDK	ПДК с.с.: 5 мг/м <sup>3</sup>
	n; A;

- **Дополнительные указания:**  
В качестве основы послужили списки, являющиеся на момент составления актуальными.

- **Требования по охране труда и меры по обеспечению безопасности персонала**

- **Средства индивидуальной защиты:**

- **Общие меры по защите от воздействия и гигиене:**

Держать подальше от продуктов питания, напитков и корма для животных.

Немедленно снять всю загрязнённую и пропитанную вредными веществами одежду.

Мыть руки перед перерывами и по окончании работы.

Избегать контакта с глазами и с кожей.

- **Защита органов дыхания:**

При кратковременном контакте с веществом или при воздействии вещества низкой концентрации пользоваться фильтрующим устройством для защиты органов дыхания. При интенсивном или более продолжительном контакте следует воспользоваться автономным устройством защиты органов дыхания.

- **Защита рук:**



Защитные перчатки (рукавицы).

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Материал перчаток / рукавиц должен быть устойчивым к воздействию продукта / вещества / препарата и не пропускать их.

Никаких рекомендаций в отношении материала перчаток / рукавиц, пригодных для применения в ходе работы с продуктом / препаратом / смесью химикатов дать нельзя, так как никаких испытаний в этом отношении не проводилось.

Выбор материала перчаток / рукавиц производится с учётом времени прорыва, степени проницаемости и эрозии.

· **Материал перчаток / рукавиц**

Выбор подходящих перчаток / рукавиц определяется не только материалом, но также и другими качественными особенностями, причём между различными производителями существует большая разница. Так как продукт представляет собой смесь различных веществ, то не представляется никакой возможности для расчёта устойчивости материала, из которого изготовлены перчатки / рукавицы, что вызывает необходимость перепроверки на предмет пригодности перед использованием.

· **Период проницаемости материала перчаток / рукавиц.**

Необходимо осведомиться у производителя защитных перчаток / рукавиц о точном времени прорыва и придерживаться его.

· **Защита глаз:**



Плотно прилегающие защитные очки

## 9 Физико-химические свойства

· **Информация по основным физическим и химическим свойствам**

· **Общая информация**

· **Внешний вид:**

· **Форма:**

Жидкое

· **Цвет:**

В соответствии с характеристикой продукта

· **Запах:**

Характерно

· **Порог запаха:**

Не определено.

· **Значение pH при 20 °C:**

7,4

· **Изменение состояния**

· **Точка плавления / интервал температур плавления:**

0 °C

· **Точка кипения / интервал температур кипения:** 100 °C

· **Температурная точка вспышки:**

Неприменимо.

· **Воспламеняемость (твёрдое, газообразное вещество):**

Неприменимо.

· **Температура распада:**

Не определено.

· **Самовоспламеняемость:**

Продукт не является самовоспламеняемым.

· **Взрывоопасность:**

Продукт не является взрывоопасным.

· **Границы взрываемости:**

· **Нижняя:**

Не определено.

· **Верхняя:**

Не определено.

· **Давление пара при 20 °C:**

23 гПа

· **Плотность при 20 °C:**

1 г/см<sup>3</sup>

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· <b>Относительная плотность</b>	Не определено.
· <b>Плотность пара</b>	Не определено.
· <b>Скорость испарения</b>	Не определено.
· <b>Растворимость в / Смешиваемость с водой:</b>	Полностью смешиваемо.
· <b>Коэффициент распределения (n-октанол / вода):</b>	Не определено.
· <b>Вязкость:</b>	
· <b>Динамическая:</b>	Не определено.
· <b>Кинематическая:</b>	Не определено.
· <b>Содержание растворителя:</b>	
· <b>Вода:</b>	97,5 %
· <b>VOC (EC)</b>	0,00 %
· <b>Содержание твёрдых тел:</b>	0,0 %
· <b>Другая информация</b>	Отсутствует какая-либо соответствующая информация.

### 10 Стабильность и реакционная способность

- **Реакционная способность** Отсутствует какая-либо соответствующая информация.
- **Химическая стабильность**
- **Термический распад / условия, которых следует избегать:**  
При использовании в соответствии с предписаниями не происходит никакого распада.
- **Возможность опасных реакций** Неизвестно ни о каких опасных реакциях.
- **Условия, вызывающие опасные изменения** Отсутствует какая-либо соответствующая информация.
- **Несовместимые материалы:** Отсутствует какая-либо соответствующая информация.
- **Опасные продукты распада:** Неизвестно ни о каких опасных продуктах распада.

### 11 Информация о токсичности

- **Информация по токсикологическому воздействию**
- **Острая токсичность:**

· **Значения LD/LC50 (летальной дозы/концентрации), необходимые для классифицирования:**

#### 111-30-8 Glutaraldehyde

Орально (через рот)	LD50	134 мг/кг (rat)
Дермально (через кожу)	LD50	2.560 мг/кг (rabbit)

- **Первичное раздражающее воздействие:**
- **на кожу:** Раздражает кожу и слизистые оболочки.
- **на глаза:** Раздражающее воздействие.
- **Сенсибилизация:**  
Сенсибилизация возможна посредством вдыхания.  
Сенсибилизация возможна посредством кожного контакта.
- **Дополнительные токсикологические указания:**  
На основании расчётного метода Всеобщей Классификационной Директивы ЕС для Препаратов в её последней (актуальной) редакции продукт представляет следующие виды опасности:  
Вредно для здоровья

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Раздражающе

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### 12 Информация о воздействии на окружающую среду

- **Токсичность**
- **Акватоксичность:** Отсутствует какая-либо соответствующая информация.
- **Стойкость и склонность к деградации** Отсутствует какая-либо соответствующая информация.
- **Поведение в экологических системах:**
- **Биоаккумулятивный потенциал** Отсутствует какая-либо соответствующая информация.
- **Подвижность в грунте** Отсутствует какая-либо соответствующая информация.
- **Экотоксические воздействия:**
- **Примечания:**  
 Ядовито для рыб.  
 Вредно для рыб.
- **Дополнительные экологические указания:**
- **Общие указания:**  
 Класс вредности для воды 2 (Само-классификация): вредно для воды  
 Не допускать попадания продукта в грунтовые воды, водоёмы или в канализационную систему.  
 Вред для питьевой воды при попадании под землю даже малых количеств.  
 В водоёмах ядовито также для рыб и планктона.  
 Ядовито для водных организмов.  
 Вредно для водных организмов.
- **Результаты оценки РВТ (устойчивое биоаккумулятивное токсическое вещество) и vPvB (очень устойчивое биоаккумулятивное вещество)**
- **РВТ:** Неприменимо.
- **vPvB:** Неприменимо.
- **Другие вредные эффекты** Отсутствует какая-либо соответствующая информация.

### 13 Рекомендации по удалению отходов (остатков)

- **Методы обработки отходов**
- **Рекомендация:**  
 Утилизация совместно с бытовыми отходами недопустима. Не допускать попадания в канализацию.
- **Неочищенные упаковки:**
- **Рекомендация:**  
 Утилизация должна быть осуществлена в соответствии с предписаниями компетентных служб.
- **Рекомендуемые чистящие средства:** Вода - если необходимо, с добавлением чистящих средств.

### 14 Информация при перевозках (транспортировании)

- **Номер UN**
- **ADR, IMDG, IATA** отпадает
- **Собственное транспортное наименование ООН**
- **ADR, IMDG, IATA** отпадает
- **классов опасности транспорта**
- **ADR, ADN, IMDG, IATA**
- **Класс** отпадает

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· <b>Группа упаковки</b> · <b>ADR, IMDG, IATA</b>	<i>отпадает</i>
· <b>Экологические риски:</b>	<i>Неприменимо.</i>
· <b>Особые меры предосторожности для пользователей</b>	<i>Неприменимо.</i>
· <b>Транспортировка навалом в соответствии с Приложением II MARPOL73/78 (Международная конвенция по предотвращению загрязнения вод с судов) и IBC Code (Международный кодекс перевозок опасных химических грузов наливом)</b>	<i>Неприменимо.</i>
· <b>UN "Model Regulation":</b>	<i>отпадает</i>

### 15 Информация о национальном и международном законодательстве

- **Нормы безопасности, правила охраны труда и экологические нормативы или стандарты, действующие для вещества или смеси**
- **Элементы маркировки в соответствии с СГС**  
Данный продукт классифицируется и маркируется в соответствии с Согласованной на глобальном уровне системой классификации и маркировки химических веществ (GHS).
- **Пиктограммы, обозначающие опасности**



GHS07 GHS08

- **Сигнальное слово** *Опасно*
- **Компоненты этикетки, указывающие на опасность:**  
*Glutaraldehyde*
- **Предупреждения об опасности**  
*Наносит вред при вдыхании.*  
*Вызывает раздражение кожи.*  
*Вызывает серьезное раздражение глаз.*  
*При вдыхании может вызывать аллергические или астматические симптомы или затруднение дыхания.*  
*Может вызывать раздражение дыхательных путей.*  
*Токсично для водных организмов.*  
*Вредно для водных организмов с долгосрочными последствиями.*
- **Меры предосторожности**  
*Избегать вдыхания пыли/дыма/газа/тумана/паров/распылителей жидкости.*  
*Пользоваться защитными перчатками и средствами защиты глаз/лица.*  
*[В случае недостаточной вентиляции] пользоваться средствами защиты органов дыхания.*  
**ПРИ ПОПАДАНИИ В ГЛАЗА:** *Осторожно промыть глаза водой в течение нескольких минут. Снять контактные линзы, если вы пользуетесь ими и если это легко сделать. Продолжить промывание глаз.*  
*Хранить под замком.*  
*Утилизировать содержимое / тару в соответствии с местными / региональными / национальными / международными предписаниями.*
- **Оценка химической безопасности:** *Оценка химической безопасности не проведена.*

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### 16 Дополнительная информация

Данные опираются на актуальные знания, однако они не являются гарантией каких-либо конкретных свойств продукта и не устанавливают никаких действующих с юридической точки зрения договорных отношений.

· **Соответствующие данные**

H227 Горючая жидкость.

H301 Токсично при проглатывании.

H313 Может нанести вред при контакте с кожей.

H314 Вызывает серьезные ожоги кожи и повреждения глаз.

H330 Смертельно при вдыхании.

H334 При вдыхании может вызывать аллергические или астматические симптомы или затруднение дыхания.

H335 Может вызывать раздражение дыхательных путей.

H400 Весьма токсично для водных организмов.

H411 Токсично для водных организмов с долгосрочными последствиями.

· **Аббревиатуры и акронимы:**

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

Воспламеняющаяся жидкость 4: Flammable liquids – Category 4

Острая токсичность 3: Acute toxicity – Category 3

Острая токсичность 5: Acute toxicity – Category 5

Острая токсичность 2: Acute toxicity – Category 2

Острая токсичность 4: Acute toxicity – Category 4

Разъедание кожи 1B: Skin corrosion/irritation – Category 1B

Раздражение кожи 2: Skin corrosion/irritation – Category 2

Раздражение глаз 2A: Serious eye damage/eye irritation – Category 2A

Респираторная сенсибилизация 1: Respiratory sensitisation – Category 1

СТОМ - однократно 3: Specific target organ toxicity (single exposure) – Category 3

Острая токсичность для воды 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Острая токсичность для воды 2: Hazardous to the aquatic environment - acute aquatic hazard – Category 2

Хроническая токсичность для воды 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

Хроническая токсичность для воды 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 08.10.2021

Revisión: 08.10.2021

### 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 PHOSPHATE BUFFER, PH 7.4

· **Número del artículo:** 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10

· **UFI:** R171-D0HW-Q00T-V8RY

#### · 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.



GHS07

Acute Tox. 4

H332 Nocivo en caso de inhalación.

Skin Irrit. 2

H315 Provoca irritación cutánea.

Eye Irrit. 2

H319 Provoca irritación ocular grave.

Skin Sens. 1

H317 Puede provocar una reacción alérgica en la piel.

STOT SE 3

H335 Puede irritar las vías respiratorias.

Aquatic Chronic 3

H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

#### · 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 08.10.2021

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**Nombre comercial: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

( se continua en página 1 )

· **Pictogramas de peligro**



GHS07 GHS08

· **Palabra de advertencia Peligro**

· **Componentes peligrosos a indicar en el etiquetaje:**

glutaral

· **Indicaciones de peligro**

H332 Nocivo en caso de inhalación.

H315 Provoca irritación cutánea.

H319 Provoca irritación ocular grave.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H317 Puede provocar una reacción alérgica en la piel.

H335 Puede irritar las vías respiratorias.

H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

· **Consejos de prudencia**

P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

P280 Llevar guantes de protección / gafas de protección / máscara de protección.

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

P305+P351+P338 **EN CASO DE CONTACTO CON LOS OJOS:** Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.

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-≤10%
EINECS: 203-856-5	Acute Tox. 3, H301; Acute Tox. 2, H330;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400; Aquatic Chronic 2, H411;  Skin Sens. 1A, H317; STOT SE 3, H335	

· **SVHC**

111-30-8	glutaral
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· **Indicaciones adicionales:** El texto de los posibles riesgos aquí indicados se puede consultar en el capítulo 16.

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( se continua en página 3 )

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( se continua en página 2 )

### SECCIÓN 4: Primeros auxilios

· **4.1 Descripción de los primeros auxilios**

· **Instrucciones generales:**

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

· **En caso de inhalación del producto:**

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· **En caso de contacto con la piel:** Lavar inmediatamente con agua y jabón y enjuagar bien.

· **En caso de con los ojos:**

Limpicar los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes 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.

Diluir con mucha agua.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

· **6.3 Métodos y material de contención y de limpieza:**

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Desechar el material contaminado como vertido según ítem 13.

Asegurar suficiente ventilación.

· **6.4 Referencia a otras secciones**

Ver capítulo 7 para mayor información sobre una manipulación segura.

Ver capítulo 8 para mayor información sobre el equipo personal de protección.

Para mayor información sobre cómo desechar el producto, ver capítulo 13.

### SECCIÓN 7: Manipulación y almacenamiento

· **7.1 Precauciones para una manipulación segura**

Asegurar suficiente ventilación /aspiración en el puesto de trabajo.

Evitar la formación de aerosoles.

· **Prevención de incendios y explosiones:** No se requieren medidas especiales.

· **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**

· **Almacenamiento:**

· **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.

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# Ficha de datos de seguridad

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( se continua en página 3 )

- **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.

#### · 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 <sup>3</sup> , 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 los ojos y la piel.

##### · Protección respiratoria:

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

##### · Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

##### · Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

##### · Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

##### · Protección de ojos:



Gafas de protección herméticas

ES

( se continua en página 5 )



# Ficha de datos de seguridad

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**Nombre comercial: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

( se continua en página 4 )

### SECCIÓN 9: Propiedades físicas y químicas

#### · 9.1 Información sobre propiedades físicas y químicas básicas

##### · Datos generales

· **Aspecto:**

· **Forma:**

Líquido

· **Color:**

Según denominación del producto

· **Olor:**

Característico

· **Umbral olfativo:**

No determinado.

· **valor pH a 20 °C:**

7,4

##### · Cambio de estado

· **Punto de fusión/punto de congelación:**

0 °C

· **Punto inicial de ebullición e intervalo de ebullición:**

100 °C

· **Punto de inflamación:**

No aplicable.

· **Inflamabilidad (sólido, gas):**

No aplicable.

· **Temperatura de descomposición:**

No determinado.

· **Temperatura de auto-inflamación:**

El producto no es autoinflamable.

· **Propiedades explosivas:**

El producto no es explosivo.

##### · Límites de explosión:

· **Inferior:**

No determinado.

· **Superior:**

No determinado.

· **Presión de vapor a 20 °C:**

23 hPa

· **Densidad a 20 °C:**

1 g/cm<sup>3</sup>

· **Densidad relativa**

No determinado.

· **Densidad de vapor**

No determinado.

· **Tasa de evaporación:**

No determinado.

· **Solubilidad en / miscibilidad con**

· **agua:**

Completamente mezclable.

· **Coefficiente de reparto: n-octanol/agua:**

No determinado.

· **Viscosidad:**

· **Dinámica:**

No determinado.

· **Cinemática:**

No determinado.

· **Concentración del disolvente:**

· **Agua:**

97,5 %

· **VOC (CE)**

0,00 %

· **Contenido de cuerpos sólidos:**

0,0 %

· **9.2 Otros datos**

No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

· **10.1 Reactividad** No existen más datos relevantes disponibles.

· **10.2 Estabilidad química**

· **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.

· **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.

· **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.

( se continua en página 6 )



# Ficha de datos de seguridad

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( se continua en página 5 )

- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**  
Nocivo en caso de inhalación.

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

#### 111-30-8 glutaral

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

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**  
Provoca irritación cutánea.
- **Lesiones o irritación ocular graves**  
Provoca irritación ocular grave.
- **Sensibilización respiratoria o cutánea**  
Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.  
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
Puede irritar las vías respiratorias.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:**  
Tóxico para peces.  
Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 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.  
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.  
tóxico para organismos acuáticos  
nocivo para organismos acuáticos

( se continua en página 7 )

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( se continua en página 6 )

- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

### SECCIÓN 14: Información relativa al transporte

- |   |               |
|---|---------------|
| · <b>14.1 Número ONU</b>  |               |
| · <b>ADR, IMDG, IATA</b>  | suprimido     |
| · <b>14.2 Designación oficial de transporte de las Naciones Unidas</b>                        |               |
| · <b>ADR, IMDG, IATA</b>  | suprimido     |
| · <b>14.3 Clase(s) de peligro para el transporte</b>  |               |
| · <b>ADR, ADN, IMDG, IATA</b>   |               |
| · <b>Clase</b>  | suprimido     |
| · <b>14.4 Grupo de embalaje</b>   |               |
| · <b>ADR, IMDG, IATA</b>  | suprimido     |
| · <b>14.5 Peligros para el medio ambiente:</b>  | No aplicable. |
| · <b>14.6 Precauciones particulares para los usuarios</b>                                     | No aplicable. |
| · <b>14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC</b> | No aplicable. |
| · <b>"Reglamentación Modelo" de la UNECE:</b>   | 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
- **Directiva 2011/65/UE sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos - Anexo II**
- ninguno de los componentes está incluido en una lista

( se continua en página 8 )

# Ficha de datos de seguridad

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( se continua en página 7 )

· **Disposiciones nacionales:**

· **Demás disposiciones, limitaciones y decretos prohibitivos**

· **Sustancias altamente preocupantes (SVHC) según REACH, artículo 57**

111-30-8	glutaral
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· **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Frases relevantes**

H301 Tóxico en caso de ingestión.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H317 Puede provocar una reacción alérgica en la piel.

H330 Mortal en caso de inhalación.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H335 Puede irritar las vías respiratorias.

H400 Muy tóxico para los organismos acuáticos.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· **Abreviaturas y acrónimos:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

ELINCS: 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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Toxicidad aguda - oral – Categoría 3

Acute Tox. 2: Toxicidad aguda - por inhalación – Categoría 2

Acute Tox. 4: Toxicidad aguda - por inhalación – Categoría 4

Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B

Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2

Eye Irrit. 2: Lesiones oculares graves o irritación ocular – Categoría 2

Resp. Sens. 1: Sensibilización respiratoria – Categoría 1

Skin Sens. 1: Sensibilización cutánea – Categoría 1

Skin Sens. 1A: Sensibilización cutánea – Categoría 1A

STOT SE 3: Toxicidad específica en determinados órganos ( exposición única) – Categoría 3

Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1

Aquatic Chronic 2: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 2

Aquatic Chronic 3: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 3

# แผ่นข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

### 1 การปฐมนิสารเดี่ยวหรือสารผสม และผู้ผลิต

- 1.1 ลักษณะเฉพาะของผลิตภัณฑ์
- ชื่อทางการค้า **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**
- เลขที่รายชื่อ 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10
- 1.2 สารหรือสารผสมที่เกี่ยวข้องที่ระบุให้ใช้และที่ไม่ควรให้ใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- การประยุกต์ใช้สาร/ การทำ เคมีภัณฑ์ห้องทดลอง
- 1.3 รายละเอียดของผู้จัดหาข้อมูลด้านความปลอดภัย
- ผู้ผลิต/ ผู้จัดหา  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: sgkcck@aol.com  
www.emsdiasum.com
- ข้อมูลรายละเอียดเพิ่มเติมหาได้จาก Product safety department
- 1.4 หมายเลขโทรศัพท์ฉุกเฉิน:  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 การปฐมนิความเป็นอันตราย

- 2.1 การจำแนกประเภทของสารหรือสารผสม
- การแบ่งประเภทตามข้อบังคับ (จีซี) เลขที่ 1272/2008



สิ่งอันตรายต่อสุขภาพ

Resp. Sens. 1 H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า



Acute Tox. 4 H332 ให้อาการหายใจลำบากหากสูดหายใจเข้า

Skin Irrit. 2 H315 เป็นสาเหตุให้เกิดการระคายเคืองผิวหนัง

Eye Irrit. 2 H319 เป็นสาเหตุให้เกิดการระคายเคืองอย่างร้ายแรงที่ตา

Skin Sens. 1 H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

STOT SE 3 H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

Aquatic Chronic 3 H412 ให้อาการต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบระยะยาว

- 2.2 องค์ประกอบของฉลาก
- ฉลากตามระเบียบ (EC) เลขที่ 1272/2008 ผลิตภัณฑ์ได้รับการจัดประเภทและติดฉลากตามข้อบังคับของ CLP
- ภาพสัญลักษณ์ที่เป็นอันตราย



GHS07 GHS08

- สัญญาณคำ อันตราย
- ส่วนประกอบที่ระบุอันตรายบนฉลาก  
กลูตารัลดีไฮด์

(ต่อที่หน้า 2)

-TH

# แผ่นข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

### ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(ต่อหน้า 1)

#### · ประกาศสิ่งที่อันตราย

- H332 ให้โทษหากสูดหายใจเข้า
- H315 เป็นสาเหตุให้เกิดการระคายเคืองผิวหนัง
- H319 เป็นสาเหตุให้เกิดการระคายเคืองอย่างร้ายแรงที่ตา
- H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า
- H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้
- H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ
- H412 ให้โทษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบระยะยาว

#### · ประกาศการป้องกันระดับระวังภัย

- P261 หลีกเลี่ยงการสูดหายใจเอาฝุ่น/ ไอสาร/ แกส/ หมอก/ไอ/ ละอองฟุ้ง
- P280 สวมถุงมือป้องกัน/ที่ป้องกันตา/ที่ป้องกันหน้า
- P284 [ในกรณีที่การระบายอากาศไม่เพียงพอ] สวมใส่อุปกรณ์ป้องกันระบบทางเดินหายใจ
- P305+P351+P338 หากเข้าตา : ชะด้วยน้ำอย่างระมัดระวังเป็นเวลาหลายๆนาทีถอดคอนแทกซ์เลนส์ถ้ายังอยู่ที่เดิมและสะดวกที่จะทำก็ให้ชะล้างต่อไป
- P405 เก็บในที่ใส่กุญแจปิด
- P501 ทิ้งสิ่งที่บรรจุ/ภาชนะที่บรรจุตามกฎหมายของท้องถิ่น/แคว้น/ในประเทศ/ระหว่างประเทศ

#### · 2.3 อันตรายอื่นๆ

#### · ผลของ PBT และการประเมิน vPvB

- PBT: ไม่สามารถใช้ได้
- vPvB: ไม่สามารถใช้ได้

## 3 องค์ประกอบและข้อมูลเกี่ยวกับส่วนผสม

#### · 3.2 คุณลักษณะทางเคมี: ส่วนผสม

- คำอธิบาย ส่วนผสมของสารในรายการข้างล่างพร้อมสารเติมแต่งที่ไม่เป็นอันตราย

#### · ส่วนประกอบที่มีอันตราย

CAS: 111-30-8	กลูตารัลดีไฮด์	>2.5-≤10%
EINECS: 203-856-5	<ul style="list-style-type: none"> <li>☠ Acute Tox. 3, H301; Acute Tox. 2, H330; ☠ Resp. Sens. 1, H334; ☠ Skin Corr. 1, H314; ☠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ☠ Skin Sens. 1A, H317; STOT SE 3, H335</li> </ul>	

- ข้อมูลรายละเอียดเสริม สำหรับข้อความที่ระบุในรายการวลีความเสี่ยงที่อ้างอิงถึงในส่วนที่ 16

## 4 มาตรการปฐมพยาบาล

#### · 4.1 คำอธิบายถึงมาตรการปฐมพยาบาล

#### · ข้อมูลรายละเอียดทั่วไป

อาการจากพิษอาจเกิดขึ้นหลังจากนั้นหลายชั่วโมงดังนั้นจะต้องเฝ้าติดตามดูอาการทางการแพทย์อย่างน้อย 48 ชั่วโมงหลังจากอุบัติเหตุ

#### · หลังจากการสูดหายใจเข้าไป

หาบริเวณที่มีอากาศบริสุทธิ์และเพื่อให้อากาศสดชื่นติดต่อแพทย์  
ในกรณีที่คนไข้ไม่รู้สึกรู้สึกรู้สึกตัวให้ขนย้ายคนไข้อย่างมั่นคงในท่าตะแคงด้านข้าง

#### · หลังจากการสัมผัสผิวหนัง

ล้างด้วยน้ำและสบู่แล้วฟอกให้ทั่วทันที

#### · หลังจากการสัมผัสตา

ชะตาที่เปิดอยู่ใต้น้ำที่กำลังไหลเป็นเวลาหลายนาทีถ้าอาการไม่ดีขึ้นให้ปรึกษาแพทย์

#### · หลังจากการกลืนเข้าไป:

ถ้าอาการยังไม่บรรเทาให้ปรึกษาแพทย์

#### · 4.2 อาการสำคัญส่วนใหญ่และผลกระทบ ทั้งชนิดเฉียบพลันและค่อยๆ แสดงอาการ

ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

#### · 4.3 ช่องขังข้อมูลที่ต้องเข้ารับการรักษาจากแพทย์ทันทีและการบำบัดพิเศษที่จำเป็น

ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

TH

(ต่อหน้า 3)

# แผนข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

**ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(ต่อหน้า 2)

### 5 มาตรการพญเพลิง

- 5.1 สารที่ใช้ดับเพลิง
- สารดับเพลิงที่เหมาะสม ใช้วิธีดับเพลิงที่เหมาะสมกับสภาพแวดล้อม
- 5.2 อันตรายเฉพาะอย่างที่เกิดจากสารหรือส่วนผสม ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 5.3 ค่าแนะนำสำหรับพนักงานดับเพลิง
- อุปกรณ์ป้องกันภัย อุปกรณ์ป้องกันซึ่งเหมาะสำหรับการหายใจทางปาก

### 6 มาตรการจัดการเมื่อมีการหกรั่วไหลของสาร

- 6.1 การป้องกันส่วนบุคคล อุปกรณ์ป้องกัน และขั้นตอนดำเนินการเมื่อเกิดกรณีฉุกเฉิน ไม่ได้กำหนด
- 6.2 การให้ความคุ้มครองสิ่งแวดล้อมล่วงหน้า:  
แจ้งผู้มีอำนาจที่เกี่ยวข้องในกรณีที่เกิดการไหลซึมเข้าลำน้ำหรือระบบระบายน้ำ  
ทำให้เจือจางด้วยน้ำมากๆ  
อย่าปล่อยให้เข้าไปในท่อน้ำทิ้ง/ น้ำบนดินหรือใต้ดิน
- 6.3 วิธีดำเนินการและวัสดุสำหรับการบรรจุและการทำความสะอาด:  
ดูดซับด้วยวัสดุที่สามารถยึดของเหลวไว้ (ทราย โตะ โม่ ไม้ท้าว ยัดเกาะ กรดตัวยัดต่างๆ ไปซีลีย)
- ทิ้งวัสดุที่ปนเปื้อนเป็นของเสียตามรายการในบัญชี 13  
ตรวจให้แน่ใจว่ามีการระบายอากาศที่ดีพอ
- 6.4 การอ้างอิงถึงส่วนอื่น  
ดูข้อมูลรายละเอียดเรื่องความปลอดภัยในการขนถ่ายจากส่วนที่ 7  
ดูข้อมูลรายละเอียดเรื่องอุปกรณ์ป้องกันส่วนบุคคลจากส่วนที่ 8  
ดูข้อมูลรายละเอียดเรื่องการจัดจากส่วนที่ 13

### 7 การขนถ่าย เคลื่อนย้าย ใช้งาน และเก็บรักษา

- 7.1 การป้องกันล่วงหน้าสำหรับการจัดการด้านความปลอดภัย  
ทำให้แน่ใจว่าสถานที่ทำงานมีการระบายอากาศ/ ระบายที่ดี  
ป้องกันการเกิดละอองสารฟุ้ง
- ข้อมูลรายละเอียดเกี่ยวกับการป้องกันอัคคีภัยและการระเบิด ไม่มีมาตรการพิเศษ
- 7.2 เงื่อนไขในการเก็บรักษาอย่างปลอดภัย, รวมถึงสิ่งที่เข้ากันไม่ได้ใดๆ
- การจัดเก็บ
- ข้อกำหนดที่ต้องปฏิบัติตามสำหรับห้องเก็บและภาชนะบรรจุ ไม่มีข้อกำหนดพิเศษ
- ข้อมูลรายละเอียดด้านการจัดเก็บในสถานที่จัดเก็บรวม ไม่ได้กำหนด
- ข้อมูลรายละเอียดเพิ่มเติมด้านสภาพการจัดเก็บ เก็บโดยปิดผนึกอย่างแน่นหนา
- 7.3 การระบุถึงการสิ้นสุดการใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

### 8 การควบคุมการสัมผัสและการป้องกันส่วนบุคคล

- ข้อมูลรายละเอียดเสริมสำหรับการออกแบบสิ่งอำนวยความสะดวกทางเทคนิค ไม่มีข้อมูลนอกเหนือจากนี้ดูรายการ 7

#### 8.1 การควบคุมตัวแปร

- ส่วนผสมพร้อมค่าขอบเขตที่ต้องเฝ้าดูในสถานที่ปฏิบัติงาน

#### 111-30-8 กลูตารัลดีไฮด์

REL (US) Ceiling limit value: 0.8 mg/m<sup>3</sup>, 0.2 ppm  
See Pocket Guide App. C

TLV (US) Ceiling limit value: 0.2 mg/m<sup>3</sup>, 0.05 ppm  
DSEN;RSEN ;activated or inactivated

- ข้อมูลรายละเอียดเสริม รายการถูกต้องระหว่างที่จัดทำโดยอาศัยการใช้งานเป็นหลัก

(ต่อหน้า 4)

# แผนข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

### ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(ต่อหน้า 3)

- 8.2 การควบคุมการสัมผัส
- อุปกรณ์ป้องกันส่วนบุคคล
- มาตรการการป้องกันและสุขอนามัยทั่วไป
  - เก็บให้ห่างจากสิ่งของที่เป็นอาหาร เครื่องดื่ม และอาหารสัตว์
  - ให้ถอดเสื้อผ้าที่เปื้อนและเช็ดออกทันที
  - ล้างมือก่อนที่จะหยุดพักและเมื่อสิ้นสุดเวลาทำงาน
  - หลีกเลี่ยงการสัมผัสถูกตาและผิวหนัง
- การป้องกันการสูดหายใจเข้าไป
  - ในกรณีที่อยู่เป็นเวลาสั้นหรืออากาศเป็นพิษระดับต่ำ ใช้หน้ากากกรองเพื่อช่วยหายใจในกรณีที่มีความเข้มข้นสูงหรืออยู่เป็นเวลานาน ให้ใช้เครื่องป้องกันที่มีอุปกรณ์ช่วยหายใจในตัว
- การป้องกันมือ



ถุงมือป้องกัน

วัสดุของถุงมือจะต้องไม่ให้อากาศผ่านเข้าออกและทนทานต่อผลิตภัณฑ์/ สาร/ การผลิต เนื่องจากขาดการทดสอบจึงไม่มีคำแนะนำสำหรับวัสดุที่ใช้ทำถุงมือสำหรับผลิตภัณฑ์/ การผลิต/ ของผสมเคมี เลือกวัสดุสำหรับถุงมือโดยพิจารณาจากเวลาที่ใช้ในการซึมผ่านอัตราการแพร่และการเสื่อม

- วัสดุที่ใช้ทำถุงมือ
  - การเลือกใช้ถุงมือที่เหมาะสมไม่เพียงแต่ขึ้นอยู่กับวัสดุแต่ยังขึ้นกับมาตรฐานด้านคุณภาพและข้อแตกต่างระหว่างผู้ผลิตแต่ละแห่ง โดยที่ผลิตภัณฑ์เตรียมมาจากสารหลายชนิดความทนทานของวัสดุถุงมือไม่สามารถที่จะคำนวณล่วงหน้า ดังนั้นจึงต้องตรวจสอบกับการใช้งาน
- เวลาที่ใช้ในการทะลุผ่านวัสดุที่ใช้ทำถุงมือ
  - ผู้ผลิตถุงมือป้องกันจะต้องทดสอบหาเวลาแน่นอนที่ใช้ในการทะลุผ่านและจะต้องมีการตรวจสอบติดตาม
- การป้องกันตา



แว่นตาที่ขอบปิดสนิท

## 9 คุณสมบัติทางกายภาพและทางเคมี

- 9.1 ข้อมูลคุณสมบัติพื้นฐานทางกายภาพและเคมี

### • ข้อมูลรายละเอียดทั่วไป

#### • ลักษณะ :

- รูปสีฐาน

ของไหล

- สี

ตามรายละเอียดของผลิตภัณฑ์

- กลิ่น

ลักษณะพิเศษ

- เกณฑ์กลิ่น :

ไม่ได้กำหนดไว้.

- ค่า pH ที่ 20 °C

7.4

- การเปลี่ยนสภาวะ

- จุดหลอมเหลว/ ขอบเขตการหลอมละลาย

0 °C

- จุดเดือด/ ขอบเขตการเดือด

100 °C

- จุดวาบไฟ

ไม่สามารถใช้ได้

- ความสามารถติดไฟ (ของแข็งแกส)

ไม่สามารถใช้ได้

- อุณหภูมิสลายตัว

ไม่ได้กำหนดไว้.

- การเผาไหม้ด้วยตัวเอง

ผลิตภัณฑ์ไม่เป็นสารจุดไฟติดด้วยตัวเอง

(ต่อหน้า 5)

-TH

# แผ่นข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

### ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(ต่อหน้า 4)

· อันตรายจากการระเบิด	ผลิตภัณฑ์ไม่ได้มีอันตรายจากการระเบิด
· ขอบเขตการระเบิด	
· ชั้นต่ำ	ไม่ได้กำหนดไว้.
· ชั้นสูง	ไม่ได้กำหนดไว้.
· ความดันไอ ที่ 20 °C	23 hPa
· ความหนาแน่น ที่ 20 °C	1 g/cm <sup>3</sup>
· ความหนาแน่นสัมพัทธ์	ไม่ได้กำหนดไว้.
· ความหนาแน่นของไอ	ไม่ได้กำหนดไว้.
· อัตราการระเหย	ไม่ได้กำหนดไว้.
· ความสามารถในการละลายใน / ความสามารถผสมเป็นสารละลายเนื้อเดียวทุกส่วนผสมกับ	
· น้ำ	ผสมกันได้อย่างเต็มที่
· สัมประสิทธิ์การแยกตัว (เฮน-ออกทานอล/น้ำ)	ไม่ได้กำหนดไว้.
· ความหนืด	
· (ไดนามิค) พลศาสตร์	ไม่ได้กำหนดไว้.
· (คิเนมาติก) จลนศาสตร์	ไม่ได้กำหนดไว้.
· ปริมาณส่วนประกอบตัวทำละลาย	
· น้ำ	97.5 %
· VOC (EC)	0.00 %
· ส่วนประกอบที่เป็นของแข็ง	0.0 %
· 9.2 ข้อมูลอื่นๆ	ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

## 10 ความเสถียรและการเกิดปฏิกิริยา

- 10.1 ปฏิกิริยาที่ตอบสนอง ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.2 เสถียรภาพทางเคมี
- การสลายตัวด้วยความร้อน / เงื่อนไขที่ต้องหลีกเลี่ยง ไม่มีการสลายตัวถ้าใช้ตามรายละเอียดที่ระบุไว้
- 10.3 ความเป็นไปได้ของการเกิดปฏิกิริยาอันตราย ไม่มีปฏิกิริยาเป็นอันตรายที่รู้จัก
- 10.4 เงื่อนไขเพื่อการหลีกเลี่ยง ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.5 วัสดุที่เข้ากันไม่ได้: ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.6 อันตรายจากการสลายตัวของผลิตภัณฑ์: ไม่มีสารจากการสลายตัวที่เป็นอันตรายที่รู้จัก

## 11 ข้อมูลด้านพิษวิทยา

- 11.1 ข้อมูลเกี่ยวกับผลกระทบทางพิษวิทยา
- ความเป็นพิษอย่างสาหัส:  
ให้โทษหากสูดหายใจเข้า

· การจัดแบ่งตามค่า LD/LC50		
111-30-8 กลูตารัลดีไฮด์		
ทางปาก	LD50	134 mg/kg (rat)
ทางผิวหนัง	LD50	2,560 mg/kg (rabbit)

- อาการระคายเคืองเบื้องต้น
- บนผิวหนัง  
เป็นสาเหตุให้เกิดการระคายเคืองผิวหนัง
- ที่ดวงตา  
เป็นสาเหตุให้เกิดการระคายเคืองอย่างร้ายแรงที่ตา

(ต่อหน้า 6)



# แผนข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

### ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(ต่อที่หน้า 5)

- **การทำให้แพ้**  
อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า  
อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้
- **ผลกระทบ CMR (การทำให้เกิดมะเร็งการผ่าเหล่าและพิษต่อการสืบพันธุ์)**
- **การผ่าเหล่าในเซลล์สืบพันธุ์**
- **การกระตุ้นให้เกิดมะเร็ง**
- **พิษต่อระบบสืบพันธุ์**
- **ความเป็นพิษต่ออวัยวะเป้าหมายเฉพาะ – การสัมผัสในครรภ์**  
อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ
- **ความเป็นพิษต่ออวัยวะเป้าหมายเฉพาะ – การสัมผัสซ้ำหลาย**
- **อันตรายต่อระบบหายใจ**

## 12 ข้อมูลด้านนิเวศวิทยา

- **12.1 ความเป็นพิษ**
- **ความเป็นพิษที่เกี่ยวกับน้ำ** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- **12.2 การคงอยู่และการย่อยสลาย** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- **12.3 การสะสมทางชีวภาพที่อาจเกิดขึ้น** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- **12.4 การเปลี่ยนแปลงในดิน** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- **ผลกระทบด้านพิษต่อระบบนิเวศน์**
- **ข้อสังเกต**  
เป็นพิษสำหรับปลา  
เป็นอันตรายกับปลา
- **ข้อมูลรายละเอียดเสริมเกี่ยวกับนิเวศวิทยา**
- **หมายเหตุทั่วไป**  
เป็นอันตรายต่อน้ำชั้น 2 (กฎข้อบังคับของเยอรมัน)(การประเมินค่าด้วยตัวเอง):เป็นอันตรายกับน้ำ  
อย่าปล่อยให้ผลิตภัณฑ์ไปถึงน้ำผิวดินเส้นทางน้ำหรือระบบระบายน้ำเสีย  
เป็นอันตรายต่อน้ำดื่มแม้จะร่วงลงในพื้นที่เป็นปริมาณน้อย  
เป็นพิษกับปลาและแพลงค์ตอนในผิวน้ำ  
มีพิษต่อสิ่งมีชีวิตในน้ำ  
เป็นอันตรายต่อสิ่งมีชีวิตในน้ำ
- **12.5 ผลของ PBT และการประเมิน vPvB**
- **PBT:** ไม่สามารถใช้ได้
- **vPvB:** ไม่สามารถใช้ได้
- **12.6 ผลข้างเคียงอื่นๆ** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

## 13 ข้อพิจารณาในการกำจัด

- **13.1 วิธีการกำจัดของเสีย**
- **คำแนะนำ** ต้องไม่ทิ้งไปพร้อมกับขยะจากบ้านเรือนอย่าปล่อยให้ผลิตภัณฑ์เข้าถึงระบบระบายน้ำเสีย
- **ภาชนะบรรจุที่ยังไม่ได้สร้างทำความสะอาด**
- **คำแนะนำ** การกำจัดจะต้องทำตามกฎระเบียบที่เป็นทางการ
- **สารทำความสะอาดที่แนะนำ** น้ำถ้าจำเป็นใช้คู่กับสารทำความสะอาด

## 14 ข้อมูลการขนส่ง

- **14.1 เลขที่ UN**
- **ADR, IMDG, IATA** ยกเลิก

(ต่อที่หน้า 7)

TH

# แผนข้อมูลความปลอดภัย

## ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

### ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(ต่อหน้า 6)

- |   |                 |
|---|-----------------|
| · 14.2 ชื่อการจัดส่งสินค้าที่เหมาะสมของ UN                      |                 |
| · ADR, IMDG, IATA   | ยกเลิก          |
| · 14.3 ชั้นเรียนอันตรายจากการขนส่ง                              |                 |
| · ADR, ADN, IMDG, IATA  |                 |
| · ประเภท  | ยกเลิก          |
| · 14.4 กลุ่มของภาชนะบรรจุ                                       |                 |
| · ADR, IMDG, IATA   | ยกเลิก          |
| · 14.5 สิ่งที่เป็นอันตรายต่อสภาพแวดล้อม                         | ไม่สามารถใช้ได้ |
| · 14.6 การป้องกันพิเศษล่วงหน้าสำหรับผู้ใช้                      | ไม่สามารถใช้ได้ |
| · 14.7 การขนส่งขนาดใหญ่ตามภาคผนวก 2 ของ MARPOL73/78 และรหัส IBC | ไม่สามารถใช้ได้ |
| · “กฎระเบียบต้นแบบ” ของ UN                                      | ยกเลิก          |

### 15 ข้อมูลด้านกฎข้อบังคับ

- 15.1 ความปลอดภัย สุขภาพและระเบียบ/กฎหมายสิ่งแวดล้อมโดยเฉพาะของสารหรือสารผสม
- บัญชีรายชื่อวัตถุอันตราย

#### · กรมวิชาการเกษตร

ไม่มีส่วนผสมใดอยู่ในรายการ

#### · กรมประมง

111-30-8 | กลูตารัลดีไฮด์

ชนิดที่ 3

#### · กรมปศุสัตว์

ไม่มีส่วนผสมใดอยู่ในรายการ

#### · อาหารและยา

111-30-8 | กลูตารัลดีไฮด์

ชนิดที่ 3

#### · กรมโรงงานอุตสาหกรรม

ไม่มีส่วนผสมใดอยู่ในรายการ

#### · กรมธุรกิจพลังงาน

ไม่มีส่วนผสมใดอยู่ในรายการ

- 15.2 การประเมินความปลอดภัยของสารเคมี: ไม่ได้ดำเนินการตามการประเมินความปลอดภัยของสารเคมี

### 16 ข้อมูลอื่นๆ

ข้อมูลรายละเอียดนี้ใช้ความรู้ปัจจุบันของเราเป็นหลักอย่างไรก็ตามข้อมูลนี้ไม่ใช่การรับประกันจากสถาบันต่อคุณสมบัติเฉพาะของผลิตภัณฑ์และไม่สามารถยืนยันการบังคับใช้ตามกฎหมายที่เกี่ยวข้องกับสัญญา

#### · วลีที่เกี่ยวข้องกับ

H301 มีพิษหากกลืนเข้าไป

H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา

H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

H330 เป็นอันตรายถึงชีวิตหากสูดหายใจเข้า

H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า

H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

H400 มีพิษมากต่อสิ่งมีชีวิตในน้ำ

H411 มีพิษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบต่อระยะยาว

(ต่อหน้า 8)

# แผ่นข้อมูลความปลอดภัย ตาม GHS

วันที่พิมพ์ 2021.10.08

การปรับปรุงใหม่ : 2021.10.08

## ชื่อทางการค้า GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4

(ต่อหน้า 7)

### · คำย่อและชื่อย่อที่ผสมขึ้น

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

TH

**Güvenlik bilgi formu**  
**23 Haziran 2017 tarihli, 30105 sayılı, „Kimyasalların Kaydı,  
 Değerlendirilmesi, İzni Ve Kisitlanması Hakkında Yönetmelik,  
 Madde 27“ hükümlerine uygun düzenlenmiştir**

Baskı tarihi: 08.10.2021

Form No.: 16537-05

Yeniden düzenleme tarihi: 08.10.2021

### Bölüm 1: Maddenin/karışımın ve şirketin/dağıtıcının tanımı

- **1.1 Madde/Karışım kimliği**
- **Ticari adı: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**
- **Mal numarası: 16537-05, 16537-05-SP, 16535-05-SP, 16537-05-SPECIAL, 16537-10**
- **UFI: R171-D0HW-Q00T-V8RY**
- **1.2 Maddenin veya karışımın ilgili tanımlanmış kullanımları ve tavsiye edilmeyen kullanımları**  
 Daha başka önemli bilgi mevcut değildir.
- **Maddenin Kullanımı / Hazırlanması** Laboratuvarında kullanılan kimyasal maddeler
- **1.3 Güvenlik bilgi formu sağlayıcısının detayları**
- **Üretici / Teslimatı yapan:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: sgkck@aol.com  
 www.emsdiasum.com
- **Güvenlik hakkında bilgiler veren kesim: Product safety department**
- **1.4 Acil telefon numarası**  
 ChemTrec 1-800-424-9300 Contract CCN7661  
 1-703-527-3887

### Bölüm 2: Zararların tanımı

- **2.1 Madde veya karışımın sınıflandırılması**
- **Düzenlemeye göre sınıflandırma (EC) No 1272/2008**



GHS08 Sağlık zararlılığı

Resp. Sens. 1 H334 Solunması halinde nefes alma zorlukları, astım nöbetleri veya alerjiye yol açabilir.



GHS07

Acute Tox. 4 H332 Solunması halinde zararlıdır.

Skin Irrit. 2 H315 Cilt tahrişine yol açar.

Eye Irrit. 2 H319 Ciddi göz tahrişine yol açar.

Skin Sens. 1 H317 Alerjik cilt reaksiyonlarına yol açar.

STOT SE 3 H335 Solunum yolu tahrişine yol açabilir.

Aquatic Chronic 3 H412 Sucul ortamda uzun süre kalıcı, zararlı etki.

- **2.2 Etiket bilgileri**
- **Yönetmelik (EC) No 1272/2008'e göre etiketleme**  
 Ürün SEA yönetmeliğine göre sınıflandırılmış ve etiketlenmiştir.

(Devamı sayfa 2 'da)

**Güvenlik bilgi formu**  
23 Haziran 2017 tarihli, 30105 sayılı, „Kimyasalların Kaydı,  
Değerlendirilmesi, İzni Ve Kisitlanması Hakkında Yönetmelik,  
Madde 27“ hükümlerine uygun düzenlenmiştir

Baskı tarihi: 08.10.2021

Form No.: 16537-05

Yeniden düzenleme tarihi: 08.10.2021

Ticari adı: **GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

(Sayfa 1 'nin devamı)

## · Zararlılık İşaretleri



GHS07 GHS08

## · Uyarı Kelimesi Tehlike

## · Etiketlendirme için tehlikeyi belirleyici bileşenler:

glutaral

## · Zararlılık İfadesi

H332 Solunması halinde zararlıdır.

H315 Cilt tahrişine yol açar.

H319 Ciddi göz tahrişine yol açar.

H334 Solunması halinde nefes alma zorlukları, astım nöbetleri veya alerjiye yol açabilir.

H317 Alerjik cilt reaksiyonlarına yol açar.

H335 Solunum yolu tahrişine yol açabilir.

H412 Sucul ortamda uzun süre kalıcı, zararlı etki.

## · Önlem İfadesi

P261 Tozunu/dumanını/gazını/sisini/buharını/spreyini solumaktan kaçının.

P280 Koruyucu eldiven/koruyucu gözlük/koruyucu maske kullanın.

P284 Solunum koruyucu giyin.

P305+P351+P338 GÖZ İLE TEMASI HALİNDE: Su ile birkaç dakika dikkatlice durulayın. Takılı ve yapması kolaysa, kontak lensleri çıkartın. Durulamaya devam edin.

P405 Kilit altında saklayın.

P501 İçeriği/kabı yerel/bölgesel/ulusal/uluslararası mevzuata uygun şekilde bertaraf edin.

## · 2.3 Diğer zararlar

## · PBT ve vPvB değerlendirmesi sonuçları

· PBT: Uygulanamaz.

· vPvB: Uygulanamaz.

**Bölüm 3: Bileşimi/İçindekiler hakkında bilgi**

## · 3.2 Karışımlar

· **Tarifi:** Tehlikesiz katkılar ihtiva eden ve aşağıda belirtilen maddelerden oluşan karışım.

## · İhtiva ettiği tehlikeli maddeler:

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

## · SVHC

111-30-8	glutaral
----------	----------

· **Ek uyarılar:** belirtilmiş olan tehlike işaretlerinin metnini Bölüm 16'dan alınız

TR

(Devamı sayfa 3 'da)

**Güvenlik bilgi formu**  
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(Sayfa 2 'nin devamı)

#### **Bölüm 4: İlk yardım önlemleri**

- **4.1 İlk yardım önlemlerinin tanıtımı**
- **Genel uyarılar:**  
Zehirlenme belirtileri birçok saat sonra başgösterebilir. Bu nedenle doktor kontrolü bir kazadan en az 48 saat sonrasına kadar sürdürülmelidir.
- **Teneffüs ettikten sonra:**  
Bolca temiz hava alması sağlanarak her ihtimale karşı doktora başvurulmalıdır.  
Baygınlık halinde yatırılması ve taşınması sabit yan pozisyonda olmalıdır.
- **Cilde temas ettikten sonra:** Derhal su ve sabunla yıkayarak iyice durulayınız.
- **Gözlere temas ettikten sonra:**  
Gözleri, gözkapakları açık bir şekilde birkaç dakika süreyle akan suyun altına tutunuz. Sikâyetlerin devam etmesi halinde doktora başvurunuz.
- **Yuttuktan sonra:** Şikâyetlerin devamı halinde doktora başvurunuz.
- **4.2 Akut ve sonradan görülen en önemli belirtiler ve etkiler** Daha başka önemli bilgi mevcut değildir.
- **4.3 Acil tıbbi müdahale ve özel tedavi gereği için işaretler** Daha başka önemli bilgi mevcut değildir.

#### **Bölüm 5: Yangınla mücadele önlemleri**

- **5.1 Yangın söndürücüler**
- **Elverişli söndürücü maddeler:** Yangın söndürme önlemlerini çevreye uydurunuz.
- **5.2 Madde veya karışımdan kaynaklanan özel zararlar** Daha başka önemli bilgi mevcut değildir.
- **5.3 Yangın söndürme ekipleri için tavsiyeler**
- **Özel koruyucu teçhizat:** Nefes koruyucu alet takınız.

#### **Bölüm 6: Kaza sonucu yayılma önlemleri**

- **6.1 Kişisel önlemler, koruyucu ekipman ve acil müdahale planı** Gerekli değildir.
- **6.2 Çevresel önlemler**  
Sulara ya da kanalizasyona karışması halinde yetkili resmi makamlara haber veriniz.  
Bol suyla sulandırınız.  
Kanalizasyona/Yüzeysel suya/Yeraltı suyuna karışmasını önleyiniz.
- **6.3 Kontrol altında tutma ve temizleme için yöntem ve malzemeler**  
Sıvı bağlayıcı malzemeyle (Kum, diyatomit, asit bağlayıcı, genel bağlayıcı, un halinde testere talaşı) ile eminiz.  
Zararlı madde karışmış malzemeyi çöp olarak madde 13 'e göre tasfiye ediniz.  
Yeterli havalandırma sağlayınız.
- **6.4 Diğer bölümlere atıflar**  
Güvenli kullanım ile ilgili bilgileri 7. bölümden alınız.  
Kişisel koruyucu teçhizat ile ilgili bilgileri 8. bölümden alınız.  
Tasfiye ile ilgili bilgileri 13. bölümden alınız.

#### **Bölüm 7: Elleçleme ve depolama**

- **7.1 Güvenli elleçleme için önlemler**  
Çalışılan yerin iyi havalanmasını / havanın iyi emilmesini sağlayınız.  
Aerosol (bir gazın içinde sis şeklinde dağılmış sıvı) oluşumunu önleyiniz.
- **Yangın ve patlamadan korunmak için uyarılar:** Özel önlemlerin alınması gerekmez.

(Devamı sayfa 4 'da)

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(Sayfa 3 'nin devamı)

- 7.2 Birlikte bulunmaması gereken maddeleri de içeren güvenli depolama koşulları
- Depolama:
- Depolarda ve kaplarda aranan özellikler: Belirli şartlar aranmaz.
- Birarada depolama ile ilgili uyarılar: Gerekli değil.
- Depolama şartları ile ilgili diğer bilgiler: Kabı sızdırmayacak şekilde kapalı tutunuz.
- 7.3 Belirli son kullanımlar Daha başka önemli bilgi mevcut değildir.

### Bölüm 8: Maruz kalma kontrolü/kişisel korunma

- Teknik tesisatların şekillendirilmesi ile ilgili ek bilgiler: Başka bilgi yoktur, madde 7 'den bakınız.
- 8.1 Kontrol parametreleri
- Çalışma yeri ile ilgili, kontrol edilmesi gereken sınır değerleri olan bileşenler:  
Ürün, çalışılan mahal ile ilgili ve kontrol edilmesi gereken sınır değerleri olan maddeleri önemli miktarda ihtiva etmemektedir.
- Ek uyarılar: Düzenlendiği tarihte geçerli listeler esas alınmıştır.
- 8.2 Maruz kalma kontrolü
- Kişisel koruyucu teçhizat:
- Genel koruyucu ve sıhhi önlemler:  
Gıda maddelerinden, içeceklerden ve yem maddelerinden uzak tutunuz.  
Kirlenmiş, sıvı bulaşmış giyim eşyalarını derhal çıkartınız.  
Molalardan önce ve mesai sonunda ellerinizi yıkayınız.  
Gözlerinize ve cildinize değmesinden kaçınınız.
- Nefes koruyucu önlemler:  
Kısa süreli ya da düşük ölçüde olumsuz tesir altında kalındığında nefes filtre aleti, yoğun bir şekilde ya da uzun süre etkisi altında kalındığında çevredeki havadan bağımsız olan nefes koruyucu cihaz kullanınız.
- Elleri koruyucu:



Koruyucu eldivenler

Eldiven malzemesi ürün / malzeme / hazırlanan madde ile ilgili olarak geçirmez ve dayanıklı olmalıdır. Testlerin yapılmamış olması nedeni ile ürün / hazırlanmış madde / kimyasal karışım için lâzım olan eldiven imalatında kullanılması gereken malzeme ile ilgili herhangi bir tavsiye yapılamamaktadır. Eldiven imalatı için kullanılan malzemelerin seçiminde delinme sürelerinin, geçirgenlik oranlarının ve bozulmanın göz önüne alınması gereklidir.

- Eldiven malzemesi  
Uygun eldivenin seçiminde yalnız imalat malzemesi değil, aynı zamanda diğer kalite özellikleri de dikkate alınmalıdır ve bunlar imalatçıdan imalatçıya değişiklik göstermektedir. Her ürün birçok malzemenin birleşiminden meydana geldiği için eldivenlerin dayanıklılığı önceden hesaplanamamaktadır ve dolayısı ile her eldiven kullanılmadan önce kontrole tabi tutulmalıdır.
- Eldiven malzemesine nüfuz etme süresi  
Kesin delinme (aşınma) süresi eldiven imalatçısından öğrenilmeli ve bu süreler riayet edilmelidir.

(Devamı sayfa 5 'da)

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(Sayfa 4 'nin devamı)

· Gözleri koruyucu:



Kenarları tam kapatan koruyucu gözlük

### Bölüm 9: Fiziksel ve kimyasal özellikler

#### · 9.1 Temel fiziksel ve kimyasal özellikler hakkında bilgi

##### · Genel bilgiler

##### · Görünüm

##### · Biçim:

Sıvı şekilde

##### · Renk:

Ürün adına göre

##### · Koku:

Karakteristik

##### · Koku eşiği

Belirli değil.

##### · pH - değeri 20 °C'de:

7,4

##### · Durum değişikliği

##### · Erime noktası/donma noktası

0 °C

##### · İlk kaynama noktası ve kaynama aralığı

100 °C

##### · Parlama noktası

Uygulanamaz.

##### · Alevlenirlik (katı, gaz)

Uygulanamaz.

##### · Bozunma sıcaklığı

Belirli değil.

##### · Kendiliğinden tutuşma sıcaklığı

Ürün kendiliğinden tutuşmaz niteliktedir.

##### · Patlayıcı özellikler

Ürünün patlama tehlikesi yoktur.

##### · Patlama sınırları:

##### · Alt:

Belirli değil.

##### · Üst:

Belirli değil.

##### · Buhar basıncı 20 °C'de:

23 hPa

##### · Yoğunluk 20 °C'de:

1 g/cm<sup>3</sup>

##### · Bağıl yoğunluk

Belirli değil.

##### · Buhar yoğunluğu

Belirli değil.

##### · Buharlaşma hızı

Belirli değil.

##### · Çözülme kabiliyeti / karışma kabiliyeti

##### · suyla:

Tamamen karıştırılabilir niteliktedir.

##### · Dağılım katsayısı: n-oktanol/su

Belirli değil.

##### · Akışkanlık

##### · Dinamik:

Belirli değil.

##### · Kinematik:

Belirli değil.

##### · Çözücü madde oranı:

##### · Su:

%97.5

##### · VOC (CE)

0,00 %

##### · Katı madde oranı:

%0.0

(Devamı sayfa 6 'da)



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(Sayfa 5 'nin devamı)

· **9.2 Diğer bilgiler**

Daha başka önemli bilgi mevcut değildir.

### Bölüm 10: Kararlılık ve tepkime

- **10.1 Tepkime** Daha başka önemli bilgi mevcut değildir.
- **10.2 Kimyasal kararlılık**
- **Termik ayrışma / kaçınılması gereken şartlar:** Usulüne uygun şekilde kullanıldığında ayrışma olmaz.
- **10.3 Zararlı reaksiyon olasılığı** Tehlikeli reaksiyonları duyulmamıştır.
- **10.4 Kaçınılması gereken durumlar** Daha başka önemli bilgi mevcut değildir.
- **10.5 Uyumsuz malzemeler** Daha başka önemli bilgi mevcut değildir.
- **10.6 Zararlı bozunma ürünleri** Ayrışmada oluşan tehlikeli ürünler duyulmamıştır.

### Bölüm 11: Toksikolojik bilgiler

- **11.1 Toksikolojik etkiler hakkında bilgi**
- **Akut toksisite**  
Solunması halinde zararlıdır.

· **Sınıflandırma için önemli olan LD/LC50 - değerleri (toksikolojik deney değerleri)**

#### 111-30-8 glutaral

Ağızdan	LD50	134 mg/kg (rat)
Ciltten	LD50	2.560 mg/kg (rabbıt)

- **Asli tahriş edici etkisi:**
- **Cilt aşınması/tahrişi**  
Cilt tahrişine yol açar.
- **Ciddi göz hasarları/tahrişi**  
Ciddi göz tahrişine yol açar.
- **Solunum yolları veya cilt hassaslaşması**  
Solunması halinde nefes alma zorlukları, astım nöbetleri veya alerjiye yol açabilir.  
Alerjik cilt reaksiyonlarına yol açar.
- **Aşağıdaki grupların potansiyel etkilerine dair bilgiler:**
- **CMR-etkileri (kansere üretici, irsiyet değiştirici ve üremeyi tehdit edici etki)**
- **Eşey hücre mutajenitesi** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Kanserojenite** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Üreme sistemi toksisitesi** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **BHOT - tek maruz kalma**  
Solunum yolu tahrişine yol açabilir.
- **BHOT - tekrarlı maruz kalma** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.
- **Aspirasyon zararı** Mevcut bilgilere göre, sınıflandırma kriterlerini karşılamamaktadır.

### Bölüm 12: Ekolojik bilgiler

- **12.1 Toksisite**
- **Su toksisitesi:** Daha başka önemli bilgi mevcut değildir.
- **12.2 Kalıcılık ve bozunabilirlik** Daha başka önemli bilgi mevcut değildir.
- **12.3 Biyobirikim potansiyeli** Daha başka önemli bilgi mevcut değildir.
- **12.4 Toprakta hareketlilik** Daha başka önemli bilgi mevcut değildir.

(Devamı sayfa 7 'da)

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(Sayfa 6 'nın devamı)

- **Ökotoksik etkileri:**
- **Not:**  
Balıklar için zehirli  
Balıklar için zararlı
- **Diğer ekolojik uyarılar:**
- **Genel uyarılar:**  
Suyu tehdit sınıfı 2 ( ): suyu tehdit edicidir  
Yeraltı suyuna, duran ve akan sulara ve kanalizasyona ulaşmasını önleyiniz.  
Cüzi miktarların bile yeraltına akması halinde içme suyunu tehdit eder.  
Duran ve akan sulara balıklar ve plankton için de zehirlidir.  
Suda yaşayan organizmalar için zehirlidir  
Suda yaşayan organizmalar için zararlıdır
- **12.5 PBT ve vPvB değerlendirmesinin sonuçları**
- **PBT:** Uygulanamaz.
- **vPvB:** Uygulanamaz.
- **12.6 Diğer olumsuz etkiler** Daha başka önemli bilgi mevcut değildir.

### Bölüm 13: Bertaraf etme bilgileri

- **13.1 Atık işleme yöntemleri**
- **Tavsiye:** Ev çöpüyle beraber tasfiye edilmesi yasaktır. Kanalizasyona ulaşmasını önleyiniz.
- **Temizlenmemiş ambalajlar:**
- **Tavsiye:** Tasfiyesi resmi makamların yönetmeliklerine göre yapılır.
- **Tavsiye olunan temizlik maddesi:** Su, gerekirse temizlik maddeleri katmak suretiyle.

### Bölüm 14: Taşımacılık bilgisi

- |   |              |
|---|--------------|
| · <b>14.1 UN Numarası</b><br>· <b>ADR, IMDG, IATA</b>                                   | kalkmıştır   |
| · <b>14.2 UN uygun taşımacılık ismi</b><br>· <b>ADR, IMDG, IATA</b>                     | kalkmıştır   |
| · <b>14.3 Taşımacılık zararları</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>sınıfı</b> | kalkmıştır   |
| · <b>14.4 Ambalaj grubu</b><br>· <b>ADR, IMDG, IATA</b>                                 | kalkmıştır   |
| · <b>14.5 Çevresel zararlar</b>   | Uygulanamaz. |
| · <b>14.6 Kullanıcılar için özel önlemler</b>   | Uygulanamaz. |
| · <b>14.7 MARPOL 73/78 EK II ve IBC Koduna göre Toplu Taşımacılık</b>                   | Uygulanamaz. |
| · <b>UN "Model Düzenleme":</b>  | kalkmıştır   |

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(Devamı sayfa 8 'da)

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(Sayfa 7 'nin devamı)

### Bölüm 15: Mevzuat bilgisi

· **15.1 Madde veya karışım için güvenlik, sağlık ve çevresel düzenlemeler/mevzuat**

· **2012/18/EU sayılı Direktifi**

· **Adlandırılmış tehlikeli maddeler - EK-1** İçerdiği maddelerin hiçbiri listelenmemiştir.

· **1907/2006/EC sayılı Yönetmelik EK-XVII Conditions of restriction: 3**

· **Elektrikli ve Elektronik Eşyalarda Bazı Zararlı Maddelerin Kullanımının Sınırlandırılmasına Dair Yönetmelik (2011/65/EU) - Ek-2**

İçerdiği maddelerin hiçbiri listelenmemiştir.

· **Ulusal hükümler:**

· **Diğer düzenlemeler, sınırlamalar ve yasaklayıcı düzenlemeler.**

· **Yüksek Önem Arz Eden Maddeler (SVHC) - REACH, Madde 57**

111-30-8 | glutaral

· **15.2 Kimyasal güvenlik değerlendirmesi: Bir Kimyasal güvenlik değerlendirmesi yapılmamıştır.**

### Bölüm 16: Diğer bilgiler

Veriler bugünkü bilgi durumumuza istinat etmektedir, ancak ürün özellikleri ile ilgili teminat teşkil etmezler ve akdî bir hukuki ilişki tesis etmezler.

· **Önemli terkipleri**

H301 Yutulması halinde toksiktir.

H314 Ciddi cilt yanıklarına ve göz hasarına yol açar.

H317 Alerjik cilt reaksiyonlarına yol açar.

H330 Solunması halinde öldürücüdür.

H334 Solunması halinde nefes alma zorlukları, astım nöbetleri veya alerjiye yol açabilir.

H335 Solunum yolu tahrişine yol açabilir.

H400 Sucul ortamda çok toksiktir.

H411 Sucul ortamda uzun süre kalıcı, toksik etki.

· **Kısaltmalar ve:**

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

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akut toksisite – Kategori 3

Acute Tox. 2: Akut toksisite – Kategori 2

Acute Tox. 4: Akut toksisite – Kategori 4

Skin Corr. 1B: Cilt aşınması/tahrişi – Kategori 1B

Skin Irrit. 2: Cilt aşınması/tahrişi – Kategori 2

Eye Irrit. 2: Ciddi göz hasarı/göz tahrişi – Kategori 2

Resp. Sens. 1: Solunum hassaslaştırıcılığı – Kategori 1

Skin Sens. 1: Cilt hassaslaştırıcılığı – Kategori 1

Skin Sens. 1A: Cilt hassaslaştırıcılığı – Alt kategori 1A

(Devamı sayfa 9 'da)

**Güvenlik bilgi formu**  
**23 Haziran 2017 tarihli, 30105 sayılı, „Kimyasalların Kaydı,**  
**Değerlendirilmesi, İzni Ve Kisitlanması Hakkında Yönetmelik,**  
**Madde 27“ hükümlerine uygun düzenlenmiştir**

Baskı tarihi: 08.10.2021

Form No.: 16537-05

Yeniden düzenleme tarihi: 08.10.2021

**Ticari adı: GLUTARALDEHYDE 2.5% IN 0.1M PHOSPHATE BUFFER, PH 7.4**

STOT SE 3: Belirli hedef organ toksisitesi (tek maruz kalma) – Kategori 3  
Aquatic Acute 1: Sucul ortam için zararlı - akut sucul zararlılık – Kategori 1  
Aquatic Chronic 2: Sucul ortam için zararlı - uzun süreli sucul zararlılık – Kategori 2  
Aquatic Chronic 3: Sucul ortam için zararlı - uzun süreli sucul zararlılık – Kategori 3

(Sayfa 8 'nin devamı)

TR