

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/25/2021

Reviewed on 08/25/2021

1 Identification

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Article number:** 16214, 16216, 16216-10
- **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: info@emsdiasum.com
www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

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



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

STOT SE 3 H335 May cause respiratory irritation.

Flam. Liq. 4 H227 Combustible liquid.

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

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· **Hazard pictograms**



· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must 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 swallowed: Call a poison center/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

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

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment is urgent (see on this label).

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

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



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- **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	>10-≤25%
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4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.

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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).

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

· Protective Action Criteria for Chemicals

· PAC-1:

111-30-8	Glutaraldehyde	0.2 ppm
67-56-1	Methyl Alcohol	530 ppm

· PAC-2:

111-30-8	Glutaraldehyde	1 ppm
67-56-1	Methyl Alcohol	2,100 ppm

· PAC-3:

111-30-8	Glutaraldehyde	5 ppm
67-56-1	Methyl Alcohol	7200* ppm

7 Handling and storage

· Handling:

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· Information about protection against explosions and fires: *Keep respiratory protective device available.*

· 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/m³, 0.2 ppm
See Pocket Guide App. C

TLV Ceiling limit value: 0.2 mg/m³, 0.05 ppm
DSEN;RSEN ;activated or inactivated

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

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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- **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.
 Store protective clothing separately.
 Avoid contact with the eyes.
 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
- **Color:** According to product specification
- **Odor:** Fruit-like
- **Odor threshold:** Not determined.
- **pH-value:** Not determined.
- **Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 100 °C (212 °F)
- **Flash point:** 71 °C (159.8 °F)

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· Flammability (solid, gaseous):	Not flammable.
· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Not determined.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Vapor pressure at 20 °C (68 °F):	23 hPa (17.3 mm Hg)
· Density at 20 °C (68 °F):	1.129 g/cm ³ (9.42151 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent content:	
· Organic solvents:	0.3 %
· Water:	74.8 %
· VOC content:	0.25 %
	18.1 g/l / 0.15 lb/gal
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:		
111-30-8 Glutaraldehyde		
Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2,560 mg/kg (rabbit)

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- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Corrosive
Irritant
Very toxic
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

12 Ecological information

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

US

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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13 Disposal considerations

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

14 Transport information

- | | |
|---|--|
| · UN-Number | UN3265 |
| · DOT, ADR, IMDG, IATA | |
| · UN proper shipping name | Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde) |
| · DOT | 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. |
| · ADR | (Glutaraldehyde), ENVIRONMENTALLY HAZARDOUS |
| · IMDG | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. |
| · IATA | (Glutaraldehyde), MARINE POLLUTANT |
| | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. |
| | (Glutaraldehyde) |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| <hr style="border-top: 1px dashed #000;"/> | |
| · ADR, IMDG | |
|   | |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| <hr style="border-top: 1px dashed #000;"/> | |
| · IATA | |
|  | |
| · Class | 8 Corrosive substances |
| · Label | 8 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | III |

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· Environmental hazards:	Product contains environmentally hazardous substances: Glutaraldehyde
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances
· Hazard identification number (Kemler code):	88
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE), 8, III, ENVIRONMENTALLY HAZARDOUS

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):**

67-56-1 Methyl Alcohol

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

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

67-56-1 Methyl Alcohol

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· **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:**

67-56-1 Methyl Alcohol

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

111-30-8 Glutaraldehyde

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS05

GHS06

GHS07

GHS08

· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

Use only outdoors or in a well-ventilated area.

Contaminated work clothing must 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 swallowed: Call a poison center/doctor if you feel unwell.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

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

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment is urgent (see on this label).

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

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

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

Store in a well-ventilated place. Keep cool.

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** 08/25/2021 / -

· **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

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

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

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

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

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

Safety Data Sheet

according to WHS Regulations

Printing date 25.08.2021

Revision: 25.08.2021

1 Identification

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Article number:** 16214, 16216, 16216-10
- **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: info@emsdiasum.com
www.emsdiasum.com
- ProSciTech Pty Ltd
11 Carlton Street, Kirwan QLD 4817 Australia
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.
P.O. Box 118
The Patch VIC 3792
Australia
Tel: 03 9752 1785
Fax: 03 9752 1784
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazard(s) Identification

- **Classification of the substance or mixture**



GHS06 skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 health hazard

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



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

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Safety Data Sheet

according to WHS Regulations

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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GHS07

Acute Tox. 4 H302 Harmful if swallowed.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.
 Flam. Liq. 4 H227 Combustible liquid.

· **Label elements**

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

· **Hazard pictograms**



GHS05

GHS06

GHS07

GHS08

· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

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.

Wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

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

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment is urgent (see on this label).

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

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

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

Store in a well-ventilated place. Keep cool.

Store locked up.

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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- 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	>10- ≤25%
----------	----------------	-----------

- **SVHC**

111-30-8	Glutaraldehyde
----------	----------------

- **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:**
 - Immediately remove any clothing soiled by the product.
 - Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
 - Remove breathing equipment only after contaminated clothing have been completely removed.
 - In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
 - Supply fresh air or oxygen; call for doctor.
 - In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
 - Call for a doctor immediately.
 - Drink plenty of water and provide fresh air. Call for a doctor immediately.
- **Information for doctor:**
 - **Most important symptoms and effects, both acute and delayed** No further relevant information available.
 - **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

AU

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **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).
Use neutralising agent.
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.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

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

111-30-8 Glutaraldehyde

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

- **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.
Store protective clothing separately.

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Avoid contact with the eyes.

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

9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

- | | |
|---------------------------|------------------------------------|
| · Form: | Fluid |
| · Colour: | According to product specification |
| · Odour: | Fruit-like |
| · Odour threshold: | Not determined. |

· **pH-value:** Not determined.

· **Change in condition**

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

· **Flash point:** 71 °C

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

· **Decomposition temperature:** Not determined.

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

· **Explosive properties:** Not determined.

· **Explosion limits:**

· **Lower:** Not determined.

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· Upper:	Not determined.
· Vapour pressure at 20 °C:	23 hPa
· Density at 20 °C:	1.129 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent content:	
· Organic solvents:	0.3 %
· Water:	74.8 %
· VOC (EC)	0.25 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and Reactivity

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

11 Toxicological Information

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

· LD/LC50 values 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** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· **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

Corrosive

Irritant

Very toxic

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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:**

Very toxic for fish

Toxic for fish

· **Additional ecological information:**

· **General notes:**

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

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

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Toxic for 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**

UN3265

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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· **UN proper shipping name**
 · **ADG** 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Glutaraldehyde), ENVIRONMENTALLY HAZARDOUS
 · **IMDG** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Glutaraldehyde), MARINE POLLUTANT
 · **IATA** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Glutaraldehyde)

· **Transport hazard class(es)**· **ADG, IMDG**

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

· **IATA**

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

· **Packing group**· **ADG, IMDG, IATA** III

· **Environmental hazards:** Product contains environmentally hazardous substances:
 Glutaraldehyde

· **Marine pollutant:** Symbol (fish and tree)

· **Special marking (ADG):** Symbol (fish and tree)

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

· **Hazard identification number (Kemler code):** 88

· **EMS Number:** F-A,S-B

· **Segregation groups** Acids

· **Stowage Category** A

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

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

· **Transport/Additional information:**· **ADG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· **Transport category** 3

· **Tunnel restriction code** E

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<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O. S. (GLUTARALDEHYDE), 8, III, ENVIRONMENTALLY HAZARDOUS</p>

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
67-56-1	Methyl Alcohol	S5, S6

- **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).

- **Hazard pictograms**



GHS05 GHS06 GHS07 GHS08

- **Signal word** Danger

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

Glutaraldehyde

- **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

- **Precautionary statements**

Keep away from flames and hot surfaces. – No smoking.

Do not breathe dusts or mists.

Wash thoroughly after handling.

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

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.

Wear respiratory protection.

IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

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

Immediately call a POISON CENTER/doctor.

Specific treatment is urgent (see on this label).

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

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

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

Store in a well-ventilated place. Keep cool.

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.

· **Seveso category**

H2 ACUTE TOXIC

E1 Hazardous to the Aquatic Environment

· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t

· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t

· **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.

· **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

Flam. Liq. 4: Flammable liquids – Category 4

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

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

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

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

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

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

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1 Identification

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Article number:** 16214, 16216, 16216-10
- **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: info@emsdiasum.com
 www.emsdiasum.com
- **Information department:** Product safety department
- **Emergency telephone number:**
 ChemTrec 1-800-424-9300 Contract CCN7661
 1-703-527-3887

2 Hazard identification

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Toxicity (Inhalation) - Category 2

H330 Fatal if inhaled.



GHS08 Health hazard

Respiratory Sensitizer - Category 1

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



GHS05 Corrosion

Skin Corrosion - Category 1B

H314 Causes severe skin burns and eye damage.

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity (Oral) - Category 4

H302 Harmful if swallowed.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure -
Category 3

H335 May cause respiratory irritation.

Flammable Liquids - Category 4

H227 Combustible liquid.

- **Label elements**

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

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· **Hazard pictograms**



· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wash thoroughly after handling.

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

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 swallowed: Call a poison center/doctor if you feel unwell.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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

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

Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment is urgent (see on this label).

Take off contaminated clothing and wash it before reuse.

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

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO₂, powder or water spray.

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)**



· **HMIS-ratings (scale 0 - 4)**



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3 Composition/Information on ingredients

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

- **Dangerous components:**

111-30-8	Glutaraldehyde	10-30% 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:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Remove breathing apparatus only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **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**
Wear protective equipment. Keep unprotected persons away.
- **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).
Use neutralizing agent.

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- *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.*
- *Open and handle receptacle with care.*
- *Prevent formation of aerosols.*
- **Information about protection against explosions and fires:** *Keep respiratory protective device available.*
- **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

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.*
- *Store protective clothing separately.*
- *Avoid contact with the eyes.*
- *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.*

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 4)

· **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

· **Color:**

According to product specification

· **Odor:**

Fruit-like

· **Odor threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

· **Melting point/Melting range:**

Undetermined.

· **Boiling point/Boiling range:**

100 °C

· **Flash point:**

71 °C

· **Flammability (solid, gaseous):**

Not flammable.

· **Decomposition temperature:**

Not determined.

· **Auto igniting:**

Product is not selfigniting.

· **Danger of explosion:**

Not determined.

· **Explosion limits:**

· **Lower:**

Not determined.

· **Upper:**

Not determined.

· **Vapor pressure at 20 °C:**

23 hPa

· **Density at 20 °C:**

1.129 g/cm³

· **Relative density**

Not determined.

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 5)

· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with	
· Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
· Dynamic:	Not determined.
· Kinematic:	Not determined.
· Solvent content:	
· Organic solvents:	0.3 %
· Water:	74.8 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

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

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

111-30-8 Glutaraldehyde

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

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

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Safety Data Sheet according to HPR, Schedule 1

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **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:**

Very toxic for fish

Toxic for fish

· **Additional ecological information:**

· **General notes:**

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

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

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

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

· **Uncleaned packagings:**

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

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

14 Transport information

· **UN-Number**

· **DOT/TDG, ADR, IMDG, IATA**

UN3265

(Contd. on page 8)

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/25/2021

Reviewed on 08/25/2021

Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 7)

· **UN proper shipping name**
 · **DOT/TDG**
 · **ADR**
 · **IMDG**
 · **IATA**

Corrosive liquid, acidic, organic, n.o.s. (Glutaraldehyde)
 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Glutaraldehyde), ENVIRONMENTALLY HAZARDOUS
 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Glutaraldehyde), MARINE POLLUTANT
 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
 (Glutaraldehyde)

· **Transport hazard class(es)**
 · **DOT/TDG (Transport dangerous goods):**



· **Class**
 · **Label**

8 Corrosive substances
 8

· **ADR, IMDG**



· **Class**
 · **Label**

8 Corrosive substances
 8

· **IATA**



· **Class**
 · **Label**

8 Corrosive substances
 8

· **Packing group**
 · **DOT/TDG, ADR, IMDG, IATA**

III

· **Environmental hazards:**
 · **Marine pollutant:**
 · **Special marking (ADR):**

Product contains environmentally hazardous substances:
Glutaraldehyde
Symbol (fish and tree)
Symbol (fish and tree)

· **Special precautions for user**
 · **Hazard identification number (Kemler code):**
 · **EMS Number:**
 · **Segregation groups**
 · **Stowage Category**
 · **Stowage Code**

Warning: Corrosive substances
 88
 F-A,S-B
 Acids
 A
 SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

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CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/25/2021

Reviewed on 08/25/2021

Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 8)

· Transport/Additional information:

· DOT/TDG

· Quantity limitations

On passenger aircraft/rail: 5 L

On cargo aircraft only: 60 L

· ADR

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

· UN "Model Regulation":

UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(GLUTARALDEHYDE), 8, III, ENVIRONMENTALLY
HAZARDOUS

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):

67-56-1 Methyl Alcohol

· TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.

· Canadian substance listings:

· Canadian Domestic Substances List (DSL)

All ingredients are listed.

· Canadian Ingredient Disclosure list (limit 0.1%)

None of the ingredients is listed.

· Canadian Ingredient Disclosure list (limit 1%)

111-30-8 Glutaraldehyde

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

· Hazard pictograms



GHS05

GHS06

GHS07

GHS08

· Signal word Danger

· Hazard-determining components of labeling:

Glutaraldehyde

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Safety Data Sheet according to HPR, Schedule 1

Printing date 08/25/2021

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 9)

· **Hazard statements**

Combustible liquid.
Harmful if swallowed.
Fatal if inhaled.
Causes severe skin burns and eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause respiratory irritation.

· **Precautionary statements**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
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 swallowed: Call a poison center/doctor if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment is urgent (see on this label).
Take off contaminated clothing and wash it before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
If experiencing respiratory symptoms: Call a poison center/doctor.
Wash contaminated clothing before reuse.
In case of fire: Use for extinction: CO₂, powder or water spray.
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** 08/25/2021 / -

· **Abbreviations and acronyms:**

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

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

Printing date 25.08.2021

Revision: 25.08.2021

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

- **Product identifier**
- **Trade name:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Article number:** 16214, 16216, 16216-10
- **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: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 Hazards identification

- **Classification of the substance or mixture**



skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



health hazard

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



corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



Acute Tox. 4 H302 Harmful if swallowed.

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

(Contd. on page 2)

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 1)

STOT SE 3 H335 May cause respiratory irritation.

Flam. Liq. 4 H227 Combustible liquid.

· **Label elements**

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

· **Hazard pictograms**



GHS05 GHS06 GHS08 GHS09

· **Signal word** *Danger*

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

Glutaraldehyde

· **Hazard statements**

Combustible liquid.

Harmful if swallowed.

Fatal if inhaled.

Causes severe skin burns and eye damage.

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

May cause an allergic skin reaction.

May cause respiratory irritation.

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

· **Precautionary statements**

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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

Continue rinsing.

Immediately call a POISON CENTER/doctor.

Specific treatment is urgent (see on this label).

Take off contaminated clothing and wash it before reuse.

Store locked up.

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

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterisation: Mixtures**

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

· **Dangerous components:**

111-30-8	Glutaraldehyde Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335; Flam. Liq. 4, H227; Acute Tox. 5, H313	>10- ≤25%
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· **SVHC**

111-30-8	Glutaraldehyde	
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(Contd. of page 2)

· **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:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **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**

Wear protective equipment. Keep unprotected persons away.

· **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).

Use neutralising agent.

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.

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 3)

See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** Keep respiratory protective device available.
- **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/personal protection

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

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

111-30-8 Glutaraldehyde

TLV | Ceiling limit: 0.05 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
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.

(Contd. on page 5)

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Trade name: **GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL**

(Contd. of page 4)

- **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
- **Colour:** According to product specification
- **Odour:** Fruit-like
- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

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

- **Flash point:** 71 °C

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

- **Decomposition temperature:** Not determined.

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

- **Explosive properties:** Not determined.

- **Explosion limits:**

- **Lower:** Not determined.
- **Upper:** Not determined.

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

- **Density at 20 °C:** 1.129 g/cm³
- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

- **Solubility in / Miscibility with**

- **water:** Fully miscible.

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

- **Viscosity:**

- **Dynamic:** Not determined.
- **Kinematic:** Not determined.

- **Solvent content:**

- **Organic solvents:** 0.3 %
- **Water:** 74.8 %

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Trade name: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Contd. of page 5)

· VOC (EC)	0.25 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

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

- **LD/LC50 values 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** Strong caustic effect on skin and mucous membranes.
- **Serious eye damage/irritation**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**
Sensitisation possible through inhalation.
Sensitisation possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:
Harmful
Corrosive
Irritant
Very toxic
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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.

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(Contd. of page 6)

- **Ecotoxicological effects:**

- **Remark:**

Very toxic for fish

Toxic for fish

- **Additional ecological information:**

- **General notes:**

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

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

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Toxic for 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**

- **ADR, IMDG, IATA**

UN3265

- **UN proper shipping name**

- **ADR**

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), ENVIRONMENTALLY HAZARDOUS

- **IMDG**

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT

- **IATA**

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

- **Transport hazard class(es)**

- **ADR, IMDG**



- **Class**

8 Corrosive substances.

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Trade name: **GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL**

(Contd. of page 7)

· Label	8
· IATA	
	
· Class	8 Corrosive substances.
· Label	8
· Packing group	
· ADR, IMDG, IATA	III
· Environmental hazards:	Product contains environmentally hazardous substances: Glutaraldehyde
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	88
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O. S. (GLUTARALDEHYDE), 8, III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

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(Contd. of page 8)

· **Hazard pictograms**

GHS05 GHS06 GHS08 GHS09

· **Signal word** *Danger*· **Hazard-determining components of labelling:***Glutaraldehyde*· **Hazard statements***Combustible liquid.**Harmful if swallowed.**Fatal if inhaled.**Causes severe skin burns and eye damage.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.**May cause respiratory irritation.**Very toxic to aquatic life.**Toxic to aquatic life with long lasting effects.*· **Precautionary statements***IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.**Continue rinsing.**Immediately call a POISON CENTER/doctor.**Specific treatment is urgent (see on this label).**Take off contaminated clothing and wash it before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*· **Directive 2012/18/EU**· **Named dangerous substances - ANNEX I** *None of the ingredients is listed.*· **Seveso category***H2 ACUTE TOXIC**E1 Hazardous to the Aquatic Environment*· **Qualifying quantity (tonnes) for the application of lower-tier requirements** *50 t*· **Qualifying quantity (tonnes) for the application of upper-tier requirements** *200 t*· **National regulations:**· **Other regulations, limitations and prohibitive regulations**· **Substances of very high concern (SVHC) according to REACH, Article 57**111-30-8 | *Glutaraldehyde*· **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.

· **Relevant phrases***H227 Combustible liquid.**H301 Toxic if swallowed.**H313 May be harmful in contact with skin.**H314 Causes severe skin burns and eye damage.*

(Contd. on page 10)

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

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(Contd. of page 9)

*H317 May cause an allergic skin reaction.**H330 Fatal if inhaled.**H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**H335 May cause respiratory irritation.**H400 Very toxic to aquatic life.**H411 Toxic to aquatic life with long lasting effects.***· Abbreviations and acronyms:***ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**EINECS: European Inventory of Existing Commercial Chemical Substances**ELINCS: European List of Notified Chemical Substances**CAS: Chemical Abstracts Service (division of the American Chemical Society)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Flam. Liq. 4: Flammable liquids – Category 4**Acute Tox. 3: Acute toxicity - oral – Category 3**Acute Tox. 4: Acute toxicity - oral – Category 4**Acute Tox. 5: Acute toxicity - dermal – Category 5**Acute Tox. 2: Acute toxicity - inhalation – Category 2**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Eye Dam. 1: Serious eye damage/eye irritation – Category 1**Resp. Sens. 1: Respiratory sensitisation – Category 1**Skin Sens. 1: Skin sensitisation – Category 1**Skin Sens. 1A: Skin sensitisation – Category 1A**STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*

IL

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

Printing date 25.08.2021

Revision: 25.08.2021

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

- **1.1 Product identifier**
- **Trade name:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Article number:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECTION 2: Hazards identification

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



GHS06 skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 health hazard

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



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

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

STOT SE 3 H335 May cause respiratory irritation.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

· Hazard pictograms



GHS05 GHS06 GHS08 GHS09

· Signal word Danger

· Hazard-determining components of labelling:

Glutaraldehyde

· Hazard statements

H302 Harmful if swallowed.

H330 Fatal if inhaled.

H314 Causes severe skin burns and eye damage.

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

H317 May cause an allergic skin reaction.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

· Precautionary statements

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P320 Specific treatment is urgent (see on this label).

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 2.3 Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

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

· Dangerous components:

CAS: 111-30-8	Glutaraldehyde	>10-≤25%
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	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:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Remove breathing equipment only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness place patient stably in side position for transportation.

· **After skin contact:** Immediately wash with water and soap and rinse thoroughly.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

· **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**

Wear protective equipment. Keep unprotected persons away.

· **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).

Use neutralising agent.

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.

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SECTION 7: Handling and storage

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

SECTION 8: Exposure controls/personal protection

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

8.1 Control parameters

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

111-30-8 Glutaraldehyde

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

- **Additional information:** The lists valid during the making were used as basis.
- **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.
 Store protective clothing separately.
 Avoid contact with the eyes.
 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.

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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

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:	Fruit-like
· Odour threshold:	Not determined.

· pH-value:	Not determined.
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- **Change in condition**

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

· Flash point:	71 °C
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· Flammability (solid, gas):	Not applicable.
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· Decomposition temperature:	Not determined.
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· Auto-ignition temperature:	Product is not selfigniting.
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· Explosive properties:	Not determined.
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- **Explosion limits:**

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

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

· Density at 20 °C:	1.129 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.

- **Solubility in / Miscibility with**

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

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

- **Solvent content:**

· Organic solvents:	0.3 %
· Water:	74.8 %

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· VOC (EC)	0.25 %
· Solids content:	0.0 %
· 9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

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

SECTION 11: Toxicological information

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

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

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- **Ecotoxicological effects:**

- **Remark:**

Very toxic for fish

Toxic for fish

- **Additional ecological information:**

- **General notes:**

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

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

Must not reach sewage water or drainage ditch undiluted or unneutralised.

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

Also poisonous for fish and plankton in water bodies.

Very toxic for aquatic organisms

Toxic for 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.

SECTION 14: Transport information

- **14.1 UN-Number**

- **ADR, IMDG, IATA**

UN3265

- **14.2 UN proper shipping name**

- **ADR**

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), ENVIRONMENTALLY HAZARDOUS

- **IMDG**

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT

- **IATA**

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

- **14.3 Transport hazard class(es)**

- **ADR, IMDG**



- **Class**

8 Corrosive substances.

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· Label	8
· IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Product contains environmentally hazardous substances: Glutaraldehyde
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Hazard identification number (Kemler code):	88
· EMS Number:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE), 8, III, ENVIRONMENTALLY HAZARDOUS

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.
- **Seveso category**
H2 ACUTE TOXIC
E1 Hazardous to the Aquatic Environment

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- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **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.

· **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. 4: Acute toxicity - oral – Category 4
- Acute Tox. 2: Acute toxicity - inhalation – Category 2
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Eye Dam. 1: Serious eye damage/eye irritation – Category 1
- Resp. Sens. 1: Respiratory sensitisation – Category 1
- Skin Sens. 1: Skin sensitisation – Category 1
- Skin Sens. 1A: Skin sensitisation – Category 1A
- STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
- Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
- Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

化学品安全技术说明书

据根据据据T 16483-2008, GB/T 17519-2013

打印日期 2021.08.25

在 2021.08.25 审核

1 化学品及企业标识

· 产品识别者

· 化学品中文名称: 戊二醛
 化学品英文名称: 戊二醛
 化学品俗名或商品名: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

· 商品编号: 16214, 16216, 16216-10

· 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: info@emsdiasum.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, 可燃液体。 吞咽有害。 吸入致命。 造成严重皮肤灼伤和眼损伤。 吸入可能导致过敏或哮喘病症状或呼吸困难。 可能导致皮肤过敏反应。 可引起呼吸道刺激。 对水生生物毒性极大。 对水生生物有毒并具有长期持续影响。

· GHS危险性类别



骷髅和交叉骨

急性毒性(吸入) 第2类

H330 吸入致命



健康危害

敏化(呼吸) 第1类

H334 吸入可能导致过敏或哮喘病症状或呼吸困难



腐蚀

皮肤腐蚀/刺激 第1B类

H314 造成严重皮肤灼伤和眼损伤

严重眼损伤/眼睛刺激性 第1类

H318 造成严重眼损伤



环境

对水环境的危害(急性) 第1类

H400 对水生生物毒性极大

对水环境的危害(慢性) 第2类

H411 对水生生物有毒并具有长期持续影响

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据根据据据T 16483-2008, GB/T 17519-2013

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化学品中文名称: 戊二醛
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急性毒性(经口) 第4类	H302 吞咽有害
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
易燃液体 第4类	H227 可燃液体

· 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。

图示图示图示



GHS05 GHS06 GHS08 GHS09

名称名称名称

· 标签上辨别危险的成份:

1,5-戊二醛 (>10-≤25 %)

· 危险字句

可燃液体
 吞咽有害
 吸入致命
 造成严重皮肤灼伤和眼损伤
 吸入可能导致过敏或哮喘病症状或呼吸困难
 可能导致皮肤过敏反应
 可引起呼吸道刺激
 对水生生物毒性极大
 对水生生物有毒并具有长期持续影响

· 警戒字句

· 事故响应

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴
 如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗
 立即呼叫急救中心/医生
 紧急具体治疗(见本标签上的)
 脱掉沾染的衣服,清洗后方可重新使用

· 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

-CN-

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据根根据据根T 16483-2008, GB/T 17519-2013

打印日期 2021.08.25

在 2021.08.25 审核

化学品中文名称: 戊二醛
 化学品英文名称: 戊二醛
 化学品俗名或商品名: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

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3 成分/组成信息

· 混合物

描述描述描述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	>10-≤25%
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4 急救措施

· 应急措施要领

· 总说明:

马上脱下染有该产品的衣服。

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。

只在彻底地脱去了已被污染的衣服之后才能移走呼吸仪器。

万一出现了不规则的呼吸或呼吸的阻碍,请为病人提供人工呼吸。

吸入吸入吸入

供给新鲜空气或氧气;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。然后咨询医生。

食入食入食入

马上召唤医生。

喝大量的清水和提供新鲜的空气。马上召唤医生。

· **给医生的资料:**

· **最重要的慢性症状及其影响** 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:** 二氧化碳 (CO₂)、灭火粉末或洒水。使用洒水或抗酒精泡沫灭火剂扑灭较大的火种。

· **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** 带上保护仪器。让未受到保护的人们远离。

· 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)。

(在 4 页继续)

化学品安全技术说明书

据根据据据T 16483-2008, GB/T 17519-2013

打印日期 2021.08.25

在 2021.08.25 审核

化学品中文名称: 戊二醛
 化学品英文名称: 戊二醛
 化学品俗名或商品名: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(在 3 页继续)

使用中和剂。
 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 储存 储存

确保工作间有良好的通风/排气装置。
 小心打开及处理贮藏器。
 防止气溶胶的形成。
 · **有关火灾及防止爆炸的资料:** 提供呼吸保护装置。

· 混合危险性等安全储存条件

储存 储存 储存

· **储存库和容器须要达到的要求:** 没有特别的要求。
 · **有关使用一个普通的储存设施来储存的资料:** 不需要。
 · **有关储存条件的更多资料:** 将容器密封。
 · **具体的最终用户:** 无相关详细资料。

8 接触控制和个体防护

· **工程控制方法:** 没有进一步数据;见第 7 项。

· 控制变数

· 在工作场需要监控的限值成分

111-30-8 1,5-戊二醛

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

· **额外的资料:** 制作期间有效的清单将作为基础来使用。

· 泄漏控制

· 个人防护设备:

· 一般保护和卫生措施:

远离食品、饮料和饲料。
 立即除去所有的不洁的和被污染的衣服。
 在休息之前和工作完毕后请清洗双手。
 分开储存保护性衣服。
 避免和眼睛接触。
 避免和眼睛及皮肤接触。

· 呼吸系统防护:

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

· 手防护:



保护手套

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(在 4 页继续)

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

外观外观外观	流体
形状形状形状	根据产品规格
颜色颜色颜色	类似水果
气味气味气味	未决定.
· 嗅觉阈限	

· pH值: 未决定.

· 条件的更改

熔点熔点熔点	未确定的
沸点沸点沸点	100 °C
闪点闪点闪点	71 °C

· 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: 未决定.

· 爆炸极限:

较低较低较低	未决定.
较高较高较高	未决定.

· 蒸气压 在 20 °C: 23 hPa

密度密度密度 0 °C: 1.129 g/cm³

· 相对密度 未决定.

· 蒸气密度 未决定.

蒸发速率速率速率 未决定.

· 溶解性

· 水: 完全可拌和的

辛醇辛醇辛醇分配系数未决定.

· 黏性:

动态动态动态 未决定.

(在 6 页继续)

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 俗名或商品名:

(在 5 页继续)

运动速度: 未决定。

· 溶剂成份:
 有机溶剂: 0.3 %
 · 水: 74.8 %

· 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

· 稳定性: 无相关详细资料。

· 稳定性: 稳定。

· 分解: 避免阳光直射。如果遵照规格使用则不会分解。

· 有害性: 未有已知的危险反应。

· 避免条件: 无相关详细资料。

· 不相容的物质: 无相关详细资料。

· 危险的分解产物: 未知有危险的分解产品。

11 毒理学信息

· 对毒性学影响的信息

· 急性毒性:

· 与分类相关的 LD/LC50 值:

111-30-8 1,5-戊二醛

口腔 LD50 134 mg/kg (rat)

皮肤 LD50 2,560 mg/kg (rabbit)

· 皮肤刺激/腐蚀性影响:

皮肤皮肤皮肤皮肤和粘膜上造成强烈的腐蚀性影响。

· 在眼睛上面:

强烈的腐蚀性影响。

强烈的刺激性和造成严重伤害眼睛的危险。

· 致敏性: 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

腐蚀性的

刺激性的

非常毒性的

吞咽该产品除了导致口部和喉咙出现强烈的腐蚀性现象之外, 还有对食道和胃部造成穿孔的危险。

12 生态学信息

· 生态毒性: 无相关详细资料。

· 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。

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· 环境系统习性:
 · 潜在的累积毒性相关详细资料。
 土壤土壤移动性相关详细资料。

· 生态毒性的影响:

· 备注:

对鱼类有剧毒

对鱼类有毒

· 额外的生态学资料:

· 总括性注释

水危害级别 3 (德国规例) (通过名单进行自我评估): 对水是极其危害的

即使是少量, 不要让该产品接触地下水、水道或污水系统。

不要让未被稀释或未被中和的产品接触下水道或排水沟渠。

即使是极其少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。

对水中的有机物有剧毒。

对水中的有机物有毒。

· 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

其他其他用途用相关详细资料。

13 废弃处置

· 废弃处置方法

建议建议不能将该产品和家居垃圾一起丢弃。不要让该产品接触污水系统。

· 受污染的容器和包装:

建议建议必须根据官方的规章来丢弃。

建议建议清洗清洗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

UN3265

适当适当船名

· ADR

3265 有机酸性腐蚀性液体, 未 (1,5-戊二醛), ENVIRONMENTALLY HAZARDOUS

· IMDG

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT

· IATA

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

运输运输危险等级

· ADR, IMDG



· 级别

8 腐蚀性物质

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标签	8
· IATA	
	
· Class	8 腐蚀性物质
· Label	8
· 包装组别	
· ADR, IMDG, IATA	III
· 危害环境:	该产品含有对环境有害的原料: 1,5-戊二醛
· 海运污染物物质	象征符号 (鱼和树)
特别特别特别 (ADR):	象征符号 (鱼和树)
· 用户特别预防措施	警告: 腐蚀性物质
· 危险编码:	88
· E号 号码 号码	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· MARPOL73/78(针对船舶引起的海洋污染预防协议附件)	根据根据C国际国际船舶货物编码) 大量大量
运送运送运送	不适用的
运输运输运输的资料:	
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· 标准标准标准规定	UN 3265 有机酸性腐蚀性液体, 未 (1,5-戊二醛), 8, III, ENVIRONMENTALLY HAZARDOUS

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

· 危险化学品目录目录

111-30-8 1,5-戊二醛

67-56-1 木精

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CN

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· 新化学物质环境管理办法

· 国家环境化学物质名录

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。

图示图示图示



GHS05 GHS06 GHS08 GHS09

名称名称名称

· 标签上辨别危险的成份:

1,5-戊二醛 (>10-≤25 %)

· 危险字句

可燃液体
 吞咽有害
 吸入致命
 造成严重皮肤灼伤和眼损伤
 吸入可能导致过敏或哮喘病症状或呼吸困难
 可能导致皮肤过敏反应
 可引起呼吸道刺激
 对水生生物毒性极大
 对水生生物有毒并具有长期持续影响

· 警戒字句

· 事故响应

如皮肤(或头发)沾染:立即脱掉所有沾染的衣服。用水清洗皮肤/淋浴
 如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗
 立即呼叫急救中心/医生
 紧急具体治疗(见本标签上的)
 脱掉沾染的衣服,清洗后方可重新使用

· 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

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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(经口) 第4类: Acute toxicity – Category 4
 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
 皮肤腐蚀/刺激 第1B类: Skin corrosion/irritation – Category 1B
 严重眼睛损伤/眼睛刺激性 第1类: Serious eye damage/eye irritation – Category 1
 敏化(呼吸) 第1类: Respiratory sensitisation – Category 1
 敏化(皮肤) 第1类: Skin sensitisation – Category 1
 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(慢性) 第2类: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

- CN -

Bezpečnostní list

podle 1907/2006/ES, Článek 31

Datum vydání: 25.08.2021

Revize: 25.08.2021

ODDÍL 1: Identifikace látky/směsi a společnosti/podniku

- **1.1 Identifikátor výrobku**
- **Obchodní označení:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Číslo výrobku:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **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: info@emsdiasum.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**



GHS06 lebka se zkříženými hnáty

Acute Tox. 2 H330 Při vdechování může způsobit smrt.



GHS08 nebezpečnost pro zdraví

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



GHS05 korozivita

Skin Corr. 1B H314 Způsobuje těžké poleptání kůže a poškození očí.

Eye Dam. 1 H318 Způsobuje vážné poškození očí.



GHS09 životní prostředí

Aquatic Acute 1 H400 Vysoce toxický pro vodní organismy.

Aquatic Chronic 2 H411 Toxický pro vodní organismy, s dlouhodobými účinky.



GHS07

Acute Tox. 4 H302 Zdraví škodlivý při požití.

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(pokračování strany 1)

Skin Sens. 1 H317 Může vyvolat alergickou kožní reakci.
 STOT SE 3 H335 Může způsobit podráždění dýchacích cest.

2.2 Prvky označení

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



GHS05 GHS06 GHS08 GHS09

- Signální slovo Nebezpečí

Nebezpečné komponenty k etiketování:

Glutaraldehyd

Standardní věty o nebezpečnosti

- H302 Zdraví škodlivý při požití.
 H330 Při vdechování může způsobit smrt.
 H314 Způsobuje těžké poleptání kůže a poškození 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.
 H400 Vysoce toxický pro vodní organismy.
 H411 Toxický pro vodní organismy, s dlouhodobými účinky.

Pokyny pro bezpečné zacházení

- P303+P361+P353 PŘI STYKU S KŮŽÍ (nebo s vlasy): Veškeré kontaminované části oděvu okamžitě svlékněte. Opláchněte kůži vodou [nebo osprchujte].
 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. Okamžitě volejte TOXIKOLOGICKÉ INFORMAČNÍ STŘEDISKO/lékaře.
 P310 Okamžitě volejte TOXIKOLOGICKÉ INFORMAČNÍ STŘEDISKO/lékaře.
 P320 Je nutné odborné ošetření (viz na tomto štítku).
 P362+P364 Kontaminovaný oděv svlékněte a před opětovným použitím vyperte.
 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 následné látky bez nebezpečných příměsí.

Výrobek obsahuje tyto nebezpečné látky:

CAS: 111-30-8	Glutaraldehyd	>10-≤25%
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:**

Neprodleně odstranit části oděvu znečištěné produktem.

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

Ochranu dýchání odstranit teprve po odstranění znečištěných částí oděvu.

Při nepravidelném dechu nebo zástavě dechu provést umělé dýchání.

· **Při nadýchání:**

Prívod čerstvého vzduchu nebo kyslíku; vyhledat lékařskou pomoc.

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:** Otevřené oči po více minut oplachovat pod tekoucí vodou a poradit se s lékařem.

· **Při požití:**

Ihned vyhledat lékaře.

Bohatě zapíjet vodou a dýchat čerstvý vzduch. Neprodleně vyhledat lékaře.

· **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:**

CO₂, hasící prášek nebo rozestříkované vodní paprsky. Větší ohně zdolat rozestříkovanými vodními paprsky nebo pěnou odolnou vůči alkoholu.

· **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**

Nosit ochrannou výstroj. Nechráněné osoby se nesmí přibližovat.

· **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).

Použít neutralizační prostředky.

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.

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Informace k odstranění viz kapitola 13.

(pokračování strany 3)

ODDÍL 7: Zacházení a skladování

- **7.1 Opatření pro bezpečné zacházení**
Na pracovišti zabezpečit dobré větrání a odsávání.
Nádrž opatrně otevřít a zacházet s ní opatrně.
Zamezit vytváření aerosolů.
- **Upozornění k ochraně před ohněm a explozí:** Mít připravené ochranné dýchací přístroje.
- **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.

8.1 Kontrolní parametry

Kontrolní parametry:

111-30-8 Glutaraldehyd

NPK	Krátkodobá hodnota: 0,4 mg/m ³ Dlouhodobá hodnota: 0,2 mg/m ³ I, S
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- **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.
Ochranný oděv odděleně přechovávat.
Zamezit styku se zrakem.
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.

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- **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:

Po plodech

· Práhová hodnota zápachu:

Není určeno.

· Hodnota pH:

Není určeno.

· Změna stavu

· Bod tání/bod tuhnutí:

Není určeno.

· Počáteční bod varu a rozmezí bodu varu: 100 °C

· Bod vzplanutí:

71 °C

· Hořlavost (pevné látky, plyny):

Nedá se použít.

· Teplota rozkladu:

Není určeno.

· Teplota samovznícení:

Produkt není samozápalný.

· Výbušné vlastnosti:

Není určeno.

· Meze výbušnosti:

· Dolní mez:

Není určeno.

· Horní mez:

Není určeno.

· Tlak páry při 20 °C:

23 hPa

· Hustota při 20 °C:

1,129 g/cm³

· Relativní hustota

Není určeno.

· Hustota páry:

Není určeno.

· Rychlost odpařování

Není určeno.

· Rozpuštnost ve / směšitelnost s

· vodě:

Úplně mísitelná.

· Rozdělovací koeficient: n-oktanol/voda: Není určeno.

· Viskozita:

· Dynamicky:

Není určeno.

· Kinematicky:

Není určeno.

· Obsah ředidel:

· Organická ředidla:

0,3 %

· Voda:

74,8 %

· VOC (EC)

0,25 %

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(pokračování strany 5)

- | | |
|-----------------------------------|--|
| · Obsah netěkavých složek: | 0,0 % |
| · 9.2 Další informace | 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 požití.

Při vdechování může způsobit smrt.

· 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**
Způsobuje těžké poleptání kůže a poškození očí.
- **Vážné poškození očí / podráždění očí**
Způsobuje vážné poškození 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.

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- **Ekotoxické účinky:**
- **Poznámka:**
Velmi jedovatý pro ryby.
Jedovatý pro ryby.
- **Další ekologické údaje:**
- **Všeobecná upozornění:**
Třída ohrožení vody 3 (Samozářazení): silně ohrožuje vodu
Nesmí vniknout do spodní vody, povodí nebo do kanalizace, ani v malých množstvích.
Nesmí nezřetěně nebo nezneutralizováno proniknout do odpadních vod nebo jímek.
Ohrožuje pitnou vodu už při proniknutí nepatrného množství do zeminy.
V povodích je také jedovatá pro ryby a plankton.
velmi jedovatá pro vodní organismy
jedovatá 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.
- **Kontaminované obaly:**
- **Doporučení:** Odstranění podle příslušných předpisů.
- **Doporučený čisticí prostředek:** Voda, případně s přísadami čisticích prostředků.

ODDÍL 14: Informace pro přepravu

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN číslo · ADR, IMDG, IATA | UN3265 |
| <ul style="list-style-type: none"> · 14.2 Oficiální (OSN) pojmenování pro přepravu · ADR · IMDG · IATA | 3265 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ,
J.N. (Glutaraldehyd), OHROŽUJÍCÍ ŽIVOTNÍ
PROSTŘEDÍ
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde) |
| <ul style="list-style-type: none"> · 14.3 Třída/třídy nebezpečnosti pro přepravu · ADR, IMDG | <div style="display: flex; align-items: center; justify-content: center;"> </div> |
| <ul style="list-style-type: none"> · třída | 8 Žíravé látky |

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· Etiketa	8
· IATA	
	
· Class	8 Žíravé látky
· Label	8
· 14.4 Obalová skupina	
· ADR, IMDG, IATA	III
· 14.5 Nebezpečnost pro životní prostředí:	Produkt obsahuje látky ohrožující životní prostředí: Glutaraldehyd
· Látka znečišťující moře:	Symbol (ryba a strom)
· Zvláštní označení (ADR):	Symbol (ryba a strom)
· 14.6 Zvláštní bezpečnostní opatření pro uživatele	Varování: Žíravé látky
· Identifikační číslo nebezpečnosti (Kemlerovo číslo):	88
· EMS-skupina:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Hromadná přeprava podle přílohy II úmluvy MARPOL a předpisu IBC	Nedá se použít.
· Přeprava/další údaje:	
· ADR	
· Omezené množství (LQ)	5L
· Vyňatá množství (EQ)	Kód: E1 Nejvyšší čisté množství na vnitřní obal: 30 ml Nejvyšší čisté množství na vnější obal: 1000 ml
· Přepavní kategorie	3
· Kód omezení pro tunely:	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N. (GLUTARALDEHYD), 8, III, OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ

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.

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- **Kategorie Seveso**
H2 AKUTNÍ TOXICITA
E1 Nebezpečnost pro vodní prostředí
- **Kvalifikační množství (v tunách) při uplatnění požadavků pro podlimitní množství 50 t**
- **Kvalifikační množství (v tunách) při uplatnění požadavků pro nadlimitní množství 200 t**
- **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.
- 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. 4: Akutní toxicita - orální – Kategorie 4
- Acute Tox. 2: Akutní toxicita - inhalační – Kategorie 2
- Skin Corr. 1B: Žíravost/dráždivost pro kůži – Kategorie 1B
- Eye Dam. 1: Vážné poškození očí / podráždění očí – Kategorie 1
- 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

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

- **1.1 Productidentificatie**
- **Handelsnaam:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Artikelnummer:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **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: info@emsdiasum.com
www.emsdiasum.com
- Aurion
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 2 H330 Dodelijk bij inademing.



GHS08 gezondheidsgevaar

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



GHS05 corrosie

Skin Corr. 1B H314 Veroorzaakt ernstige brandwonden en oogletsel.

Eye Dam. 1 H318 Veroorzaakt ernstig oogletsel.

(Vervolg op blz. 2)

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(Vervolg van blz. 1)



GHS09 milieu

Aquatic Acute 1 H400 Zeer giftig voor in het water levende organismen.

Aquatic Chronic 2 H411 Giftig voor in het water levende organismen, met langdurige gevolgen.



GHS07

Acute Tox. 4 H302 Schadelijk bij inslikken.

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

STOT SE 3 H335 Kan irritatie van de luchtwegen veroorzaken.

· 2.2 Etiketteringselementen

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

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

· Gevarenpictogrammen



GHS05



GHS06



GHS08



GHS09

· Signaalwoord Gevaar

· Gevaaraanduidende componenten voor de etikettering:

Glutaaraldehyd

· Gevarenaanduidingen

H302 Schadelijk bij inslikken.

H330 Dodelijk bij inademing.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

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

H317 Kan een allergische huidreactie 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.

· Veiligheidsaanbevelingen

P303+P361+P353 BIJ CONTACT MET DE HUID (of het haar): verontreinigde kleding onmiddellijk uittrekken. Huid met water afspoelen [of afdouchen].

P305+P351+P338 BIJ CONTACT MET DE OGEN: voorzichtig afspoelen met water gedurende een aantal minuten; contactlenzen verwijderen, indien mogelijk; blijven spoelen.

P310 Onmiddellijk een ANTIGIFCENTRUM/arts raadplegen.

P320 Specifieke behandeling dringend vereist (zie op dit etiket).

P362+P364 Verontreinigde kleding uittrekken en wassen alvorens deze opnieuw te gebruiken.

P405 Achter slot bewaren.

P501 De inhoud en de verpakking verwerken volgens de plaatselijke/regionale/nationale/internationale voorschriften.

· 2.3 Andere gevaren

· Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

NL

(Vervolg op blz. 3)

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





Handelsnaam: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Vervolg van blz. 2)

RUBRIEK 3: Samenstelling en informatie over de bestanddelen

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

- **Gevaarlijke inhoudstoffen:**

CAS: 111-30-8 EINECS: 203-856-5	Glutaaraldehyd  Acute Tox. 3, H301;  Acute Tox. 2, H330;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Aquatic Chronic 2, H411;  Skin Sens. 1A, H317; STOT SE 3, H335	>10-≤25%
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- **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.

RUBRIEK 4: Eerstehulpmaatregelen

- **4.1 Beschrijving van de eerstehulpmaatregelen**
- **Algemene informatie:**
Verontreinigde kleding onmiddellijk uittrekken.
Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.
Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.
Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.
- **Na het inademen:**
Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.
Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.
- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
- **Na inslikken:**
Onmiddellijk arts raadplegen.
Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.
- **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:**
CO₂, bluspoeder of waterstraal. Grotere brand met waterstraal bestrijden of met schuim, dat tegen alcohol bestand is.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

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

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermingsmiddelen en noodprocedures**
Beschermende kleding aantrekken. Niet beschermde personen op afstand houden.

(Vervolg op blz. 4)

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(Vervolg van blz. 3)

- **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 InsluTINGS- en reinigingsmethoden en -materiaal:**
 Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.
 Neutralisatiemiddel gebruiken.
 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.
 Tanks voorzichtig openen en behandelen.
 Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Ademhalingstoestellen gereedhouden.
- **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.
 Beschermende kleding afzonderlijk bewaren.
 Aanraking met de ogen vermijden.
 Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**
 Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.

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(Vervolg van blz. 4)

· Handbescherming:

Veiligheidshandschoenen

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.

Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.

Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

· Handschoenmateriaal

De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.

· Doordringingstijd van het handschoenmateriaal

De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.

· Oogbescherming:

Nauw aansluitende veiligheidsbril

RUBRIEK 9: Fysische en chemische eigenschappen

· 9.1 Informatie over fysische en chemische basiseigenschappen
· Algemene gegevens
· Voorkomen:
· Vorm:

Vloeibaar

· Kleur:

Volgens de produktbeschrijving

· Geur:

Vruchtachtig

· Geurdrempelwaarde:

Niet bepaald.

· pH-waarde:

Niet bepaald.

· Toestandsverandering
· Smelt-/vriespunt:

Niet bepaald.

· Beginkookpunt en kooktraject:

100 °C

· Vlampunt:

71 °C

· Ontvlambaarheid (vast, gas):

Niet bruikbaar.

· Ontledingstemperatuur:

Niet bepaald.

· Zelfontbrandingstemperatuur:

Het produkt ontbrandt niet uit zichzelf.

· Ontploffingseigenschappen:

Niet bepaald.

· Ontploffingsgrenzen:
· Onderste:

Niet bepaald.

· Bovenste:

Niet bepaald.

· Dampspanning bij 20 °C:

23 hPa

· Dichtheid bij 20 °C:
1,129 g/cm³
· Relatieve dichtheid

Niet bepaald.

(Vervolg op blz. 6)

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(Vervolg van blz. 5)

· 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:	
· Organisch oplosmiddel:	0,3 %
· Water:	74,8 %
· VOC (EG)	0,25 %
· 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.
- **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 inslikken.
Dodelijk 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 ernstige brandwonden en oogletsel.
- **Ernstig oogletsel/oogirritatie**
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**
Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

- **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:**
Zeer giftig voor vissen.
Giftig voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)
Gevaar voor water klasse 3 (D) (Zelfclassificatie): gevaar voor water groot
Niet lozen in grondwater, oppervlaktewater of riolering, ook niet in kleine hoeveelheden.
Mag niet onverdund of niet geneutraliseerd in oppervlaktewater of in afwateringskanaal geloosd worden.
Gevaar voor drinkwater zelfs bij het uitlopen van zeer geringe hoeveelheden in de ondergrond.
In oppervlaktewater ook giftig voor vissen en plankton.
zeer giftig voor in het water levende organismen
giftig voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

RUBRIEK 13: Instructies voor verwijdering

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

RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR, IMDG, IATA** UN3265
- **14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN**
- **ADR** 3265 BIJTENDE ZURE ORGANISCHE VLOEISTOF, N.E.G.
(Glutaaraldehyd), MILIEUGEVAARLIJK

(Vervolg op blz. 8)

NL

Veiligheidsinformatieblad
volgens 1907/2006/EG, Artikel 31

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Handelsnaam: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Vervolg van blz. 7)

· **IMDG** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT

· **IATA** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde)

· **14.3 Transportgevarenklasse(n)**· **ADR, IMDG**

· **klasse** 8 Bijtende stoffen

· **Etiket** 8

· **IATA**

· **Class** 8 Bijtende stoffen

· **Label** 8

· **14.4 Verpakkingsgroep:**

· **ADR, IMDG, IATA** III

· **14.5 Milieugevaren:**

· **Marine pollutant:** Produkt bevat milieugevaarlijke stoffen: Glutaaraldehyd
Symbool (vis en boom)

· **Bijzondere kenmerking (ADR):** Symbool (vis en boom)

· **14.6 Bijzondere voorzorgen voor de gebruiker**

· **Gevaarsidentificatienummer (Kemler-getal):** Waarschuwing: Bijtende stoffen
88

· **EMS-nummer:** F-A,S-B

· **Segregation groups** Acids

· **Stowage Category** A

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

· **14.7 Vervoer in bulk overeenkomstig bijlage II bij**

Marpol en de IBC-code Niet bruikbaar.

· **Transport/verdere gegevens:**

· **ADR**

· **Beperkte hoeveelheden (LQ)** 5L

· **Uitgezonderde hoeveelheden (EQ)** Code: E1
Grootste netto hoeveelheid per binnenverpakking: 30 ml
Grootste netto hoeveelheid per buitenverpakking: 1000 ml

· **Vervoerscategorie** 3

· **Tunnelbeperkingscode** E

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

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· VN "Model Regulation": UN 3265 BIJTENDE ZURE ORGANISCHE VLOEISTOF, N.E.G. (GLUTAARALDEHYD), 8, III, MILIEUGEVAARLIJK

RUBRIEK 15: Regelgeving

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

· **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

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.

· **Seveso-categorie**

H2 ACUUT TOXISCH

E1 Gevaar voor het aquatisch milieu

· **Drempelwaarde (ton) voor toepassing van voorschriften voor lagedrempelinrichtingen** 50 t

· **Drempelwaarde (ton) voor toepassing van voorschriften voor hogedrempelinrichtingen** 200 t

· **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/bioaccumulerend 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.

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· **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. 4: Acute toxiciteit - oraal – Categorie 4

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

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

Eye Dam. 1: Ernstig oogletsel/oogirritatie – Categorie 1

Resp. Sens. 1: Sensibilisatie van de luchtwegen – Categorie 1

Skin Sens. 1: Sensibilisatie van de huid – Categorie 1

Skin Sens. 1A: Sensibilisatie van de huid – Categorie 1A

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

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

Aquatic Chronic 2: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 2

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

- **1.1 Identificateur de produit**
- **Nom du produit:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Code du produit:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIQUE 2: Identification des dangers

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



GHS06 tête de mort sur deux tibias

Acute Tox. 2 H330 Mortel par inhalation.



GHS08 danger pour la santé

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



GHS05 corrosion

Skin Corr. 1B H314 Provoque des brûlures de la peau et de graves lésions des yeux.

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



GHS09 environnement

Aquatic Acute 1 H400 Très toxique pour les organismes aquatiques.

Aquatic Chronic 2 H411 Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.



GHS07

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Acute Tox. 4 H302 Nocif en cas d'ingestion.
 Skin Sens. 1 H317 Peut provoquer une allergie cutanée.
 STOT SE 3 H335 Peut irriter les voies respiratoires.

· 2.2 Éléments d'étiquetage

· **Étiquetage selon le règlement (CE) n° 1272/2008** Le produit est classifié et étiqueté selon le règlement CLP.

· Pictogrammes de danger



GHS05 GHS06 GHS08 GHS09

· Mention d'avertissement Danger

· Composants dangereux déterminants pour l'étiquetage:

glutaral

· Mentions de danger

H302 Nocif en cas d'ingestion.
 H330 Mortel par inhalation.
 H314 Provoque des brûlures de la peau et de graves lésions des yeux.
 H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.
 H317 Peut provoquer une allergie cutanée.
 H335 Peut irriter les voies respiratoires.
 H400 Très toxique pour les organismes aquatiques.
 H411 Toxique pour les organismes aquatiques, entraîne des effets néfastes à long terme.

· Conseils de prudence

P303+P361+P353 **EN CAS DE CONTACT AVEC LA PEAU (ou les cheveux):** Enlever immédiatement tous les vêtements contaminés. Rincer la peau à l'eau [ou se doucher].
 P305+P351+P338 **EN CAS DE CONTACT AVEC LES YEUX:** Rincer avec précaution à l'eau pendant plusieurs minutes. Enlever les lentilles de contact si la victime en porte et si elles peuvent être facilement enlevées. Continuer à rincer.
 P310 Appeler immédiatement un CENTRE ANTIPOISON/un médecin.
 P320 Un traitement spécifique est urgent (voir sur cette étiquette).
 P362+P364 Enlever les vêtements contaminés et les laver avant réutilisation.
 P405 Garder sous clef.
 P501 Éliminer le contenu/récipient conformément à la réglementation locale/régionale/nationale/internationale.

· 2.3 Autres dangers

· Résultats des évaluations PBT et vPvB

· **PBT:** Non applicable.
 · **vPvB:** Non applicable.

RUBRIQUE 3: Composition/informations sur les composants

· 3.2 Caractérisation chimique: Mélanges

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

· Composants dangereux:

CAS: 111-30-8	glutaral	>10-≤25%
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	

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· **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:**

Enlever immédiatement les vêtements contaminés par le produit.

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

Ne retirer la protection respiratoire qu'après avoir retiré les vêtements contaminés.

Respiration artificielle dans le cas d'une respiration irrégulière ou d'un arrêt respiratoire.

· **Après inhalation:**

Donner de l'air frais ou de l'oxygène; demander d'urgence une assistance médicale.

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

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

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

· **Après ingestion:**

Consulter immédiatement un médecin.

Boire de l'eau en abondance et donner de l'air frais. Consulter immédiatement un médecin.

· **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.· **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

RUBRIQUE 5: Mesures de lutte contre l'incendie

· **5.1 Moyens d'extinction**· **Moyens d'extinction:**

CO₂, poudre d'extinction ou eau pulvérisée. Combattre les foyers importants avec de l'eau pulvérisée ou de la mousse résistant à l'alcool.

· **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**

Porter un équipement de sécurité. Eloigner les personnes non protégées.

· **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).

Utiliser un neutralisant.

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

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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.

Ouvrir et manipuler les récipients avec précaution.

Eviter la formation d'aérosols.

· **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.

· **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**

· **Stockage:**

· **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.

· **Indications concernant le stockage commun:** Pas nécessaire.

· **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.

· **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

RUBRIQUE 8: Contrôles de l'exposition/protection individuelle

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

Sans autre indication, voir point 7.

· **8.1 Paramètres de contrôle**

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

111-30-8 glutaral

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

· **Remarques supplémentaires:**

Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.

· **8.2 Contrôles de l'exposition**

· **Équipement 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.

Conserver à part les vêtements de protection.

Eviter tout contact avec les yeux.

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

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

Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.

· **Matériau des gants**

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

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

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

· **Protection des yeux:**



Lunettes de protection hermétiques

RUBRIQUE 9: Propriétés physiques et chimiques

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

· **Indications générales**

· **Aspect:**

· **Forme:** Liquide

· **Couleur:** Selon désignation produit

· **Odeur:** Fruitée

· **Seuil olfactif:** Non déterminé.

· **valeur du pH:** Non déterminé.

· **Changement d'état**

· **Point de fusion/point de congélation:** Non déterminé.

· **Point initial d'ébullition et intervalle d'ébullition:** 100 °C

· **Point d'éclair** 71 °C

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

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

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

· **Propriétés explosives:** Non déterminé.

· **Limites d'explosion:**

· **Inférieure:** Non déterminé.

· **Supérieure:** Non déterminé.

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

· **Densité à 20 °C:** 1,129 g/cm³

· **Densité relative** Non déterminé.

· **Densité de vapeur:** Non déterminé.

· **Taux d'évaporation:** Non déterminé.

· **Solubilité dans/miscibilité avec**

· **l'eau:** Entièrement miscible

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· Coefficient de partage: n-octanol/eau:	Non déterminé.
· Viscosité:	
· Dynamique:	Non déterminé.
· Cinématique:	Non déterminé.
· Teneur en solvants:	
· Solvants organiques:	0,3 %
· Eau:	74,8 %
· VOC (CE)	0,25 %
· Teneur en substances solides:	0,0 %
· 9.2 Autres informations	Pas d'autres informations importantes disponibles.

RUBRIQUE 10: Stabilité et réactivité

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

RUBRIQUE 11: Informations toxicologiques

· 11.1 Informations sur les effets toxicologiques

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

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

RUBRIQUE 13: Considérations relatives à l'élimination

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

RUBRIQUE 14: Informations relatives au transport

- **14.1 Numéro ONU**
- **ADR, IMDG, IATA** UN3265
- **14.2 Désignation officielle de transport de l'ONU**
- **ADR** 3265 LIQUIDE ORGANIQUE CORROSIF, ACIDE, N.S.A. (glutaral), DANGEREUX POUR L'ENVIRONNEMENT
- **IMDG** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT
- **IATA** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde)

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· **14.3 Classe(s) de danger pour le transport**

· **ADR, IMDG**



· **Classe** 8 Matières corrosives.
 · **Étiquette** 8

· **IATA**



· **Class** 8 Matières corrosives.
 · **Label** 8

· **14.4 Groupe d'emballage**

· **ADR, IMDG, IATA** III

· **14.5 Dangers pour l'environnement:**

Le produit contient matières dangereuses pour l'environnement : glutaral

· **Marine Pollutant:** *Signe conventionnel (poisson et arbre)*
 · **Marquage spécial (ADR):** *Signe conventionnel (poisson et arbre)*

· **14.6 Précautions particulières à prendre par l'utilisateur**

Attention: Matières corrosives.

· **Numéro d'identification du danger (Indice Kemler):** 88
 · **No EMS:** F-A,S-B
 · **Segregation groups** Acids
 · **Stowage Category** A
 · **Stowage Code** SW2 Clear of living quarters.

· **14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC**

Non applicable.

· **Indications complémentaires de transport:**

· **ADR**

· **Quantités limitées (LQ)** 5L
 · **Quantités exceptées (EQ)** Code: E1
Quantité maximale nette par emballage intérieur: 30 ml
Quantité maximale nette par emballage extérieur: 1000 ml

· **Catégorie de transport** 3
 · **Code de restriction en tunnels** E

· **IMDG**

· **Limited quantities (LQ)** 5L
 · **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

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· "Règlement type" de l'ONU:	UN 3265 LIQUIDE ORGANIQUE CORROSIF, ACIDE, N.S.A. (GLUTARAL), 8, III, DANGEREUX POUR L'ENVIRONNEMENT
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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.
- Catégorie SEVESO
H2 TOXICITÉ AIGUË
E1 Danger pour l'environnement aquatique
- Quantité seuil (tonnes) pour l'application des exigences relatives au seuil bas 50 t
- Quantité seuil (tonnes) pour l'application des exigences relatives au seuil haut 200 t
- 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

- 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

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SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

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

Acute Tox. 4: Toxicité aiguë - voie orale – Catégorie 4

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

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

Eye Dam. 1: Lésions oculaires graves/irritation oculaire – Catégorie 1

Resp. Sens. 1: Sensibilisation respiratoire – Catégorie 1

Skin Sens. 1: Sensibilisation cutanée – Catégorie 1

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

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

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

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

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

- **1.1 Produktidentifikator**
- **Handelsname:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Artikelnummer:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com

Science Services GmbH
Unterhachinger Str. 75
81737 München Germany

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

Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, www.toxinfo.org
Osterreich: +43 1406 43 43, Gesundheit Osterreich GmbH, 24 h
- **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**



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 2

H330 Lebensgefahr bei Einatmen.



GHS08 Gesundheitsgefahr

Resp. Sens. 1

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



GHS05 Ätzwirkung

Skin Corr. 1B

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1

H318 Verursacht schwere Augenschäden.

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GHS09 Umwelt

Aquatic Acute 1 H400 Sehr giftig für Wasserorganismen.

Aquatic Chronic 2 H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

· 2.2 Kennzeichnungselemente

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

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

· Gefahrenpiktogramme



GHS05



GHS06



GHS08



GHS09

· Signalwort Gefahr

· Gefahrbestimmende Komponenten zur Etikettierung:

Glutaral

· Gefahrenhinweise

H302 Gesundheitsschädlich bei Verschlucken.

H330 Lebensgefahr bei Einatmen.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

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

H317 Kann allergische Hautreaktionen verursachen.

H335 Kann die Atemwege reizen.

H400 Sehr giftig für Wasserorganismen.

H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.

· Sicherheitshinweise

P303+P361+P353 BEI BERÜHRUNG MIT DER HAUT (oder dem Haar): Alle kontaminierten Kleidungsstücke sofort ausziehen. Haut mit Wasser abwaschen [oder duschen].

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

P310 Sofort GIFTINFORMATIONSZENTRUM/Arzt anrufen.

P320 Besondere Behandlung dringend erforderlich (siehe auf diesem Kennzeichnungsetikett).

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

P405 Unter Verschluss aufbewahren.

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

· 2.3 Sonstige Gefahren

· Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

· **vPvB:** Nicht anwendbar.

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ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

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

- **Gefährliche Inhaltsstoffe:**

CAS: 111-30-8	Glutaral	>10-≤25%
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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- **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**
 - Mit Produkt verunreinigte Kleidungsstücke unverzüglich entfernen.
 - Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.
 - Atemschutz erst nach Entfernen verunreinigter Kleidungsstücke abnehmen.
 - Bei unregelmäßiger Atmung oder Atemstillstand künstliche Beatmung.
- **Nach Einatmen:**
 - Frischluf- oder Sauerstoffzufuhr; ärztliche Hilfe in Anspruch nehmen.
 - Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.
- **Nach Hautkontakt:** Sofort mit Wasser und Seife abwaschen und gut nachspülen.
- **Nach Augenkontakt:**
 - Augen bei geöffnetem Lidspalt mehrere Minuten unter fließendem Wasser abspülen und Arzt konsultieren.
- **Nach Verschlucken:**
 - Sofort Arzt aufsuchen.
 - Reichlich Wasser nachtrinken und Frischluftzufuhr. Unverzüglich Arzt hinzuziehen.
- **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:**
 - CO₂, Löschpulver oder Wassersprühstrahl. Größeren Brand mit Wassersprühstrahl oder alkoholbeständigem Schaum bekämpfen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**
 - Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

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ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**
Schutzausrüstung tragen. Ungeschützte Personen fernhalten.
- **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.
Neutralisationsmittel anwenden.
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.
Behälter mit Vorsicht öffnen und handhaben.
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **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 ³ , 0,05 ml/m ³ 2(I);AGS, Sah, Y
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- **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.
- **8.2 Begrenzung und Überwachung der Exposition**
- **Persönliche Schutzausrüstung:**
- **Allgemeine Schutz- und Hygienemaßnahmen:**
Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.
Beschmutzte, getränkte Kleidung sofort ausziehen.

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Vor den Pausen und bei Arbeitsende Hände waschen.

Gtrennte Aufbewahrung der Schutzkleidung.

Berührung mit den Augen vermeiden.

Berührung mit den Augen und der Haut vermeiden.

· **Atemschutz:**

Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein.

Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

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

· **Handschuhmaterial**

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

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

· **Allgemeine Angaben**

· **Aussehen:**

· **Form:**

Flüssig

· **Farbe:**

Gemäß Produktbezeichnung

· **Geruch:**

Fruchtartig

· **Geruchsschwelle:**

Nicht bestimmt.

· **pH-Wert:**

Nicht bestimmt.

· **Zustandsänderung**

· **Schmelzpunkt/Gefrierpunkt:**

Nicht bestimmt.

· **Siedebeginn und Siedebereich:**

100 °C

· **Flammpunkt:**

71 °C

· **Entzündbarkeit (fest, gasförmig):**

Nicht anwendbar.

· **Zersetzungstemperatur:**

Nicht bestimmt.

· **Selbstentzündungstemperatur:**

Das Produkt ist nicht selbstentzündlich.

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· Explosive Eigenschaften:	Nicht bestimmt.
· Explosionsgrenzen:	
· Untere:	Nicht bestimmt.
· Obere:	Nicht bestimmt.
· Dampfdruck bei 20 °C:	23 hPa
· Dichte bei 20 °C:	1,129 g/cm ³
· Relative Dichte	Nicht bestimmt.
· Dampfdichte	Nicht bestimmt.
· Verdampfungsgeschwindigkeit	Nicht bestimmt.
· Löslichkeit in / Mischbarkeit mit	
· Wasser:	Vollständig mischbar.
· Verteilungskoeffizient: n-Octanol/Wasser:	Nicht bestimmt.
· Viskosität:	
· Dynamisch:	Nicht bestimmt.
· Kinematisch:	Nicht bestimmt.
· Lösemittelgehalt:	
· Organische Lösemittel:	0,3 %
· Wasser:	74,8 %
· VOC (EU)	0,25 %
· Festkörpergehalt:	0,0 %
· 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 Verschlucken.

Lebensgefahr 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 schwere Verätzungen der Haut und schwere Augenschäden.

(Fortsetzung auf Seite 7)

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

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(Fortsetzung von Seite 6)

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

ABSCHNITT 12: Umweltbezogene Angaben

- **12.1 Toxizität**
- **Aquatische Toxizität:** Keine weiteren relevanten Informationen verfügbar.
- **12.2 Persistenz und Abbaubarkeit** Keine weiteren relevanten Informationen verfügbar.
- **12.3 Bioakkumulationspotenzial** Keine weiteren relevanten Informationen verfügbar.
- **12.4 Mobilität im Boden** Keine weiteren relevanten Informationen verfügbar.
- **Ökotoxische Wirkungen:**
- **Bemerkung:**
Sehr giftig für Fische.
Giftig für Fische.
- **Weitere ökologische Hinweise:**
- **Allgemeine Hinweise:**
Wassergefährdungsklasse 3 (Selbsteinstufung): stark wassergefährdend
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.
Darf nicht unverdünnt bzw. unneutralisiert ins Abwasser bzw. in den Vorfluter gelangen.
Trinkwassergefährdung bereits beim Auslaufen geringster Mengen in den Untergrund.
In Gewässern auch giftig für Fische und Plankton.
sehr giftig für Wasserorganismen
giftig 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.

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(Fortsetzung auf Seite 8)

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ABSCHNITT 14: Angaben zum Transport

<ul style="list-style-type: none"> · 14.1 UN-Nummer · ADR, IMDG, IATA 	UN3265
<ul style="list-style-type: none"> · 14.2 Ordnungsgemäße UN-Versandbezeichnung · ADR · IMDG · IATA 	3265 ÄTZENDER SAURER ORGANISCHER FLÜSSIGER STOFF, N.A.G. (Glutaral), UMWELTGEFÄHRDEND CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde)
<ul style="list-style-type: none"> · 14.3 Transportgefahrenklassen · ADR, IMDG 	<div style="display: flex; align-items: center; gap: 10px;">   </div> <ul style="list-style-type: none"> · Klasse · Gefahrzettel
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; align-items: center; gap: 10px;">  </div> <ul style="list-style-type: none"> · Class · Label
<ul style="list-style-type: none"> · 14.4 Verpackungsgruppe · ADR, IMDG, IATA 	III
<ul style="list-style-type: none"> · 14.5 Umweltgefahren: · Marine pollutant: · Besondere Kennzeichnung (ADR): 	Das Produkt enthält umweltgefährdende Stoffe: Glutaral Symbol (Fisch und Baum) Symbol (Fisch und Baum)
<ul style="list-style-type: none"> · 14.6 Besondere Vorsichtsmaßnahmen für den Verwender · Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl): · EMS-Nummer: · Segregation groups · Stowage Category · Stowage Code 	Achtung: Ätzende Stoffe 88 F-A,S-B Acids A SW2 Clear of living quarters.
<ul style="list-style-type: none"> · 14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code 	Nicht anwendbar.
<ul style="list-style-type: none"> · Transport/weitere Angaben: 	<hr style="border-top: 1px dashed black;"/> <ul style="list-style-type: none"> · ADR · Begrenzte Menge (LQ) · Freigestellte Mengen (EQ) · Beförderungskategorie
	5L Code: E1 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 1000 ml 3

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(Fortsetzung von Seite 8)

· Tunnelbeschränkungscode	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 ÄTZENDER SAURER ORGANISCHER FLÜSSIGER STOFF, N.A.G. (GLUTARAL), 8, III, UMWELTGEFÄHRDEND

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.
- **Seveso-Kategorie**
H2 AKUT TOXISCH
E1 Gewässergefährdend
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse** 50 t
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der oberen Klasse** 200 t
- **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	74,8
I	25,3

- **Wassergefährdungsklasse: WGK 3 (Selbsteinstufung):** stark wassergefährdend.
- **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**
Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe

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

111-30-8 | Glutaral

- **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.

(Fortsetzung auf Seite 10)

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*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. 4: Akute Toxizität - oral – Kategorie 4**Acute Tox. 2: Akute Toxizität - inhalativ – Kategorie 2**Skin Corr. 1B: Hautreizende/-ätzende Wirkung – Kategorie 1B**Eye Dam. 1: Schwere Augenschädigung/Augenreizung – Kategorie 1**Resp. Sens. 1: Sensibilisierung der Atemwege – Kategorie 1**Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1**Skin Sens. 1A: Sensibilisierung der Haut – Kategorie 1A**STOT SE 3: Spezifische Zielorgan-Toxizität (einmalige Exposition) – Kategorie 3**Aquatic Acute 1: Gewässergefährdend - akut gewässergefährdend – Kategorie 1**Aquatic Chronic 2: Gewässergefährdend - langfristig gewässergefährdend – Kategorie 2*

DE

Biztonsági adatlap
1907/2006/EK, 31. cikk szerint

A nyomtatás kelte 25.08.2021

Felülvizsgálat 25.08.2021

1. SZAKASZ: Az anyag/keverék és a vállalat/vállalkozás azonosítása

- **1.1 Termékazonosító**
- **Kereskedelmi megnevezés:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Cikkszám:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Az anyag vagy keverék megfelelő azonosított felhasználásai, illetve ellenjavallt felhasználásai**
További lényeges információk nem állnak rendelkezésre.
- **Anyag/készítmény használata** Laboratóriumi vegyületek
- **1.3 A biztonsági adatlap szállítójának adatai**
- **Gyártó/szállító:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Információt nyújtó terület:** Product safety department
- **1.4 Sürgősségi telefonszám:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2. SZAKASZ: A veszély azonosítása

- **2.1 Az anyag vagy keverék osztályozása**
- **Az 1272/2008/EK rendelet szerinti osztályozás**



GHS06 halálfej

Acute Tox. 2 H330 Belélegezve halálos.



GHS08 egészségi veszély

Resp. Sens. 1 H334 Belélegezve allergiás és asztmás tüneteket, és nehéz légzést okozhat.



GHS05 maró anyagok

Skin Corr. 1B H314 Súlyos égési sérülést és szemkárosodást okoz.

Eye Dam. 1 H318 Súlyos szemkárosodást okoz.



GHS09 környezet

Aquatic Acute 1 H400 Nagyon mérgező a vízi élővilágra.

Aquatic Chronic 2 H411 Mérgező a vízi élővilágra, hosszan tartó károsodást okoz.



GHS07

Acute Tox. 4 H302 Lenyelve ártalmas.

(folytatás a 2. oldalon)

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(folytatás az 1. oldalról)

Skin Sens. 1 H317 Allergiás bőrreakciót válthat ki.
STOT SE 3 H335 Légúti irritációt okozhat.

2.2 Címkézési elemek

Az 1272/2008/EK rendelet szerinti címkézés

A termék a CLP-rendelet (Anyagok és Keverékek Osztályozásáról, Címkézéséről és Csomagolásáról szóló rendelet) szerint osztályozva és címkézve.

Veszélyt jelző piktogramok



GHS05 GHS06 GHS08 GHS09

Figyelmeztetés Veszély

Veszélyt meghatározó komponensek a címkéhez:

Glutaral

Figyelmeztető mondatok

H302 Lenyelve ártalmatlan.

H330 Belélegezve halálos.

H314 Súlyos égési sérülést és szemkárosodást okoz.

H334 Belélegezve allergiás és asztmás tüneteket, és nehéz légzést okozhat.

H317 Allergiás bőrreakciót válthat ki.

H335 Légúti irritációt okozhat.

H400 Nagyon mérgező a vízi élővilágra.

H411 Mérgező a vízi élővilágra, hosszan tartó károsodást okoz.

Óvintézkedésre vonatkozó mondatok

P303+P361+P353 HA BŐRRE (vagy hajra) KERÜL: Az összes szennyezett ruhadarabot azonnal le kell vetni. A bőrt le kell öblíteni vízzel [vagy zuhanyozás].

P305+P351+P338 SZEMBE KERÜLÉS ESETÉN: Több percig tartó óvatos öblítés vízzel. Adott esetben a kontaktlencsék eltávolítása, ha könnyen megoldható. Az öblítés folytatása.

P310 Azonnal forduljon TOXIKOLÓGIAI KÖZPONTHOZ/orvoshoz.

P320 Sürgős szakellátás szükséges (lásd a címkén).

P362+P364 A szennyezett ruhadarabot le kell vetni és újbóli használat előtt ki kell mosni.

P405 Elzárva tárolandó.

P501 Az edény tartalmát / a tartályt a helyi/regionális/nemzeti/nemzetközi szabályozásoknak megfelelően kell hulladékként elhelyezni.

2.3 Egyéb veszélyek

A PBT- és a vPvB-értékelés eredményei

• **PBT:** Nem alkalmazható

• **vPvB:** Nem alkalmazható

3. SZAKASZ: Összetétel/összetevőkre vonatkozó információk

3.2 Kémiai jellemzés: Keverékek

• **Leírás:** Az alábbi anyagokból álló, veszélytelen adalékokat tartalmazó keverék.

Veszélyes alkotórészek:

111-30-8	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	>10-≤25%
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(folytatás a 3. oldalon)

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(folytatás a 2. oldalról)

· SVHC

111-30-8 | Glutaral

· **További információk:** A megadott veszélyességi utalások szövege a 16. fejezetben található.

4. SZAKASZ: Elsősegély-nyújtási intézkedések

· 4.1 Az elsősegély-nyújtási intézkedések ismertetése

· Általános információk:

A termék által szennyezett ruhadarabokat haladéktalanul távolítsuk el.

A mérgezési tünetek csak több óra elteltével lépnek fel, ezért orvosi felügyelet szükséges a baleset bekövetkeztétől számított 8 órán keresztül.

A védőálcot csak a szennyezett ruhadarabok eltávolítása után vegyük le.

Rendszertelen légzés vagy légzéskimaradás esetén mesterséges lélegeztetést alkalmazunk.

· Belélegzés után:

Gondoskodjunk friss levegőről vagy oxigénről; vegyük igénybe az orvosi segítséget.

Eszméletvesztés esetén a fektetés és szállítás stabil, oldalra fektetett helyzetben történjék.

· Bőrrel való érintkezés után:

Azonnal mossuk le vízzel és szappannal és jól öblítsük le.

· A szemmel való érintkezés után:

A szemet folyó víz alatt néhány percen át öblítsük le, miközben a szemhéjat nyitva tartjuk és kérjük orvosi tanácsot.

· Lenyelés után:

Azonnal keressük fel az orvost.

Itassunk sok vizet és gondoskodjunk friss levegőről. Azonnal hívjunk orvost.

· 4.2 A legfontosabb - akut és késleltetett - tünetek és hatások

További lényeges információk nem állnak rendelkezésre.

· 4.3 A szükséges azonnali orvosi ellátás és különleges ellátás jelzése

További lényeges információk nem állnak rendelkezésre.

5. SZAKASZ: Tűzvédelmi intézkedések

· 5.1 Oltóanyag

· Megfelelő tűzoltószerek:

CO₂, poroltó vagy vízpermet. A nagyobb tüzekeket vízszugárral vagy alkoholnak ellenálló habbal oltjuk.

· 5.2 Az anyagból vagy a keverékből származó különleges veszélyek

További lényeges információk nem állnak rendelkezésre.

· 5.3 Tűzoltóknak szóló javaslat

· **Különleges védőfelszerelés:** Használjunk védőálcot.

6. SZAKASZ: Intézkedések véletlenszerű expozíciónál

· 6.1 Személyi óvintézkedések, egyéni védőeszközök és vészhelyzeti eljárások

Viseljünk védőfelszerelést. Távolítsuk el a védtelen személyeket.

· 6.2 Környezetvédelmi óvintézkedések:

A környezeti vizekbe vagy csatornába való behatolás esetén értesítsük az illetékes hatóságokat.

Hígítsuk fel sok vízzel.

Ne hagyjuk bekerülni a csatornába/felszíni vizekbe/talajvízbe.

· 6.3 A területi elhatárolás és a szennyezésmentesítés módszerei és anyagai:

Folyadékot megkötő anyaggal (homok, kovaföld, savmegkötő anyag, univerzális megkötő anyag) itassuk fel.

Használjunk semlegesítő szereket.

A szennyezett anyagot, mint hulladékot a 13. pont szerint távolítsuk el.

Gondoskodjunk megfelelő szellőztetésről.

(folytatás a 4. oldalon)

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(folytatás a 3. oldalról)

· 6.4 Hivatkozás más szakaszokra

A biztonságos kezeléshez lásd a 7. Fejezetben közölt információkat.
A személyes védőfelszereléshez lásd a 8. Fejezetben közölt információkat.
Az eltávolítással kapcsolatban lásd a 13. Fejezetben közölt információkat.

7. SZAKASZ: Kezelés és tárolás

· 7.1 A biztonságos kezelésre irányuló óvintézkedések

Gondoskodjunk a munkahelyen megfelelő szellőzéstől és elszívásról.

A tartályokat óvatosan nyissuk és kezeljük.

Kerüljük az aerosol képződést.

· **Tűz- és robbanásvédelmi információk:** Tartsuk készenlétben a védőálarcot.

· 7.2 A biztonságos tárolás feltételei, az esetleges összeférhetlenséggel együtt

· **Raktározás:**

· **A raktárhelyiségekkel és tartályokkal szemben támasztott követelmény:** Nincsenek különleges követelmények.

· **Együttes tárolással kapcsolatos információk:** Nem szükséges.

· **További adatok a raktározási körülményekkel kapcsolatban:** Az edényeket jól lezárt állapotban tartsuk.

· **7.3 Meghatározott végfelhasználás (végfelhasználások)** További lényeges információk nem állnak rendelkezésre.

8. SZAKASZ: Az expozíció ellenőrzése/egyéni védelem

· **Pótlólagos információ a műszaki berendezés kialakításához:** További adatok nincsenek; lásd 7. pontot.

· 8.1 Ellenőrzési paraméterek

· **Alkotórészek munkahelyre vonatkoztatott, felügyelet tárgyát képező határértékekkel:**

A termék nem tartalmaz olyan releváns anyagmennyiségeket, amelyek munkahelyre vonatkoztatott, ellenőrizendő határértékekkel rendelkeznek.

· **Pótlólagos információk:** A létrehozásnál érvényes listák képezték a kiindulópontot.

· 8.2 Az expozíció ellenőrzése

· **Személyes védőfelszerelés:**

· **Általános védekezési és higiéniai intézkedések:**

Tartsuk távol étel- és italoktól, italoktól és takarmányoktól.

A szennyezett folyadékkal átitatott ruházatot azonnal vegyük le.

Munkahelyi szünetek előtt és a munka befejezésekor mossunk kezet.

A védőruházatot külön tároljuk.

Kerüljük a szembe való bejutást.

Kerüljük a szemmel és bőrrel való érintkezést.

· **Légzésvédelem:**

Rövid ideig tartó vagy csekély terhelés esetén légzési szűrőkészüléket alkalmazunk, intenzív vagy hosszú ideig tartó expozíció esetén környezeti levegőtől független védőálarc szükséges.

· **Kézvédelem:**



Védőkesztyű.

A kesztyű anyagának át nem eresztő képességűnek és a termékkel/anyaggal/készítménnyel szemben ellenállónak kell lennie.

Megfelelő vizsgálatok hiányában a termékre/készítményre/vegyszerkeverékre nem lehet alkalmas kesztyűanyagot javasolni.

A kesztyű anyagának kiválasztása az áttörési idő, permeációs sebesség és a bomlás figyelembevételével történik.

(folytatás az 5. oldalon)

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(folytatás a 4. oldalról)

· **Kesztyűanyag**

A vízben oldhatatlan anyag/termék/készítmény használata előtt vízdékony bőrvédő szert (zsírmentes rétegképző vagy olaj/víz-emulziót) használjunk. Mivel a termék több anyagból összeállított készítményt jelent, a kesztyű anyagának tartóssága előre nem számítható ki, ezért a használat előtt ezt ellenőrizni kell.

· **Áthatolási idő a kesztyűanyagon**

A pontos behatolási időt a kesztyű gyártójától kell megkérdezni és azt be is kell tartani.

· **Szemvédelem:**



Jól záró védőszemüveg.

9. SZAKASZ: Fizikai és kémiai tulajdonságok

· **9.1 Az alapvető fizikai és kémiai tulajdonságokra vonatkozó információk**

· **Általános adatok**

· **Külső jellemzők:**

· **Forma:**

Folyékony

· **Szín:**

a termék megjelölés szerint.

· **Szag:**

gyümölcsszerű

· **Szagküszöbérték:**

Nincs meghatározva.

· **pH-érték:**

Nincs meghatározva.

· **Állapotváltozás**

· **Olvadáspont/fagyáspont:**

nem meghatározható

· **Kezdő forráspont és forrásponttartomány:**

100 °C

· **Lobbanáspont:**

71 °C

· **Gyúlékonyság (szilárd, gázhalmazállapot):**

Nem alkalmazható

· **Bomlási hőmérséklet:**

Nincs meghatározva.

· **Öngyulladási hőmérséklet:**

Az anyag magától nem gyullad.

· **Robbanásveszélyesség:**

Nincs meghatározva.

· **Robbanási határok:**

· **Alsó:**

Nincs meghatározva.

· **Felső:**

Nincs meghatározva.

· **Gőznyomás 20 °C-nál:**

23 hPa

· **Sűrűség 20 °C-nál:**

1,129 g/cm³

· **Relatív sűrűség**

Nincs meghatározva.

· **Gőzsűrűség**

Nincs meghatározva.

· **Párolgási sebesség**

Nincs meghatározva.

· **Oldhatóság/keverhetőség az alábbiakkal:**

· **Víz:**

Teljes mértékben keverhető.

· **Megoszlási hányados: n-oktanol/víz:**

Nincs meghatározva.

· **Viszkózitás:**

· **dinamikai:**

Nincs meghatározva.

· **kinematikai:**

Nincs meghatározva.

(folytatás a 6. oldalon)

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(folytatás az 5. oldalról)

· Oldószer tartalom:	
· Szerves oldószerek:	0,3 %
· Víz:	74,8 %
· VOC (EC)	0,25 %
· Szilárdanyag tartalom:	0,0 %
· 9.2 Egyéb információk	További lényeges információk nem állnak rendelkezésre.

10. SZAKASZ: Stabilitás és reakciókészség

- **10.1 Reakciókészség** További lényeges információk nem állnak rendelkezésre.
- **10.2 Kémiai stabilitás**
- **Termikus bomlás/kerülendő feltételek:** Rendeltetésszerű használat esetén nincs bomlás.
- **10.3 A veszélyes reakciók lehetősége** Veszélyes reakciók nem ismeretesek.
- **10.4 Kerülendő körülmények** További lényeges információk nem állnak rendelkezésre.
- **10.5 Nem összeférhető anyagok:** További lényeges információk nem állnak rendelkezésre.
- **10.6 Veszélyes bomlástermékek:** Veszélyes bomlástermékek nem ismeretesek.

11. SZAKASZ: Toxikológiai információk

- **11.1 A toxikológiai hatásokra vonatkozó információ**
- **Akut toxicitás**
Lenyelve ártalmatlan.
Belélegezve halálos.

· **Besorolás releváns LD/LC50-értékek:**

111-30-8 Glutaral

Szájon át	LD50	134 mg/kg (rat)
Bőrön át	LD50	2.560 mg/kg (rabbit)

- **Primer ingerhatás:**
- **Bőrkorrózió/bőrirritáció**
Súlyos égési sérülést és szemkárosodást okoz.
- **Súlyos szemkárosodás/szemirritáció**
Súlyos szemkárosodást okoz.
- **Légzőszervi vagy bőrszenzibilizáció**
Belélegezve allergiás és asztmás tüneteket, és nehéz légzést okozhat.
Allergiás bőrreakciót válthat ki.
- **CMR hatások (rákkeltő, mutagén és teratogén hatás)**
- **Csírasejt-mutagenitás** A rendelkezésre álló adatok alapján az osztályozás kritériumai nem teljesülnek.
- **Rákkeltő hatás** A rendelkezésre álló adatok alapján az osztályozás kritériumai nem teljesülnek.
- **Reprodukciós toxicitás** A rendelkezésre álló adatok alapján az osztályozás kritériumai nem teljesülnek.
- **Egyetlen expozíció utáni célszervi toxicitás (STOT)**
Légúti irritációt okozhat.
- **Ismétlődő expozíció utáni célszervi toxicitás (STOT)**
A rendelkezésre álló adatok alapján az osztályozás kritériumai nem teljesülnek.
- **Aspirációs veszély** A rendelkezésre álló adatok alapján az osztályozás kritériumai nem teljesülnek.

HU

(folytatás a 7. oldalon)

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(folytatás a 6. oldalról)

12. SZAKASZ: Ökológiai információk

- **12.1 Toxicitás**
- **Akvatikus toxicitás:** További lényeges információk nem állnak rendelkezésre.
- **12.2 Perzisztencia és lebonthatóság** További lényeges információk nem állnak rendelkezésre.
- **12.3 Bioakkumulációs képesség** További lényeges információk nem állnak rendelkezésre.
- **12.4 A talajban való mobilitás** További lényeges információk nem állnak rendelkezésre.
- **Ökotoxikus hatások:**
- **Megjegyzés:**
Halakra fokozottan mérgező hatású.
Halakra mérgező hatású.
- **További ökológiai információk:**
- **Általános információk:**
3 (Saját besorolás) Vízveszélyeztetési osztály: a vizeket erősen veszélyezteti.
Ne engedjük bele a talajvízbe, a környezeti vizekbe, vagy a csatornarendszerbe, még kis mennyiségben sem.
Higitatlan, illetve semlegesítetlen állapotban nem engedhető bele a szennyvízbe, illetve a befogadóba.
A legcsekélyebb mennyiségek talajbakerülése is veszélyezteti az ivóvizet.
A vizekben mérgező hatást fejt ki a halakra és planktonokra is.
vízi élőlényekre erősen mérgező
vízi élőlényekre mérgező
- **12.5 A PBT- és a vPvB-értékelés eredményei**
- **PBT:** Nem alkalmazható
- **vPvB:** Nem alkalmazható
- **12.6 Egyéb káros hatások** További lényeges információk nem állnak rendelkezésre.

13. SZAKASZ: Ártalmatlanítási szempontok

- **13.1 Hulladékkezelési módszerek**
- **Ajánlás:** Nem keverhető hozzá a háztartási hulladékhoz. Ne engedjük bele a csatornahálózatba.
- **Tisztítatlan csomagolások:**
- **Ajánlás:** A kezelés módját a hatásági előírások szabják meg.
- **Ajánlott tisztítószer:** Víz, adott esetben tisztítószerekkel együtt.

14. SZAKASZ: Szállításra vonatkozó információk

- | | |
|--|---|
| · 14.1 UN-szám | |
| · ADR, IMDG, IATA | UN3265 |
| · 14.2 Az ENSZ szerinti megfelelő szállítási megnevezés | |
| · ADR | 3265 MARÓ, FOLYÉKONY, SAVAS SZERVES ANYAG, M.N.N. (Glutaral), KÖRNYEZETRE VESZÉLYES |
| · IMDG | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT |
| · IATA | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde) |

(folytatás a 8. oldalon)

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(folytatás a 7. oldalról)

· **14.3 Szállítási veszélyességi osztály(ok)**

· **ADR, IMDG**



· **osztály**

8 Maró anyagok

· **Bárcák**

8

· **IATA**



· **Class**

8 Maró anyagok

· **Label**

8

· **14.4 Csomagolási csoport**

· **ADR, IMDG, IATA**

III

· **14.5 Környezeti veszélyek:**

A termék tartalmaz környezetre veszélyes anyagok:
Glutaral

· **Marine pollutant:**

Jelkép (hal és fa)

· **Különleges jelölésére (ADR):**

Jelkép (hal és fa)

· **14.6 A felhasználót érintő különleges óvintézkedések** Figyelem: Maró anyagok

· **Veszélyt jelölő számok (Kemler-szám):**

88

· **EMS-szám:**

F-A,S-B

· **Segregation groups**

Acids

· **Stowage Category**

A

· **Stowage Code**

SW2 Clear of living quarters.

· **14.7 A MARPOL-egyezmény II. melléklete és az IBC szabályzat szerinti ömlesztett szállítás**

Nem alkalmazható

· **Szállítási/egyéb adatok:**

· **ADR**

· **Korlátozott mennyiség (LQ)**

5L

· **Engedményes mennyiség (EQ)**

Kód: E1

Legnagyobb nettó mennyiség belső csomagolásonként: 30 ml

Legnagyobb nettó mennyiség külső csomagolásonként: 1000 ml

· **Szállítási kategória**

3

· **Alagútkorlátozási kód:**

E

· **IMDG**

· **Limited quantities (LQ)**

5L

· **Excepted quantities (EQ)**

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

(folytatás a 9. oldalon)

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- | | |
|--------------------------|--|
| · UN "Model Regulation": | UN 3265 MARÓ, FOLYÉKONY, SAVAS SZERVES ANYAG, M.N.N. (GLUTARAL), 8, III, KÖRNYEZETRE VESZÉLYES |
|--------------------------|--|

15. SZAKASZ: Szabályozással kapcsolatos információk

- 15.1 Az adott anyaggal vagy keverékkel kapcsolatos biztonsági, egészségügyi és környezetvédelmi előírások/jogszabályok
- Irányelv 2012/18/EU
- Megnevezett veszélyes anyagok - I. MELLÉKLET egyik alkotóanyag sincs listázva
- Seveso-kategóriát
H2 AKUT TOXIKUS
E1 A vízi környezetre veszélyes
- Küszöbértékek (tonna): Alsó küszöbérték 50 t
- Küszöbértékek (tonna): Felső küszöbérték 200 t
- Tanács 1907/2006/EK rendelete XVII. MELLÉKLET A korlátozás feltételei: 3

- 2011/65/EU Irányelve egyes veszélyes anyagok elektromos és elektronikus berendezésekben való alkalmazásának korlátozásáról - II. Melléklet

egyetik alkotóanyag sincs listázva

- Országos előírások:
- Egyéb előírások, korlátozások és tiltó előírások
- Különös aggodalomra okot adó anyagok (SVHC) REACH szerint, 57. cikk

111-30-8 | Glutaral

- 15.2 Kémiai biztonsági értékelés: A kémiai biztonsági értékelést nem végezték.

16. SZAKASZ: Egyéb információk

Az adatok jelenlegi ismeretinkre támaszkodnak, azonban nem jelentik a termék tulajdonságainak garanciáját és nem alapoznak meg szerződéses jogviszonyt.

- **Lényeges mondatok**

- H301 Lenyelve mérgező.
- H314 Súlyos égési sérülést és szemkárosodást okoz.
- H317 Allergiás bőrreakciót válthat ki.
- H330 Belélegezve halálos.
- H334 Belélegezve allergiás és asztmás tüneteket, és nehéz légzést okozhat.
- H335 Légúti irritációt okozhat.
- H400 Nagyon mérgező a vízi élővilágra.
- H411 Mérgező a vízi élővilágra, hosszan tartó károsodást okoz.

- **Rövidítések és mozaikszavak:**

- 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

(folytatás a 10. oldalon)

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(folytatás a 9. oldalról)

*PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Akut toxicitás - szájon át – 3. kategória**Acute Tox. 4: Akut toxicitás - szájon át – 4. kategória**Acute Tox. 2: Akut toxicitás - belélegzés – 2. kategória**Skin Corr. 1B: Bőrmarás/bőrirritáció – 1B. kategória**Eye Dam. 1: Súlyos szemkárosodás/szemirritáció – 1. kategória**Resp. Sens. 1: Légzőszervi szenzibilizáció – 1. kategória**Skin Sens. 1: Bőrszenzibilizáció – 1. kategória**Skin Sens. 1A: Bőrszenzibilizáció – 1A. kategória**STOT SE 3: Célszervi toxicitás (egyszeri expozíció) – 3. kategória**Aquatic Acute 1: A vízi környezetre veszélyes - akut vízi toxicitási veszély – 1. kategória**Aquatic Chronic 2: A vízi környezetre veszélyes - hosszú távú vízi toxicitási veszély – 2. kategória*

HU

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

Stampato il: 25.08.2021

Revisione: 25.08.2021

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

· **Articolo numero:** 16214, 16216, 16216-10

· **UFI:** MWY0-D07Y-900Q-YXDM

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

Non sono disponibili altre informazioni.

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

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

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: info@emsdiasum.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

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

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SEZIONE 2: Identificazione dei pericoli

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

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



GHS06 teschio e tibie incrociate

Acute Tox. 2 H330 Letale se inalato.



GHS08 pericolo per la salute

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



GHS05 corrosione

Skin Corr. 1B H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

Eye Dam. 1 H318 Provoca gravi lesioni oculari.



GHS09 ambiente

Aquatic Acute 1 H400 Molto tossico per gli organismi acquatici.

Aquatic Chronic 2 H411 Tossico per gli organismi acquatici con effetti di lunga durata.

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Scheda di dati di sicurezza
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Denominazione commerciale: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Segue da pagina 1)



GHS07

Acute Tox. 4 H302 Nocivo se ingerito.
Skin Sens. 1 H317 Può provocare una reazione allergica cutanea.
STOT SE 3 H335 Può irritare le vie respiratorie.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS05 GHS06 GHS08 GHS09

· **Avvertenza Pericolo**

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

glutarale

· **Indicazioni di pericolo**

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

· **Consigli di prudenza**

P303+P361+P353 **IN CASO DI CONTATTO CON LA PELLE (o con i capelli):** togliersi di dosso immediatamente tutti gli indumenti contaminati. Sciacquare la pelle [o fare una doccia].

P305+P351+P338 **IN CASO DI CONTATTO CON GLI OCCHI:** sciacquare accuratamente per parecchi minuti. Togliere le eventuali lenti a contatto se è agevole farlo. Continuare a sciacquare.

P310 Contattare immediatamente un CENTRO ANTIVELENI/un medico.

P320 Trattamento specifico urgente (vedere su questa etichetta).

P362+P364 Togliere tutti gli indumenti contaminati e lavarli prima di indossarli nuovamente.

P405 Conservare sotto chiave.

P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.

· **vPvB:** Non applicabile.

SEZIONE 3: Composizione/informazioni sugli ingredienti

· **3.2 Caratteristiche chimiche: Miscela**

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

(continua a pagina 3)

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

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· Sostanze pericolose:

CAS: 111-30-8 EINECS: 203-856-5	glutarale Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>10-≤25%
------------------------------------	---	----------

· SVHC

111-30-8 | glutarale

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

SEZIONE 4: Misure di primo soccorso

· 4.1 Descrizione delle misure di primo soccorso

· Indicazioni generali:

Allontanare immediatamente gli abiti contaminati dal prodotto.

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.

Levarsi la maschera protettiva solamente dopo aver tolto gli abiti contaminati.

In caso di respirazione irregolare o di blocco respiratorio praticare la respirazione artificiale.

· Inalazione:

Portare il soggetto in zona ben areata o somministrare ossigeno; chiedere l'intervento di un medico.

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

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

· Contatto con gli occhi:

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

· Ingestione:

Chiamare subito il medico.

Bere abbondante acqua e sostare in zona ben areata. Richiedere immediatamente l'intervento del 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:

CO₂, polvere o acqua nebulizzata. Estinguere gli incendi di grosse dimensioni con acqua nebulizzata o con schiuma resistente all'alcool.

· 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

Indossare equipaggiamento protettivo. Allontanare le persone non equipaggiate.

· 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.

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- **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).
Utilizzare mezzi di neutralizzazione.
Smaltimento del materiale contaminato conformemente al punto 13.
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**
Per informazioni relative ad un manipolazione sicura, vedere capitolo 7.
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.
Per informazioni relative allo smaltimento vedere Capitolo 13.

SEZIONE 7: Manipolazione e immagazzinamento

- **7.1 Precauzioni per la manipolazione sicura**
Accurata ventilazione/aspirazione nei luoghi di lavoro.
Aprire e manipolare i recipienti con cautela.
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Tener pronto il respiratore.
- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

SEZIONE 8: Controllo dell'esposizione/protezione individuale

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

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

111-30-8 glutarale

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

- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.
- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**
Tenere lontano da cibo, bevande e foraggi.
Togliere immediatamente gli abiti contaminati.
Lavarsi le mani prima dell'intervallo o a lavoro terminato.
Custodire separatamente l'equipaggiamento protettivo.
Evitare il contatto con gli occhi.
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.

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· **Guanti protettivi:**



Guanti protettivi

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

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

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

· **Materiale dei guanti**

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

· **Tempo di permeazione del materiale dei guanti**

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

· **Occhiali protettivi:**



Occhiali protettivi a tenuta

SEZIONE 9: Proprietà fisiche e chimiche

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

· **Indicazioni generali**

· **Aspetto:**

· **Forma:**

Liquido

· **Colore:**

In conformità con la denominazione del prodotto

· **Odore:**

Simile a frutto

· **Soglia olfattiva:**

Non definito.

· **valori di pH:**

Non definito.

· **Cambiamento di stato**

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

Non definito.

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

· **Punto di infiammabilità:**

71 °C

· **Infiammabilità (solidi, gas):**

Non applicabile.

· **Temperatura di decomposizione:**

Non definito.

· **Temperatura di autoaccensione:**

Prodotto non autoinfiammabile.

· **Proprietà esplosive:**

Non definito.

· **Limiti di infiammabilità:**

· **Inferiore:**

Non definito.

· **Superiore:**

Non definito.

· **Tensione di vapore a 20 °C:**

23 hPa

· **Densità a 20 °C:**

1,129 g/cm³

· **Densità relativa**

Non definito.

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· 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:	
· Solventi organici:	0,3 %
· Acqua:	74,8 %
· VOC (CE)	0,25 %
· 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.
- **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 ingerito.
Letale 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 gravi ustioni cutanee e gravi lesioni oculari.
- **Lesioni oculari gravi/irritazioni oculari gravi**
Provoca gravi lesioni oculari.
- **Sensibilizzazione respiratoria o cutanea**
Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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- **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:**
Molto tossico per i pesci.
Tossico per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**
Pericolosità per le acque classe 3 (D) (Autoclassificazione): molto pericoloso
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.
Non immettere il prodotto non diluito o non neutralizzato nelle acque di scarico e nei canali di raccolta.
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di quantità minime di prodotto.
Tossico per pesci e plancton.
Molto tossico per gli organismi acquatici
tossico per gli organismi acquatici
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

SEZIONE 13: Considerazioni sullo smaltimento

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

SEZIONE 14: Informazioni sul trasporto

- | | |
|---|--|
| · 14.1 Numero ONU | |
| · ADR, IMDG, IATA | UN3265 |
| · 14.2 Nome di spedizione dell'ONU | |
| · ADR | 3265 LIQUIDO ORGANICO CORROSIVO, ACIDO, N.A.S.
(glutarale), PERICOLOSO PER L'AMBIENTE |
| · IMDG | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT |

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· **IATA** *CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.*
(Glutaraldehyde)

· **14.3 Classi di pericolo connesso al trasporto**

· **ADR, IMDG**



· **Classe** 8 Materie corrosive
· **Etichetta** 8

· **IATA**



· **Class** 8 Materie corrosive
· **Label** 8

· **14.4 Gruppo di imballaggio**

· **ADR, IMDG, IATA** III

· **14.5 Pericoli per l'ambiente:** *Il prodotto contiene materie pericolose per l'ambiente: glutarale*

· **Marine pollutant:** *Simbolo (pesce e albero)*

· **Marcatura speciali (ADR):** *Simbolo (pesce e albero)*

· **14.6 Precauzioni speciali per gli utilizzatori** *Attenzione: Materie corrosive*

· **N° identificazione pericolo (Numero Kemler):** 88

· **Numero EMS:** F-A,S-B

· **Segregation groups** Acids

· **Stowage Category** A

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

· **14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC**

Non applicabile.

· **Trasporto/ulteriori indicazioni:**

· **ADR**

· **Quantità limitate (LQ)** 5L

· **Quantità esenti (EQ)** Codice: E1

Quantità massima netta per imballaggio interno: 30 ml

Quantità massima netta per imballaggio esterno: 1000 ml

· **Categoria di trasporto** 3

· **Codice di restrizione in galleria** E

· **IMDG**

· **Limited quantities (LQ)** 5L

· **Excepted quantities (EQ)** Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

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· **UN "Model Regulation":** UN 3265 LIQUIDO ORGANICO CORROSIVO, ACIDO, N.A.S. (GLUTARALE), 8, III, PERICOLOSO PER L'AMBIENTE

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.
- **Categoria Seveso**
H2 TOSSICITÀ ACUTA
E1 Pericoloso per l'ambiente acquatico
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia inferiore** 50 t
- **Quantità limite (tonnellate) ai fini dell'applicazione dei requisiti di soglia superiore** 200 t
- **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.

· **Disposizioni nazionali:**

· **Istruzione tecnica aria:**

Classe	quota in %
NC	0,3

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

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

111-30-8 | glutarale

· **15.2 Valutazione della sicurezza chimica:** Una valutazione della sicurezza chimica non è stata effettuata.

SEZIONE 16: Altre informazioni

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

· **Frasei rilevanti**

- 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

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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. 4: Tossicità acuta per via orale – Categoria 4

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

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

Eye Dam. 1: Gravi lesioni oculari/irritazione oculare – Categoria 1

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

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

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

IT

물질안전보건자료 GHS에 따라

인쇄일자: 2021.08.25

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(1 쪽부터 계속)



환경

수생환경 유해성 - 급성 1
수생환경 유해성 - 만성 2

H400 수생생물에 매우 유독함
H411 장기적 영향에 의해 수생생물에 유독함



급성 독성 - 경구 - 구분 4
피부 과민성 - 구분 1
특정표적장기 독성 - 1회 노출 - 구분 3

H302 삼키면 유해함
H317 알레르기성 피부 반응을 일으킬 수 있음
H335 호흡 자극성을 일으킬 수 있음

라벨 표기 요소

라벨 라벨 요소

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

그림 문자



GHS05 GHS06 GHS08 GHS09

신호어 위험

상표상에 명확히 위험성이 표시된 성분:

글루타르알데히드

유해 **위험** 문구

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

예방 조치 문구

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오

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

즉시 독성물질센터/병원 연락 필요.

긴급히(라벨 참조) 처치를 하시오.

오염된 의복은 벗고 다시 사용 전 세척하십시오.

밀봉하여 저장 하시오.

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

기타 기타 유해성

- PBT(잔류성, 생물농축성, 물질분해성) 및 vPvB(고 잔류성, 고 생물농축성, 물질분해성) 평가 결과
- PBT(잔류성, 생물농축성, 물질분해성) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성, 물질분해성) 당사항 없음.

KR

(3 쪽에 계속)

물질안전보건자료 GHS에 따라라다

인쇄일자: 2021.08.25

개정: 2021.08.25

제품명: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(2 쪽부터 계속)

3 구성성분의 명칭 및 함유량

· **화학적 특성:** 혼합물
 설명설명설명 설명한 점 가 물 이 함유된 아래에 열 거 된 물 질 로 만 들 어 진 혼 합 물.

· 위험 요소요소		
111-30-8	글루타르알데히드 ⚠ 급성 독성 - 경구 - 구분 3, H301; ⚠ 급성 독성 - 흡입 - 구분 2, H330; ⚠ 호흡기 과민성 - 구분 1, H334; ⚠ 피부 부식성/피부 자극성 - 구분 1, H314; ⚠ 수생환경 유해성 - 급성 1, H400; 수생환경 유해성 - 만성2, H411; ⚠ 피부 과민성 - 구분 1, H317; 특정 표적장기 독성 - 1회 노출 - 구분 3, H335	>10-≤25%

4 응급조치 요령

- **응급조치요령 내용내용**
- **일반정보정보**
 이 제품에 의해 오염된 의상은 즉시 제거한다.
 중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간 동안은 의료진의 관찰을 받아야 한다.
 반드시 오염된 의상을 완전히 제거한 후에 호흡 보호기를 떼어낸다.
 불규칙적인 호흡이나 호흡 정지 상태에서는 인공 호흡을 실시한다.
- **흡입했을 때:**
 신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.
 환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- **피부에 접촉했을 때:** 즉시 물과 비누로 씻고 잘 행군다.
- **눈에 눈에 들어갔을 때:** 흐르는 물에 눈을 몇 분 동안 씻어내고 나서, 의사와 상담한다
- **먹었을 때:**
 즉시 의사의 도움을 구한다.
 물을 충분히 마시고 신선한 공기를 쐬다. 즉시 의사의 도움을 구한다.
- 기타 기타 **각각의 주의사항:**
 가장 가장 **중요한 응급 대응 지침은 응급 처치 지침에 있는 응급 처치 지침에 있는 정보가 존재하지 않습니다.**
 · **즉각적인 의료 처치 및 특별 처치가 필요함을 시사하는 징후 중 어떠한 정보가 존재하지 않습니다.**

5 폭발·화재시 대처방법

- **소화제**
- **적절한 소화제:**
 이산화탄소, 진화용 석회 가루 또는 물 방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.
- **본 화학물질이나 혼합물에서 발생시킬 특별한 위험 특성** 추가적인 정보가 존재하지 않습니다.
- **소방관에게 대한 신고 사항**
- **화재 예방을 위한 개인적 예방 조치:** 호흡 보호장비 설치.

6 누출 사고 시 대처방법

- **개인적 예방 조치, 보호 장비 및 응급 처치 절차** 안전 장비 착용하고, 무방비 의사람은 격리시킨다.
- **환경 관련 예방 조치:**
 하천이나 하수로 유입되었을 경우 해당 관청에 보고한다.
 많은 물로 희석시킨다.
 하수도망/해수면 위 의 물/지하수로 도달하지 않게 한다.

(4 쪽에 계속)

물질안전보건자료 GHS에 따라라따

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(4 쪽부터계속)

보충 보호보호



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.
테스트를 하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.
투과 시간, 침투율 과 저하를 고려해서 장갑 재료를 선택한다.

장갑 의재료

적합한장갑의선정은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업종에따라서도다르게선정되어야한다. 제품은다양한재료로부터의조제로이루어지는것이기때문에, 장갑재질의안정성은사전에예측되어질수있는것이아니고, 반드시사용전에 (그안전성이) 체크되어야한다.

장갑 재료 의 투과 시간 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

보충 보호보호



확조이는보안경

9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보	
외형외형외형	
· 물리적 상태 상태	액체의
· 색:	제품 표시에 따름
냄새 냄새 냄새	과일종류의
· 후각역치	알맞지않다.
· pH:	알맞지않다.
· 상태변화	
· 녹는점/어는점:	맞지않는
초기초기 끓는점과 끓는점 범위 범위	100 °C
· 인화점:	71 °C
· 인화성 고체/기체/기체	해당사항 없음.
분해 분해 온도	알맞지않다.
· 자기점화:	이제품은자연발화성이없다.
· 폭발위험:	알맞지않다.
인화 인화 인화 폭발 위험 상한 상한 하한	
· 아래로:	알맞지않다.
위로 위로 위로	알맞지않다.
· 증기압 의 경우 20 °C:	23 hPa
밀도 밀도 밀도 경우 20 °C:	1.129 g/cm ³
비중 비중 비중	알맞지않다.
· 증기밀도:	알맞지않다.
증발 증발 증발 속도	알맞지않다.

(6 쪽에계속)

물질안전보건자료

GHS에 따라

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삼킬 경우 식도나 위 등의 내장 기관 벽에 상처를 주는 위험과 마찬가지로 입 주변이나 구강에 강한 부식 작용을 한다

12 환경에 미치는 영향

독성독성독성

- **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:**

의견의견의견

- 어류에 매우 독성임
- 어류에 독이 됨

· **추가적인 생태학 정보 정보**

일반 열안정성 특징

- 수질오염등급 3 (자체등급분류): 심하게 수질 오염이 된 지하수나, 하천으로 또는 하수도망에도 달하지 않게 한다. 역시 극소수의 양이라도 안 된다.
- 희석시키지 않은 채 또는 중화시키지 않은 채 하수도나 배수로에도 달하지 않게 해야 한다.
- 지하수로 아주 미세한 양이 유입되었을 경우 엔이미식수 오염 상태이다
- 하천에서는 역시 물고기나 플랑크톤에게는 독성이 있다.
- 물속의 유기체에 아주 독이 되는 것
- 물속의 유기체에 독이 되는 것

- PBT(잔류성, 생물농축성, 물성물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 물성물질) 당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질) 당사항 없음.

기타 기타 부속 추가적인 정보가 존재하지 않습니다.

13 폐기시 주의사항

- **폐기물 처리 방법**
권고 권고 생활쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.
- **비위생적 포장 포장**
권고 권고 바닥의 지침에 입각한 쓰레기 처리.
- **추천 세정제:** 경우에 따라서 세제가 첨가된 물

14 운송에 필요한 정보

유엔 유엔 번호

- ADR, IMDG, IATA UN3265

적정적정명명

- ADR 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (글루타르알데히드), ENVIRONMENTALLY HAZARDOUS
- IMDG CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT
- IATA CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde)

(8 쪽에 계속)

물질안전보건자료

GHS에 따라 라다

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(7 쪽부터 계속)

교통 규정: 유해물질 위험 클래스

· ADR, IMDG



등급: 등급: 등급

· 위험: **물라벨라벨**

8 부식작용하는 물질

8

· IATA



· Class
· Label

8 부식작용하는 물질

8

· 용기등급

· ADR, IMDG, IATA

III

· 환경적 유해물질:

이 물질은 환경오염물질을 함유하고 있다: 글루타르알데히드

· 해양오염물질:

심벌 (물고기와 나무)

특수 위험: **특수 위험: 환경 (R):**

심벌 (물고기와 나무)

· 이동: **특별 취급 조치**

경고: 부식작용하는 물질

위험: **위험: 유해 코드**

88

· E: **번호 번호**

F-A,S-B

· Segregation groups

Acids

· Stowage Category

A

· Stowage Code

SW2 Clear of living quarters.

· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따라
발크: 발크: 운송: 운송

해당사항 없음.

· 운송: **추가 정보**

· ADR

한정: **한정: 양 (수량)**

· Excepted quantities (EQ)

5L

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

운송: **운송: 구분**

3

터널: **터널: 제한 코드**

E

· IMDG

· Limited quantities (LQ)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

(9 쪽에 계속)

물질안전보건자료

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· **UN번호** **UN 3265**

UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC,
N . O . S . (글루타르알데히드), 8 , III ,
ENVIRONMENTALLY HAZARDOUS

15 법적 규제 현황

· **산업안전보건법에 의한 유해화학물질 규제**

제조제조자금지물질:

어떠한 내용물도 목록화 되어있지 않다

· **허가대상물질:**

어떠한 내용물도 목록화 되어있지 않다

· **관리대상유해물질:**

111-30-8 글루타르알데히드

67-56-1 메틸알코올

· **작업환경측정 대상 유해인자**

111-30-8 글루타르알데히드

1A1

67-56-1 메틸알코올

1A28

· **특수건강 집관 대상 유해인자**

111-30-8 글루타르알데히드

1A2

67-56-1 메틸알코올

1A31

해당 해당 유해물질 또는 혼합물에 대한 유해화학물질관리법 제 12조 제 1항 제 1호를 적용 받음

· **Korean Existing Chemical Inventory**

7732-18-5 물

KE-35400

111-30-8 글루타르알데히드

KE-27969

67-56-1 메틸알코올

KE-23193

· **화학물질관리법**

· **사고대비물질**

67-56-1 메틸알코올

· **금지물질**

어떠한 내용물도 목록화 되어있지 않다

· **제한물질**

어떠한 내용물도 목록화 되어있지 않다

· **유독물질**

111-30-8 글루타르알데히드

67-56-1 메틸알코올

· **허가물질**

111-30-8 글루타르알데히드

67-56-1 메틸알코올

등록명목명칭 또는 산재대상 화학물질

7732-18-5 물

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

어떠한 내용물도 목록화 되어있지 않다

(10 쪽에 계속)

물질안전보건자료

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· **중점관리물 집행지정지정**

· **표1 중점관리물 질(제관전)관련관련**

어떠한내용물도목록화되어있지않다

· **표2 중점관리물 질(제관전)관련관련**

어떠한내용물도목록화되어있지않다

· **라벨라벨요소**

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

· **그림문자**



GHS05 GHS06 GHS08 GHS09

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

글루타르알데히드

유해 **위험** 문구

삼키면 유해함

흡입하면 치명적임

피부에 심한 화상과 눈에 손상을 일으킴

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

알레르기성 피부 반응을 일으킬 수 있음

호흡 자극성을 일으킬 수 있음

수생생물에 매우 유독함

장기적 영향에 의해 수생생물에 유독함

· **예방조치 문구문구**

피부(또는 머리카락)에 묻으면 오염된 모든 의복은 벗거나 제거하십시오. 피부를 물로 씻으시오/샤워하십시오

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

즉시 독성물질센터/병원 연락 필요.

긴급히(라벨 참조) 처치를 하시오.

오염된 의복은 벗고 다시 사용 전 세척하십시오.

밀봉하여 저장하십시오.

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

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

16 그 밖의 참고사항

이 보고서는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다, 하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

최초 최초 작성 일자: 2021.08.25

개정 개정 일자: 최종 개정 일자: 1 / 2021.08.25

· **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

(11 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2021.08.25

개정: 2021.08.25

제품명: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative

(10 쪽부터계속)

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

Tarikh cetak 25.08.2021

Disemak semula pada 25.08.2021

1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Nombor artikel:** 16214, 16216, 16216-10
- **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: info@emsdiasum.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**



Tengkorak dan tulang bersilang

Toks. Akut 2 H330 Maut jika tersedut.



Bahaya kesihatan

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



Kakisan

Skin Corr. 1 H314 Menyebabkan lecuran kulit dan kerosakan mata yang teruk.

Kros. Mata 1 H318 Menyebabkan kerosakan mata yang serius.



Alam sekitar

Akuatik Akut 1 H400 Sangat toksik kepada hidupan akuatik.

Akuatik Kronik 2 H411 Toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.



Toks. Akut 4 H302 Memudaratkan jika tertelan.

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

STOT SE 3 H335 Boleh menyebabkan kerengsaan pernafasan.

(Bersambung ke halaman 2)

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

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Disemak semula pada 25.08.2021

Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 1)

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



GHS05 GHS06 GHS08 GHS09

- **Kata isyarat Bahaya**
- **Komponen pelabelan yang menentukan bahaya:**
1,5-pentanadial
- **Pernyataan Bahaya**
Memudaratkan jika tertelan.
Maut jika tertedut.
Menyebabkan lecuran kulit dan kerosakan mata yang teruk.
Boleh menyebabkan gejala alahan atau asma atau kesukaran bernafas jika tertedut.
Boleh menyebabkan tindak balas alahan kulit.
Boleh menyebabkan kerengsaan pernafasan.
Sangat toksik kepada hidupan akuatik.
Toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.

- **Pernyataan Berjaga-jaga**

JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.
JIKA TERKENA MATA: Bilas berhati-hati dengan air selama beberapa minit. Tanggalkan kanta lekap, jika ada dan dapat dilakukan dengan mudah. Teruskan membilas.
Segera hubungi PUSAT RACUN/doktor.
Rawatan khas diperlukan dengan segera (lihat label ini).
Simpan di tempat berkunci.
Lupuskan kandungan/bekas menurut peraturan tempatan/wilayah/kebangsaan/antarabangsa.

- **Bahaya lain**

- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan

3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

- **Ciri kimia:** Campuran
- **Keterangan:** Campuran bahan disenaraikan di bawah bersama dengan bahan tambah tidak berbahaya.

- **Komponen berbahaya :**

111-30-8	1,5-pentanadial ☠ Toks. Akut 3, H301; Toks. Akut 2, H330; ☠ Pem. Naf. 1, H334; ☠ Skin Corr. 1, H314; ☠ Akutik Akut 1, H400; Akutik Kronik 2, H411; ☠ Pem. Kulit 1, H317; STOT SE 3, H335	>10-≤25%
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4 Langkah-langkah pertolongan cemas

- **Keterangan langkah pertolongan cemas**
- **Maklumat am:**
Segera tanggalkan mana-mana pakaian yang terkena produk.

(Bersambung ke halaman 3)

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Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 2)

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

Tanggalkan kelengkapan pernafasan hanya selepas pakaian yang tercemar telah ditanggalkan semuanya.

Berikan pernafasan bantuan jika pernafasan tidak tetap atau terhenti.

• **Jika tersedut:**

Berikan udara bersih atau oksigen, dapatkan rawatan doktor.

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

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

• **Jika terkena mata:**

Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit. Kemudian hubungi doktor.

• **Jika tertelan:**

Segera hubungi doctor.

Minum air yang banyak dan berikan udara bersih. Segera 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.

5 Langkah-langkah pepadaman kebakaran

• **Bahan padam api**

• **Agen padam yang sesuai:**

CO₂, serbuk atau semburan air. Padam kebakaran besar dengan semburan air atau busa rintangan alkohol.

• **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperoleh.

• **Panduan kepada padam kebakaran**

• **Kelengkapan perlindungan:** Peralatan perlindungan pernafasan mulut.

6 Langkah-langkah pelepasan tidak sengaja

• **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan**

Pakai kelengkapan perlindungan. Jauhkan mereka yang tidak dilindungi dari kawasan tercemar.

• **Langkah perlindungan alam sekitar:**

Hubungi pihak berkuasa berkaitan jika berlaku peresapan masuk ke dalam saluran air atau sistem pemetungan.

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)

Gunakan agen peneutralan.

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.

Buka dan kendalikan bekas dengan cermat.

(Bersambung ke halaman 4)

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

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Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 3)

- Elakkan pembentukan aerosol.
- **Maklumat kebakaran dan perlindungan daripada letupan:** Pastikan alat perlindungan pernafasan sentiasa ada.
- **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 diperolehi.

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/m³, 0.05 ppm

- **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.
- **Kawalan pendedahan**
- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**
- Jauhkan daripada makanan, minuman dan makanan haiwan.
- Segera tanggalkan semua pakaian yang tercemar dan kotor.
- Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.
- Simpan pakaian perlindungan secara berasingan.
- Elakkan daripada terkena mata.
- 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 diperolehi pengeluar sarung tangan pelindung dan hendaklah dipatuhi.

(Bersambung ke halaman 5)

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Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 4)

· **Perlindungan mata:**



Gogal bertutup rapat

9 Sifat fizikal dan kimia

· Maklumat tentang ciri fizik dan kimia	
· Maklumat Am	
· Rupa:	Bendalir
· Bentuk:	Mengikut spesifikasi produk
· Warna:	Seperti buah
· Bau:	Tidak ditentukan.
· Ambang bau	Tidak ditentukan.
· Nilai pH:	Tidak ditentukan.
· Perubahan pada keadaan	
· Takat lebur/takat beku	Tidak ditentukan.
· Takat didih awal dan julat didih	100 °C
· Takat kilat:	71 °C
· Kemudahbakaran (pepejal, gas)	Tidak berkenaan
· Suhu penguraian:	Tidak ditentukan.
· Suhu pengautocucuhan	Produk tidak tercucuh sendiri
· Bahaya letupan:	Tidak ditentukan.
· Had letupan :	
· Bawah:	Tidak ditentukan.
· Atas:	Tidak ditentukan.
· Tekanan wap pada 20 °C:	23 hPa
· Ketumpatan pada 20 °C:	1.129 g/cm ³
· Ketumpatan bandingan	Tidak ditentukan.
· Ketumpatan wap	Tidak ditentukan.
· Kadar penyejatan	Tidak ditentukan.
· Keterlarutan dalam / Keterlarutcampuran dengan	
· Air:	Terlarut campur sepenuhnya.
· Pekali sekatan: n-oktanol/air	Tidak ditentukan.
· Kelikatan:	
· Dinamik:	Tidak ditentukan.
· Kinematik:	Tidak ditentukan.
· Kandungan pelarut:	
· Pelarut organik:	0.3 %
· Air:	74.8 %
· Kandungan pepejal:	0.0 %

(Bersambung ke halaman 6)

MY

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

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Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 5)

· **Maklumat lain**

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** Kesan kaustik yang kuat pada kulit dan mukus membran.
- **Kerosakan atau kerengsaan mata yang serius**
Kesan kaustik yang kuat.
Perengsa yang kuat dengan bahaya kecederaan mata yang teruk.
- **Pemekaan pernafasan / kulit**
Pemekaan mungkin berlaku melalui penyedutan.
Pemekaan mungkin berlaku jika terkena kulit.
- **Maklumat tambahan toksikologi:**
Produk menunjukkan bahaya berikut mengikut kaedah pengiraan Garis Panduan Pengelasan Am EU bagi Sediaan seperti yang dikeluarkan dalam versi terbaru:
Memudaratkan
Mengakis
Perengsa
Sangat toksik
Tertelan akan menyebabkan kesan kaustik yang kuat pada mulut dan tekak serta bahaya perliangan esofagus dan perut.

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:**
Sangat toksik kepada ikan

(Bersambung ke halaman 7)

MY

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

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Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 6)

Toksik kepada ikan.

· **Maklumat tambahan ekologi:**

· **Nota am:**

Bahaya air kelas 3 (Peraturan Jerman) (Penilaian sendiri): amat berbahaya kepada air

Jangan biarkan produk memasuki air tanah, saluran air atau sistem pembetulan, walaupun sedikit.

Tidak boleh memasuki air pembentungan atau parit saliran tanpa dicairkan atau dineutralkan.

Bahaya kepada air minuman walaupun dalam amat sedikit produk kebocoran yang memasuki tanah

Juga beracun kepada ikan dan plankton dalam jasad air

Sangat toksik kepada organisma akuatik

Toksik kepada 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 pembentungan.

· **Pembungkusan yang tidak bersih:**

· **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi

· **Agan pencuci yang disyorkan:** Air, jika perlu, digunakan bersama dengan agan pencuci.

14 Maklumat pengangkutan

· **Nombor UN**

· **ADR, IMDG, IATA**

UN3265

· **Nama penghantaran UN yang betul**

· **ADR**

3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(1,5-pentanadial), ENVIRONMENTALLY HAZARDOUS

· **IMDG**

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT

· **IATA**

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

· **pengangkutan kelas bahaya**

· **ADR, IMDG**



· **Kelas**

8 Bahan mengakis.

· **Label**

8

(Bersambung ke halaman 8)

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(Sambungan halaman 7)

· IATA



· **Class** 8 Bahan mengakis.
· **Label** 8

· **Kumpulan pembungkusan**
· **ADR, IMDG, IATA** III

· **Hazard persekitaran:** Produk mengandungi bahan yang berbahaya kepada alam sekitar: 1,5-pentanadial
· **Bahan cemar marin:** Tanda (ikan dan pokok)
· **Pelabelan khas (ADR):** Tanda (ikan dan pokok)

· **Langkah perlindungan khas untuk pengguna** Amaran: Bahan mengakis.
· **Kod bahaya (Kemler):** 88
· **Nombor EMS:** F-A,S-B
· **Segregation groups** Acids
· **Stowage Category** A
· **Stowage Code** SW2 Clear of living quarters.

· **Pengangkutan dalam pukal menurut Lampiran II MARPOL73/78 dan Kod IBC** Tidak berkenaan

· Pengangkutan/Maklumat Tambahan:

· **ADR**
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **IMDG**
· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

· **"Peraturan Model" UN:** UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,5-PENTANADIAL), 8, III, ENVIRONMENTALLY HAZARDOUS

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
----------	-----------------

· **Unsur label GHS** Produk ini dikelaskan dan dilabelkan menurut Sistem Terharmoni Global (GHS).

(Bersambung ke halaman 9)

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

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Nama dagang: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Sambungan halaman 8)

· **Piktogram hazard**



· **Perkataan isyarat Bahaya**

· **Komponen pelabelan yang menentukan bahaya:**

1,5-pentanadial

· **Pernyataan hazard**

Memudaratkan jika tertelan.

Maut jika tertedut.

Menyebabkan lecuran kulit dan kerosakan mata yang teruk.

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

Boleh menyebabkan tindak balas alahan kulit.

Boleh menyebabkan kerengsaan pernafasan.

Sangat toksik kepada hidupan akuatik.

Toksik kepada hidupan akuatik dengan kesan kekal berpanjangan.

· **Pernyataan langkah perlindungan**

JIKA TERKENA KULIT (atau rambut): Segera tanggalkan/buka semua pakaian yang tercemar. Basuh kulit dengan air/pancuran air.

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

Segera hubungi PUSAT RACUN/doktor.

Rawatan khas diperlukan dengan segera (lihat label ini).

Simpan di tempat berkunci.

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

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

16 Maklumat lain

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

· **Singkatan dan akronim:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Toks. Akut 3: Ketoksikan akut – Kategori 3

Toks. Akut 4: Ketoksikan akut – Kategori 4

Toks. Akut 2: Ketoksikan akut – Kategori 2

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

Kros. Mata 1: Kerosakan mata atau kerengsaan mata yang serius – Kategori 1

Pem. Naf. 1: Pemekaan pernafasan – Kategori 1

Pem. Kulit 1: Pemekaan kulit – Kategori 1

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

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

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

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在 2021.08.25 審核

1 化學品與廠商資料

- 產品識別者
- 化學品中文名稱名稱名稱化學品俗名或商品名: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- 商品編號: 16214, 16216, 16216-10
- 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: info@emsdiasum.com
www.emsdiasum.com
- 可獲取更多資料的部門: Product safety department
- 緊急聯繫電話號碼:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 危害辨識資料

· 緊急情況概述:

根據產品規格，流體，可燃液體。吞食有害。吸入致命。造成嚴重皮膚灼傷和眼睛損傷。吸入可能導致過敏或哮喘病症狀或呼吸困難。可能造成皮膚過敏。可能造成呼吸道刺激。對水生生物毒性非常大。對水生生物有毒並具有長期持續影響。

· GHS危險性類別



骷髏和交叉骨

急毒性物質(吸入) 第2級

H330 吸入致命



健康危險

呼吸道過敏物質 第1級

H334 吸入可能導致過敏或哮喘病症狀或呼吸困難



腐蝕

腐蝕/刺激皮膚物質 第1B級

H314 造成嚴重皮膚灼傷和眼睛損傷

嚴重損傷/刺激眼睛物質 第1級

H318 造成嚴重眼睛損傷



環境

水環境之危害物質(急毒性) 第1級

H400 對水生生物毒性非常大

水環境之危害物質(慢毒性) 第2級

H411 對水生生物有毒並具有長期持續影響

(在 2 頁繼續)

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(在 1 頁繼續)



急毒性物質(吞食) 第4級

H302 吞食有害

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

易燃液體 第4級

H227 可燃液體

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。

圖示圖示圖示



GHS05



GHS06



GHS08



GHS09

名稱名稱名稱

標籤上辨別危險的成份:

1,5- 戊二 醛

危險字句

可燃液體

吞食有害

吸入致命

造成嚴重皮膚灼傷和眼睛損傷

吸入可能導致過敏或哮喘病症狀或呼吸困難

可能造成皮膚過敏

可能造成呼吸道刺激

對水生生物毒性非常大

對水生生物有毒並具有長期持續影響

警戒字句

事故響應

如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。

如進入眼睛：用水小心清洗數分鐘。如帶隱形眼鏡且可方便地取出，取出隱形眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

緊急處置方法(參見本標示)。

脫掉沾染的衣服，清洗後方可重新使用

安全貯存

加鎖存放。

廢棄處置

按照地方/區域/國家/國際法規處理內容物之廢棄/容器。

其他有害性

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

PBT(殘留性、生物濃縮性、毒性物質) 不適用的

vPvB(高殘留性、高生物濃縮性物質): 不適用的

TW

(在 3 頁繼續)

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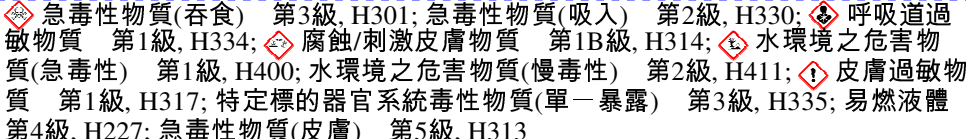
(在 2 頁繼續)

3 成分辨識資料

· 混合物

描述描述描述以下含有無害添加劑的成分組成的混合物

· 危險的成分：

111-30-8	1,5- 戊二 醛 	>10-≤25%
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4 急救措施

· 應急措施要領

· 總說明：

馬上脫下染有該產品的衣服。

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。

只在徹底地脫去了已被汙染的衣服之後才能移走呼吸儀器。

萬一出現了不規則的呼吸或呼吸的阻礙，請為病人提供人工呼吸。

吸入吸入吸入

供給新鮮空氣或氧氣；叫醫生。

萬一病人不清醒時，請讓病人側躺以便移動。

· **皮膚接觸：**馬上用水和肥皂進行徹底的沖洗。

· **眼睛接觸：**張開眼睛在流水下沖洗數分鐘。然後諮詢醫生。

食入食入食入

馬上召喚醫生。

喝大量的清水和提供新鮮的空氣。馬上召喚醫生。

· **給醫生的資料：**

· **最重要的急慢性症狀及其影響** 無相關詳細資料。

· **需要及時的醫療處理及特別處理的症狀** 無相關詳細資料。

5 滅火措施

· 滅火方法

· **滅火的方法和滅火劑：**二氧化碳 (CO₂)、滅火粉末或灑水。使用灑水或抗酒精泡沫滅火劑撲滅較大的火種。

· **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** 帶上保護儀器。讓未受到保護的人們遠離。

· **環境保護措施：**

如果滲入了水源或汙水系統，請通知有關當局。

用大量的水進行稀釋。

切勿讓其進入下水道/水面或地下水。

· **密封及淨化方法和材料：**

吸收液體粘合原料 (沙粒、矽藻土、酸性粘合劑、通用粘合劑、鋸屑)。

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- 使用中和劑。
- 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。
- 小心打開及處理貯藏器。
- 防止氣溶膠的形成。
- **有關火災及防止爆炸的資料**: 提供呼吸保護裝置。
- **混合危險性等安全儲存條件**
- **儲存**
- **儲存庫和容器須要達到的要求**: 沒有特別的要求。
- **有關使用一個普通的儲存設施來儲存的資料**: 不需要。
- **有關儲存條件的更多資料**: 將容器密封。
- **具體的最終用戶** 無相關詳細資料。

8 暴露預防措施

- **工程控制方法**: 沒有進一步數據;見第 7 項。

- **控制變數**

- **在工作場需要監控的限值成分**

111-30-8 戊二醛

PEL (TW)	PC-TWA: 0.82 mg/m ³ , 0.2 ppm
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- **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。
- 分開儲存保護性衣服。
- 避免和眼睛接觸。
- 避免和眼睛及皮膚接觸。

- **呼吸系統防護**:

- 如果會短暫接觸或在低汙染的情況下,請使用呼吸過濾裝置。如果會深入或較長時間接觸,請使用獨立的呼吸保護裝置。

- **手防護**:



保護手套

(在 5 頁繼續)

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(在 4 頁繼續)

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	
外觀外觀外觀	流體
形狀形狀形狀	根據產品規格
顏色顏色顏色	類似水果
氣味氣味氣味	未決定.
· 嗅覺閾限	
· pH值:	未決定.
· 條件的更改	
熔點熔點熔點	未確定的
沸點沸點沸點	100 °C
閃點閃點閃點	71 °C
· 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:	未決定.
· 爆炸極限:	
較低較低較低	未決定.
較高較高較高	未決定.
· 蒸氣壓 在 20 °C:	23 hPa
密度密度密度	1.129 g/cm ³
· 相對密度密度	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
· 辛醇辛醇辛醇	未決定.
· 黏性:	
動態動態動態	未決定.

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(在 5 頁繼續)

運動運動運動學的 未決定.

· 溶劑成份:
有機機溶劑溶 0.3 %
· 水: 74.8 %

· 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

應反應性應相關詳細資料。

穩定穩定穩定

分解分解分解避免的情況: 如果遵照規格使用則不會分解。

有害有害有害應可應性 未有已知的危險反應。

避應避免應條件 無相關詳細資料。

· 不相容的物質: 無相關詳細資料。
· 危險的分解產物: 未知有危險的分解產品。

11 毒性資料

· 對毒性學影響的資訊

· 急性毒性:

· 與分類相關的 LD/LC50 值:

111-30-8 戊二醛

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

要的弱刺激劑影響:

皮膚皮膚皮膚皮膚和粘膜上造成強烈的腐蝕性影響。

· 在眼睛上面:

強烈的腐蝕性影響。
強烈的刺激性和造成嚴重傷害眼睛的危險。

致敏致敏致敏作用

通過吸入可能造成敏化作用。
通過皮膚接觸可能造成敏化作用。

· 更多毒物的資料:

根據有關配制的 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
腐蝕性的
刺激性的
非常毒性的
吞咽該產品除了導致口部和喉嚨出現強烈的腐蝕性現象之外, 還有對食道和胃部造成穿孔的危險。

12 生態資料

· 毒態毒性毒性

· 水生毒性: 無相關詳細資料。

持久持久持久持久性無相關詳細資料。

(在 7 頁繼續)

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(在 6 頁繼續)

- 環境系統習性:
- 潛在的累積累積累積相關詳細資料。
- 土壤土壤動動動性動相關詳細資料。
- 生態毒性的影響:

- 備注:

- 對魚類有劇毒
- 對魚類有毒

- 額外的生態學資料:

括總括注解注

- 水危害級別 3 (德國規例) (通過名單進行自我評估): 對水是極其危害的
即使是少量, 不要讓該產品接觸地下水、水道或污水系統。
不要讓未被稀釋或未被中和的產品接觸下水道或排水溝渠。
即使是極其少量的產品滲入地下也會對飲用水造成危險。
對水體中的魚和浮遊生物也有毒害。
對水中的有機物有劇毒。
對水中的有機物有毒。

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

- PBT(殘留性、生物濃縮性、毒性物質) 不適用的

- vPvB(高殘留性、高生物濃縮性物質): 不適用的

其他其他其他用無相關詳細資料。

13 廢棄處置方法

- 廢棄處置方法

建議建議建議將該產品和家居垃圾一起丟棄。不要讓該產品接觸污水系統。

- 受污染的容器和包裝:

建議建議建議根據官方的規章來丟棄。

建議建議建議洗滌如有必要請使用水及清潔劑進行清潔。

14 運送資料

聯合聯合危險危險編號(UN號)

- ADR, IMDG, IATA UN3265

適當適當適當名稱

- ADR 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,5- 戊二 醛), ENVIRONMENTALLY HAZARDOUS
- IMDG CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT
- IATA CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde)

運輸運輸危險等級

- ADR, IMDG



- 級別

8 腐蝕性物質

(在 8 頁繼續)

安全資料表

據根根據據據性化學品標示及通識規則

打印日期 2021.08.25

在 2021.08.25 審核

化學品中文名稱名稱名稱化學品俗名或商品名： GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(在 8 頁繼續)

二條二條二條二條二條

111-30-8 | 1,5- 戊二 醛

· 新化學物質及既有化學物質資料登錄辦法 英

沒有列出成份

· 國現國現國現國現國現

列出所有成份

· TCSCA**· 列管編號編號編號**

沒有列出成份

· 毒性分類

沒有列出成份

· 管制濃度 (w/w %)

沒有列出成份

· 大量運作基準基公斤)

沒有列出成份

· 新化學物質及既有化學物質資料登錄辦法, 附表六

沒有列出成份

· TCSI - Taiwan Chemical Substance Inventory

列出所有成份

· 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。**圖示圖示圖示**

GHS05 GHS06 GHS08 GHS09

名稱名稱名稱**· 標籤上辨別危險的成份:**

1,5- 戊二 醛

· 危險字句

可燃液體

吞食有害

吸入致命

造成嚴重皮膚灼傷和眼睛損傷

吸入可能導致過敏或哮喘病症狀或呼吸困難

可能造成皮膚過敏

可能造成呼吸道刺激

對水生生物毒性非常大

對水生生物有毒並具有長期持續影響

· 警戒字句**· 事故響應**

如皮膚(或頭髮)沾染：立即移除或脫掉所有沾染的衣物。用水沖洗/淋洗皮膚。

如進入眼睛：用水小心清洗數分鐘。如帶隱形眼鏡且可方便地取出，取出隱形眼鏡。繼續清洗。

立即呼叫解毒中心/醫生

緊急處置方法(參見本標示)。

脫掉沾染的衣服，清洗後方可重新使用

(在 10 頁繼續)

安全資料表

據根據據據性化學品標示及通識規則

打印日期 2021.08.25

在 2021.08.25 審核

化學品中文名稱名稱名稱：GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(在 9 頁繼續)

- **安全貯存**
加鎖存放。
- **廢棄處置**
按照地方/區域/國家/國際法規處理內容物之廢棄/容器。
- **化學物質安全性評價**: 尚未進行化學物質安全性評價

16 其他資料

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

縮寫:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: 持久性生物累積性有毒物質
 vPvB: very Persistent and very Bioaccumulative
 易燃液體 第4級: Flammable liquids – Category 4
 急毒性物質(吞食) 第3級: Acute toxicity – Category 3
 急毒性物質(吞食) 第4級: Acute toxicity – Category 4
 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
 腐蝕/刺激皮膚物質 第1B級: Skin corrosion/irritation – Category 1B
 嚴重損傷/刺激眼睛物質 第1級: Serious eye damage/eye irritation – Category 1
 呼吸道過敏物質 第1級: Respiratory sensitisation – Category 1
 皮膚過敏物質 第1級: Skin sensitisation – Category 1
 特定標的器官系統毒性物質(單一暴露) 第3級: Specific target organ toxicity (single exposure) – Category 3
 水環境之危害物質(急毒性) 第1級: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 水環境之危害物質(慢毒性) 第2級: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

-TW-

Sikkerhetsdatablad

iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 25.08.2021

revidert den: 25.08.2021

Avsnitt 1: Identifikasjon av stoffet/stoffblandingen og av selskapet/foretaket

- **1.1 Produktidentifikator**
- **Handelsnavn:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Artikkelnummer:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Relevante identifiserte bruksområder for stoffet eller stoffblandingen og bruk som frarådes**
Ikke noe mer relevant informasjon tilgjengelig.
- **Bruk av stoffet/ tilberedning** laboratoriekjemikalier
- **1.3 Opplysninger om leverandøren av sikkerhetsdatabladet**
- **Produsent/leverandør:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Avdeling for nærmere informasjon:** Product safety department
- **1.4 Nødtelefonnummer**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

Avsnitt 2: Fareidentifikasjon

- **2.1 Klassifisering av stoffet eller stoffblandingen**
- **Klassifisering i henhold til EC-forskrift nr.1272/2008**



GHS06 Dødningshode med korslagte knokler

Acute Tox. 2 H330 Dødelig ved innånding.



GHS08 Helsefare

Resp. Sens. 1 H334 Kan gi allergi eller astmasymptomer eller pustevansker ved innånding.



GHS05 Etsende virkning

Skin Corr. 1B H314 Gir alvorlige etseskader på hud og øyne.

Eye Dam. 1 H318 Gir alvorlig øyeskade.



GHS09 Miljø

Aquatic Acute 1 H400 Meget giftig for liv i vann.

Aquatic Chronic 2 H411 Giftig, med langtidsvirkning, for liv i vann.



GHS07

Acute Tox. 4 H302 Farlig ved svelging.

(fortsatt på side 2)

Sikkerhetsdatablad

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Handelsnavn: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(fortsatt fra side 1)

Skin Sens. 1 H317 Kan utløse en allergisk hudreaksjon.
 STOT SE 3 H335 Kan forårsake irritasjon av luftveiene.

2.2 Merkingselementer

Merking iht. bestemmelse (EC) Nr. 1272/2008

Produktet er klassifisert og merket i henhold til CLP-forordningen.

Farepiktogrammer



GHS05 GHS06 GHS08 GHS09

Varselord Fare

Farebestemmende komponenter ved etikettering:

glutaraldehyd

Faresetninger

H302 Farlig ved svelging.

H330 Dødelig ved innånding.

H314 Gir alvorlige etseskader på hud og øyne.

H334 Kan gi allergi eller astmasymptomer eller pustevansker ved innånding.

H317 Kan utløse en allergisk hudreaksjon.

H335 Kan forårsake irritasjon av luftveiene.

H400 Meget giftig for liv i vann.

H411 Giftig, med langtidsvirkning, for liv i vann.

Sikkerhetssetninger

P303+P361+P353 VED HUDKONTAKT (eller håret): Tilsølte klær må fjernes straks. Skyll [eller dusj] huden med vann.

P305+P351+P338 VED KONTAKT MED ØYNENE: Skyll forsiktig med vann i flere minutter. Fjern eventuelle kontaktlinser dersom dette enkelt lar seg gjøre. Fortsett skyllingen.

P310 Kontakt umiddelbart et GIFTINFORMASJONSSENTER/en lege.

P320 Særlig behandling kreves umiddelbart (se på etiketten).

P362+P364 Tilsølte klær må fjernes og vaskes før bruk.

P405 Oppbevares innelåst.

P501 Innholdet / emballasjen skal avhendes i henhold til de lokale / regionale / nasjonale / internasjonale forskrifter.

2.3 Andre farer

Resultater av PBT- og vPvB-vurdering

• PBT: Ikke brukbar.

• vPvB: Ikke brukbar.

Avsnitt 3: Sammensetning/opplysninger om bestanddeler

3.2 Kjemisk karakterisering: Stoffblandinger

• Beskrivelse: Blanding av nedenstående oppførte stoffer med ufarlige tilsetninger.

Farlige innholdsstoffer:

CAS: 111-30-8	glutaraldehyd	>10-≤25%
EINECS: 203-856-5		

SVHC

111-30-8	glutaraldehyd
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(fortsatt på side 3)

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(fortsatt fra side 2)

· **Ytterligere informasjoner:** Teksten til de fareangivelsene som er inkludert her, kan konsulteres i kapittel 16.

Avsnitt 4: Førstehjelpstiltak

· **4.1 Beskrivelse av førstehjelpstiltak**

· **Generelle informasjoner:**

Klær som er tilsølt med produktet må fjernes omgående.

Forgiftningssymptomer kan også oppstå etter mange timer. Personer må derfor ha legetilsyn i minst 48 timer etter en ulykke.

Åndedrettsbeskyttelse må først fjernes etter at tilsølte klær er fjernet.

Kunstig åndedrett ved uregelmessig åndedrett eller åndedrettsstillstand.

· **Etter innånding:**

Tilførsel av frisk luft eller surstoff; søk legehjelp.

Ved bevisstløshet lagring og transport i stabil sidestilling.

· **Etter hudkontakt:** Vask straks med vann og sepe og skylld godt etterpå.

· **Etter øyekontakt:** Skylld øynene med åpne øyenlokk i flere minutter under rennende vann og tilkall lege.

· **Etter svelging:**

Søk lege straks.

Drikk rikelig med vann og sørg for frisk luft. Tilkall lege omgående.

· **4.2 De viktigste symptomene og virkningene, både akutte og forsinkede**

Ikke noe mer relevant informasjon tilgjengelig.

· **4.3 Angivelse av om umiddelbar legehjelp og spesialbehandling er nødvendig**

Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 5: Brannsløkkingstiltak

· **5.1 Slokkingsmidler**

· **Egnede slukningsmidler:**

CO₂, slukningspulver eller vann i spredt stråle. Større branner bekjempes med vann i spredt stråle eller med skum som er motstandsdyktig mot alkohol.

· **5.2 Særlige farer knyttet til stoffet eller stoffblandingen** Ikke noe mer relevant informasjon tilgjengelig.

· **5.3 Råd til brannmannskaper**

· **Spesielt verneutstyr:** Ta på egnet åndedrettsbeskyttelse.

Avsnitt 6: Tiltak ved utilsiktede utslipp

· **6.1 Personlige forsiktighetsregler, personlig verneutstyr og nødrutiner**

Ta på beskyttelsesdrakt. Hold ubeskyttede personer borte.

· **6.2 Forsiktighetsregler med hensyn til miljø**

Ansvarlige myndigheter varsles hvis produktet er kommet ned i vassdrag eller kloakk.

Fortynn med rikelig med vann.

La ikke produktet komme ned i kloakk/overflatevann/grunnvann.

· **6.3 Metoder og materialer for oppsamling og rensing**

Ta opp stoffet med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, sagflis).

Bruk nøytraliseringsmiddel.

Bortskaff kontaminert materiale som avfall i.h.t. punkt 13.

Sørg for tilstrekkelig ventilasjon.

· **6.4 Henvisning til andre avsnitt**

Informasjoner om sikker håndtering, se kapittel 7.

Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.

(fortsatt på side 4)

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(fortsatt fra side 3)

Informasjoner om bortskaffelse/deponering, se kapittel 13.

Avsnitt 7: Håndtering og lagring

- **7.1 Forsiktighetsregler for sikker håndtering**
Sørg for god ventilasjon/avsugning på arbeidsplassen.
Beholderne må åpnes og håndteres forsiktig.
Unngå aerosoldannelse.
- **Henvisninger om brann- og eksplosjonsvern:** Hold åndedrettsbeskyttelse i beredskap.
- **7.2 Vilkår for sikker lagring, herunder eventuelle uforenligheter**
- **Lagring:**
- **Krav til lagerrom og beholdere:** Ingen spesielle krav.
- **Informasjoner om felles lagring:** Ikke nødvendig.
- **Ytterligere informasjon om lagervilkårene:** Hold beholderne tett tillukket.
- **7.3 Særlig(e) sluttanvendelse(r)** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 8: Eksponeringskontroll / personlig verneutstyr

- **Ytterligere informasjon om utforming av tekniske anlegg:** Ingen ytterligere informasjon, se punkt 7.
- **8.1 Kontrollparametere**

· **Komponenter med grenseverdier for arbeidsplass som må overholdes:**

111-30-8 glutaraldehyd

AG	Takverdi: 0,8 *0,25 mg/m ³ , 0,2 ppm
A	*alkalisk aktivert

- **Ytterligere informasjon:** Basis: listene som var gyldige ved oppstillingen.
- **8.2 Eksponeringskontroll**
- **Personlig verneutstyr:**
- **Generelle verne- og hygienetiltak:**
Holdes adskilt fra næringsmidler, drikkevarer og fôrstoffer.
Fjern omgående forurensede, gjennomvåtede klær.
Vask hendene før arbeidspausen og ved arbeidets slutt.
Beskyttelsesklær må oppbevares adskilt.
Unngå berøring med øynene.
Unngå berøring med øyne og hud.
- **Åndedrettsvern:**
Ved korttidlig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.
- **Håndvern:**



Beskyttelseshansker

Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen. På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet /tilberedningsprosessen/kjemikalieblanding.

Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.

- **hanskemateriale**
Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskjennetegn og er forskjellig fra produsent til produsent. Da produktet representerer en sammensetning av flere stoffer, kan holdbarheten av hanskematerialet ikke forhåndsregnes, og denne må testes før bruk.

(fortsatt på side 5)

Sikkerhetsdatablad

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(fortsatt fra side 4)

- **gjennomtrengingstid for hanskemateriale**
Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.
- **Øyevern:**



Tettsittende vernebrille

Avsnitt 9: Fysiske og kjemiske egenskaper

· 9.1 Opplysninger om grunnleggende fysiske og kjemiske egenskaper

· alminnelige opplysninger

· Utseende:

- **Form:** Flytende
- **Farge:** i.h.t. produktbetegnelse
- **Lukt:** Fruktlignende
- **Luktterskel:** Ikke bestemt.

· **pH-verdi:** Ikke bestemt.

· Tilstandsendring

- **Smeltepunkt/frysepunkt:** Ikke bestemt.
- **Startkokepunkt og kokeområde:** 100 °C

· **Flammepunkt:** 71 °C

· **Antennelighet (fast stoff, gass):** Ikke brukbar.

· **Nedbrytingstemperatur:** Ikke bestemt.

· **Selvantennelsestemperatur:** Produktet er ikke selvantennelig.

· **Eksplorative egenskaper:** Ikke bestemt.

· Eksplosjonsgrenser:

- **Nedre:** Ikke bestemt.
- **Øvre:** Ikke bestemt.

· **Damptrykk ved 20 °C:** 23 hPa

· **Tetthet ved 20 °C:** 1,129 g/cm³

· **Relativ tetthet:** Ikke bestemt.

· **Damptetthet:** Ikke bestemt.

· **Fordampingshastighet:** Ikke bestemt.

· Løslighet i / blandbarhet med

· **vann:** Fullstendig blandbar.

· **Fordelingskoeffisient; n-oktanol/vann:** Ikke bestemt.

· Viskositet:

- **Dynamisk:** Ikke bestemt.
- **Kinematisk:** Ikke bestemt.

· Løsningsmiddelandel:

- **Organiske løsningsmidler:** 0,3 %
- **Vann:** 74,8 %
- **VOC (EF)** 0,25 %

(fortsatt på side 6)

Sikkerhetsdatablad

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(fortsatt fra side 5)

- **Andel faste stoffer:** 0,0 %
- **9.2 Andre opplysninger** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Ikke noe mer relevant informasjon tilgjengelig.
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Risiko for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som skal unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Uforenlige materialer** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytingsprodukter** Ingen farlige spaltningsprodukter kjente.

Avsnitt 11: Toksikologiske opplysninger

- **11.1 Opplysninger om toksikologiske virkninger**
- **Akutt giftighet**
Farlig ved svelging.
Dødelig ved innånding.

- **Klassifiseringsrelevante LD/LC50-verdier:**

111-30-8 glutaraldehyd

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

- **Primær irritasjonsvirkning:**
- **Hudetsing/hudirritasjon**
Gir alvorlige etseskader på hud og øyne.
- **Alvorlig øyeskade/øyeirritasjon**
Gir alvorlig øyeskade.
- **Sensibilisering ved innånding eller hudkontakt**
Kan gi allergi eller astmasymptomer eller pustevansker ved innånding.
Kan utløse en allergisk hudreaksjon.
- **Informasjon om følgende grupper med potensielle virkninger:**
- **CMR-virkninger (kreftfremkallende virkninger, arvestoffskadelige og reproduksjonsskadelige virkninger)**
- **Arvestoffskadelig virkning på kjønnseller** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Kreftfremkallende egenskap** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Reproduksjonstoksitet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – enkelteksponering**
Kan forårsake irritasjon av luftveiene.
- **STOT – gjentatt eksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Aspirasjonsfare** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

Avsnitt 12: Økologiske opplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumuleringsevne** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.

(fortsatt på side 7)

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(fortsatt fra side 6)

- **Økotoksiske virkninger:**
- **Bemerkning:**
meget giftig for fisk
giftig for fisk
- **Ytterligere økologiske informasjon:**
- **Generelle informasjon:**
Vannfareklasse 3 (D) (Selvklassifisering): meget farlig for vann
Ikke la stoffet komme ned i grunnvannet, i vassdrag eller i kloakker, heller ikke i små mengder.
Må ikke komme uforynnet eller unøytralisert ned i spillvann eller i avløpsgrøft.
Fare for drikkevann allerede ved utstrømning av meget små mengder i marken.
I vassdrag også giftig for fisker og plankton.
meget giftig for vannorganismer
giftig for vannorganismer
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadevirkninger** Ikke noe mer relevant informasjon tilgjengelig.

Avsnitt 13: Sluttbehandling

- **13.1 Avfallsbehandlingsmetoder**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsavfall. Må ikke komme ned i kloakk.
- **Ikke rengjort emballasje:**
- **Anbefaling:** Deponering i henhold til myndighetenes forskrifter.
- **Anbefalt rengjøringsmiddel:** Vann, eventuelt med tilsetning av rengjøringsmidler.

Avsnitt 14: Transportopplysninger

- **14.1 FN-nummer**
- **ADR, IMDG, IATA** UN3265
- **14.2 FN-forsendelsesnavn**
- **ADR** 3265 ETSENDE VÆSKE, SUR, ORGANISK, N.O.S.
(glutaraldehyd), MILJØSKADELG STOFF
- **IMDG** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT
- **IATA** CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde)
- **14.3 Transportfareklasse(r)**
- **ADR, IMDG**
- 
- **klasse** 8 Etsende stoffer

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· Fareseddel	8
· IATA	
	
· Class	8 Etsende stoffer
· Label	8
· 14.4 Emballasjegruppe	
· ADR, IMDG, IATA	III
· 14.5 Miljøfarer	Produktet inneholder miljøskadelige stoffer: glutaraldehyd
· Marine pollutant:	Symbol (fisk og treet)
· Spesielle merking (ADR):	Symbol (fisk og treet)
· 14.6 Særlige forsiktighetsregler ved bruk	Advarsel: Etsende stoffer
· Farenummer (Kemler-tall):	88
· EMS-nummer:	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Bulkransport i henhold til vedlegg II til MARPOL 73/78 og IBC-regelverket	Ikke brukbar.
· Transport/ytterligere informasjoner:	
· ADR	
· Begrenset mengde (LQ)	5L
· Unntatte mengder (EQ)	Kode: E1 Maksimal nettovekt per inneremballasje: 30 ml Maksimal nettovekt per ytteremballasje: 1000 ml
· Transportkategori	3
· Tunnel restriksjonskode	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 ETSENDE VÆSKE, SUR, ORGANISK, N.O.S. (GLUTARALDEHYD), 8, III, MILJØSKADELG STOFF

Avsnitt 15: Opplysninger om regelverk

- **15.1 Særlige bestemmelser / særskilt lovgivning om sikkerhet, helse og miljø for stoffet eller stoffblandingen**
- **Direktiv 2012/18/EU**
- **Spesifiserte farlige stoffer - VEDLEGG I** ingen av innholdsstoffene er listet opp
- **Seveso kategori**
H2
E1
- **Mengdegrense (i tonn) for anvendelsen av krav til virksomheter på lavere nivå** 50 t
- **Mengdegrense (i tonn) for anvendelsen av krav til virksomheter på høyere nivå** 200 t

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-NO

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· **Forordning (EF) nr. 1907/2006 VEDLEGG XVII Begrensninger: 3**

· **Direktiv 2011/65/EF om begrensning av bruken av visse farlige stoffer i elektrisk og elektronisk utstyr - Vedlegg II**

ingen av innholdsstoffene er listet opp

· **Nasjonale forskrifter:**

· **Andre forskrifter, restriksjoner og forbudsforordninger**

· **Stoffer som gir stor grunn til bekymring iflg. REACH, artikkel 57**

111-30-8 | glutaraldehyd

· **15.2 Vurdering av kjemikaliesikkerhet** En kjemisk sikkerhetsvurdering er ikke utført.

Avsnitt 16: Andre opplysninger

Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produktegenskaper og er ikke grunnlag for noe kontraktmessig rettsforhold.

· **Relevante satser**

H301 Giftig ved svelging.

H314 Gir alvorlige etseskader på hud og øyne.

H317 Kan utløse en allergisk hudreaksjon.

H330 Dødelig ved innånding.

H334 Kan gi allergi eller astmasymptomer eller pustevansker ved innånding.

H335 Kan forårsake irritasjon av luftveiene.

H400 Meget giftig for liv i vann.

H411 Giftig, med langtidsvirkning, for liv i vann.

· **Forkortelser og akronymer:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

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: Akutt giftighet – Kategori 3

Acute Tox. 4: Akutt giftighet – Kategori 4

Acute Tox. 2: Akutt giftighet – Kategori 2

Skin Corr. 1B: Hudetsing/hudirritasjon – Kategori 1B

Eye Dam. 1: Alvorlig øyeskade/øyeirritasjon – Kategori 1

Resp. Sens. 1: Åndedrettssensibilisering – Kategori 1

Skin Sens. 1: Hudsensibilisering – Kategori 1

Skin Sens. 1A: Hudsensibilisering – Kategori 1A

STOT SE 3: Giftvirkning på bestemte organer (enkelteksponering) – Kategori 3

Aquatic Acute 1: Farlig for vannmiljøet - akutt fare for vannmiljøet – Kategori 1

Aquatic Chronic 2: Farlig for vannmiljøet - langsiktig fare for vannmiljøet – Kategori 2

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SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Código do produto:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Utilizações identificadas relevantes da substância ou mistura e utilizações desaconselhadas**
Não existe mais nenhuma informação relevante disponível.
- **Utilização da substância / da preparação** Químicos de laboratório
- **1.3 Identificação do fornecedor da ficha de dados de segurança**
- **Fabricante/fornecedor:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Entidade para obtenção de informações adicionais:** Product safety department
- **1.4 Número de telefone de emergência:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

SECÇÃO 2: Identificação dos perigos

- **2.1 Classificação da substância ou mistura**
- **Classificação em conformidade com o Regulamento (CE) n.º 1272/2008**



GHS06 caveira sobre tóbias cruzadas

Acute Tox. 2

H330 Mortal por inalação.



GHS08 perigo para a saúde

Resp. Sens. 1

H334 Quando inalado, pode provocar sintomas de alergia ou de asma ou dificuldades respiratórias.



GHS05 corrosão

Skin Corr. 1B

H314 Provoca queimaduras na pele e lesões oculares graves.

Eye Dam. 1

H318 Provoca lesões oculares graves.



GHS09 ambiente

Aquatic Acute 1 H400 Muito tóxico para os organismos aquáticos.

Aquatic Chronic 2 H411 Tóxico para os organismos aquáticos com efeitos duradouros.



GHS07

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Acute Tox. 4 H302 Nocivo por ingestão.
 Skin Sens. 1 H317 Pode provocar uma reacção alérgica cutânea.
 STOT SE 3 H335 Pode provocar irritação das vias respiratórias.

2.2 Elementos do rótulo

Rotulagem em conformidade com o Regulamento (CE) n.º 1272/2008

O produto classificou-se e está etiquetado em conformidade com o regulamento CLP.

Pictogramas de perigo



GHS05 GHS06 GHS08 GHS09

Palavra-sinal Perigo

Componentes determinantes para os perigos constantes do rótulo:

glutaral

Advertências de perigo

H302 Nocivo por ingestão.

H330 Mortal por inalação.

H314 Provoca queimaduras na pele e lesões oculares graves.

H334 Quando inalado, pode provocar sintomas de alergia ou de asma ou dificuldades respiratórias.

H317 Pode provocar uma reacção alérgica cutânea.

H335 Pode provocar irritação das vias respiratórias.

H400 Muito tóxico para os organismos aquáticos.

H411 Tóxico para os organismos aquáticos com efeitos duradouros.

Recomendações de prudência

P303+P361+P353 SE ENTRAR EM CONTACTO COM A PELE (ou o cabelo): Retirar imediatamente toda a roupa contaminada. Enxaguar a pele com água [ou tomar um duche].

P305+P351+P338 SE ENTRAR EM CONTACTO COM OS OLHOS: Enxaguar cuidadosamente com água durante vários minutos. Se usar lentes de contacto, retire-as, se tal lhe for possível. Continue a enxaguar.

P310 Contacte imediatamente um CENTRO DE INFORMAÇÃO ANTIVENENOS/médico.

P320 É urgente um tratamento específico (ver no presente rótulo).

P362+P364 Retirar a roupa contaminada e lavá-la antes de a voltar a usar.

P405 Armazenar em local fechado à chave.

P501 Eliminar o conteúdo/recipiente de acordo com a legislação local/regional/nacional/internacional.

2.3 Outros perigos

Resultados da avaliação PBT e mPmB

• **PBT:** Não aplicável.

• **mPmB:** Não aplicável.

SECÇÃO 3: Composição/informação sobre os componentes

3.2 Caracterização química: Misturas

• **Descrição:** Mistura das seguintes substâncias com aditivos não perigosos.

Substâncias perigosas:

CAS: 111-30-8	glutaral	>10-≤25%
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	

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· **SVHC**

111-30-8 | glutaral

· **Avisos adicionais:** O texto das indicações de perigo aqui incluído poderá ser consultado no capítulo 16.

SECÇÃO 4: Medidas de primeiros socorros

· **4.1 Descrição das medidas de primeiros socorros**

· **Indicações gerais:**

O vestuário contaminado com substâncias perigosas deve ser imediatamente removido.

Os sintomas de envenenamento podem surgir apenas após várias horas, por isso é necessária vigilância médica pelo menos 48 horas após o acidente.

Tirar a protecção respiratória apenas depois de ter sido despido o vestuário contaminado.

Em caso de respiração irregular ou paragem da respiração, executar respiração artificial.

· **Em caso de inalação:**

Ar fresco ou entrada de oxigénio; solicitar auxílio médico.

Se a vítima estiver inconsciente, posicioná-la e transportá-la com estabilidade, deitada lateralmente.

· **Em caso de contacto com a pele:** Lavar imediatamente com água e sabão e enxaguar abundantemente.

· **Em caso de contacto com os olhos:**

Enxaguar os olhos durante alguns minutos sob água corrente, mantendo as pálpebras abertas, e consultar o médico.

· **Em caso de ingestão:**

Consultar imediatamente o médico

Beber bastante água e respirar ar fresco. Consultar imediatamente um médico.

· **4.2 Sintomas e efeitos mais importantes, tanto agudos como retardados**

Não existe mais nenhuma informação relevante disponível.

· **4.3 Indicações sobre cuidados médicos urgentes e tratamentos especiais necessários**

Não existe mais nenhuma informação relevante disponível.

SECÇÃO 5: Medidas de combate a incêndios

· **5.1 Meios de extinção**

· **Meios adequados de extinção:**

CO₂, pó extintor ou jacto de água. Um incêndio de grandes dimensões deve ser combatido com jacto de água ou espuma resistente ao álcool.

· **5.2 Perigos especiais decorrentes da substância ou mistura**

Não existe mais nenhuma informação relevante disponível.

· **5.3 Recomendações para o pessoal de combate a incêndios**

· **Equipamento especial de protecção:** Colocar máscara de respiração.

SECÇÃO 6: Medidas a tomar em caso de fugas accidentais

· **6.1 Precauções individuais, equipamento de protecção e procedimentos de emergência**

Usar equipamento de protecção. Manter as pessoas desprotegidas afastadas.

· **6.2 Precauções a nível ambiental:**

Em caso de infiltrações nos leitos de água ou na canalização, comunicar aos serviços públicos competentes.

Diluir em bastante água.

Evitar que penetre na canalização / águas superficiais / águas subterrâneas.

· **6.3 Métodos e materiais de confinamento e limpeza:**

Recolher com produtos que absorvam líquidos (areia, seixos, absorventes universais, serradura).

Aplicar um agente de neutralização.

Eliminar residualmente as substâncias contaminadas como um resíduo segundo o Ponto 13.

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Assegurar uma ventilação adequada.

· **6.4 Remissão para outras secções**

Para informações sobre uma manipulação segura, ver o capítulo 7.

Para informações referentes ao equipamento de protecção individual, ver o capítulo 8.

Para informações referentes à eliminação residual, ver o capítulo 13.

SECÇÃO 7: Manuseamento e armazenagem

· **7.1 Precauções para um manuseamento seguro**

Assegurar uma boa ventilação / exaustão no local de trabalho.

Abrir e manusear o recipiente com cuidado

Evitar a formação de aerossóis.

· **Precauções para prevenir incêndios e explosões:** Manter uma máscara de respiração sempre preparada.

· **7.2 Condições de armazenagem segura, incluindo eventuais incompatibilidades**

· **Armazenagem:**

· **Requisitos para espaços ou contentores para armazenagem:** Sem requisitos especiais.

· **Avisos para armazenagem conjunta:** Não necessário.

· **Outros avisos sobre as condições de armazenagem:** Manter o recipiente hermeticamente fechado.

· **7.3 Utilização(ões) final(is) específica(s)** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 8: Controlo da exposição/Protecção individual

· **Indicações adicionais para concepção de instalações técnicas:** Não existem outras informações, ver ponto 7.

· **8.1 Parâmetros de controlo**

· **Componentes cujo valor do limite de exposição no local de trabalho deve ser monitorizado:**

111-30-8 glutaral

VLE	Valor limite de exposição – concentração máxima: 0,05 ppm (S); A4; Irrit.ocular, do TRS, cutânea; SCN
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· **Indicações adicionais:** Foram utilizadas como base as listas válidas à data da elaboração.

· **8.2 Controlo da exposição**

· **Equipamento de protecção individual:**

· **Medidas gerais de protecção e higiene:**

Manter afastado de alimentos, bebidas e forragens.

Despir imediatamente a roupa contaminada e embebida.

Lavar as mãos antes das pausas e no fim do trabalho.

Guardar o vestuário de protecção separadamente.

Evitar o contacto com os olhos.

Evitar o contacto com os olhos e com a pele.

· **Protecção respiratória:**

Utilizar uma máscara respiratória se a exposição for reduzida ou durante um curto espaço de tempo; se esta for mais prolongada ou mais intensa, utilizar uma máscara respiratória independente do ar ambiente.

· **Protecção das mãos:**



Luvas de protecção

O material das luvas tem de ser impermeável e resistente ao produto / à substância / preparação.

Uma vez que não foram realizados testes nesta área, não podemos recomendar um determinado tipo de material para as luvas que seja adequado para o produto / a preparação / a mistura de químicos.

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Escolher o material das luvas tendo em consideração a durabilidade, a permeabilidade e a degradação.

· **Material das luvas**

A escolha das luvas mais adequadas não depende apenas do material, mas também de outras características qualitativas e varia de fabricante para fabricante. O facto de o produto ser composto por uma variedade de materiais leva a que não seja possível prever a duração dos mesmos e, conseqüentemente, das luvas, sendo assim necessário proceder a uma verificação antes da sua utilização.

· **Tempo de penetração no material das luvas**

Deve informar-se sobre a validade exacta das suas luvas junto do fabricante e respeitá-la.

· **Protecção dos olhos:**



Óculos de protecção totalmente fechados

SECÇÃO 9: Propriedades físico-químicas

· **9.1 Informações sobre propriedades físicas e químicas de base**

· **Informações gerais**

· **Aspetto:**

· **Forma:**

Líquido

· **Cor:**

Conforme a designação do produto

· **Odor:**

frutado

· **Limiar olfactivo:**

Não determinado.

· **valor pH:**

Não determinado.

· **Mudança do estado:**

· **Ponto de fusão/ponto de congelação:**

Não determinado.

· **Ponto de ebulição inicial e intervalo de ebulição:** 100 °C

· **Ponto de inflamação:**

71 °C

· **Inflamabilidade (sólido, gás):**

Não aplicável.

· **Temperatura de decomposição:**

Não determinado.

· **Temperatura de autoignição:**

O produto não é auto-inflamável.

· **Propriedades explosivas:**

Não determinado.

· **Limites de explosão:**

· **Inferior:**

Não determinado.

· **Superior:**

Não determinado.

· **Pressão de vapor em 20 °C:**

23 hPa

· **Densidade em 20 °C:**

1,129 g/cm³

· **Densidade relativa**

Não determinado.

· **Densidade de vapor**

Não determinado.

· **Taxa de evaporação:**

Não determinado.

· **Solubilidade em / miscibilidade com**

· **água:**

Completamente misturável.

· **Coefficiente de partição: n-octanol/água**

Não determinado.

· **Viscosidade:**

· **Dinâmico:**

Não determinado.

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· Cinemático:	Não determinado.
· Percentagem de solvente:	
· Solventes orgânicos:	0,3 %
· Água:	74,8 %
· VOC (UE)	0,25 %
· Percentagem de substâncias sólidas:	0,0 %
· 9.2 Outras informações	Não existe mais nenhuma informação relevante disponível.

SECÇÃO 10: Estabilidade e reactividade

- **10.1 Reactividade** Não existe mais nenhuma informação relevante disponível.
- **10.2 Estabilidade química**
- **Decomposição térmica / condições a evitar:** Não existe decomposição se usado de acordo com as especificações.
- **10.3 Possibilidade de reações perigosas** Não se conhecem reacções perigosas.
- **10.4 Condições a evitar** Não existe mais nenhuma informação relevante disponível.
- **10.5 Materiais incompatíveis:** Não existe mais nenhuma informação relevante disponível.
- **10.6 Produtos de decomposição perigosos:** Não se conhecem produtos de decomposição perigosos.

SECÇÃO 11: Informação toxicológica

· 11.1 Informações sobre os efeitos toxicológicos

- **Toxicidade aguda**
Nocivo por ingestão.
Mortal por inalação.

· Valores LD/LC50 relevantes para a classificação:

111-30-8 glutaral

por via oral	LD50	134 mg/kg (rat)
por via dérmica	LD50	2.560 mg/kg (rabbit)

- **Efeito de irritabilidade primário:**
- **Corrosão/irritação cutânea**
Provoca queimaduras na pele e lesões oculares graves.
- **Lesões oculares graves/irritação ocular**
Provoca lesões oculares graves.
- **Sensibilização respiratória ou cutânea**
Quando inalado, pode provocar sintomas de alergia ou de asma ou dificuldades respiratórias.
Pode provocar uma reacção alérgica cutânea.
- **Efeitos CMR (carcinogenicidade, mutagenicidade e efeitos tóxicos na reprodução)**
- **Mutagenicidade em células germinativas**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Carcinogenicidade** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade reprodutiva** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição única**
Pode provocar irritação das vias respiratórias.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição repetida**
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Perigo de aspiração** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

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SECÇÃO 12: Informação ecológica

- **12.1 Toxicidade**
- **Toxicidade aquática:** Não existe mais nenhuma informação relevante disponível.
- **12.2 Persistência e degradabilidade** Não existe mais nenhuma informação relevante disponível.
- **12.3 Potencial de bioacumulação** Não existe mais nenhuma informação relevante disponível.
- **12.4 Mobilidade no solo** Não existe mais nenhuma informação relevante disponível.
- **Efeitos ecotóxicos:**
- **Observação:**
Muito tóxico para os peixes.
Tóxico para os peixes.
- **Outras indicações ecológicas:**
- **Indicações gerais:**
Classe de perigo para a água 3 (D) (auto-classificação): muito perigoso para a água
Não deixar chegar às águas subterrâneas, aos cursos de água nem à canalização, nem em pequenas quantidades.
Substâncias concentradas, ou seja não neutralizadas, não podem chegar aos esgotos nem às águas.
Perigo de poluição da água potável mesmo se forem derramadas quantidades muito pequenas no subsolo.
Tóxico nas águas para os peixes e para o plâncton.
muito tóxico para os organismos aquáticos
tóxico para os organismos aquáticos
- **12.5 Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.
- **12.6 Outros efeitos adversos** Não existe mais nenhuma informação relevante disponível.

SECÇÃO 13: Considerações relativas à eliminação

- **13.1 Métodos de tratamento de resíduos**
- **Recomendação:** Não se pode eliminar juntamente com o lixo doméstico. Não permita que chegue à canalização.
- **Embalagens contaminadas:**
- **Recomendação:** Eliminação residual conforme o regulamento dos serviços públicos.
- **Meio de limpeza recomendado:** Água, eventualmente com adição de produtos de limpeza

SECÇÃO 14: Informações relativas ao transporte

- | | |
|---|--|
| · 14.1 Número ONU | |
| · ADR, IMDG, IATA | UN3265 |
| · 14.2 Designação oficial de transporte da ONU | |
| · ADR | 3265 LÍQUIDO ORGÂNICO CORROSIVO, ÁCIDO, N.S.A.
(glutaral), PERIGOSO PARA O AMBIENTE |
| · IMDG | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde), MARINE POLLUTANT |
| · IATA | CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyde) |

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· **14.3 Classes de perigo para efeitos de transporte**

· **ADR, IMDG**



· **Classe** 8 *Matérias corrosivas*
· **Rótulo** 8

· **IATA**



· **Class** 8 *Matérias corrosivas*
· **Label** 8

· **14.4 Grupo de embalagem**

· **ADR, IMDG, IATA** III

· **14.5 Perigos para o ambiente:**

O produto contém matérias perigosas para o ambiente: glutaral
· **Poluente das águas:** *Símbolo convencional (peixes e árvore)*
· **Marcação especial (ADR):** *Símbolo convencional (peixes e árvore)*

· **14.6 Precauções especiais para o utilizador**

Atenção: Matérias corrosivas
· **Número de identificação de perigo (N° Kemler):** 88
· **N° EMS:** F-A,S-B
· **Segregation groups** Acids
· **Stowage Category** A
· **Stowage Code** SW2 *Clear of living quarters.*

· **14.7 Transporte a granel em conformidade com o anexo II da Convenção MARPOL e o Código IBC Não aplicável.**

· **Transporte/outras informações:**

· **ADR**

· **Quantidades Limitadas (LQ)** 5L
· **Quantidades exceptuadas (EQ)** Código: E1
Quantidade líquida máxima por embalagem interior: 30 ml
Quantidade líquida máxima por embalagem exterior: 1000 ml
· **Categoria de transporte** 3
· **Código de restrição em túneis** E

· **IMDG**

· **Limited quantities (LQ)** 5L
· **Excepted quantities (EQ)** Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

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· **UN "Model Regulation":** UN 3265 LÍQUIDO ORGÂNICO CORROSIVO, ÁCIDO, N.S.A. (GLUTARAL), 8, III, PERIGOSO PARA O AMBIENTE

SECÇÃO 15: Informação sobre regulamentação

· **15.1 Regulamentação/legislação específica para a substância ou mistura em matéria de saúde, segurança e ambiente**

- **Diretiva 2012/18/UE**
- **Substâncias perigosas designadas - ANEXO I Nenhum dos componentes se encontra listado.**
- **Categoria "Seveso"**
H2 TOXICIDADE AGUDA
E1 Perigoso para o ambiente aquático
- **Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível inferior 50 t**
- **Quantidades-limiar (em toneladas), para a aplicação de requisitos de nível superior 200 t**
- **Regulamento (CE) n.º 1907/2006 ANEXO XVII Condições de limitação: 3**

· **Directiva 2011/65/UE relativa à restrição do uso de determinadas substâncias perigosas em equipamentos eléctricos e electrónicos - Anexo II**

Nenhum dos componentes se encontra listado.

· **Disposições nacionais:**

· **outros regulamentos, restrições e decretos que proibem**

· **Substâncias que suscitam elevada preocupação (SVHC) em conformidade com REACH, artigo 57**

111-30-8 | glutaral

· **15.2 Avaliação da segurança química:** Não foi realizada nenhuma Avaliação de Segurança Química.

SECÇÃO 16: Outras informações

As informações fornecidas baseiam-se no estado actual dos nossos conhecimentos, embora não representem uma garantia das propriedades do produto e não fundamentam uma relação contratual.

· **Frases relevantes**

H301 Tóxico por ingestão.

H314 Provoca queimaduras na pele e lesões oculares graves.

H317 Pode provocar uma reacção alérgica cutânea.

H330 Mortal por inalação.

H334 Quando inalado, pode provocar sintomas de alergia ou de asma ou dificuldades respiratórias.

H335 Pode provocar irritação das vias respiratórias.

H400 Muito tóxico para os organismos aquáticos.

H411 Tóxico para os organismos aquáticos com efeitos duradouros.

· **Abreviaturas e acrónimos:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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*PBT: Persistent, Bioaccumulative and Toxic**SVHC: Substances of Very High Concern**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Toxicidade aguda - via oral – Categoria 3**Acute Tox. 4: Toxicidade aguda - via oral – Categoria 4**Acute Tox. 2: Toxicidade aguda - via inalatória – Categoria 2**Skin Corr. 1B: Corrosão/irritação cutânea – Categoria 1B**Eye Dam. 1: Lesões oculares graves/irritação ocular – Categoria 1**Resp. Sens. 1: Sensibilização respiratória – Categoria 1**Skin Sens. 1: Sensibilização cutânea – Categoria 1**Skin Sens. 1A: Sensibilização cutânea – Categoria 1A**STOT SE 3: Toxicidade para órgãos-alvo específicos (exposição única) – Categoria 3**Aquatic Acute 1: Perigoso para o ambiente aquático - perigo agudo para o ambiente aquático – Categoria 1**Aquatic Chronic 2: Perigoso para o ambiente aquático - perigo de longo prazo para o ambiente aquático – Categoria 2*

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

· 1.1 Identificador del producto

· **Nombre comercial:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

· **Número del artículo:** 16214, 16216, 16216-10

· **UFI:** MWY0-D07Y-900Q-YXDM

· 1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados

No existen más datos relevantes disponibles.

· **Utilización del producto / de la elaboración** Sustancias químicas de laboratorio

· 1.3 Datos del proveedor de la ficha de datos de seguridad

· **Fabricante/distribuidor:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: info@emsdiasum.com

www.emsdiasum.com

Aname

C/ Perez Galdos no. 2

28693 Quijorna

Madrid, Spain

Tel: +34.91.816.89.50

Fax: +34.91.816.85.94

email: ventas@aname.es

· **Área de información:** Product safety department

· 1.4 Teléfono de emergencia:

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

SECCIÓN 2: Identificación de los peligros

· 2.1 Clasificación de la sustancia o de la mezcla

· **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS06 calavera y tibias cruzadas

Acute Tox. 2

H330 Mortal en caso de inhalación.



GHS08 peligro para la salud

Resp. Sens. 1

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.



GHS05 corrosión

Skin Corr. 1B

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

Eye Dam. 1

H318 Provoca lesiones oculares graves.

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GHS09 medio ambiente

Aquatic Acute 1 H400 Muy tóxico para los organismos acuáticos.

Aquatic Chronic 2 H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.



GHS07

Acute Tox. 4 H302 Nocivo en caso de ingestión.

Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.

STOT SE 3 H335 Puede irritar las vías respiratorias.

· 2.2 Elementos de la etiqueta

· Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

· Pictogramas de peligro



GHS05



GHS06



GHS08



GHS09

· Palabra de advertencia Peligro

· Componentes peligrosos a indicar en el etiquetaje:

glutaral

· Indicaciones de peligro

H302 Nocivo en caso de ingestión.

H330 Mortal en caso de inhalación.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H317 Puede provocar una reacción alérgica en la piel.

H335 Puede irritar las vías respiratorias.

H400 Muy tóxico para los organismos acuáticos.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· Consejos de prudencia

P303+P361+P353 EN CASO DE CONTACTO CON LA PIEL (o el pelo): Quitar inmediatamente toda la ropa contaminada. Enjuagar la piel con agua [o ducharse].

P305+P351+P338 EN CASO DE CONTACTO CON LOS OJOS: Enjuagar con agua cuidadosamente durante varios minutos. Quitar las lentes de contacto cuando estén presentes y pueda hacerse con facilidad. Proseguir con el lavado.

P310 Llamar inmediatamente a un CENTRO DE TOXICOLOGÍA/médico.

P320 Se necesita urgentemente un tratamiento específico (ver en esta etiqueta).

P362+P364 Quitar las prendas contaminadas y lavarlas antes de volver a usarlas.

P405 Guardar bajo llave.

P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.

· 2.3 Otros peligros

· Resultados de la valoración PBT y mPmB

· **PBT:** No aplicable.

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· **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	>10-≤25%
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
----------	----------

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

SECCIÓN 4: Primeros auxilios

· 4.1 Descripción de los primeros auxilios

· Instrucciones generales:

Quitarse de inmediato toda prenda contaminada con el producto.

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.

Antes de quitarse la protección respiratoria, quítese la ropa contaminada.

En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

· En caso de inhalación del producto:

Suministrar aire fresco u oxígeno; solicitar ayuda médica.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

· En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.

· En caso de con los ojos:

Limpiar los ojos abiertos durante varios minutos con agua corriente y consultar un médico.

· En caso de ingestión:

Consultar inmediatamente un médico.

Beber mucha agua a respirar aire fresco. Solicitar asistencia médica inmediatamente.

· 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:

CO₂, polvo extintor o chorro de agua rociada. Combatir incendios mayores con chorro de agua rociada o espuma resistente al alcohol.

· 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.

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SECCIÓN 6: Medidas en caso de vertido accidental

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia**
Llevar puesto equipo de protección. Mantener alejadas las personas sin protección.
- **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).
Utilizar un neutralizador.
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.
Abrir y manejar el recipiente con cuidado.
Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:** Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**
Sin datos adicionales, ver punto 7.

· 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

111-30-8 glutaral

LEP	Valor de corta duración: 0,2 mg/m ³ , 0,05 ppm
Sen	

- **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

· 8.2 Controles de la exposición

- **Equipo de protección individual:**

· **Medidas generales de protección e higiene:**

Mantener alejado de alimentos, bebidas y alimentos para animales.
Quitarse de inmediato la ropa ensuciada o impregnada.
Lavarse las manos antes de las pausas y al final del trabajo.

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Guardar la ropa protectora por separado.

Evitar el contacto con los ojos.

Evitar el contacto con los ojos y la piel.

· **Protección respiratoria:**

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

· **Protección de manos:**



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

· **Material de los guantes**

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

· **Tiempo de penetración del material de los guantes**

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

· **Protección de ojos:**



Gafas de protección herméticas

SECCIÓN 9: Propiedades físicas y químicas

· **9.1 Información sobre propiedades físicas y químicas básicas**

· **Datos generales**

· **Aspecto:**

· **Forma:**

Líquido

· **Color:**

Según denominación del producto

· **Olor:**

Similar al de las frutas

· **Umbral olfativo:**

No determinado.

· **valor pH:**

No determinado.

· **Cambio de estado**

· **Punto de fusión/punto de congelación:**

Indeterminado.

· **Punto inicial de ebullición e intervalo de ebullición:** 100 °C

· **Punto de inflamación:**

71 °C

· **Inflamabilidad (sólido, gas):**

No aplicable.

· **Temperatura de descomposición:**

No determinado.

· **Temperatura de auto-inflamación:**

El producto no es autoinflamable.

· **Propiedades explosivas:**

No determinado.

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· Límites de explosión:	
· Inferior:	No determinado.
· Superior:	No determinado.
· Presión de vapor a 20 °C:	23 hPa
· Densidad a 20 °C:	1,129 g/cm ³
· 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:	
· Disolventes orgánicos:	0,3 %
· Agua:	74,8 %
· VOC (CE)	0,25 %
· 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.
- **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 ingestión.
Mortal 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 quemaduras graves en la piel y lesiones oculares graves.
- **Lesiones o irritación ocular graves**
Provoca lesiones oculares graves.

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- **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:**
Muy tóxico para peces.
Tóxico para peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**
Nivel de riesgo para el agua 3 (autoclasificación): muy peligroso para el agua
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados, ni siquiera en pequeñas cantidades.
En estado no diluido o no neutralizado, no verter en el alcantarillado o en otros sistemas de desagüe.
Una cantidad ínfima vertida en el subsuelo ya representa un peligro para el agua potable.
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.
muy tóxico para organismos acuáticos
tóxico para organismos acuáticos
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

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.

ES

(se continua en página 8)

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(se continua en página 7)

SECCIÓN 14: Información relativa al transporte

· 14.1 Número ONU
· ADR, IMDG, IATA

UN3265

· 14.2 Designación oficial de transporte de las Naciones Unidas

· ADR

3265 LÍQUIDO CORROSIVO, ÁCIDO, ORGÁNICO, N.E.P. (glutaral), PELIGROSO PARA EL MEDIO AMBIENTE

· IMDG

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT

· IATA

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

· 14.3 Clase(s) de peligro para el transporte

· ADR, IMDG



· Clase

8 Materias corrosivas

· Etiqueta

8

· IATA



· Class

8 Materias corrosivas

· Label

8

· 14.4 Grupo de embalaje

· ADR, IMDG, IATA

III

· 14.5 Peligros para el medio ambiente:

El producto contiene materias peligrosas para el medio ambiente: glutaral

· Contaminante marino:

Símbolo (pez y árbol)

· Marcado especial (ADR):

Símbolo (pez y árbol)

· 14.6 Precauciones particulares para los usuarios

Atención: Materias corrosivas

· Número de identificación de peligro (Número Kemler):

88

· Número EMS:

F-A,S-B

· Segregation groups

Acids

· Stowage Category

A

· Stowage Code

SW2 Clear of living quarters.

· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC

No aplicable.

· Transporte/datos adicionales:

· ADR

· Cantidades limitadas (LQ)

5L

· Cantidades exceptuadas (EQ)

Código: E1

Cantidad neta máxima por envase interior: 30 ml

Cantidad neta máxima por embalaje exterior: 1000 ml

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· Categoría de transporte	3
· Código de restricción del túnel	E
<hr/>	
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· "Reglamentación Modelo" de la UNECE:	UN 3265 LÍQUIDO CORROSIVO, ÁCIDO, ORGÁNICO, N.E.P. (GLUTARAL), 8, III, PELIGROSO PARA EL MEDIO AMBIENTE

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
- **Categoría Seveso**
H2 TOXICIDAD AGUDA
E1 Peligroso para el medio ambiente acuático
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel inferior** 50 t
- **Cantidad umbral (toneladas) a efectos de aplicación de los requisitos de nivel superior** 200 t
- **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

- **Disposiciones nacionales:**
- **Demás disposiciones, limitaciones y decretos prohibitivos**

- **Sustancias altamente preocupantes (SVHC) según REACH, artículo 57**

111-30-8 | glutaral

- **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)

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*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: Toxicidad aguda - oral – Categoría 3**Acute Tox. 4: Toxicidad aguda - oral – Categoría 4**Acute Tox. 2: Toxicidad aguda - por inhalación – Categoría 2**Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B**Eye Dam. 1: Lesiones oculares graves o irritación ocular – Categoría 1**Resp. Sens. 1: Sensibilización respiratoria – Categoría 1**Skin Sens. 1: Sensibilización cutánea – Categoría 1**Skin Sens. 1A: Sensibilización cutánea – Categoría 1A**STOT SE 3: Toxicidad específica en determinados órganos (exposición única) – Categoría 3**Aquatic Acute 1: Peligroso para el medio ambiente acuático - peligro acuático agudo – Categoría 1**Aquatic Chronic 2: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 2*

ES

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

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AVSNITT 1: Namnet på ämnet/blandningen och bolaget/företaget

- **1.1 Produktbeteckning**
- **Handelsnamn:** GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL
- **Artikelnummer:** 16214, 16216, 16216-10
- **UFI:** MWY0-D07Y-900Q-YXDM
- **1.2 Relevanta identifierade användningar av ämnet eller blandningen och användningar som det avråds från**
Ingen ytterligare relevant information finns till förfogande.
- **Ämnets användning / tillredningen** Laboratoriekemikalier
- **1.3 Närmare upplysningar om den som tillhandahåller säkerhetsdatablad**
- **Tillverkare/leverantör:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- **Område där upplysningar kan inhämtas:** Product safety department
- **1.4 Telefonnummer för nödsituationer:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

AVSNITT 2: Farliga egenskaper

- **2.1 Klassificering av ämnet eller blandningen**
- **Klassificering enligt förordning (EG) nr 1272/2008**



GHS06 döds-kalle med korsande benknor

Acute Tox. 2 H330 Dödligt vid inandning.



GHS08 hälsofara

Resp. Sens. 1 H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.



GHS05 frätande

Skin Corr. 1B H314 Orsakar allvarliga frätskador på hud och ögon.

Eye Dam. 1 H318 Orsakar allvarliga ögonskador.



GHS09 miljöfarligt

Aquatic Acute 1 H400 Mycket giftigt för vattenlevande organismer.

Aquatic Chronic 2 H411 Giftigt för vattenlevande organismer med långtidseffekter.



GHS07

Acute Tox. 4 H302 Skadligt vid förtäring.

(Fortsättning på sida 2)

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(Fortsättning från sida 1)

Skin Sens. 1 H317 Kan orsaka allergisk hudreaktion.
STOT SE 3 H335 Kan orsaka irritation i luftvägarna.

· **2.2 Märkningsuppgifter**

- **Märkning enligt förordning (EG) nr 1272/2008** Produkten är klassificerad och märkt enligt CLP-förordningen.
- **Faropiktogram**



GHS05 GHS06 GHS08 GHS09

· **Signalord Fara**

· **Riskbestämmande komponenter för etikettering:**

Glutaraldehyd

· **Faroangivelser**

H302 Skadligt vid förtäring.

H330 Dödligt vid inandning.

H314 Orsakar allvarliga frätskador på hud och ögon.

H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.

H317 Kan orsaka allergisk hudreaktion.

H335 Kan orsaka irritation i luftvägarna.

H400 Mycket giftigt för vattenlevande organismer.

H411 Giftigt för vattenlevande organismer med långtidseffekter.

· **Skyddsangivelser**

P303+P361+P353 VID HUDKONTAKT (även håret): Ta omedelbart av alla nedstänkta kläder. Skölj huden med vatten [eller duscha].

P305+P351+P338 VID KONTAKT MED ÖGONEN: Skölj försiktigt med vatten i flera minuter. Ta ur eventuella kontaktlinser om det går lätt. Fortsätt att skölja.

P310 Kontakta genast GIFTINFORMATIONSCENTRALEN/läkare.

P320 Särskild behandling krävs omedelbart (se på etiketten).

P362+P364 Ta av nedstänkta kläder och tvätta dem innan de används igen.

P405 Förvaras inlåst.

P501 Innehållet / behållaren avfallshanteras enligt lokala / regionala / nationella / internationella föreskrifter.

· **2.3 Andra faror**

· **Resultat av PBT- och vPvB-bedömningen**

· **PBT:** Ej användbar.

· **vPvB:** Ej användbar.

AVSNITT 3: Sammansättning/information om beståndsdelar

· **3.2 Kemisk karakterisering: Blandningar**

· **Beskrivning:** Blandning bestående av nedan upplistade ämnen med ofarliga tillsatser.

· **Farliga ingredienser:**

CAS: 111-30-8	Glutaraldehyd	>10-≤25%
EINECS: 203-856-5		

· **SVHC**

111-30-8	Glutaraldehyd
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(Fortsättning på sida 3)

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(Fortsättning från sida 2)

· **Ytterligare hänvisningar:** De angivna farohänvisningarnas ordalydelse framgår av kapitel 16.

AVSNITT 4: Åtgärder vid första hjälpen

· **4.1 Beskrivning av åtgärder vid första hjälpen**

· **Allmänna hänvisningar:**

Klädesplagg som förorenats med produkten skall omedelbart avlägsnas.

Förgiftningssymptom kan uppträda först efter många timmar. Av denna anledning krävs läkarövervakning i minst 48 timmar efter ett olycksfall.

Ta inte bort andningsskyddet förrän förorenade klädesplagg har avlägsnats.

Vid oregelbunden andning eller andningsstillestånd - ge konstgjord andning.

· **Vid inandning:**

Friskluft- eller syretillförsel; tillkalla läkarhjälp.

Vid medvetslöshet lägg och transportera patient stabilt i framstupa sidoläge.

· **Vid kontakt med huden:** Tvätta omedelbart med vatten och tvål och spola därefter noggrant.

· **Vid kontakt med ögonen:** Spola ögonen öppna i flera minuter under rinnande vatten och kontakta läkare.

· **Vid förtäring:**

Kontakta läkare omedelbart.

Drick rikligt med vatten. Tillför frisk luft. Kontakta läkare omedelbart.

· **4.2 De viktigaste symptomen och effekterna, både akuta och fördröjda**

Ingen ytterligare relevant information finns till förfogande.

· **4.3 Angivande av omedelbar medicinsk behandling och särskild behandling som eventuellt krävs**

Ingen ytterligare relevant information finns till förfogande.

AVSNITT 5: Brandbekämpningsåtgärder

· **5.1 Släckmedel**

· **Lämpliga släckningsmedel:**

CO₂, släckningspulver eller spridd vattenstråle. Större bränder skall bekämpas med spridd vattenstråle eller alkoholbeständigt skum.

· **5.2 Särskilda faror som ämnet eller blandningen kan medföra**

Ingen ytterligare relevant information finns till förfogande.

· **5.3 Råd till brandbekämpningspersonal**

· **Speciell skyddsutrustning:** Använd andningsskyddsutrustning.

AVSNITT 6: Åtgärder vid oavsiktliga utsläpp

· **6.1 Personliga skyddsåtgärder, skyddsutrustning och åtgärder vid nödsituationer**

Använd skyddsutrustning. Håll oskyddade personer på avstånd.

· **6.2 Miljöskyddsåtgärder:**

När produkten kommit in i vattendrag eller avloppsnät, skall vederbörande myndigheter underrättas.

Blanda ut med mycket vatten.

Förhindra produkten att tränga ner i avloppsnät/ytvatten/grundvatten.

· **6.3 Metoder och material för inneslutning och sanering:**

Sug upp med vätskebindande material (sand, kiselgur, syrabindemedel, universalbindemedel, sågspån).

Använd neutraliseringsmedel.

Omhändertag förorenat material som avfall enligt punkt 13.

Se till att ventilationen är tillräcklig.

· **6.4 Hänvisning till andra avsnitt**

Information beträffande säker hantering se kapitel 7.

Information beträffande personlig skyddsutrustning se kapitel 8.

(Fortsättning på sida 4)

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Information beträffande avfallshantering se kapitel 13.

(Fortsättning från sida 3)

AVSNITT 7: Hantering och lagring

- **7.1 Försiktighetsmått för säker hantering**
Sörj för god ventilation/utsug på arbetsplatsen.
Öppna behållaren försiktigt och hantera den varsamt.
Undvik bildning av aerosol.
- **Hänvisningar beträffande brand- och explosionsskydd:** Håll andningsskyddsutrustning i beredskap.
- **7.2 Förhållanden för säker lagring, inklusive eventuell oförenlighet**
- **Lagring:**
- **Krav på lagerutrymmen och behållare:** Inga speciella krav.
- **Hänvisningar beträffande sammanlagring:** Erfordras ej.
- **Ytterligare uppgifter till lagringsvillkoren:** Förvara behållaren tätt tillsluten.
- **7.3 Specifik slutanvändning** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 8: Begränsning av exponeringen/personligt skydd

- **Ytterligare hänvisningar beträffande utformning av tekniska anläggningar:** Inga övriga uppgifter, se punkt 7.

· **8.1 Kontrollparametrar**

- **Ämnen med yrkeshygieniska gränsvärden som bör övervakas:**

111-30-8 Glutaraldehyd

OEL	Korttidsvärde: 0,4 mg/m ³ , 0,1 ppm
S	

- **Ytterligare hänvisningar:** De vid framställningen gällande listorna har använts som utgångspunkt.
- **8.2 Begränsning av exponeringen**
- **Personlig skyddsutrustning:**
- **Allmänna skydds- och hygienåtgärder:**
Undvik kontakt med livsmedel, drycker och fodermedel.
Nedsmutsade, indränkta klädesplagg skall omedelbart tas av.
Tvätta händerna före raster och efter arbetet.
Skyddsdräkter förvaras separat.
Undvik kontakt med ögonen.
Undvik kontakt med ögonen och huden.
- **Andningsskydd:**
Vid kortvarig eller ringa belastning - använd andningsfilterutrustning; vid intensiv resp. längre exponering - använd andningsskyddsutrustning som är oberoende av omgivningsluften.
- **Handskydd:**



Skyddshandskar

Handskmaterialet måste vara tätt och beständigt mot produkt/ämne/tillredning.
Handskmaterialrekommendationer kan inte ges för produkt/tillredning/kemikalielösning, då inga tester genomförts.
Val av handskmaterial beaktande penetrationstider, permeationskvoter och degradation.

· **Handskmaterial**

Val av lämplig handske är inte enbart beroende av material utan även av andra kvalitetskriterier och varierar från en tillverkare till nästa. Då produkten bereds av flera material, kan handskmaterialets beständighet inte förutses och måste därför kontrolleras före användningen.

(Fortsättning på sida 5)

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(Fortsättning från sida 4)

- **Handskmaterialets penetreringstid**
Exakt penetreringstid fastställs av skyddshandskarnas tillverkare och skall beaktas.
- **Ögonskydd:**



Tättslutande skyddsglasögon

AVSNITT 9: Fysikaliska och kemiska egenskaper

· 9.1 Information om grundläggande fysikaliska och kemiska egenskaper

· Allmänna uppgifter

· Utseende:

- **Form:** Flytande
- **Färg:** Enligt produktbeteckning
- **Lukt:** Fruktaktig
- **Luktröskel:** Ej bestämd.

· **pH-värde:** Ej bestämd.

· Tillståndsändring

- **Smältpunkt/frys punkt:** Ej bestämd.
- **Initial kokpunkt och kokpunktsintervall:** 100 °C

· **Flampunkt:** 71 °C

· **Brandfarlighet (fast form, gas):** Ej användbar.

· **Sönderfallstemperatur:** Ej bestämd.

· **Självantändningstemperatur:** Produkten är ej självantändande.

· **Explosiva egenskaper:** Ej bestämd.

· Explosionsgränser:

- **Nedre:** Ej bestämd.
- **Övre:** Ej bestämd.

· **Ångtryck vid 20 °C:** 23 hPa

· **Densitet vid 20 °C:** 1,129 g/cm³

· **Relativ densitet** Ej bestämd.

· **Ångdensitet** Ej bestämd.

· **Avdunstningshastighet:** Ej bestämd.

· Löslighet i / blandbarhet med

· **Vatten:** Fullständigt blandbar.

· **Fördelningskoefficient: n-oktanol/vatten:** Ej bestämd.

· Viskositet:

- **Dynamisk:** Ej bestämd.
- **Kinematisk:** Ej bestämd.

· Lösningsmedelhalt:

- **Organiska lösningsmedel:** 0,3 %
- **Vatten:** 74,8 %
- **VOC (EG)** 0,25 %

(Fortsättning på sida 6)

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(Fortsättning från sida 5)

- | | |
|--|---|
| <ul style="list-style-type: none"> · Andel av fasta partiklar: · 9.2 Annan information | <p>0,0 %</p> <p>Ingen ytterligare relevant information finns till förfogande.</p> |
|--|---|

AVSNITT 10: Stabilitet och reaktivitet

- **10.1 Reaktivitet** Ingen ytterligare relevant information finns till förfogande.
- **10.2 Kemisk stabilitet**
- **Termisk sönderdelning / förhållanden som bör undvikas:** Inget sönderfall vid ändamålsenlig användning.
- **10.3 Risken för farliga reaktioner** Inga farliga reaktioner kända.
- **10.4 Förhållanden som ska undvikas** Ingen ytterligare relevant information finns till förfogande.
- **10.5 Oförenliga material:** Ingen ytterligare relevant information finns till förfogande.
- **10.6 Farliga sönderdelningsprodukter:** Inga farliga sönderfallsprodukter kända.

AVSNITT 11: Toxikologisk information

- **11.1 Information om de toxikologiska effekterna**
- **Akut toxicitet**
Skadligt vid förtäring.
Dödligt vid inandning.

- **Klassificeringsrelevanta LD/LC50-värden:**

111-30-8 Glutaraldehyd

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

- **Primär retningseffekt:**
- **Frätande/irriterande på huden**
Orsakar allvarliga frätskador på hud och ögon.
- **Allvarlig ögonskada/ögonirritation**
Orsakar allvarliga ögonskador.
- **Luftvägs-/hudsensibilisering**
Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.
Kan orsaka allergisk hudreaktion.
- **CMR-effekter (cancerframkallande, mutagena och reproduktionstoxiska egenskaper)**
- **Mutagenitet i könsceller**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Cancerogenitet** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Reproduktionstoxicitet**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Specifik organtoxicitet – enstaka exponering**
Kan orsaka irritation i luftvägarna.
- **Specifik organtoxicitet – upprepad exponering**
Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.
- **Fara vid aspiration** Kriterierna för klassificering kan på grundval av tillgängliga data inte anses vara uppfyllda.

AVSNITT 12: Ekologisk information

- **12.1 Toxicitet**
- **Akvatisk toxicitet:** Ingen ytterligare relevant information finns till förfogande.
- **12.2 Persistens och nedbrytbarhet** Ingen ytterligare relevant information finns till förfogande.
- **12.3 Bioackumuleringsförmåga** Ingen ytterligare relevant information finns till förfogande.

(Fortsättning på sida 7)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.08.2021

Omarbetad: 25.08.2021

Handelsnamn: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL



(Fortsättning från sida 6)

- **12.4 Rörlighet i jord** Ingen ytterligare relevant information finns till förfogande.
- **Ekotoxiska effekter:**
- **Kommentar:**
Mycket giftig för fisk.
Giftig för fisk.
- **Ytterligare ekologiska hänvisningar:**
- **Allmänna hänvisningar:**
Vattenföroreningsklass 3 (Självtvärdering): stor risk för vattenförorening.
Låt ej tränga ner i grundvatten, vattendrag eller avloppsnätet, inte ens i små mängder.
Får ej hamna i avloppsvatten eller uppsamlingsdike i outspätt resp. oneutraliserat tillstånd.
Risk för förorening av dricksvattnet redan när mycket små mängder tränger ner i marken.
I vattendrag även giftig för fisk och plankton.
Mycket giftig för vattenorganismer
Giftig för vattenorganismer
- **12.5 Resultat av PBT- och vPvB-bedömningen**
- **PBT:** Ej användbar.
- **vPvB:** Ej användbar.
- **12.6 Andra skadliga effekter** Ingen ytterligare relevant information finns till förfogande.

AVSNITT 13: Avfallshantering

- **13.1 Avfallsbehandlingsmetoder**
- **Rekommendation:** Får inte deponeras ihop med hushållsavfall. Får inte tömmas i avloppsnätet.
- **Ej rengjorda förpackningar:**
- **Rekommendation:** Avfallshanteras enligt myndigheters föreskrifter.
- **Rekommenderat rengöringsmedel:** Vatten, eventuellt med tillsats av rengöringsmedel.

AVSNITT 14: Transportinformation

- | | |
|--|---|
| <ul style="list-style-type: none"> · 14.1 UN-nummer · ADR, IMDG, IATA | UN3265 |
| <ul style="list-style-type: none"> · 14.2 Officiell transportbenämning · ADR · IMDG · IATA | 3265 FRÄTANDE SUR ORGANISK VÄTSKA, N.O.S.
(Glutaraldehyd), MILJÖFARLIGT
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyd), MARINE POLLUTANT
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
(Glutaraldehyd) |
| <ul style="list-style-type: none"> · 14.3 Faroklass för transport · ADR, IMDG | <div style="display: flex; align-items: center; justify-content: center;">   </div> |
| <ul style="list-style-type: none"> · Klass | 8 Frätande ämnen |

(Fortsättning på sida 8)


Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.08.2021

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Handelsnamn: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Fortsättning från sida 7)

· Etikett	8
· IATA	
	
· Class	8 Frätande ämnen
· Label	8
· 14.4 Förpackningsgrupp · ADR, IMDG, IATA	III
· 14.5 Miljöfaror: · Marine pollutant: · Särskild märkning (ADR):	Produkten innehåller miljöfarliga ämnen: Glutaraldehyd Symbol (fisk och träd) Symbol (fisk och träd)
· 14.6 Särskilda skyddsåtgärder · Farlighetsnummer (Kemler-tal): · EMS-nummer: · Segregation groups · Stowage Category · Stowage Code	Varning: Frätande ämnen 88 F-A,S-B Acids A SW2 Clear of living quarters.
· 14.7 Bulktransport enligt bilaga II till Marpol 73/78 och IBC-koden	Ej användbar.
· Transport / ytterligare uppgifter:	
· ADR · Begränsade mängder (LQ) · Reducerade mängder (EQ)	5L Kod: E1 Högsta nettomängd per innerförpackning: 30 ml Högsta nettomängd per ytterförpackning: 1000 ml
· Transportkategori · Tunnelrestriktionskod	3 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 3265 FRÄTANDE SUR ORGANISK VÄTSKA, N.O.S. (GLUTARALDEHYD), 8, III, MILJÖFARLIGT

AVSNITT 15: Gällande föreskrifter

- **15.1 Föreskrifter/lagstiftning om ämnet eller blandningen när det gäller säkerhet, hälsa och miljö**
- **Direktiv 2012/18/EU**
- **Namngivna farliga ämnen - BILAGA I** Inga beståndsdelar är listade.
- **Seveso-kategorier**
H2 AKUT TOXICITET
E1 Farligt för vattenmiljön
- **Tröskelvärden (i ton) för tillämpning av krav för lägre nivå 50 t**
- **Tröskelvärden (i ton) för tillämpning av krav för övre nivå 200 t**

(Fortsättning på sida 9)

Säkerhetsdatablad
enligt förordning (EG) nr. 1907/2006, Artikel 31

Datum för utskrift: 25.08.2021

Omarbetad: 25.08.2021

Handelsnamn: GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(Fortsättning från sida 8)

· **Förordning (EG) nr 1907/2006 BILAGA XVII Villkor: 3**

· **Direktiv 2011/65/EU om begränsning av användning av vissa farliga ämnen i elektrisk och elektronisk utrustning - Bilaga II**

Inga beståndsdelar är listade.

· **Nationella föreskrifter:**

· **Övriga föreskrifter, begränsningar och förbudsbestämmelser**

· **Ämnen som inger mycket stora betänkligheter (SVHC) enligt REACH, artikel 57**

111-30-8 | Glutaraldehyd

· **15.2 Kemikaliesäkerhetsbedömning: En kemikaliesäkerhetsbedömning har ej gjorts.**

AVSNITT 16: Annan information

Uppgifterna är baserade på våra aktuella kunskaper. De representerar emellertid ingen som helst garanti beträffande produkttegenskaper och utgör ingen grund för ett avtalat rättsförhållande.

· **Relevanta fraser**

H301 Giftigt vid förtäring.

H314 Orsakar allvarliga frätskador på hud och ögon.

H317 Kan orsaka allergisk hudreaktion.

H330 Dödligt vid inandning.

H334 Kan orsaka allergi- eller astmasymtom eller andningssvårigheter vid inandning.

H335 Kan orsaka irritation i luftvägarna.

H400 Mycket giftigt för vattenlevande organismer.

H411 Giftigt för vattenlevande organismer med långtidseffekter.

· **Förkortningar och akronymer:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Akut toxicitet - oral – Kategori 3

Acute Tox. 4: Akut toxicitet - oral – Kategori 4

Acute Tox. 2: Akut toxicitet - inhalation – Kategori 2

Skin Corr. 1B: Frätande eller irriterande på huden – Kategori 1B

Eye Dam. 1: Allvarlig ögonskada eller ögonirritation – Kategori 1

Resp. Sens. 1: Luftvägssensibilisering – Kategori 1

Skin Sens. 1: Hudsensibilisering – Kategori 1

Skin Sens. 1A: Hudsensibilisering – Kategori 1A

STOT SE 3: Specifik organtoxicitet (enstaka exponering) – Kategori 3

Aquatic Acute 1: Farligt för vattenmiljön - akut fara – Kategori 1

Aquatic Chronic 2: Farligt för vattenmiljön - fara för skadliga långtidseffekter – Kategori 2

แผ่นข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2021.08.25

การปรับปรุงใหม่ : 2021.08.25

1 การปฐษึสารเดี่ยวหรือสารผสม และผู้ผลิต

- 1.1 ลักษณะเฉพาะของผลิตภัณฑ์
- ชื่อทางการค้า **GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL**
- เลขที่รายชื่อ 16214, 16216, 16216-10
- 1.2 สารหรือสารผสมที่เกี่ยวข้องที่ระบุให้ใช้และที่ไม่ควรรให้ใช้ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- การประยุกต์ใช้สาร/ การทำ เคมีภัณฑ์ห้องทดลอง
- 1.3 รายละเอียดของผู้จัดหาข้อมูลด้านความปลอดภัย
- ผู้ผลิต/ ผู้จัดหา
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- ข้อมูลรายละเอียดเพิ่มเติมหาได้จาก Product safety department
- 1.4 หมายเลขโทรศัพท์ฉุกเฉิน:
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

2 การปฐษึความเป็นอันตราย

- 2.1 การจำแนกประเภทของสารหรือสารผสม
- การแบ่งประเภทตามข้อบังคับซีไอซีที 1272/2008



หัวกระโหลกและกระดูกไขว้

Acute Tox. 2 H330 เป็นอันตรายถึงชีวิตหากสูดหายใจเข้า



สิ่งอันตรายต่อสุขภาพ

Resp. Sens. 1 H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า



การกัดกร่อน

Skin Corr. 1 H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา

Eye Dam. 1 H318 เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส



สิ่งแวดล้อม

Aquatic Acute 1 H400 มีพิษมากต่อสิ่งมีชีวิตในน้ำ

Aquatic Chronic 2 H411 มีพิษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบระยะยาว



Acute Tox. 4 H302 เป็นอันตรายหากกลืนเข้าไป

Skin Sens. 1 H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้

(ต่อที่หน้า 2)

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แผ่นข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2021.08.25

การปรับปรุงใหม่ : 2021.08.25

ชื่อทางการค้า GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(ต่อหน้า 1)

STOT SE 3 H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ

- 2.2 องค์ประกอบของฉลาก
- ฉลากตามระเบียบ (EC) เลขที่ 1272/2008 ผลิตภัณฑ์ได้รับการจัดประเภทและติดฉลากตามข้อบังคับของ CLP
- ภาพสัญลักษณ์สิ่งที่เป็นอันตราย



GHS05 GHS06 GHS08 GHS09

- สัญญาณคำ อันตราย
- ส่วนประกอบที่ระบุอันตรายบนฉลาก
กลูตารัลดีไฮด์
- ประกาศสิ่งที่เป็นอันตราย
H302 เป็นอันตรายหากกลืนเข้าไป
H330 เป็นอันตรายถึงชีวิตหากสูดหายใจเข้า
H314 เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา
H334 อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า
H317 อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้
H335 อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ
H400 มีพิษมากต่อสิ่งมีชีวิตในน้ำ
H411 มีพิษต่อสิ่งมีชีวิตในน้ำพร้อมผลกระทบระยะยาว
- ประกาศการป้องกันระดับระวังภัย
P303+P361+P353 หากสัมผัสผิวหนัง (หรือเส้นผม) ถอดเสื้อผ้าที่เปื้อนทั้งหมดทันที ล้างผิวหนังด้วยน้ำ/อาบน้ำ
P305+P351+P338 หากเข้าตา : ชะล้างตาอย่างระมัดระวังเป็นเวลาหลายๆนาทีถอดคอนแทกซ์เลนส์ถ้ายังอยู่ที่เดิมและสะดวกที่จะทำก็ให้ชะล้างต่อไป
P310 โทรศัพท์ถึงศูนย์พิษวิทยา/แพทย์ ทันที
P320 การบำบัดรักษาเฉพาะอย่างเร่งด่วน (ดูฉลาก)
P362+P364 ถอดเสื้อผ้าที่เปื้อนและซักก่อนที่จะนำกลับมาใช้ใหม่
P405 เก็บในที่ใส่กุญแจปิด
P501 ทิ้งสิ่งที่ย่อย/ภาชนะที่ย่อยตามกฎหมายของท้องถิ่น/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	>10-≤25%
EINECS: 203-856-5	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	

- ข้อมูลรายละเอียดเสริม สำหรับข้อความที่ระบุในรายการวลีความเสี่ยงที่อ้างอิงถึงในส่วนที่ 16

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(ต่อหน้า 3)

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2021.08.25

การปรับปรุงใหม่ : 2021.08.25

ชื่อทางการค้า GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(ต่อหน้า 2)

4 มาตรการปฐมพยาบาล

- 4.1 คำอธิบายถึงมาตรการปฐมพยาบาล
- **ข้อมูลรายละเอียดทั่วไป**
ให้ถอดเสื้อผ้าที่เปื้อนหรือเปื้อนผลิตภัณฑ์ออกทันที
อาการจากพิษอาจเกิดขึ้นหลังจากนั้นหลายชั่วโมงดังนั้นจะต้องเฝ้าติดตามอาการทางการแพทย์อย่างน้อย 48 ชั่วโมงหลังจากอุบัติเหตุ
ให้ถอดอุปกรณ์ช่วยหายใจออกหลังจากที่ถอดเสื้อผ้าที่เปื้อนออกเรียบร้อยแล้วเท่านั้น
ในกรณีที่หายใจผิดปกติหรือการหายใจหยุดชะงักให้ใช้อุปกรณ์ช่วยหายใจ
- **หลังจากการสูดหายใจเข้าไป**
หาบริเวณที่มีอากาศบริสุทธิ์หรือให้ออกซิเจนติดต่อแพทย์
ในกรณีที่คนไข้ไม่รู้สึกตัวให้ขนย้ายคนไข้อย่างมั่นคงในท่าตะแคงด้านข้าง
- **หลังจากการสัมผัสผิวหนัง** ล้างด้วยน้ำและสบู่แล้วฟอกให้ทั่วทันที
- **หลังจากการสัมผัสลูกตา** ชะตาที่เปิดอยู่ใต้น้ำที่กำลังไหลเป็นเวลาหลายนาที่จากนั้นให้ปรึกษาแพทย์
- **หลังจากการกลืนเข้าไป:**
พบแพทย์โดยทันที
ดื่มน้ำมากๆ และให้สูดอากาศบริสุทธิ์พบแพทย์โดยทันที
- 4.2 **อาการสำคัญส่วนใหญ่และผลกระทบ ทั้งชนิดเฉียบพลันและค่อยๆ แสดงอาการ**
ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 4.3 **ข้อบ่งชี้ของอาการที่ต้องเข้ารับการรักษาจากแพทย์ทันทีและการบำบัดพิเศษที่จำเป็น**
ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

5 มาตรการพดุงเพลิง

- 5.1 **สารที่ใช้ดับเพลิง**
- **สารดับเพลิงที่เหมาะสม**
คาร์บอนไดออกไซด์สเปรย์ผงหรือน้ำดับเพลิงขนาดใหญ่ด้วยการฉีดน้ำหรือโฟมแอลกอฮอล์ที่ทนทาน
- 5.2 **อันตรายเฉพาะอย่างที่เกิดจากสารหรือส่วนผสม** ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 5.3 **คำแนะนำสำหรับพนักงานดับเพลิง**
- **อุปกรณ์ป้องกันภัย** อุปกรณ์ป้องกันซึ่งเหมาะสำหรับการหายใจทางปาก

6 มาตรการจัดการเมื่อมีการหกรั่วไหลของสาร

- 6.1 **การป้องกันส่วนบุคคล อุปกรณ์ป้องกัน และขั้นตอนดำเนินการเมื่อเกิดกรณีฉุกเฉิน**
สวมอุปกรณ์ป้องกันภัยกันคนที่ไม่ใช้อุปกรณ์ป้องกันออกไป
- 6.2 **การให้ความคุ้มครองสิ่งแวดล้อมส่วนหน้า:**
แจ้งผู้มีอำนาจที่เกี่ยวข้องในกรณีที่เกิดการไหลซึมเข้าลำน้ำหรือระบบระบายน้ำ
ทำให้เจือจางด้วยน้ำมากๆ
อย่าปล่อยให้เข้าไปในท่อน้ำทิ้ง/ น้ำบนดินหรือใต้ดิน
- 6.3 **วิธีดำเนินการและวัสดุสำหรับการบรรจุและการทำความสะอาด:**
ดูดซับด้วยวัสดุที่สามารถยึดของเหลวไว้ (ทรายไดอะโตไมท์ตัวยึดเกาะกรดตัวยึดทั่วๆ ไปซีลีย)
- ใช้สารทำให้เป็นกลาง
ทิ้งวัสดุที่ปนเปื้อนเป็นของเสียตามรายการในบัญชี 13
ตรวจให้แน่ใจว่ามีการระบายอากาศที่ดีพอ
- 6.4 **การอ้างอิงถึงส่วนอื่น**
ดูข้อมูลรายละเอียดเรื่องความปลอดภัยในการขนถ่ายจากส่วนที่ 7
ดูข้อมูลรายละเอียดเรื่องอุปกรณ์ป้องกันส่วนบุคคลจากส่วนที่ 8
ดูข้อมูลรายละเอียดเรื่องการจัดจากส่วนที่ 13

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(ต่อหน้า 4)

แผนข้อมูลความปลอดภัย

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7 การขนถ่าย เคลื่อนย้าย ใช้งาน และเก็บรักษา

- 7.1 การป้องกันล่วงหน้าสำหรับการจัดการด้านความปลอดภัย ทำให้แน่ใจว่าสถานที่ทำงานมีการระบายอากาศ/ ไอเสียที่ดี เปิดและถือภาชนะรองรับอย่างระมัดระวัง ป้องกันการเกิดละอองสารฟุ้ง
- ข้อมูลรายละเอียดเกี่ยวกับการป้องกันอัคคีภัยและการระเบิด เก็บอุปกรณ์ป้องกันสำหรับการช่วยหายใจให้มีพร้อมใช้งาน
- 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 ³ , 0.2 ppm See Pocket Guide App. C
TLV (US)	Ceiling limit value: 0.2 mg/m ³ , 0.05 ppm DSEN;RSEN ;activated or inactivated

- ข้อมูลรายละเอียดเสริม รายการถูกต้องระหว่างที่จัดทำโดยอาศัยการปฏิบัติงานเป็นหลัก
- 8.2 การควบคุมการสัมผัส
- อุปกรณ์ป้องกันส่วนบุคคล
- มาตรการการป้องกันและสุขอนามัยทั่วไป
 - เก็บให้ห่างจากสิ่งของที่เป็นอาหาร เครื่องดื่ม และอาหารสัตว์
 - ให้ถอดเสื้อผ้าที่เปื้อนและเช็ดออกทันที
 - ล้างมือก่อนที่จะหยุดพักและเมื่อสิ้นสุดเวลาทำงาน
 - เก็บชุดป้องกันแยกต่างหาก
 - หลีกเลี่ยงการสัมผัสถูกตา
 - หลีกเลี่ยงการสัมผัสถูกตาและผิวหนัง
- การป้องกันการสูดหายใจเข้าไป
 - ในกรณีที่อยู่เป็นเวลาสั้นหรืออากาศเป็นพิษระดับต่ำ ใช้หน้ากากกรองเพื่อช่วยหายใจในกรณีที่มีความเข้มข้นสูงหรืออยู่เป็นเวลานาน ให้ใช้เครื่องป้องกันที่มีอุปกรณ์ช่วยหายใจในตัว
- การป้องกันมือ



ถุงมือป้องกัน

วัสดุของถุงมือจะต้องไม่ให้อากาศผ่านเข้าออกและทนทานต่อผลิตภัณฑ์/ สาร/ การผลิต เนื่องจากขาดการทดสอบจึงไม่มีคำแนะนำสำหรับวัสดุที่ใช้ทำถุงมือสำหรับผลิตภัณฑ์/ การผลิต/ ของผสมเคมี เลือกวัสดุสำหรับถุงมือโดยพิจารณาจากเวลาที่ใช้ในการซึมผ่านอัตราการแพร่และการเสื่อม

วัสดุที่ใช้ทำถุงมือ

การเลือกใช้ถุงมือที่เหมาะสมไม่เพียงแต่ขึ้นอยู่กับวัสดุแต่ยังขึ้นกับมาตรฐานด้านคุณภาพและข้อแตกต่างระหว่างผู้ผลิตแต่ละแห่ง โดยที่ผลิตภัณฑ์เตรียมมาจากสารหลายชนิดความทนทานของวัสดุถุงมือไม่สามารถที่จะคำนวณล่วงหน้า ดังนั้นจึงต้องตรวจสอบกับการใช้งาน

(ต่อหน้า 5)

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- เวลาที่ใช้ในการทะลุผ่านวัสดุที่ใช้ทำถุงมือ
- ผู้ผลิตถุงมือป้องกันจะต้องทดสอบหาเวลาแน่นอนที่ใช้ในการทะลุผ่านและจะต้องมีการตรวจสอบติดตาม
- การป้องกันตา



แว่นตาที่ขอบปิดสนิท

9 คุณสมบัติทางกายภาพและทางเคมี

<ul style="list-style-type: none"> · 9.1 ข้อมูลคุณสมบัติพื้นฐานทางกายภาพและเคมี · ข้อมูลรายละเอียดทั่วไป · ลักษณะ : · รูปสีพื้นฐาน · สี 	ของไหล ตามรายละเอียดของผลิตภัณฑ์ คล้ายผลไม้ ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · กลิ่นกลิ่นกลิ่น · เกณฑ์กลิ่น : 	ไม่ได้กำหนดไว้.
ค่าค่า pH	ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · การเปลี่ยนสถานะ · จุดหลอมเหลว/ ขอบเขตการหลอมละลาย · จุดเดือด/ ขอบเขตการเดือด 	ไม่ได้กำหนด 100 °C
· จุดวาบไฟ	71 °C
· ความสามารถติดไฟ (ของแข็งแกส)	ไม่สามารถใช้ได้
· อุณหภูมิสลายตัว	ไม่ได้กำหนดไว้.
· การเผาไหม้ด้วยตัวเอง	ผลิตภัณฑ์ไม่เป็นสารจุดไฟติดด้วยตัวเอง
· อันตรายจากการระเบิด	ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · ขอบเขตการระเบิด · ขั้นต่ำ · ขั้นสูง 	ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้.
· ความดันไอ ที่ 20 °C	23 hPa
<ul style="list-style-type: none"> · ความหนาแน่น ที่ 20 °C · ความหนาแน่นสัมพัทธ์ · ความหนาแน่นของไอ · อัตราการระเหย 	1.129 g/cm ³ ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · ความสามารถในการละลายใน / ความสามารถผสมเป็นสารละลายเนื้อเดียวทุกส่วนผสมกับ 	ผสมกันได้อย่างเต็มที่
<ul style="list-style-type: none"> · น้ำน้ำหนัก 	ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · สัมประสิทธิ์การแยกตัวอินทรีย์/เอ็อกทานอล/น้ำ 	ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · ความหนืด · (ไดนามิค) พลศาสตร์ · (คิเนเมติก) จลนศาสตร์ 	ไม่ได้กำหนดไว้. ไม่ได้กำหนดไว้.
<ul style="list-style-type: none"> · ปริมาณส่วนประกอบตัวทำละลาย · ตัวทำละลายอินทรีย์ · น้ำน้ำหนัก 	0.3 % 74.8 %

(ต่อที่หน้า 6)

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· VOC (EC)	0.25 %
· ส่วนประกอบที่เป็นของแข็ง	0.0 %
· 9.2 ข้อมูลอื่นๆ	ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

10 ความเสถียรและการเกิดปฏิกิริยา

- 10.1 ปฏิกิริยาโต้ตอบ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.2 เสถียรภาพทางเคมี
- การสลายตัวด้วยความร้อน / เจือจางที่ต้องหลีกเลี่ยง ไม่มีการสลายตัวถ้าใช้ตามรายละเอียดที่ระบุไว้
- 10.3 ความเป็นไปได้ของการเกิดปฏิกิริยาอันตราย ไม่มีปฏิกิริยาเป็นอันตรายที่รู้จัก
- 10.4 เจือจางเพื่อหลีกเลี่ยงความเสี่ยง ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.5 วัสดุที่เข้ากันไม่ได้: ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 10.6 อันตรายนจากการสลายตัวของผลิตภัณฑ์: ไม่มีสารจากการสลายตัวที่เป็นอันตรายที่รู้จัก

11 ข้อมูลด้านพิษวิทยา

- 11.1 ข้อมูลเกี่ยวกับผลกระทบทางพิษวิทยา

- ความเป็นพิษอย่างสาหัส:
เป็นอันตรายหากกลืนเข้าไป
เป็นอันตรายถึงชีวิตหากสูดหายใจเข้า

- การจัดแบ่งตามค่า LD/LC50

111-30-8 กลูตารัลดีไฮด์

ทางปาก	LD50	134 mg/kg (rat)
ทางผิวหนัง	LD50	2,560 mg/kg (rabbit)

- อาการระคายเคืองเบื้องต้น
- บวมผิวหนัง
เป็นสาเหตุให้ผิวหนังไหม้อย่างสาหัสและทำอันตรายต่อดวงตา
- ที่ดวงตา
เป็นสาเหตุให้เกิดอันตรายต่อดวงตาอย่างสาหัส
- การทำให้แพ้
อาจเป็นสาเหตุให้เกิดการแพ้หรืออาการโรคหืดหรือหายใจลำบากหากสูดหายใจเข้า
อาจเป็นสาเหตุให้ผิวหนังแสดงอาการแพ้
- ผลกระทบ CMR (การทำให้เกิดมะเร็งการผ่าเหล่าและพิษต่อการสืบพันธุ์)
- การผ่าเหล่าในเซลล์สืบพันธุ์
- การกระตุ้นให้เกิดมะเร็ง
- พิษต่อระบบสืบพันธุ์
- ความเป็นพิษต่ออวัยวะเป้าหมายเฉพาะ – การสัมผัสในครี
อาจเป็นสาเหตุให้เกิดการระคายเคืองต่อระบบหายใจ
- ความเป็นพิษต่ออวัยวะเป้าหมายเฉพาะ – การสัมผัสซ้ำหลาย
- อันตรายต่อระบบหายใจ

12 ข้อมูลด้านนิเวศวิทยา

- 12.1 ความเป็นพิษ
- ความเป็นพิษที่เกี่ยวข้องกับน้ำ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.2 การคงอยู่และการย่อยสลาย ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.3 การสะสมทางชีวภาพที่อาจเกิดขึ้น ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้
- 12.4 การเปลี่ยนแปลงในดิน ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

(ต่อหน้า 7)

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- ผลกระทบด้านพิษต่อระบบนิเวศน์
- ข้อสังเกต
 - เป็นพิษมากสำหรับปลา
 - เป็นพิษสำหรับปลา
- ข้อมูลรายละเอียดเสริมเกี่ยวกับนิเวศวิทยา
- หมายเหตุทั่วไป
 - เป็นอันตรายต่อน้ำชั้น 3 (กฎข้อบังคับของเยอรมัน)(การประเมินค่าด้วยตัวเอง):เป็นอันตรายสูงสุดกับน้ำ
 - อย่าปล่อยให้ผลิตภัณฑ์ไปถึงน้ำผิวดินเส้นทางน้ำหรือระบบระบายน้ำเสียแม้ว่าจะเป็นปริมาณเล็กน้อยเท่านั้น
 - ผลิตภัณฑ์ที่ยังไม่ได้เจือจางหรือยังไม่ได้ทำให้เป็นกลางต้องไม่ไปถึงน้ำเสียหรือระบายน้ำ
 - เป็นอันตรายต่อน้ำดื่มแม้จะร่วงลงในพื้นที่เป็นปริมาณที่น้อยมากก็ตาม
 - เป็นพิษกับปลาและแพลงก์ตอนในผิวน้ำ
 - มีพิษมากต่อสิ่งมีชีวิตในน้ำ
 - มีพิษต่อสิ่งมีชีวิตในน้ำ
- 12.5 ผลของ PBT และการประเมิน vPvB
- PBT: ไม่สามารถใช้ได้
- vPvB: ไม่สามารถใช้ได้
- 12.6 ผลข้างเคียงอื่นๆ ไม่มีข้อมูลที่เกี่ยวข้องนอกเหนือจากนี้

13 ข้อพิจารณาในการกำจัด

- 13.1 วิธีการกำจัดของเสีย
- คำแนะนำ ต้องไม่ทิ้งไปพร้อมกับขยะจากบ้านเรือนอย่าปล่อยให้ผลิตภัณฑ์เข้าถึงระบบระบายน้ำเสีย
- ภาชนะบรรจุที่ยังไม่ได้ล้างทำความสะอาด
- คำแนะนำ การกำจัดจะต้องทำตามกฎระเบียบที่เป็นทางการ
- สารทำความสะอาดที่แนะนำ นำถ้าจำเป็นใช้คู่กับสารทำความสะอาด

14 ข้อมูลการขนส่ง

- 14.1 เลขที่ UN
- ADR, IMDG, IATA UN3265
- 14.2 ชื่อการจัดส่งสินค้าที่เหมาะสมของ UN
- ADR 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (กลูตารัลดีไฮด์), ENVIRONMENTALLY HAZARDOUS
- IMDG CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT
- IATA CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde)
- 14.3 ชั้นเรียนอันตรายจากการขนส่ง
- ADR, IMDG
-
- ประเภท 8 สารกัดกร่อน

(ต่อหน้า 8)

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2021.08.25

การปรับปรุงใหม่ : 2021.08.25

ชื่อทางการค้า GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(ต่อหน้า 7)

· ฉลากสิ่งที่เป็นอันตราย	8
· IATA	
· Class	8 สารกัดกร่อน
· Label	8
· 14.4 กลุ่มของภาชนะบรรจุ	
· ADR, IMDG, IATA	III
· 14.5 สิ่งที่เป็นอันตรายต่อสภาพแวดล้อม	ผลิตภัณฑ์ประกอบด้วยวัสดุที่เป็นอันตรายต่อสภาพแวดล้อม: กลูตารัลดีไฮด์
· สารที่เป็นพิษต่อทะเล	สัญลักษณ์ (ปลาและต้นไม้)
· เฉพาะการติดฉลาก (ADR):	สัญลักษณ์ (ปลาและต้นไม้)
· 14.6 การป้องกันพิเศษล่วงหน้าสำหรับผู้ใช้	คำเตือน !: สารกัดกร่อน
· รหัสความอันตราย:	88
· หมายเลข EMS	F-A,S-B
· Segregation groups	Acids
· Stowage Category	A
· Stowage Code	SW2 Clear of living quarters.
· 14.7 การขนส่งขนาดใหญ่ตามภาคผนวกของของ MARPOL73/78 และรหัส IBC	ไม่สามารถใช้ได้
· การขนส่ง/ข้อมูลรายละเอียดเสริม	
· ADR	
· ปริมาณที่จำกัด (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· หมวดหมู่การขนส่ง	3
· รหัสควบคุมการผ่านอุโมงค์	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· “กฎระเบียบต้นแบบ” ของ UN	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (กลูตารัลดีไฮด์), 8, III, ENVIRONMENTALLY HAZARDOUS

15 ข้อมูลด้านกฎข้อบังคับ

- 15.1 ความปลอดภัย สุขภาพและระเบียบ/กฎหมายสิ่งแวดล้อมโดยเฉพาะของสารหรือสารผสม
- บัญชีรายชื่อวัตถุอันตราย

· กรมวิชาการเกษตร

ไม่มีส่วนผสมใดอยู่ในรายการ

· กรมประมง

111-30-8 กลูตารัลดีไฮด์

ชนิดที่ 3

(ต่อหน้า 9)

แผนข้อมูลความปลอดภัย

มาตรฐาน GHS

วันที่พิมพ์ 2021.08.25

การปรับปรุงใหม่ : 2021.08.25

ชื่อทางการค้า GLUTARALDEHYDE EM GRADE 25% AQUEOUS IN SERUM VIAL

(ต่อหน้า 8)

· กรมปศุสัตว์

ไม่มีส่วนผสมใดอยู่ในรายการ

· อาหารและยา

111-30-8 กลูตาไรลดีไฮด์

ชนิดที่ 3

67-56-1 เมทานอล

ชนิดที่ 4

· กรมโรงงานอุตสาหกรรม

67-56-1 เมทานอล

ชนิดที่ 1

· 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

· คำย่อและชื่อย่อที่ผสมขึ้น

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 3: Acute toxicity – Category 3

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

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

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

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

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

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

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

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

TH