

Safety Data Sheet

acc. to OSHA HCS

Printing date 08/27/2021

Reviewed on 08/27/2021

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 25%, Biological Grade
- **Article number:** 16400, 16411, 16401, 16410
- **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 25%, Biological Grade**

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· **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.**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)***Health = 3**Fire = 1**Reactivity = 0*· **HMIS-ratings (scale 0 - 4)***Health = 3**Fire = 1**Reactivity = 0*

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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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- **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:** Colorless
- **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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· 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:	Not determined.
· 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:	75.0 %
· VOC content:	0.25 %
	18.4 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.

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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

<ul style="list-style-type: none"> · UN-Number · DOT, ADR, IMDG, IATA 	UN3265
<ul style="list-style-type: none"> · UN proper shipping name · DOT · 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)
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8
<ul style="list-style-type: none"> · ADR, IMDG 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8
<ul style="list-style-type: none"> · IATA 	<div style="text-align: center;">  </div>
<ul style="list-style-type: none"> · Class · Label 	8 Corrosive substances 8
<ul style="list-style-type: none"> · Packing group · DOT, ADR, IMDG, IATA 	III

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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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· **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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Trade name: Glutaraldehyde 25%, Biological Grade

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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** 08/27/2021 / -

· **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 27.08.2021

Revision: 27.08.2021

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 25%, Biological Grade
- **Article number:** 16400, 16411, 16401, 16410
- **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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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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- *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
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
 - 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 25%, Biological Grade**

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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: | Colourless |
| · 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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· Upper:	Not determined.
· Vapour pressure:	Not determined.
· 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:	75.0 %
· 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 25%, Biological Grade

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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 25%, Biological Grade*

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<ul style="list-style-type: none"> · UN proper shipping name · ADG · IMDG · IATA 	<p>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)</p>
--	---

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

<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances. 8</p>
--	--------------------------------------

· **IATA**

<ul style="list-style-type: none"> · Class · Label 	<p>8 Corrosive substances. 8</p>
--	--------------------------------------

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

<ul style="list-style-type: none"> · Environmental hazards: 	<p>Product contains environmentally hazardous substances: Glutaraldehyde</p>
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<ul style="list-style-type: none"> · Marine pollutant: 	<p>Symbol (fish and tree)</p>
--	-------------------------------

<ul style="list-style-type: none"> · Special marking (ADG): 	<p>Symbol (fish and tree)</p>
---	-------------------------------

<ul style="list-style-type: none"> · Special precautions for user 	<p>Warning: Corrosive substances.</p>
---	---------------------------------------

<ul style="list-style-type: none"> · Hazard identification number (Kemler code): 	<p>88</p>
--	-----------

<ul style="list-style-type: none"> · EMS Number: 	<p>F-A,S-B</p>
--	----------------

<ul style="list-style-type: none"> · Segregation groups 	<p>Acids</p>
---	--------------

<ul style="list-style-type: none"> · Stowage Category 	<p>A</p>
---	----------

<ul style="list-style-type: none"> · Stowage Code 	<p>SW2 Clear of living quarters.</p>
---	--------------------------------------

<ul style="list-style-type: none"> · Transport in bulk according to Annex II of Marpol and the IBC Code 	<p>Not applicable.</p>
---	------------------------

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

<ul style="list-style-type: none"> · Limited quantities (LQ) 	<p>5L</p>
--	-----------

<ul style="list-style-type: none"> · Excepted quantities (EQ) 	<p>Code: E1</p>
---	-----------------

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

<ul style="list-style-type: none"> · Transport category 	<p>3</p>
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<ul style="list-style-type: none"> · Tunnel restriction code 	<p>E</p>
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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

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/27/2021

Reviewed on 08/27/2021

1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 25%, Biological Grade
- **Article number:** 16400, 16411, 16401, 16410
- **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**

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 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)***Health = 3**Fire = 1**Reactivity = 0*· **HMIS-ratings (scale 0 - 4)***Health = 3**Fire = 1**Reactivity = 0*

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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 poisonings 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 25%, Biological Grade**

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· **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:	Colorless
· Odor:	Fruit-like
· Odor threshold:	Not determined.

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

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

· Flash point:	71 °C
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· Flammability (solid, gaseous):	Not flammable.
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· 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:	Not determined.
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· Density at 20 °C:	1.129 g/cm ³
· Relative density	Not determined.

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· 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:	75.0 %
· Solids content:	0.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **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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Trade name: Glutaraldehyde 25%, Biological Grade

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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 08/27/2021

Reviewed on 08/27/2021

Trade name: *Glutaraldehyde 25%, Biological Grade*

(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.

(Contd. on page 9)

CA

Safety Data Sheet

according to HPR, Schedule 1

Printing date 08/27/2021

Reviewed on 08/27/2021

Trade name: **Glutaraldehyde 25%, Biological Grade**

(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 08/27/2021

Reviewed on 08/27/2021

Trade name: Glutaraldehyde 25%, Biological Grade

(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** 08/27/2021 / -

· **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 27.08.2021

Revision: 27.08.2021

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

- **Product identifier**
- **Trade name:** Glutaraldehyde 25%, Biological Grade
- **Article number:** 16400, 16411, 16401, 16410
- **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)

Safety data sheet

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Trade name: **Glutaraldehyde 25%, Biological Grade**

(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. on page 3)

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

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Trade name: Glutaraldehyde 25%, Biological Grade

(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 25%, Biological Grade

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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.

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Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2021

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Trade name: **Glutaraldehyde 25%, Biological Grade**

(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:** Colourless
- **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:** Not determined.

- **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:** 75.0 %

(Contd. on page 6)

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

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Trade name: **Glutaraldehyde 25%, Biological Grade**

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· 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.

(Contd. on page 7)

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

Printing date 27.08.2021

Revision: 27.08.2021

Trade name: Glutaraldehyde 25%, Biological Grade

(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.

(Contd. on page 8)


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

Printing date 27.08.2021

Revision: 27.08.2021

Trade name: **Glutaraldehyde 25%, Biological Grade**

(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).

(Contd. on page 9)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 27.08.2021

Revision: 27.08.2021

Trade name: **Glutaraldehyde 25%, Biological Grade**

(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

Printing date 27.08.2021

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Trade name: Glutaraldehyde 25%, Biological Grade

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*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 27.08.2021

Revision: 27.08.2021

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

- **1.1 Product identifier**
- **Trade name:** Glutaraldehyde 25%, Biological Grade
- **Article number:** 16400, 16411, 16401, 16410
- **UFI:** FU80-90UX-K00J-Y6N1
- **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:	Colourless
· 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:** Not determined.

· 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:	75.0 %

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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

- | | |
|---|---|
| <ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA | UN3265 |
| <ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG · IATA | 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) |
| <ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG | <div style="display: flex; align-items: center; gap: 10px;">   </div> |
| <ul style="list-style-type: none"> · 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

GB

Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 27.08.2021

Herziening van: 27.08.2021

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

- **1.1 Productidentificatie**
- **Handelsnaam:** Glutaraldehyde 25%, Biological Grade
- **Artikelnummer:** 16400, 16411, 16401, 16410
- **UFI:** FU80-90UX-K00J-Y6N1
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**
Electron Microscopy Sciences
1560 Industry Road
USA-Hatfield, PA 19440
Tel: 215-412-8400 Fax: 215-412-8450
email: info@emsdiasum.com
www.emsdiasum.com
- Aurion
Binnenhaven 5
6709 PD Wageningen
The Netherlands
Tel: 31 317 415094
Fax: 31 317 415955
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**
ChemTrec 1-800-424-9300 Contract CCN7661
1-703-527-3887

RUBRIEK 2: Identificatie van de gevaren

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



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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Herziening van: 27.08.2021

Handelsnaam: Glutaraldehyde 25%, Biological Grade

(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)

Veiligheidsinformatieblad

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datum van de druk: 27.08.2021

Herziening van: 27.08.2021








Handelsnaam: Glutaraldehyde 25%, Biological Grade

(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	Glutaaraldehyd	>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	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 invoeren.
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 brandweelieden**
- **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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- **6.2 Milieuvorzorgsmaatregelen:**
 Bij indringen in afvalwater of riolering moet de bevoegde instantie gewaarschuwd worden.
 Met veel water verdunnen.
 Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 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.

(Vervolg op blz. 5)

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· 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:** Kleurloos
- **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:** Niet bepaald.

- **Dichtheid bij 20 °C:** 1,129 g/cm³
- **Relatieve dichtheid** Niet bepaald.

(Vervolg op blz. 6)

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· 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:	75,0 %
· 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:**

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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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- **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)

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· **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:**· **Bijzondere kenmerking (ADR):**

Produkt bevat milieugevaarlijke stoffen: Glutaaraldehyd

Symbool (vis en boom)

Symbool (vis en boom)

· **14.6 Bijzondere voorzorgen voor de gebruiker**· **Gevaarsidentificatienummer (Kemler-getal):**· **EMS-nummer:**· **Segregation groups**· **Stowage Category**· **Stowage Code**

Waarschuwing: Bijtende stoffen

88

F-A,S-B

Acids

A

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)**· **Uitgezonderde hoeveelheden (EQ)**

5L

Code: E1

Grootste netto hoeveelheid per binnenverpakking: 30 ml

Grootste netto hoeveelheid per buitenverpakking: 1000 ml

· **Vervoerscategorie**· **Tunnelbeperkingscode**

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

(Vervolg op blz. 9)

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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

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· 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

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· 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

Fiche de données de sécurité

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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 25%, Biological Grade
- **Code du produit:** 16400, 16411, 16401, 16410
- **UFI:** FU80-90UX-K00J-Y6N1
- **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

(suite page 2)

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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**

· **Equipement de protection individuel:**

· **Mesures générales de protection et d'hygiène:**

Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.

Retirer immédiatement les vêtements souillés ou humectés.

Se laver les mains avant les pauses et en fin de travail.

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:** Incolore

· **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:** Non déterminé.

· **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:	75,0 %
· 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:**

· **Marine Pollutant:** *Le produit contient matières dangereuses pour l'environnement : glutaral*
Signe conventionnel (poisson et arbre)
 · **Marquage spécial (ADR):** *Signe conventionnel (poisson et arbre)*

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

· **Numéro d'identification du danger (Indice Kemler):** *Attention: Matières corrosives.*
 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
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· 15.2 Évaluation de la sécurité chimique: Une évaluation de la sécurité chimique n'a pas été réalisée.

RUBRIQUE 16: Autres informations

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

· Phrases importantes

- H301 Toxique en cas d'ingestion.
- 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*

FR

Sicherheitsdatenblatt

gemäß 1907/2006/EG, Artikel 31

Druckdatum: 27.08.2021

überarbeitet am: 27.08.2021

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

- **1.1 Produktidentifikator**
- **Handelsname:** Glutaraldehyde 25%, Biological Grade
- **Artikelnummer:** 16400, 16411, 16401, 16410
- **UFI:** FU80-90UX-K00J-Y6N1
- **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
-----	--

- **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.
 Getrennte 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: | Farblos |
| · 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.
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· Zersetzungstemperatur:	Nicht bestimmt.
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· Selbstentzündungstemperatur:	Das Produkt ist nicht selbstentzündlich.
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· Explosive Eigenschaften:	Nicht bestimmt.
· Explosionsgrenzen:	
· Untere:	Nicht bestimmt.
· Obere:	Nicht bestimmt.
· Dampfdruck:	Nicht bestimmt.
· 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:	75,0 %
· 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:

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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.

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- **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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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 #000;"/> <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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· 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	75,0
I	25,0

- **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.

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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*

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

Stampato il: 27.08.2021

Revisione: 27.08.2021

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Glutaraldehyde 25%, Biological Grade

· **Articolo numero:** 16400, 16411, 16401, 16410

· **UFI:** FU80-90UX-K00J-Y6N1

· **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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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**



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· **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.

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

Incolore

· **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:**

Non definito.

· **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:	75,0 %
· 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:**

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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.

· **Frase 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: 2021.08.27

개정: 2021.08.27

제품명: Glutaraldehyde 25%, Biological Grade

(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 표기 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 따라라따

인쇄일자: 2021.08.27

개정: 2021.08.27

제품명: Glutaraldehyde 25%, Biological Grade

(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	액체의
· 색:	색소가 없는
냄새 냄새 냄새	과일종류의
· 후각역치	알맞지 않다.
· pH:	알맞지 않다.
· 상태변화	
· 녹는점/어는점:	맞지 않는
초기초기 끓는점과 끓는점 범위	100 °C
· 인화점:	71 °C
· 인화성 고체/기체	해당 사항 없음.
분해 분해 온도	알맞지 않다.
· 자기점화:	이 제품은 자연발화성이 없다.
· 폭발 위험:	알맞지 않다.
인화 인화 인화 폭발 위험 상한 상한 하한	
· 아래로:	알맞지 않다.
위로 위로	알맞지 않다.
· 증기압:	알맞지 않다.
밀도 밀도 밀도 경우 20 °C:	1.129 g/cm ³
비중 비중 비중	알맞지 않다.
· 증기밀도:	알맞지 않다.
증발 증발 증발 속도	알맞지 않다.

(6 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2021.08.27

개정: 2021.08.27

제품명: Glutaraldehyde 25%, Biological Grade

(5 쪽부터계속)

· 용해도:	
· 물:	완전히혼합할수있는
· n 옥탄올/물 분배계수:	알맞지않다.
점도점도점도	
· 역학성:	알맞지않다.
· 동점성:	알맞지않다.
· 용매내용물	
· 유기용매:	0.3 %
· 물:	75.0 %
· VOC (EU)	0.25 %
· 고체양함량함량	0.0 %
기타 정보	추가적인 정보가 존재하지 않습니다.

10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해 예방 조건 조건에 따라 사용 할 경우 해체는 없다
- 유해 반응 가능성 위험한 반응으로 알려지지 않았다.
- 피해 예방 조건 조건에 대한 정보가 존재하지 않습니다.
- 혼합 혼합 혼합 혼합 혼합 추가적인 정보가 존재하지 않습니다.
- 유해 분해 물질: 위험성 있는 분해물들은 알려지지 않았다.

11 독성에 관한 정보

· 독성학적 영향에 대한 정보
급성 독성 독성 독성

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

· 입체적 자극 자극 효과
피부 피부 부식성 또는 자극성: 피부와 점막에 강한 부식 작용.

심한 심한 심한 심한 심한 자극성:
강한 부식 작용
심각한 안구상처의 위험이 있는 강한 자극

· 감각화:
호흡을 통한 감각화 가능성이 있다.
피부 접촉을 통하여 감각화 가능성이 있다.

· 추가적인 독성에 관한 정보
이제 품은 유럽 공동체의 공동 분류 원칙의 합법적인 절차에 근거하여 최근에 발효된 원고에서 아래 위험들의 사전 준비에 대하여 제시하고 있다.
건강에 해로운
부식 작용의
자극적인
맹독성의

(7 쪽에 계속)

물질안전보건자료 GHS에 따라

인쇄일자: 2021.08.27

개정: 2021.08.27

제품명: Glutaraldehyde 25%, Biological Grade

삼킬 경우 식도나 위 등의 내장 기관 벽에 상처를 주는 위험과 마찬가지로 입 주변이나 구강에 강한 부식 작용을 한다 (6 쪽부터 계속)

12 환경에 미치는 영향

독성/독성/독성

- **수생독성:** 추가적인 정보가 존재하지 않습니다.
- **지속성 및 분해성:** 추가적인 정보가 존재하지 않습니다.
- **환경 시스템에서의 행동:**
- **생물농축 잠재성:** 추가적인 정보가 존재하지 않습니다.
- **토양내 이동성:** 추가적인 정보가 존재하지 않습니다.
- **생태독성:**

의견/의견/의견

- 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

· 적정적정명

· 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

인쇄일자: 2021.08.27

개정: 2021.08.27

제품명: Glutaraldehyde 25%, Biological Grade

(7 쪽부터 계속)

교통 규정: 유해물질 위험 클래스

· ADR, IMDG



등급: 8 부식작용하는 물질

· 위험 라벨라벨

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 취급명칭 (ADR):

심벌 (물고기와 나무)

· 이동 시 특별 취급 조치

경고: 부식작용하는 물질

위험 위험 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 따른 벌크물질 운송

해당사항 없음.

· 운송/취급 정보

· ADR

한정 양 (수량 제한)

5L

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

운송 구분

3

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

GHS에 따라 라다

인쇄일자: 2021.08.27

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제품명: Glutaraldehyde 25%, Biological Grade

(8 쪽부터 계속)

· **UN번호** UN 3265

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

15 법적 규제현황

· **산업안전보건법에 의한 유해화학물질 규제**

제조제조자금지물질:

어떠한내용물도 목록화 되어있지 않다

· **허가대상물질:**

어떠한내용물도 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 유해인자 정보 및 작업환경측정 관련 법률

· **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**

어떠한내용물도 목록화 되어있지 않다

· **제한물질**

어떠한내용물도 목록화 되어있지 않다

· **유독물질**

111-30-8 글루타르알데히드

67-56-1 메틸알코올

· **허가물질**

111-30-8 글루타르알데히드

67-56-1 메틸알코올

등록명목명칭 또는 산제 대상 화학물질

7732-18-5 물

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

어떠한내용물도 목록화 되어있지 않다

(10 쪽에 계속)

물질안전보건자료

GHS에 따라라따

인쇄일자: 2021.08.27

개정: 2021.08.27

제품명: Glutaraldehyde 25%, Biological Grade

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

(10 쪽부터계속)

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 2021.08.27

在 2021.08.27 審核

1 化學品與廠商資料

- 產品識別者
- 化學品中英文名稱名稱化學品俗名或商品名: Glutaraldehyde 25%, Biological Grade
- 商品編號: 16400, 16411, 16401, 16410
- 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:

無色的，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)

安全資料表

據根據據據性化學品標示及通識規則

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在 2021.08.27 審核

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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

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

(在 3 頁繼續)

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(在 2 頁繼續)

· 危險的成分:

111-30-8	1,5- 戊二 醛	>10-≤25%
	<ul style="list-style-type: none"> ⚠ 急毒性物質(吞食) 第3級, H301; 急毒性物質(吸入) 第2級, H330; ⚠ 呼吸道過敏物質 第1級, H334; ⚠ 腐蝕/刺激皮膚物質 第1B級, H314; ⚠ 水環境之危害物質(急毒性) 第1級, H400; 水環境之危害物質(慢毒性) 第2級, H411; ⚠ 皮膚過敏物質 第1級, H317; 特定標的器官系統毒性物質(單一暴露) 第3級, H335; 易燃液體 第4級, H227; 急毒性物質(皮膚) 第5級, H313 	

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)。

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。

(在 4 頁繼續)

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(在 3 頁繼續)

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 儲存 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 儲存

- **儲存庫和容器須要達到的要求:** 沒有特別的要求。
- **有關使用一個普通的儲存設施來儲存的資料:** 不需要。
- **有關儲存條件的更多資料:** 將容器密封。
- **具體的最終用戶** 無相關詳細資料。

8 暴露預防措施

- **工程控制方法:** 沒有進一步數據;見第 7 項。

· 控制變數

· 在工作場需要監控的限值成分

111-30-8 戊二醛

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

- **額外的資料:** 制作期間有效的清單將作為基礎來使用。

· 遺漏控制

· 個人防護設備:

· 一般保護和衛生措施:

- 遠離食品、飲料和飼料。
- 立即除去所有的不潔的和被汙染的衣服。
- 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:

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

· 手防護:



保護手套

手套的物料必須是不滲透性的,且能抵抗該產品/物質/添加劑。
基於缺乏測試,對於產品/制劑/化學混合物,並不會提供手套材料的建議
選擇手套材料時,請注意材料的滲透時間,滲濾率和降解參數

· 手套材料

選擇合適的手套不單取決於材料,亦取決於質量特征,以及來自哪一間生產廠家,因為該產品是由很多材料
配製而成,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

(在 5 頁繼續)

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(在 5 頁繼續)

· 其他資訊 無相關詳細資料。

10 安定性及反應性

應使應性應相關詳細資料。

穩定穩定穩定

分解分解分解免的情況: 如果遵照規格使用則不會分解。

有害有害有害可能 未有已知的危險反應。

避應避免避條件 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)

要的弱弱弱弱影響:

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。

持久性和持久性降解性無相關詳細資料。

· 環境系統習性:

· 潛在的累積累積無相關詳細資料。

土壤土壤移動性無相關詳細資料。

· 生態毒性的影響:

· 備注:

- 對魚類有劇毒
- 對魚類有毒

(在 7 頁繼續)

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額外的生態學資料:

括總括注

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、水道或汗水系統.

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. 不要讓該產品接觸汗水系統.

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.

建議建議建議清洗劑如有必要請使用水及清潔劑進行清潔.

14 運送資料

聯合聯合危險貨物編號(UN號)

· ADR, IMDG, IATA UN3265

適當適當船名

· 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

標籤標籤標籤

8

· IATA



· Class

8 腐蝕性物質

(在 8 頁繼續)

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· Label	8
· 包裝組別	
· ADR, IMDG, IATA	III
· 危害環境： · 海運毒藥物質物質 · 具體標記 (ADR):	該產品含有對環境有害的原料: 1,5- 戊二 醛 象徵符號 (魚和樹) 象徵符號 (魚和樹)
· 用戶特別預防措施 · 危險編碼： · 標碼號碼號碼 · Segregation groups · Stowage Category · Stowage Code	警告: 腐蝕性物質 88 F-A,S-B Acids A SW2 Clear of living quarters.
· MARPOL73/78(針對船舶引起的海洋污染預防協約協約 件附件書據根據根據C國際國際國際貨物編碼) 值大量大量 運送運送運送	不適用
運輸運輸運輸的資料:	
· 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) · Excepted quantities (EQ)	5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "標準規定":	UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (1,5- 戊二 醛), 8, III, ENVIRONMENTALLY HAZARDOUS

15 法規資料

- 對相應純物質或者混合物的安全、保健及環境法規/法律
- 優先管理化學品之指定及運作管理辦法

附表附表附表對於未滿十八歲羈域羈域羈域後未滿女年女性雙工具危害性之化學品

沒有列出成份

二條二條二條二條二條

沒有列出成份

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

列出所有成分

(在 9 頁繼續)

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(在 8 頁繼續)

· TCSCA

列管編號編號編號

沒有列出成份

· 毒性分類

沒有列出成份

· 管制濃度 (w/w%)

沒有列出成份

· 大量運作基準基公斤)

沒有列出成份

· 新化學物質及既有化學物質資料登錄辦法, 附表六

沒有列出成份

· TCSI - Taiwan Chemical Substance Inventory

列出所有成分

· GHS標籤元素 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。

· 化學物質安全性評價: 尚未進行化學物質安全性評價

TW

(在 10 頁繼續)

安全資料表

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(在 9 頁繼續)

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-

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SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** Glutaraldehyde 25%, Biological Grade
- **Código do produto:** 16400, 16411, 16401, 16410
- **UFI:** FU80-90UX-K00J-Y6N1
- **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

· **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:**

Incolor

· **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:**

Não determinado.

· **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:	75,0 %
· 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.

PT

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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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PT

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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:

· Poluente das águas: O produto contém matérias perigosas para o ambiente: glutaral
· Marcação especial (ADR): Símbolo convencional (peixes e árvore)
Símbolo convencional (peixes e árvore)

· 14.6 Precauções especiais para o utilizador

· Número de identificação de perigo (N° Kemler): Atenção: Matérias corrosivas 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
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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
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· **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

(continuação na página 10)

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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*

PT

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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 25%, Biological Grade

· **Número del artículo:** 16400, 16411, 16401, 16410

· **UFI:** FU80-90UX-K00J-Y6N1

· 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.

(se continua en página 2)

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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
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· **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:

Quitar 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:

Limpia 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:

Incoloro

· 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:	No determinado.
· 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.
· Coeficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad:	
· Dinámica:	No determinado.
· Cinemática:	No determinado.
· Concentración del disolvente:	
· Disolventes orgánicos:	0,3 %
· Agua:	75,0 %
· 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.

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SECCIÓN 14: Información relativa al transporte

<ul style="list-style-type: none"> · 14.1 Número ONU · ADR, IMDG, IATA 	<p style="text-align: right;">UN3265</p>
<ul style="list-style-type: none"> · 14.2 Designación oficial de transporte de las Naciones Unidas · ADR · IMDG · IATA 	<p style="text-align: right;">3265 LÍQUIDO CORROSIVO, ÁCIDO, ORGÁNICO, N.E.P. (glutaral), PELIGROSO PARA EL MEDIO AMBIENTE</p> <p style="text-align: right;">CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde), MARINE POLLUTANT</p> <p style="text-align: right;">CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Glutaraldehyde)</p>
<ul style="list-style-type: none"> · 14.3 Clase(s) de peligro para el transporte · ADR, IMDG 	<div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: right;">8 Materias corrosivas</p> <p style="text-align: right;">8</p>
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; justify-content: center; align-items: center;">  </div> <p style="text-align: right;">8 Materias corrosivas</p> <p style="text-align: right;">8</p>
<ul style="list-style-type: none"> · 14.4 Grupo de embalaje · ADR, IMDG, IATA 	<p style="text-align: right;">III</p>
<ul style="list-style-type: none"> · 14.5 Peligros para el medio ambiente: · Contaminante marino: · Marcado especial (ADR): 	<p style="text-align: right;">El producto contiene materias peligrosas para el medio ambiente: glutaral</p> <p style="text-align: right;">Símbolo (pez y árbol)</p> <p style="text-align: right;">Símbolo (pez y árbol)</p>
<ul style="list-style-type: none"> · 14.6 Precauciones particulares para los usuarios · Número de identificación de peligro (Número Kemler): · Número EMS: · Segregation groups · Stowage Category · Stowage Code 	<p style="text-align: right;">Atención: Materias corrosivas</p> <p style="text-align: right;">88</p> <p style="text-align: right;">F-A,S-B</p> <p style="text-align: right;">Acids</p> <p style="text-align: right;">A</p> <p style="text-align: right;">SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> · 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC 	<p style="text-align: right;">No aplicable.</p>
<ul style="list-style-type: none"> · Transporte/datos adicionales: · ADR · Cantidades limitadas (LQ) · Cantidades exceptuadas (EQ) 	<p style="text-align: right;">5L</p> <p style="text-align: right;">Código: E1</p> <p style="text-align: right;">Cantidad neta máxima por envase interior: 30 ml</p> <p style="text-align: right;">Cantidad neta máxima por embalaje exterior: 1000 ml</p>

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Nombre comercial: **Glutaraldehyde 25%, Biological Grade**

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

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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*

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