

# Safety Data Sheet

acc. to OSHA HCS

Printing date 08/31/2021

Reviewed on 08/31/2021

## 1 Identification

- **Product identifier**
- **Trade name:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Article number:** 16531
- **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**



GHS02 Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

---



GHS06 Skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.

---



GHS08 Health hazard

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

Carc. 1A H350 May cause cancer.

---



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.

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· **Label elements**

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

· **Hazard pictograms**



· **Signal word** *Danger*

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

*Ethyl alcohol*

*Glutaraldehyde*

· **Hazard statements**

*Highly flammable liquid and vapor.*

*Harmful if swallowed.*

*Toxic 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 cancer.*

*May cause respiratory irritation.*

· **Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*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.*

*IF exposed or concerned: Get medical advice/attention.*

*Specific treatment (see on this label).*

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

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

*Wash contaminated clothing before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, 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.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **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:**

64-17-5	Ethyl alcohol	>50-≤100%
111-30-8	Glutaraldehyde	>2.5-≤10%

### 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.

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## 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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.  
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:**

64-17-5	Ethyl alcohol	1,800 ppm
111-30-8	Glutaraldehyde	0.2 ppm

- **PAC-2:**

64-17-5	Ethyl alcohol	3300* ppm
111-30-8	Glutaraldehyde	1 ppm

- **PAC-3:**

64-17-5	Ethyl alcohol	15000* ppm
111-30-8	Glutaraldehyde	5 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 ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
  - Keep receptacle tightly sealed.
  - Store in cool, dry conditions in well sealed receptacles.
  - Protect from heat and direct sunlight.
- **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:**

#### 64-17-5 Ethyl alcohol

PEL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

REL Long-term value: 1900 mg/m<sup>3</sup>, 1000 ppm

TLV Short-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

#### 111-30-8 Glutaraldehyde

REL Ceiling limit value: 0.8 mg/m<sup>3</sup>, 0.2 ppm

See Pocket Guide App. C

TLV Ceiling limit value: 0.2 mg/m<sup>3</sup>, 0.05 ppm

DSEN;RSEN ;activated or inactivated

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

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

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

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· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

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

- |                    |                 |
|--------------------|-----------------|
| · <b>pH-value:</b> | Not determined. |
|--------------------|-----------------|

· **Change in condition**

- |                                       |                  |
|---------------------------------------|------------------|
| · <b>Melting point/Melting range:</b> | Undetermined.    |
| · <b>Boiling point/Boiling range:</b> | 78 °C (172.4 °F) |

- |                       |                 |
|-----------------------|-----------------|
| · <b>Flash point:</b> | 13 °C (55.4 °F) |
|-----------------------|-----------------|

- |   |                |
|---|----------------|
| · <b>Flammability (solid, gaseous):</b> | Not flammable. |
|---|----------------|

- |                                |                 |
|--------------------------------|-----------------|
| · <b>Ignition temperature:</b> | 425 °C (797 °F) |
|--------------------------------|-----------------|

- |                                     |                 |
|-------------------------------------|-----------------|
| · <b>Decomposition temperature:</b> | Not determined. |
|-------------------------------------|-----------------|

- |                         |                              |
|-------------------------|------------------------------|
| · <b>Auto igniting:</b> | Product is not selfigniting. |
|-------------------------|------------------------------|

- |                               |  |
|-------------------------------|--|
| · <b>Danger of explosion:</b> | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
|-------------------------------|--|

· **Explosion limits:**

- |                 |           |
|-----------------|-----------|
| · <b>Lower:</b> | 3.5 Vol % |
| · <b>Upper:</b> | 15 Vol %  |

- |   |                     |
|---|---------------------|
| · <b>Vapor pressure at 20 °C (68 °F):</b> | 59 hPa (44.3 mm Hg) |
|---|---------------------|

- |                                    |   |
|------------------------------------|---|
| · <b>Density at 20 °C (68 °F):</b> | 0.816 g/cm <sup>3</sup> (6.80952 lbs/gal) |
|------------------------------------|---|

- |                           |                 |
|---------------------------|-----------------|
| · <b>Relative density</b> | Not determined. |
|---------------------------|-----------------|

- |                        |                 |
|------------------------|-----------------|
| · <b>Vapor density</b> | Not determined. |
|------------------------|-----------------|

- |                           |                 |
|---------------------------|-----------------|
| · <b>Evaporation rate</b> | Not determined. |
|---------------------------|-----------------|

· **Solubility in / Miscibility with**

- |                 |                 |
|-----------------|-----------------|
| · <b>Water:</b> | Fully miscible. |
|-----------------|-----------------|

- |   |                 |
|---|-----------------|
| · <b>Partition coefficient (n-octanol/water):</b> | Not determined. |
|---|-----------------|

· **Viscosity:**

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

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- |                            |  |
|----------------------------|--|
| <b>· Solvent content:</b>  |  |
| <b>· Organic solvents:</b> | 90.0 %                                     |
| <b>· VOC content:</b>      | 90.00 %                                    |
|                            | 734.4 g/l / 6.13 lb/gal                    |
| <b>· Solids content:</b>   | 0.0 %                                      |
| <b>· Other information</b> | No further relevant information available. |

## 10 Stability and reactivity

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

## 11 Toxicological information

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

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

**111-30-8 Glutaraldehyde**

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

- **Primary irritant effect:**
- **on the skin:** 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:  
Toxic  
Harmful  
Corrosive  
Irritant  
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)**

64-17-5	Ethyl alcohol	1
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

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· **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.
- **Ecotoxic effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
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.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

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

## 14 Transport information

- |                                  |   |
|----------------------------------|---|
| · <b>UN-Number</b>               |   |
| · <b>DOT, ADR, IMDG, IATA</b>    | UN2924  |
| · <b>UN proper shipping name</b> |   |
| · <b>DOT</b>                     | Flammable liquids, corrosive, n.o.s. (Glutaraldehyde, Ethanol)                        |
| · <b>ADR</b>                     | 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.<br>(Glutaraldehyde, ETHANOL (ETHYL ALCOHOL)) |
| · <b>IMDG</b>                    | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde,<br>ETHANOL (ETHYL ALCOHOL))      |

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· **IATA** *FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)*

· **Transport hazard class(es)**

· **DOT**



· **Class** *3 Flammable liquids*  
 · **Label** *3, 8*

· **ADR**



· **Class** *3 Flammable liquids*  
 · **Label** *3+8*

· **IMDG**



· **Class** *3 Flammable liquids*  
 · **Label** *3/8*

· **IATA**



· **Class** *8 Corrosive substances*  
 · **Label** *3 (8)*

· **Packing group**

· **DOT** *I*  
 · **ADR, IMDG, IATA** *II*

· **Environmental hazards:** *Not applicable.*

· **Special precautions for user** *Warning: Flammable liquids*

· **Hazard identification number (Kemler code):** *883*

· **EMS Number:** *F-E,S-C*

· **Segregation groups** *Acids*

· **Stowage Category** *B*

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

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

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Reviewed on 08/31/2021

**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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**· Transport/Additional information:**

**· DOT**

**· Quantity limitations**

On passenger aircraft/rail: 0.5 L

On cargo aircraft only: 2.5 L

**· ADR**

**· Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**· IMDG**

**· Limited quantities (LQ)**

0

**· Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

**· UN "Model Regulation":**

UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
(GLUTARALDEHYDE, ETHANOL (ETHYL ALCOHOL)), 3 (8), II

## 15 Regulatory information

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

**· Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All components have the value ACTIVE.

**· Hazardous Air Pollutants**

None of the ingredients is listed.

**· Proposition 65**

**· Chemicals known to cause cancer:**

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

64-17-5 Ethyl alcohol

**· Carcinogenic categories**

**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

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

64-17-5 Ethyl alcohol

A3

111-30-8 Glutaraldehyde

A4

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

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS02   GHS05   GHS06   GHS07   GHS08

· **Signal word** *Danger*

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

*Ethyl alcohol*

*Glutaraldehyde*

· **Hazard statements**

*Highly flammable liquid and vapor.*

*Harmful if swallowed.*

*Toxic 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 cancer.*

*May cause respiratory irritation.*

· **Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting/equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*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.*

*IF exposed or concerned: Get medical advice/attention.*

*Specific treatment (see on this label).*

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

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

*Wash contaminated clothing before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

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

*Store in a well-ventilated place. Keep cool.*

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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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** 08/31/2021 / -

· **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. 2: Flammable liquids – Category 2**

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

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

**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**

**Carc. 1A: Carcinogenicity – Category 1A**

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

US

# Safety Data Sheet

## according to WHS Regulations

Printing date 31.08.2021

Revision: 31.08.2021

### 1 Identification

- **Product identifier**
- **Trade name:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Article number:** 16531
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://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](http://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](http://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**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.



GHS08 health hazard

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

Carc. 1A H350 May cause cancer.

(Contd. on page 2)

## Safety Data Sheet according to WHS Regulations

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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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.*

· **Label elements**

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

· **Hazard pictograms**



GHS02



GHS05



GHS06



GHS07



GHS08

· **Signal word** *Danger*

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

*Ethyl alcohol*

*Glutaraldehyde*

· **Hazard statements**

*Highly flammable liquid and vapour.*

*Harmful if swallowed.*

*Toxic 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 cancer.*

*May cause respiratory irritation.*

· **Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*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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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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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.*
- IF exposed or concerned: Get medical advice/attention.*
- Specific treatment (see on this label).*
- If skin irritation or rash occurs: Get medical advice/attention.*
- If experiencing respiratory symptoms: Call a POISON CENTER/doctor.*
- 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.*
- **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:**

64-17-5	Ethyl alcohol	>50-≤100%
111-30-8	Glutaraldehyde	>2.5-≤10%

- **SVHC**

64-17-5	Ethyl alcohol
111-30-8	Glutaraldehyde

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

### 4 First Aid Measures

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

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 3)

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

### 5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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.  
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 ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 4)

· **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:**

#### 64-17-5 Ethyl alcohol

WES Long-term value: 1880 mg/m<sup>3</sup>, 1000 ppm

#### 111-30-8 Glutaraldehyde

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

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

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

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.

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

AU

(Contd. on page 6)

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Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

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### 9 Physical and Chemical Properties

<ul style="list-style-type: none"> <li>· <b>Information on basic physical and chemical properties</b></li> <li>· <b>General Information</b></li> <li>· <b>Appearance:</b></li> <li>· <b>Form:</b> Fluid</li> <li>· <b>Colour:</b> According to product specification</li> <li>· <b>Odour:</b> Characteristic</li> <li>· <b>Odour threshold:</b> Not determined.</li> </ul>	
· <b>pH-value:</b>	Not determined.
<ul style="list-style-type: none"> <li>· <b>Change in condition</b></li> <li>· <b>Melting point/freezing point:</b> Undetermined.</li> <li>· <b>Initial boiling point and boiling range:</b> 78 °C</li> </ul>	
· <b>Flash point:</b>	13 °C
· <b>Flammability (solid, gas):</b>	Not applicable.
· <b>Ignition temperature:</b>	425 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not selfigniting.
· <b>Explosive properties:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	3.5 Vol %
· <b>Upper:</b>	15 Vol %
· <b>Vapour pressure at 20 °C:</b>	59 hPa
· <b>Density at 20 °C:</b>	0.816 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	90.0 %
· <b>VOC (EC)</b>	90.00 %
· <b>Solids content:</b>	0.0 %
· <b>Other information</b>	No further relevant information available.

### 10 Stability and Reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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# Safety Data Sheet

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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- **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:  
Toxic  
Harmful  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Carc. 1A

### 12 Ecological Information

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

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Also poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

Harmful to aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

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

### 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

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

· **Uncleaned packaging:**

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

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

### 14 Transport information

· **UN-Number**

· **ADG, IMDG, IATA**

UN2924

· **UN proper shipping name**

· **ADG**

2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
(Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))

· **IMDG**

FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
(Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))

· **IATA**

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

· **Transport hazard class(es)**

· **ADG**



· **Class**

3 Flammable liquids.

· **Label**

3+8

· **IMDG**



· **Class**

3 Flammable liquids.

· **Label**

3/8

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# Safety Data Sheet

according to WHS Regulations

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Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

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## · IATA



· Class 8 Corrosive substances.  
 · Label 3 (8)

· Packing group II  
 · ADG, IMDG, IATA

· Environmental hazards: Not applicable.

· Special precautions for user Warning: Flammable liquids.  
 · Hazard identification number (Kemler code): 883  
 · EMS Number: F-E,S-C  
 · Segregation groups Acids  
 · Stowage Category B  
 · Stowage Code SW2 Clear of living quarters.

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

## · Transport/Additional information:

· ADG  
 · Limited quantities (LQ) 1L  
 · Excepted quantities (EQ) Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml  
 · Transport category 2  
 · Tunnel restriction code D/E

· IMDG  
 · Limited quantities (LQ) 0  
 · Excepted quantities (EQ) Code: E0  
 Not permitted as Excepted Quantity

· UN "Model Regulation": UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (GLUTARALDEHYDE, ETHANOL (ETHYL ALCOHOL)), 3 (8), II

## 15 Regulatory information

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

· Australian Inventory of Industrial Chemicals

All ingredients are listed.

· Standard for the Uniform Scheduling of Medicines and Poisons

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

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

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# Safety Data Sheet

according to WHS Regulations

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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· **Hazard pictograms**



· **Signal word** *Danger*

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

*Ethyl alcohol*  
*Glutaraldehyde*

· **Hazard statements**

*Highly flammable liquid and vapour.*

*Harmful if swallowed.*

*Toxic 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 cancer.*

*May cause respiratory irritation.*

· **Precautionary statements**

*Obtain special instructions before use.*

*Do not handle until all safety precautions have been read and understood.*

*Keep away from heat/sparks/open flames/hot surfaces. No smoking.*

*Ground/bond container and receiving equipment.*

*Use explosion-proof electrical/ventilating/lighting equipment.*

*Use only non-sparking tools.*

*Take precautionary measures against static discharge.*

*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.*

*IF exposed or concerned: Get medical advice/attention.*

*Specific treatment (see on this label).*

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

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

*Wash contaminated clothing before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, 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.*

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# Safety Data Sheet

## according to WHS Regulations

Printing date 31.08.2021

Revision: 31.08.2021

**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**  
H2 ACUTE TOXIC  
P5c FLAMMABLE LIQUIDS
- **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**

64-17-5	Ethyl alcohol
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.*

· **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. 2: Flammable liquids – Category 2

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

Acute Tox. 3: Acute toxicity - inhalation – Category 3

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

Carc. 1A: Carcinogenicity – Category 1A

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

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 08/31/2021

Reviewed on 08/31/2021

### 1 Identification

- **Product identifier**
- **Trade name:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Article number:** 16531
- **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**



GHS02 Flame

Flammable Liquids - Category 2

H225 Highly flammable liquid and vapour.



GHS06 Skull and crossbones

Acute Toxicity (Inhalation) - Category 3

H331 Toxic if inhaled.



GHS08 Health hazard

Respiratory Sensitizer - Category 1

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

Carcinogenicity - Category 1A

H350 May cause cancer.



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.

(Contd. on page 2)



## Safety Data Sheet according to HPR, Schedule 1

Printing date 08/31/2021

Reviewed on 08/31/2021

**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 1)

Specific Target Organ Toxicity - Single Exposure -  
Category 3

H335 May cause respiratory irritation.

· **Label elements**

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

· **Hazard pictograms**



· **Signal word** *Danger*

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

Ethyl alcohol

Glutaraldehyde

· **Hazard statements**

Highly flammable liquid and vapour.

Harmful if swallowed.

Toxic 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 cancer.

May cause respiratory irritation.

· **Precautionary statements**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

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

Ground and bond container and receiving equipment.

Use explosion-proof [electrical/ventilating/lighting] equipment.

Use non-sparking tools.

Take actions to prevent static discharges.

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.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

Take off contaminated clothing and wash it before reuse.

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

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

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.

(Contd. on page 3)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 08/31/2021

Reviewed on 08/31/2021

**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 2)

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 = 3

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*3

Fire = 3

Reactivity = 0

### 3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

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

· **Dangerous components:**

64-17-5	Ethyl alcohol	80-100% w/w *
111-30-8	Glutaraldehyde	5-10% w/w *

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

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

Immediately remove any clothing soiled by the product.

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

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

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

· **After inhalation:**

Supply fresh air or oxygen; call for doctor.

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

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

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

· **After swallowing:**

Immediately call a doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

· **Information for doctor:**

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

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

No further relevant information available.

CA

(Contd. on page 4)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 08/31/2021

Reviewed on 08/31/2021

**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 3)

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, 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.  
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 ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep receptacle tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **Specific end use(s)** No further relevant information available.

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(Contd. on page 5)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 08/31/2021

Reviewed on 08/31/2021

**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 4)

### 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:**

#### 64-17-5 Ethyl alcohol

EL STEL: 1000 ppm

EV TWA: 1,900 mg/m<sup>3</sup>, 1,000 ppm

#### 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.

· **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.

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# Safety Data Sheet

## according to HPR, Schedule 1

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Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

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· Eye protection:



Tightly sealed goggles

### 9 Physical and chemical properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

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

· pH-value: Not determined.

· Change in condition

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	78 °C

· Flash point: 13 °C

· Flammability (solid, gaseous): Not flammable.

· Ignition temperature: 425 °C

· Decomposition temperature: Not determined.

· Auto igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

· Explosion limits:

· Lower:	3.5 Vol %
· Upper:	15 Vol %

· Vapor pressure at 20 °C: 59 hPa

· Density at 20 °C:	0.816 g/cm <sup>3</sup>
· 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: 90.0 %

· Solids content: 0.0 %

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Contd. of page 6)

· **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:

Toxic

Harmful

Corrosive

Irritant

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)**

64-17-5 Ethyl alcohol

I

· **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.

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**


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

### 13 Disposal considerations

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

### 14 Transport information

- |   |   |
|---|---|
| <b>· UN-Number</b>  | UN2924  |
| <b>· DOT/TDG, ADR, IMDG, IATA</b>   |   |
| <b>· UN proper shipping name</b>  | Flammable liquids, corrosive, n.o.s. (Glutaraldehyde, Ethanol)                |
| <b>· DOT/TDG</b>  | 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.                                      |
| <b>· ADR</b>  | (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))                                     |
| <b>· IMDG</b>   | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL)) |
| <b>· IATA</b>   | FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)                 |
| <b>· Transport hazard class(es)</b>   |   |
| <b>· DOT/TDG (Transport dangerous goods):</b>                                       |   |
|  |   |
| <b>· Class</b>  | 3 Flammable liquids   |

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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· **Label** 3, 8

· **ADR**



· **Class** 3 Flammable liquids  
 · **Label** 3+8

· **IMDG**



· **Class** 3 Flammable liquids  
 · **Label** 3/8

· **IATA**



· **Class** 8 Corrosive substances  
 · **Label** 3 (8)

· **Packing group**

· **DOT/TDG** I  
 · **ADR, IMDG, IATA** II

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Flammable liquids

· **Hazard identification number (Kemler code):** 883

· **EMS Number:** F-E,S-C

· **Segregation groups** Acids

· **Stowage Category** B

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

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

· **Transport/Additional information:**

· **DOT/TDG**

· **Quantity limitations** On passenger aircraft/rail: 0.5 L  
 On cargo aircraft only: 2.5 L

· **ADR**

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

· **IMDG**

· **Limited quantities (LQ)** 0

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (GLUTARALDEHYDE, ETHANOL (ETHYL ALCOHOL)), 3 (8), II

## 15 Regulatory information

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

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

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%)**

64-17-5 Ethyl alcohol

· **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**



GHS02   GHS05   GHS06   GHS07   GHS08

- **Signal word** Danger

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

Ethyl alcohol  
Glutaraldehyde

· **Hazard statements**

Highly flammable liquid and vapour.  
Harmful if swallowed.  
Toxic 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 cancer.  
May cause respiratory irritation.

· **Precautionary statements**

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
Ground and bond container and receiving equipment.

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Use explosion-proof [electrical/ventilating/lighting] equipment.  
 Use non-sparking tools.  
 Take actions to prevent static discharges.  
 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.  
 IF exposed or concerned: Get medical advice/attention.  
 Specific treatment (see on this label).  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation or rash occurs: Get medical advice/attention.  
 If experiencing respiratory symptoms: Call a poison center/doctor.  
 Wash contaminated clothing before reuse.  
 In case of fire: Use for extinction: CO<sub>2</sub>, 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 the latest revision of the safety data sheet** 08/31/2021 / -

· **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 31.08.2021

Revision: 31.08.2021

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

- **1.1 Product identifier**
- **Trade name:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Article number:** 16531
- **UFI:** 14A1-M0D6-R00M-PJR9
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://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**



GHS02 flame

Flam. Liq. 2      H225 Highly flammable liquid and vapour.



GHS06 skull and crossbones

Acute Tox. 3      H331 Toxic 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.

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(Contd. of page 1)

STOT SE 3 H335 May cause respiratory irritation.

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

## 2.2 Label elements

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

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

## Hazard pictograms



GHS02 GHS05 GHS06 GHS08

## Signal word Danger

## Hazard-determining components of labelling:

Glutaraldehyde

## Hazard statements

H225 Highly flammable liquid and vapour.

H302 Harmful if swallowed.

H331 Toxic 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.

H412 Harmful 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.

P321 Specific treatment (see on this label).

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

P405 Store locked up.

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

## 2.3 Other hazards

## Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

## SECTION 3: Composition/information on ingredients

## 3.2 Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions.

## Dangerous components:

CAS: 64-17-5 EINECS: 200-578-6	Ethyl alcohol Flam. Liq. 2, H225	>50-≤100%
CAS: 111-30-8 EINECS: 203-856-5	Glutaraldehyde Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2.5-≤10%

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# Safety data sheet

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**Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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· **SVHC**

64-17-5	Ethyl alcohol
111-30-8	Glutaraldehyde

· **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:**

CO<sub>2</sub>, 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.

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See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Protect from heat.  
Protect against electrostatic charges.  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.
- **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:**

##### **64-17-5 Ethyl alcohol**

WEL	Long-term value: 1920 mg/m <sup>3</sup> , 1000 ppm
-----	--

##### **111-30-8 Glutaraldehyde**

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

- **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.

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# Safety data sheet

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Trade name: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

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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

## SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

· **Form:**

Fluid

· **Colour:**

According to product specification

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **pH-value:**

Not determined.

· **Change in condition**

· **Melting point/freezing point:**

Undetermined.

· **Initial boiling point and boiling range:** 78 °C

· **Flash point:**

13 °C

· **Flammability (solid, gas):**

Not applicable.

· **Ignition temperature:**

425 °C

· **Decomposition temperature:**

Not determined.

· **Auto-ignition temperature:**

Product is not selfigniting.

· **Explosive properties:**

Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

· **Lower:**

3.5 Vol %

· **Upper:**

15 Vol %

· **Vapour pressure at 20 °C:**

59 hPa

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· <b>Density at 20 °C:</b>	0.816 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>water:</b>	Fully miscible.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	90.0 %
· <b>VOC (EC)</b>	90.00 %
· <b>Solids content:</b>	0.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

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

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Harmful if swallowed.  
Toxic 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.

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- **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.
- **Ecotoxic effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water  
Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
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.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |                                     |   |
|-------------------------------------|---|
| <b>14.1 UN-Number</b>               |   |
| <b>ADR, IMDG, IATA</b>              | UN2924  |
| <b>14.2 UN proper shipping name</b> |   |
| <b>ADR</b>                          | 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.<br>(Glutaraldehyde, ETHANOL (ETHYL ALCOHOL)) |

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· **IMDG** *FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))*  
 · **IATA** *FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)*

· **14.3 Transport hazard class(es)**· **ADR**

· **Class** *3 Flammable liquids.*  
 · **Label** *3+8*

· **IMDG**

· **Class** *3 Flammable liquids.*  
 · **Label** *3/8*

· **IATA**

· **Class** *8 Corrosive substances.*  
 · **Label** *3 (8)*

· **14.4 Packing group**· **ADR, IMDG, IATA** *II*· **14.5 Environmental hazards:** *Not applicable.*· **14.6 Special precautions for user** *Warning: Flammable liquids.*· **Hazard identification number (Kemler code):** *883*· **EMS Number:** *F-E,S-C*· **Segregation groups** *Acids*· **Stowage Category** *B*· **Stowage Code** *SW2 Clear of living quarters.*

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

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)** *1L*· **Excepted quantities (EQ)** *Code: E2**Maximum net quantity per inner packaging: 30 ml**Maximum net quantity per outer packaging: 500 ml*· **Transport category** *2*· **Tunnel restriction code** *D/E*

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· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (GLUTARALDEHYDE, ETHANOL (ETHYL ALCOHOL)), 3 (8), II

### 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  
P5c FLAMMABLE LIQUIDS
- **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**

64-17-5	Ethyl alcohol
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**

- H225 Highly flammable liquid and vapour.
- 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

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*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**Flam. Liq. 2: Flammable liquids – Category 2**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**Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

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# Veiligheidsinformatieblad

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

- **1.1 Productidentificatie**
- **Handelsnaam:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Artikelnummer:** 16531
- **UFI:** 14A1-M0D6-R00M-PJR9
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- Aurion  
Binnenhaven 5  
6709 PD Wageningen  
The Netherlands  
Tel: 31 317 415094  
Fax: 31 317 415955  
email: [info@aurion.nl](mailto: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**



GHS02 vlam

Flam. Liq. 2      H225 Licht ontvlambare vloeistof en damp.



GHS06 doodshoofd met gekruiste beenderen

Acute Tox. 3      H331 Giftig bij inademing.



GHS08 gezondheidsgevaar

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



GHS05 corrosie

(Vervolg op blz. 2)

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*Skin Corr. 1B*      *H314* Veroorzaakt ernstige brandwonden en oogletsel.  
*Eye Dam. 1*      *H318* Veroorzaakt ernstig oogletsel.



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.

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

### · 2.2 Etiketteringselementen

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

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

#### · Gevarenpictogrammen



GHS02

GHS05

GHS06

GHS08

#### · Signaalwoord Gevaar

#### · Gevaaraanduidende componenten voor de etikettering:

Glutaaraldehyd

#### · Gevarenaanduidingen

*H225* Licht ontvlambare vloeistof en damp.

*H302* Schadelijk bij inslikken.

*H331* Giftig 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.

*H412* Schadelijk 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.

*P321* Specifieke behandeling vereist (zie op dit etiket).

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

*P405* Achter slot bewaren.

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

### · 2.3 Andere gevaren

#### · Resultaten van PBT- en zPzB-beoordeling

· **PBT:** Niet bruikbaar.

· **zPzB:** Niet bruikbaar.

NL

(Vervolg op blz. 3)

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(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: 64-17-5	ethanol	>50-≤100%
EINECS: 200-578-6	☠ Flam. Liq. 2, H225	
CAS: 111-30-8	Glutaaraldehyd	>2,5-≤10%
EINECS: 203-856-5	☠ Acute Tox. 3, H301; Acute Tox. 2, H330; ☠ Resp. Sens. 1, H334; ☠ Skin Corr. 1B, H314; ☠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ☠ Skin Sens. 1A, H317; STOT SE 3, H335	

- **SVHC**

64-17-5	ethanol
111-30-8	Glutaaraldehyd

- **Aanvullende gegevens:**

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

## RUBRIEK 4: Eerstehulpmaatregelen

- **4.1 Beschrijving van de eerstehulpmaatregelen**
- **Algemene informatie:**  
Verontreinigde kleding onmiddellijk uittrekken.  
Het is mogelijk dat vergiftigingssymptomen pas na vele uren optreden. Om deze reden is medische controle gedurende minstens 48 uur na een ongeval noodzakelijk.  
Ademhalingstoestel pas afnemen nadat de verontreinigde kleding verwijderd is.  
Bij onregelmatige ademhaling of ademstilstand kunstmatige ademhaling toepassen.
- **Na het inademen:**  
Verse lucht of zuurstof toedienen; deskundige medische hulp inroepen.  
Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- **Na huidcontact:** Onmiddellijk met water en zeep afwassen en goed naspoelen.
- **Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.
- **Na inslikken:**  
Onmiddellijk arts raadplegen.  
Drink zeer veel water en voer verse lucht aan. Onmiddellijk een dokter waarschuwen.
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**  
Geen verdere relevante informatie verkrijgbaar.

## RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:**  
CO<sub>2</sub>, 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 brandweertieners**
- **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

NL

(Vervolg op blz. 4)

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### 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.
- **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 terecht komen.
- **6.3 Insluitings- 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:**  
Onststekingsbronnen op afstand houden - niet roken.  
Beschermen tegen hitte.  
Maatregelen treffen tegen ontlading van statische elektriciteit.  
Ademhalingsstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Op een koele plaats bewaren.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:**  
Tanks ondoordringbaar gesloten houden.  
Koel en droog bewaren in goed gesloten vaten.  
Tegen hitte en directe zonnestralen beschermen.
- **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:**

#### 64-17-5 ethanol

WGW	Korte termijn waarde: 1900 mg/m <sup>3</sup> , 990 ppm
	Lange termijn waarde: 260 mg/m <sup>3</sup> , 35 ppm

- **Aanvullende gegevens:** Als basis dienden lijsten die bij opstelling geldig waren.

(Vervolg op blz. 5)



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- **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 ademhalingsstoestel gebruiken.
- **Handbescherming:**


**Veiligheidshandschoenen**

Het handschoenmateriaal moet ondoorlatend en bestand zijn tegen het product / de stof / de bereiding.  
Op grond van falende testen kan geen aanbeveling voor handschoenmateriaal voor het product / de bereiding / het chemicaliënmengsel afgegeven worden.  
Kies handschoenmateriaal rekening houdend met de penetratietijden, de permeatiegraden en de degradatie.

- **Handschoenmateriaal**
  - De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant. Aangezien het product uit meerdere stoffen is samengesteld, is de duurzaamheid van de handschoenmaterialen niet vooraf berekenbaar en moet derhalve vóór het gebruik worden getest.
- **Doordringingstijd van het handschoenmateriaal**
  - De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:**


**Nauw aansluitende veiligheidsbril**

### RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**
- **Algemene gegevens**
- **Voorkomen:**
- **Vorm:** Vloeibaar
- **Kleur:** Volgens de produktbeschrijving
- **Geur:** Karakteristiek
- **Geurdrempelwaarde:** Niet bepaald.
- **pH-waarde:** Niet bepaald.
- **Toestandsverandering**
- **Smelt-/vriespunt:** Niet bepaald.
- **Beginkookpunt en kooktraject:** 78 °C
- **Vlampunt:** 13 °C

(Vervolg op blz. 6)

# Veiligheidsinformatieblad

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**Handelsnaam: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(Vervolg van blz. 5)

· <b>Ontvlambaarheid (vast, gas):</b>	Niet bruikbaar.
· <b>Ontstekingstemperatuur:</b>	425 °C
· <b>Ontledingstemperatuur:</b>	Niet bepaald.
· <b>Zelfontbrandingstemperatuur:</b>	Het produkt ontbrandt niet uit zichzelf.
· <b>Ontploffingseigenschappen:</b>	Het produkt is niet ontploffingsgevaarlijk, maar de vorming van ontploffingsgevaarlijke damp-/luchtmengsels is mogelijk.
· <b>Ontploffingsgrenzen:</b>	
· <b>Onderste:</b>	3,5 Vol %
· <b>Bovenste:</b>	15 Vol %
· <b>Dampspanning bij 20 °C:</b>	59 hPa
· <b>Dichtheid bij 20 °C:</b>	0,816 g/cm <sup>3</sup>
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bepaald.
· <b>Verdampingssnelheid</b>	Niet bepaald.
· <b>Oplosbaarheid in/mengbaarheid met</b>	
· <b>Water:</b>	Volledig mengbaar.
· <b>Verdelingscoëfficiënt: n-octanol/water:</b>	Niet bepaald.
· <b>Viscositeit</b>	
· <b>Dynamisch:</b>	Niet bepaald.
· <b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
· <b>Organisch oplosmiddel:</b>	90,0 %
· <b>VOC (EG)</b>	90,00 %
· <b>Gehalte aan vaste bestanddelen:</b>	0,0 %
· <b>9.2 Overige informatie</b>	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.  
Giftig bij inademing.

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

**Indelingsrelevantie LD/LC50-waarden:**
**111-30-8 Glutaaraldehyd**

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

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

### RUBRIEK 12: Ecologische informatie

- **12.1 Toxiciteit**
- **Aquatische toxiciteit:** Geen verdere relevante informatie verkrijgbaar.
- **12.2 Persistentie en afbreekbaarheid** Geen verdere relevante informatie verkrijgbaar.
- **12.3 Bioaccumulatie** Geen verdere relevante informatie verkrijgbaar.
- **12.4 Mobiliteit in de bodem** Geen verdere relevante informatie verkrijgbaar.
- **Ecotoxische effecten:**
- **Opmerking:**  
Giftig voor vissen.  
Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioacumulerend 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.  
giftig voor in het water levende organismen  
schadelijk voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

NL

(Vervolg op blz. 8)

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(Vervolg van blz. 7)

## RUBRIEK 13: Instructies voor verwijdering

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

## RUBRIEK 14: Informatie met betrekking tot het vervoer

- |  |   |
|--|---|
| · <b>14.1 VN-nummer</b><br>· <b>ADR, IMDG, IATA</b>  | UN2924  |
| · <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b><br>· <b>ADR</b><br><br>· <b>IMDG</b><br><br>· <b>IATA</b> | 2924 <b>BRANDBARE VLOEISTOF, BIJTEND, N.E.G.</b><br>(Glutaaraldehyd, ETHANOL (ETHYLALCOHOL))<br><b>FLAMMABLE LIQUID, CORROSIVE, N.O.S.</b><br>(Glutaraldehyde, ETHANOL (ETHYLALCOHOL))<br><b>FLAMMABLE LIQUID, CORROSIVE, N.O.S.</b><br>(Glutaraldehyde, ETHANOL) |
| · <b>14.3 Transportgevarenklasse(n)</b><br>· <b>ADR</b>  |   |
|   |   |
| · <b>klasse</b><br>· <b>Etiket</b>   | 3 Brandbare vloeistoffen<br>3+8   |
| · <b>IMDG</b>  |   |
|   |   |
| · <b>Class</b><br>· <b>Label</b>   | 3 Brandbare vloeistoffen<br>3/8   |
| · <b>IATA</b>  |   |
|   |   |
| · <b>Class</b><br>· <b>Label</b>   | 8 Bijtende stoffen<br>3 (8)   |
| · <b>14.4 Verpakkingsgroep:</b><br>· <b>ADR, IMDG, IATA</b>  | II  |
| · <b>14.5 Milieugevaren:</b>   | Niet bruikbaar.   |
| · <b>14.6 Bijzondere voorzorgen voor de gebruiker</b><br>· <b>Gevaarsidentificatienummer (Kemler-getal):</b>                           | Waarschuwing: Brandbare vloeistoffen<br>883   |

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(Vervolg van blz. 8)

· <b>EMS-nummer:</b>	F-E,S-C
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b>	Niet bruikbaar.
· <b>Transport/verdere gegevens:</b>	
· <b>ADR</b>	
· <b>Beperkte hoeveelheden (LQ)</b>	1L
· <b>Uitgezonderde hoeveelheden (EQ)</b>	Code: E2 Grootste netto hoeveelheid per binnenverpakking: 30 ml Grootste netto hoeveelheid per buitenverpakking: 500 ml
· <b>Vervoerscategorie</b>	2
· <b>Tunnelbeperkingscode</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>VN "Model Regulation":</b>	UN 2924 BRANDBARE VLOEISTOF, BIJTEND, N.E.G. (GLUTAARALDEHYD, ETHANOL (ETHYLALCOHOL)), 3 (8), II

## RUBRIEK 15: Regelgeving

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

#### · SZW-lijst van kankerverwekkende stoffen

64-17-5 ethanol

#### · SZW-lijst van mutagene stoffen

geen der bestanddelen staat op de lijst.

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

64-17-5 ethanol

IA

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

64-17-5 ethanol

IA

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

64-17-5 ethanol

x

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

geen der bestanddelen staat op de lijst.

#### · Lijst van Potentieel Zeer Zorgwekkende Stoffen

111-30-8 Glutaaraldehyd

#### · Richtlijn 2012/18/EU

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

#### · Seveso-categorie

H2 ACUUT TOXISCH

P5c ONTVLAMBARE VLOEISTOFFEN

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

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

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· **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**

64-17-5	ethanol
111-30-8	Glutaaraldehyd

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

### RUBRIEK 16: Overige informatie

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

· **Relevante zinnen**

H225 Licht ontvlambare vloeistof en damp.

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

Flam. Liq. 2: Ontvlambare vloeistoffen – Categorie 2

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

Aquatic Chronic 3: Gevaar voor het aquatisch milieu - aquatisch gevaar op lange termijn – Categorie 3

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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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:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Code du produit:** 16531
- **UFI:** 14A1-M0D6-R00M-PJR9
- **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**



GHS02 flamme

Flam. Liq. 2      H225 Liquide et vapeurs très inflammables.



GHS06 tête de mort sur deux tibias

Acute Tox. 3      H331 Toxique 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.



GHS07

Acute Tox. 4      H302 Nocif en cas d'ingestion.

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*Skin Sens. 1 H317 Peut provoquer une allergie cutanée.*

*STOT SE 3 H335 Peut irriter les voies respiratoires.*

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

### · 2.2 Éléments d'étiquetage

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

· **Pictogrammes de danger**



GHS02 GHS05 GHS06 GHS08

· **Mention d'avertissement** Danger

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

glutaral

· **Mentions de danger**

*H225 Liquide et vapeurs très inflammables.*

*H302 Nocif en cas d'ingestion.*

*H331 Toxique 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.*

*H412 Nocif 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.*

*P321 Traitement spécifique (voir sur cette étiquette).*

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

*P405 Garder sous clef.*

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

· **2.3 Autres dangers**

· **Résultats des évaluations PBT et vPvB**

· **PBT:** Non applicable.

· **vPvB:** Non applicable.

## RUBRIQUE 3: Composition/informations sur les composants

· **3.2 Caractérisation chimique: Mélanges**

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

(suite page 3)



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(suite de la page 2)

· Composants dangereux:		
CAS: 64-17-5 EINECS: 200-578-6	éthanol Flam. Liq. 2, H225	>50-≤100%
CAS: 111-30-8 EINECS: 203-856-5	glutaral Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
· SVHC		
64-17-5	éthanol	
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:

CO<sub>2</sub>, 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.

(suite page 4)

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(suite de la page 3)

- **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.  
 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 à l'abri des sources d'inflammation - ne pas fumer.  
 Tenir à l'abri de la chaleur.  
 Prendre des mesures contre les charges électrostatiques.  
 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:** *Stocker dans un endroit frais.*
- **Indications concernant le stockage commun:** *Pas nécessaire.*
- **Autres indications sur les conditions de stockage:**  
*Tenir les emballages hermétiquement fermés.  
 Stocker au frais et au sec dans des fûts bien fermés.  
 Protéger de la forte chaleur et du rayonnement direct du soleil.*
- **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:**

#### 64-17-5 éthanol

VLEP	Valeur momentanée: 9500 mg/m <sup>3</sup> , 5000 ppm
	Valeur à long terme: 1900 mg/m <sup>3</sup> , 1000 ppm

#### 111-30-8 glutaral

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

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# Fiche de données de sécurité

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(suite de la page 4)

· **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

Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.

À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.

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

· **Matériau des gants**

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

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

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

· **Protection des yeux:**



Lunettes de protection hermétiques

### RUBRIQUE 9: Propriétés physiques et chimiques

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

· **Indications générales**

· **Aspect:**

· **Forme:**

Liquide

· **Couleur:**

Selon désignation produit

· **Odeur:**

Caractéristique

· **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:** 78 °C

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(suite de la page 5)

· <b>Point d'éclair</b>	13 °C
· <b>Inflammabilité (solide, gaz):</b>	Non applicable.
· <b>Température d'inflammation:</b>	425 °C
· <b>Température de décomposition:</b>	Non déterminé.
· <b>Température d'auto-inflammabilité:</b>	Le produit ne s'enflamme pas spontanément.
· <b>Propriétés explosives:</b>	Le produit n'est pas explosif; toutefois, des mélanges explosifs vapeur-air peuvent se former.
· <b>Limites d'explosion:</b>	
· <b>Inférieure:</b>	3,5 Vol %
· <b>Supérieure:</b>	15 Vol %
· <b>Pression de vapeur à 20 °C:</b>	59 hPa
· <b>Densité à 20 °C:</b>	0,816 g/cm <sup>3</sup>
· <b>Densité relative</b>	Non déterminé.
· <b>Densité de vapeur:</b>	Non déterminé.
· <b>Taux d'évaporation:</b>	Non déterminé.
· <b>Solubilité dans/miscibilité avec l'eau:</b>	Entièrement miscible
· <b>Coefficient de partage: n-octanol/eau:</b>	Non déterminé.
· <b>Viscosité:</b>	
· <b>Dynamique:</b>	Non déterminé.
· <b>Cinématique:</b>	Non déterminé.
· <b>Teneur en solvants:</b>	
· <b>Solvants organiques:</b>	90,0 %
· <b>VOC (CE)</b>	90,00 %
· <b>Teneur en substances solides:</b>	0,0 %
· <b>9.2 Autres informations</b>	Pas d'autres informations importantes disponibles.

### RUBRIQUE 10: Stabilité et réactivité

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

### RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**  
Nocif en cas d'ingestion.  
Toxique par inhalation.

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**· 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)**
- **Mutagenicité sur les cellules germinales**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
Peut irriter les voies respiratoires.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:**  
Toxique chez les poissons.  
Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**  
Catégorie de pollution des eaux 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.  
Toxique pour les organismes aquatiques.  
Nocif pour les organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

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

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

### RUBRIQUE 14: Informations relatives au transport

<ul style="list-style-type: none"> <li>· <b>14.1 Numéro ONU</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	UN2924
<ul style="list-style-type: none"> <li>· <b>14.2 Désignation officielle de transport de l'ONU</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	2924 LIQUIDE INFLAMMABLE, CORROSIF, N.S.A. (glutaral, ÉTHANOL (ALCOOL ÉTHYLIQUE)) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL)) FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)
<ul style="list-style-type: none"> <li>· <b>14.3 Classe(s) de danger pour le transport</b></li> <li>· <b>ADR</b></li> </ul>	<div style="display: flex; align-items: center; gap: 10px;">   </div> <p>· <b>Classe</b> 3 Liquides inflammables.            · <b>Étiquette</b> 3+8</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>	<div style="display: flex; align-items: center; gap: 10px;">   </div> <p>· <b>Class</b> 3 Liquides inflammables.            · <b>Label</b> 3/8</p>
<ul style="list-style-type: none"> <li>· <b>IATA</b></li> </ul>	<div style="display: flex; align-items: center; gap: 10px;">   </div> <p>· <b>Class</b> 8 Matières corrosives.            · <b>Label</b> 3 (8)</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Groupe d'emballage</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	II
<ul style="list-style-type: none"> <li>· <b>14.5 Dangers pour l'environnement:</b></li> </ul>	Non applicable.
<ul style="list-style-type: none"> <li>· <b>14.6 Précautions particulières à prendre par l'utilisateur</b></li> </ul>	Attention: Liquides inflammables.

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· Numéro d'identification du danger (Indice Kemler):	883
· No EMS:	F-E,S-C
· Segregation groups	Acids
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC	Non applicable.
· Indications complémentaires de transport:	
· ADR	
· Quantités limitées (LQ)	1L
· Quantités exceptées (EQ)	Code: E2 Quantité maximale nette par emballage intérieur: 30 ml Quantité maximale nette par emballage extérieur: 500 ml
· Catégorie de transport	2
· Code de restriction en tunnels	D/E
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· "Règlement type" de l'ONU:	UN 2924 LIQUIDE INFLAMMABLE, CORROSIF, N.S.A. (GLUTARAL, ÉTHANOL (ALCOOL ÉTHYLIQUE)), 3 (8), II

### RUBRIQUE 15: Informations relatives à la réglementation

- 15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement
- Directive 2012/18/UE
- Substances dangereuses désignées - ANNEXE I Aucun des composants n'est compris.
- Catégorie SEVESO  
H2 TOXICITÉ AIGUË  
P5c LIQUIDES INFLAMMABLES
- 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

64-17-5 éthanol

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**

H225 Liquide et vapeurs très inflammables.

H301 Toxique en cas d'ingestion.

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

H317 Peut provoquer une allergie cutanée.

H330 Mortel par inhalation.

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

H335 Peut irriter les voies respiratoires.

H400 Très toxique pour les organismes aquatiques.

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

· **Acronymes et abréviations:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Liquides inflammables – Catégorie 2

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

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



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.08.2021

überarbeitet am: 31.08.2021

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

- **1.1 Produktidentifikator**
- **Handelsname:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL
- **Artikelnummer:** 16531
- **UFI:** 14A1-MOD6-R00M-PJR9
- **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](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)  
  
Science Services GmbH  
Unterhachinger Str. 75  
81737 München Germany  
  
Tel: +49(0)89 18 93 668-0  
[safety@scienceservices.de](mailto:safety@scienceservices.de)  
  
Deutschland: +49 (0)89 19240, 24h Giftnotruf Munchen, [www.toxinfo.org](http://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**



GHS02 Flamme

Flam. Liq. 2

H225 Flüssigkeit und Dampf leicht entzündbar.



GHS06 Totenkopf mit gekreuzten Knochen

Acute Tox. 3

H331 Giftig bei Einatmen.



GHS08 Gesundheitsgefahr

Resp. Sens. 1

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

(Fortsetzung auf Seite 2)

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(Fortsetzung von Seite 1)



GHS05 Ätzwirkung

Skin Corr. 1B H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

Eye Dam. 1 H318 Verursacht schwere Augenschäden.



GHS07

Acute Tox. 4 H302 Gesundheitsschädlich bei Verschlucken.

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

STOT SE 3 H335 Kann die Atemwege reizen.

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

### · 2.2 Kennzeichnungselemente

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

Das Produkt ist gemäß CLP-Verordnung eingestuft und gekennzeichnet.

#### · Gefahrenpiktogramme



GHS02



GHS05



GHS06



GHS08

#### · Signalwort Gefahr

#### · Gefahrbestimmende Komponenten zur Etikettierung:

Glutaral

#### · Gefahrenhinweise

H225 Flüssigkeit und Dampf leicht entzündbar.

H302 Gesundheitsschädlich bei Verschlucken.

H331 Giftig 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.

H412 Schädlich 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.

P321 Besondere Behandlung (siehe auf diesem Kennzeichnungsetikett).

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

P405 Unter Verschluss aufbewahren.

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

#### · 2.3 Sonstige Gefahren

#### · Ergebnisse der PBT- und vPvB-Beurteilung

· **PBT:** Nicht anwendbar.

(Fortsetzung auf Seite 3)

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 · **vPvB:** Nicht anwendbar.

(Fortsetzung von Seite 2)

### ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

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

- **Gefährliche Inhaltsstoffe:**

CAS: 64-17-5	Ethanol	>50-≤100%
EINECS: 200-578-6	Flam. Liq. 2, H225	
CAS: 111-30-8	Glutaral	>2,5-≤10%
EINECS: 203-856-5	Acute Tox. 3, H301;  Acute Tox. 2, H330;  Resp. Sens. 1, H334;  Skin Corr. 1B, H314;  Aquatic Acute 1, H400;  Aquatic Chronic 2, H411;  Skin Sens. 1A, H317; STOT SE 3, H335	

- **SVHC**

64-17-5	Ethanol	
111-30-8	Glutaral	

- **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:**
  - CO<sub>2</sub>, 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.

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- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
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:**  
Zündquellen fernhalten - nicht rauchen.  
Vor Hitze schützen.  
Maßnahmen gegen elektrostatische Aufladung treffen.  
Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** An einem kühlen Ort lagern.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:**  
Behälter dicht geschlossen halten.  
In gut verschlossenen Gebinden kühl und trocken lagern.  
Vor Hitze und direkter Sonnenbestrahlung schützen.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** Entzündbare Flüssigkeiten
- **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.

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### · 8.1 Zu überwachende Parameter

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

##### 64-17-5 Ethanol

AGW	Langzeitwert: 380 mg/m <sup>3</sup> , 200 ml/m <sup>3</sup> 4(II);DFG, Y
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##### 111-30-8 Glutaral

AGW	Langzeitwert: 0,2 mg/m <sup>3</sup> , 0,05 ml/m <sup>3</sup> 2(I);AGS, Sah, Y
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· **Zusätzliche Hinweise:** Als Grundlage dienen die bei der Erstellung gültigen Listen.

### · 8.2 Begrenzung und Überwachung der Exposition

#### · Persönliche Schutzausrüstung:

##### · Allgemeine Schutz- und Hygienemaßnahmen:

Von Nahrungsmitteln, Getränken und Futtermitteln fernhalten.

Beschmutzte, getränkte Kleidung sofort ausziehen.

Vor den Pausen und bei Arbeitsende Hände waschen.

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

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### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

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

· <b>pH-Wert:</b>	Nicht bestimmt.
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**· Zustandsänderung**

· <b>Schmelzpunkt/Gefrierpunkt:</b>	Nicht bestimmt.
· <b>Siedebeginn und Siedebereich:</b>	78 °C

· <b>Flammpunkt:</b>	13 °C
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· <b>Entzündbarkeit (fest, gasförmig):</b>	Nicht anwendbar.
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· <b>Zündtemperatur:</b>	425 °C
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· <b>Zersetzungstemperatur:</b>	Nicht bestimmt.
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· <b>Selbstentzündungstemperatur:</b>	Das Produkt ist nicht selbstentzündlich.
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· <b>Explosive Eigenschaften:</b>	Das Produkt ist nicht explosionsgefährlich, jedoch ist die Bildung explosionsgefährlicher Dampf-/Luftgemische möglich.
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**· Explosionsgrenzen:**

· <b>Untere:</b>	3,5 Vol %
· <b>Obere:</b>	15 Vol %

· <b>Dampfdruck bei 20 °C:</b>	59 hPa
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· <b>Dichte bei 20 °C:</b>	0,816 g/cm <sup>3</sup>
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· <b>Relative Dichte</b>	Nicht bestimmt.
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· <b>Dampfdichte</b>	Nicht bestimmt.
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· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.
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**· Löslichkeit in / Mischbarkeit mit**

· <b>Wasser:</b>	Vollständig mischbar.
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· <b>Verteilungskoeffizient: n-Octanol/Wasser:</b>	Nicht bestimmt.
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**· Viskosität:**

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

· <b>Organische Lösemittel:</b>	90,0 %
· <b>VOC (EU)</b>	90,00 %

· <b>Festkörpergehalt:</b>	0,0 %
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· <b>9.2 Sonstige Angaben</b>	Keine weiteren relevanten Informationen verfügbar.
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### ABSCHNITT 10: Stabilität und Reaktivität

· <b>10.1 Reaktivität</b>	Keine weiteren relevanten Informationen verfügbar.
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- **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.  
Giftig bei Einatmen.

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

#### 111-30-8 Glutaral

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

##### · Primäre Reizwirkung:

##### · Ätz-/Reizwirkung auf die Haut

Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

##### · 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:

Giftig für Fische.  
Schädlich für Fische.

##### · Weitere ökologische Hinweise:

##### · Allgemeine Hinweise:

Wassergefährdungsklasse 3 (Selbsteinstufung): stark wassergefährdend  
Nicht in das Grundwasser, in Gewässer oder in die Kanalisation gelangen lassen, auch nicht in kleinen Mengen.

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- 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.  
 giftig für Wasserorganismen  
 schädlich für Wasserorganismen
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
  - **PBT:** Nicht anwendbar.
  - **vPvB:** Nicht anwendbar.
  - **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.


### ABSCHNITT 13: Hinweise zur Entsorgung

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

### ABSCHNITT 14: Angaben zum Transport

- **14.1 UN-Nummer**
- **ADR, IMDG, IATA** UN2924
- **14.2 Ordnungsgemäße UN-Versandbezeichnung**
- **ADR** 2924 ENTZÜNDBARER FLÜSSIGER STOFF, ÄTZEND, N.A.G. (Glutaral, ETHANOL (ETHYLALKOHOL))
- **IMDG** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))
- **IATA** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)
- **14.3 Transportgefahrenklassen**
- **ADR**
- 
- **Klasse** 3 Entzündbare flüssige Stoffe
- **Gefahrzettel** 3+8

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- **IMDG**
- 
- **Class** 3 Entzündbare flüssige Stoffe

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· <b>Label</b>	3/8
· <b>IATA</b>	
	
· <b>Class</b>	8 Ätzende Stoffe
· <b>Label</b>	3 (8)
· <b>14.4 Verpackungsgruppe</b> · <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Umweltgefahren:</b>	Nicht anwendbar.
· <b>14.6 Besondere Vorsichtsmaßnahmen für den Verwender</b>	Achtung: Entzündbare flüssige Stoffe
· <b>Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl):</b>	883
· <b>EMS-Nummer:</b>	F-E,S-C
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code</b>	Nicht anwendbar.
· <b>Transport/weitere Angaben:</b>	
· <b>ADR</b>	
· <b>Begrenzte Menge (LQ)</b>	1L
· <b>Freigestellte Mengen (EQ)</b>	Code: E2 Höchste Nettomenge je Innenverpackung: 30 ml Höchste Nettomenge je Außenverpackung: 500 ml
· <b>Beförderungskategorie</b>	2
· <b>Tunnelbeschränkungscode</b>	D/E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	0
· <b>Excepted quantities (EQ)</b>	Code: E0 Not permitted as Excepted Quantity
· <b>UN "Model Regulation":</b>	UN 2924 ENTZÜNDBARER FLÜSSIGER STOFF, ÄTZEND, N.A.G. (GLUTARAL, ETHANOL (ETHYLALKOHOL)), 3 (8), II

### ABSCHNITT 15: Rechtsvorschriften

- **15.1 Vorschriften zu Sicherheit, Gesundheits- und Umweltschutz/spezifische Rechtsvorschriften für den Stoff oder das Gemisch**
- **Richtlinie 2012/18/EU**
- **Namentlich aufgeführte gefährliche Stoffe - ANHANG I Keiner der Inhaltsstoffe ist enthalten.**
- **Seveso-Kategorie**  
H2 AKUT TOXISCH  
P5c ENTZÜNDBARE FLÜSSIGKEITEN
- **Mengenschwelle (in Tonnen) für die Anwendung in Betrieben der unteren Klasse 50 t**

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- **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 %
I	10,0
NK	90,0

- **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**

64-17-5	Ethanol
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**

H225 Flüssigkeit und Dampf leicht entzündbar.

H301 Giftig bei Verschlucken.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H330 Lebensgefahr bei Einatmen.

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

H335 Kann die Atemwege reizen.

H400 Sehr giftig für Wasserorganismen.

H411 Giftig für Wasserorganismen, mit langfristiger Wirkung.

· **Abkürzungen und Akronyme:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 2: Entzündbare Flüssigkeiten – Kategorie 2

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

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

DE

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

Stampato il: 31.08.2021

Revisione: 31.08.2021

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

· **Articolo numero:** 16531

· **UFI:** 14A1-M0D6-R00M-PJR9

· **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](mailto:info@emsdiasum.com)

[www.emsdiasum.com](http://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](http://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**



GHS02 fiamma

Flam. Liq. 2      H225 Liquido e vapori facilmente infiammabili.



GHS06 teschio e tibie incrociate

Acute Tox. 3      H331 Tossico 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.

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GHS07

Acute Tox. 4      H302 Nocivo se ingerito.  
Skin Sens. 1      H317 Può provocare una reazione allergica cutanea.  
STOT SE 3      H335 Può irritare le vie respiratorie.  
.....  
Aquatic Chronic 3 H412 Nocivo per gli organismi acquatici con effetti di lunga durata.

· **2.2 Elementi dell'etichetta**

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

Il prodotto è classificato ed etichettato conformemente al regolamento CLP.

· **Pittogrammi di pericolo**



GHS02

GHS05

GHS06

GHS08

· **Avvertenza Pericolo**

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

· **Indicazioni di pericolo**

H225 Liquido e vapori facilmente infiammabili.  
H302 Nocivo se ingerito.  
H331 Tossico 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.  
H412 Nocivo 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.  
P321 Trattamento specifico (vedere su questa etichetta).  
P362+P364 Togliere tutti gli indumenti contaminati e lavarli prima di indossarli nuovamente.  
P405 Conservare sotto chiave.  
P501 Smaltire il prodotto/recipiente in conformità con le disposizioni locali / regionali / nazionali / internazionali.

· **2.3 Altri pericoli**

· **Risultati della valutazione PBT e vPvB**

· **PBT:** Non applicabile.  
· **vPvB:** Non applicabile.

**SEZIONE 3: Composizione/informazioni sugli ingredienti**

· **3.2 Caratteristiche chimiche: Miscela**

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

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· <b>Sostanze pericolose:</b>		
CAS: 64-17-5 EINECS: 200-578-6	etanolo Flam. Liq. 2, H225	>50-≤100%
CAS: 111-30-8 EINECS: 203-856-5	glutarale Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
· <b>SVHC</b>		
64-17-5	etanolo	
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.

Levare 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:**

CO<sub>2</sub>, 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.

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Diluire abbondantemente con acqua.

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

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

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

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:**

Tenere lontano da fonti di calore, non fumare.

Proteggere dal calore.

Adottare provvedimenti contro cariche elettrostatiche.

Tener pronto il respiratore.

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

**· Stoccaggio:**

**· Requisiti dei magazzini e dei recipienti:** Conservare in ambiente fresco.

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

**· Ulteriori indicazioni relative alle condizioni di immagazzinamento:**

Mantenere i recipienti ermeticamente chiusi.

Conservare in luogo fresco e asciutto in fusti ben chiusi.

Proteggere dal calore e dai raggi diretti del sole.

**· 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:**

**64-17-5 etanolo**

TWA	Valore a breve termine: 1884 mg/m <sup>3</sup> , 1000 ppm
A3	

**111-30-8 glutarale**

TWA	Limite Ceiling: 0,2 mg/m <sup>3</sup> , 0,05 ppm
sen, A4	

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

**· 8.2 Controlli dell'esposizione**

**· Mezzi protettivi individuali:**

**· Norme generali protettive e di igiene del lavoro:**

Tenere lontano da cibo, bevande e foraggi.

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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.

· **Guanti protettivi:**



Guanti protettivi

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

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

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

· **Materiale dei guanti**

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

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

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

· **Occhiali protettivi:**



Occhiali protettivi a tenuta

## SEZIONE 9: Proprietà fisiche e chimiche

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

· **Indicazioni generali**

· **Aspetto:**

· **Forma:**

Liquido

· **Colore:**

In conformità con la denominazione del prodotto

· **Odore:**

Caratteristico

· **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:** 78 °C

· **Punto di infiammabilità:**

13 °C

· **Infiammabilità (solidi, gas):**

Non applicabile.

· **Temperatura di accensione:**

425 °C

· **Temperatura di decomposizione:**

Non definito.

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· <b>Temperatura di autoaccensione:</b>	Prodotto non autoinfiammabile.
· <b>Proprietà esplosive:</b>	Prodotto non è esplosivo, è tuttavia possibile la formazione di miscele di vapori/aria esplosive.
· <b>Limiti di infiammabilità:</b>	
· <b>Inferiore:</b>	3,5 Vol %
· <b>Superiore:</b>	15 Vol %
· <b>Tensione di vapore a 20 °C:</b>	59 hPa
· <b>Densità a 20 °C:</b>	0,816 g/cm <sup>3</sup>
· <b>Densità relativa</b>	Non definito.
· <b>Densità di vapore:</b>	Non definito.
· <b>Velocità di evaporazione</b>	Non definito.
· <b>Solubilità in/Miscibilità con acqua:</b>	Completamente miscibile.
· <b>Coefficiente di ripartizione: n-ottanolo/acqua:</b>	Non definito.
· <b>Viscosità:</b>	
· <b>Dinamica:</b>	Non definito.
· <b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
· <b>Solventi organici:</b>	90,0 %
· <b>VOC (CE)</b>	90,00 %
· <b>Contenuto solido:</b>	0,0 %
· <b>9.2 Altre informazioni</b>	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.  
Tossico se inalato.

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

#### 111-30-8 glutarale

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

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IT

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- **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.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
Può irritare le vie respiratorie.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

## SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:**  
Tossico per i pesci.  
Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 3 (D) (Autoclassificazione): molto pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature, anche in piccole dosi.  
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.  
tossico per gli organismi acquatici  
nocivo per gli organismi acquatici
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

## 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.

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· **Detergente consigliato:** Acqua eventualmente con l'aggiunta di detersivi.

### SEZIONE 14: Informazioni sul trasporto

· **14.1 Numero ONU**

· **ADR, IMDG, IATA**

UN2924

· **14.2 Nome di spedizione dell'ONU**

· **ADR**

2924 LIQUIDO INFIAMMABILE, CORROSIVO, N.A.S.  
(glutarale, ETANOLO (ALCOL ETILICO))

· **IMDG**

FLAMMABLE LIQUID, CORROSIVE, N.O.S.  
(Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))

· **IATA**

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

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

· **ADR**



· **Classe**

3 Liquidi infiammabili

· **Etichetta**

3+8

· **IMDG**



· **Class**

3 Liquidi infiammabili

· **Label**

3/8

· **IATA**



· **Class**

8 Materie corrosive

· **Label**

3 (8)

· **14.4 Gruppo di imballaggio**

· **ADR, IMDG, IATA**

II

· **14.5 Pericoli per l'ambiente:**

Non applicabile.

· **14.6 Precauzioni speciali per gli utilizzatori**

Attenzione: Liquidi infiammabili

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

883

· **Numero EMS:**

F-E,S-C

· **Segregation groups**

Acids

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **14.7 Trasporto di rinfuse secondo l'allegato II di**

**MARPOL ed il codice IBC**

Non applicabile.

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**· Trasporto/ulteriori indicazioni:**

**· ADR**

· **Quantità limitate (LQ)**

1L

· **Quantità esenti (EQ)**

Codice: E2

Quantità massima netta per imballaggio interno: 30 ml

Quantità massima netta per imballaggio esterno: 500 ml

· **Categoria di trasporto**

2

· **Codice di restrizione in galleria**

D/E

**· IMDG**

· **Limited quantities (LQ)**

0

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

· **UN "Model Regulation":**

UN 2924 LIQUIDO INFIAMMABILE, CORROSIVO, N.A.S.  
(GLUTARALE, ETANOLO (ALCOL ETILICO)), 3 (8), II

### SEZIONE 15: Informazioni sulla regolamentazione

· **15.1 Disposizioni legislative e regolamentari su salute, sicurezza e ambiente specifiche per la sostanza o la miscela**

· **Direttiva 2012/18/UE**

· **Sostanze pericolose specificate - ALLEGATO I** Nessuno dei componenti è contenuto.

· **Categoria Seveso**

H2 TOSSICITÀ ACUTA

P5c LIQUIDI INFIAMMABILI

· **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	90,0

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

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

64-17-5 etanolo

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.

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· **Frasi rilevanti**

- H225 Liquido e vapori facilmente infiammabili.
- H301 Tossico se ingerito.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.
- H317 Può provocare una reazione allergica cutanea.
- H330 Letale se inalato.
- H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.
- H335 Può irritare le vie respiratorie.
- H400 Molto tossico per gli organismi acquatici.
- H411 Tossico per gli organismi acquatici con effetti di lunga durata.

· **Abbreviazioni e acronimi:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Flam. Liq. 2: Liquidi infiammabili – Categoria 2
- 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
- Aquatic Chronic 3: Pericoloso per l'ambiente acquatico - pericolo a lungo termine per l'ambiente acquatico – Categoria 3

IT

# 물질안전보건자료

## GHS에 따라라다

인쇄일자: 2021.08.31

개정: 2021.08.31

### 1 화학제품과 회사에 관한 정보

#### 제품제품제명

- **제품명: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

- **상품번호: 16531**

해당해당해당 물질이나 혼합물(액) 관련 권고사항 및 사용금지용도 추가적인 정보가 존재하지 않습니다.

- **제품의 권고 용도와 사용 용도에 대한 제한사항** 시험 실 화 학 품

- **안전데이터표(Safety Data Sheet)내 공급업체 관련 연락처 정보**

- **제조자/수입자/유통업체 정보**

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

Samchang Commercial Co., Ltd.

Yeo Eui Do

PO Box 1110

Seoul, Korea

Tel: 82 2 703 3040

Fax: 82 2 717 3298

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Daedok Science, Co. Ltd.

34141 E10 Korea Advanced Institute of Science

Guseong-Dong, Yuseong-gu, Daejeon,

Korea

Phone: 82 42 710 2091

Fax: 82 42 367 0005

Website: www.labsmro.com

- **추가적인 정보** : 제품 특성 등 위험 가능성 product safety department

- **비상연락 전화번호:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### 2 유해성·위험성

- **순물질 또는 혼합물(액) 분류분류**



화염

인화성 액체 – 구분 2

H225 고인화성 액체 및 증기



두개골과 대퇴골

급성 독성 - 흡입 - 구분 3

H331 흡입하면 유독함



건강에 위험

호흡기 과민성 – 구분 1

H334 흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음

(2 쪽에 계속)

# 물질안전보건자료

## GHS에 따라

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(1 쪽부터 계속)



부식

피부 부식성/피부 자극성 - 구분 1	H314 피부에 심한 화상과 눈에 손상을 일으킴
심한 눈 손상성/눈 자극성 - 구분 1	H318 눈에 심한 손상을 일으킴



급성 독성 - 경구 - 구분 4	H302 삼키면 유해함
피부 과민성 - 구분 1	H317 알레르기성 피부 반응을 일으킬 수 있음
특정표적장기 독성 - 1회 노출 - 구분 3	H335 호흡 자극성을 일으킬 수 있음
수생환경 유해성 - 만성3	H412 장기적 영향에 의해 수생생물에 유해함

- 라벨표가 요소요소
- 라벨표가 요소
- 본 제품은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.
- 그림문자



GHS02 GHS05 GHS06 GHS08

- 신호어 위험
- 상표상에 명확히 위험성이 표시된 성분:

글루타르알데히드

유해 **유해** 문구

고인화성 액체 및 증기

삼키면 유해함

흡입하면 유독함

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

장기적 영향에 의해 수생생물에 유해함

· 예방조치 문구 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.

(라벨 참조) 처치를 하시오.

오염된 의복은 벗고 다시 사용 전 세척하십시오.

밀봉하여 저장하십시오.

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

기타기타 유해성

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

KR

(3 쪽에 계속)

# 물질안전보건자료

## GHS에 따라

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(2 쪽부터 계속)

### 3 구성성분의 명칭 및 함유량

- 화학적 특성: 혼합물

설명 설명서에는 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

· 위험요소요소		
64-17-5	Ethyl alcohol ☞ 인화성 액체 - 구분 2, H225	>50-≤100%
111-30-8	글루타르알데히드 ☞ 급성 독성 - 경구 - 구분 3, H301; ☞ 급성 독성 - 흡입 - 구분 2, H330; ☞ 호흡기 과민성 - 구분 1, H334; ☞ 피부 부식성/피부 자극성 - 구분 1, H314; ☞ 수생환경 유해성 - 급성 1, H400; 수생환경 유해성 - 만성2, H411; ☞ 피부 과민성 - 구분 1, H317; ☞ 특정표적장기 독성 - 1회 노출 - 구분 3, H335	>2.5-≤10%

### 4 응급조치 요령

- 응급조치요령 내용내용

- 일반정보정보

이 제품에 의해 오염된 의상은 즉시 제거한다.

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

반드시 오염된 의상을 완전히 제거한 후에 호흡보호기를 떼어낸다.

불규칙적인 호흡이나 호흡 정지 상태에서는 인공 호흡을 실시한다.

- 흡입했을 때:

신선한 공기나 산소를 공급받고, 의료진의 도움을 구한다.

환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.

- 피부에 접촉했을 때: 즉시 물과 비누로 씻고 잘 행군다.

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

- 먹었을 때:

즉시 의사의 도움을 구한다.

물을 충분히 마시고 신선한 공기를 쉰다. 즉시 의사의 도움을 구한다.

- 기타 기타 사항의 주의사항:

가장 가장 중요한 응급조치요령에 대한 영향에 대한 정보가 존재하지 않습니다.

· 즉각적인 의료처리 및 특별처리가 필요함을 시사하는 징후 중 후속적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

- 소화제

- 적절한 소화제:

이산화탄소, 진화용 석회가루 또는 물방사를 사용하고, 더 큰 화재는 물을 분사하거나 알코올이 함유된 거품으로 끈다.

- 본 화학물질이나 혼합물에서 발생하거나 특별 취급 시 추가적인 정보가 존재하지 않습니다.

- 소방관에게 대할 사항

화재 발생 시 대피 및 안전장비 보호구 및 예방조치: 호흡보호장비 설치.

### 6 누출 사고 시 대처방법

· 개인적 예방조치, 보호장비 및 응급조치 절차: 안전장비 착용하고, 무방비 의 사람은 격리시킨다.

- 환경 오염 방지 대책:

하천이나 하수로 유입되었을 경우 해당 관청에 보고한다.

많은 물로 희석시킨다.

(4 쪽에 계속)



# 물질안전보건자료 GHS에 따라라따

인쇄일자: 2021.08.31

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## 제품명: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

(3 쪽부터계속)

하수도망/해수면위의물/지하수로도달하지않게한다.

**밀폐** 밀폐용기나 화학처리용기, 폐기물 수거용기에 액체가 혼합된 물질(모래, 규조토, 산성결합물, 일반결합물, 톱밥)에 흡입되도록 한다. 중성제를사용한다.

항목 13에 따라 오염된 물질을 쓰레기로 처분한다. 충분한 환기가 되도록 한다.

**석면** 석면 함유물 참조

안전관리에 대한 정보는 제7 장 을 참고하시오.  
개인보호장비에 대한 정보는 제8 장 을 참고하시오.  
쓰레기처리에 대한 정보는 제13 장 을 참고하시오.

## 7 취급 및 저장방법

**취급** 취급취급

**안전** 안전작업을 위한 예방조치

작업장에서는 통풍이 잘 되고 습기 제거가 잘 되게 주의한다.  
조심스럽게 용기를 개봉하거나 취급한다.  
연무질이 형성되는 것을 피한다.

**화재** 화재발생 시 화재를 예방하기 위한 조치

발화요소는 멀리 둔다. 급연.  
열로부터 보호한다.  
정전기의 충전으로부터 보호한다.  
호흡보호장비를 항상 비치한다.

**혼합** 혼합 위험성 및 안정성 조건

**보관** 보관보관

- 안전장벽을 형성하는 방법 가까운 장소에 보관한다.
- 하수관공로, 방수, 방화 시설에 대한 안전장벽을 형성할 필요 없음
- 보관 조건에 관한 추가 정보
- 용기를 새지 않게 밀폐한 채 보관한다.
- 밀폐된 용기 속에서 늘 하고 건조하게 보관한다.
- 열이나 직사광선으로부터 보호한다.
- 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

## 8 노출방지 및 개인보호구

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

통제 물질 목록 번호

· 화학물질의 노출기준, 생물학적 노출기준 등:	
<b>64-17-5 Ethyl alcohol</b>	
TLV (KR)	장기간의값: 1000 ppm 발암성 1A
PEL (US)	장기간의값: 1900 mg/m <sup>3</sup> , 1000 ppm
REL (US)	장기간의값: 1900 mg/m <sup>3</sup> , 1000 ppm
TLV (US)	단기간의값: 1880 mg/m <sup>3</sup> , 1000 ppm
<b>111-30-8 글루타르알데히드</b>	
TLV (KR)	최고노출기준: 0.05 ppm

(5 쪽에 계속)

# 물질안전보건자료 GHS에 따라 라다

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(4 쪽부터 계속)

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

· 추가 정보: 정보 할 당시에 유효한 목록을 기초로 사용했다.

**노출 통제 통제**  
**개인 보호구**

· **일반적 보호 조치 및 위생 조치:**

- 식료품, 음료수와 사료로부터 멀리 떨어져 두어 놓는다.
- 더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.
- 휴식 전이나 작업이 끝날 때 마다 손을 씻는다.
- 방호복은 따로 보관한다.
- 눈과의 접촉을 피한다.
- 눈과 피부와의 접촉을 피한다.

· **호흡기 보호 보호**

단 시간 또는 경미한 오염의 경우에는 호흡 여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡 보호 장비를 사용한다.

**보수 보호 보호**



보호용 장갑

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

· **장갑의 재료**

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

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

**보수 보호 보호**



확조이는 보안경

## 9 물리화학적 특성

**기본 물리화학적 특성에 대한 정보**

· **일반 정보**

**외형 외형 외형**

- **물리적 상태** 액체의
- **색:** 제품 표시에 따름
- **냄새** 특색있는
- **후각역치** 알맞지 않다.

· **pH:** 알맞지 않다.

· **상태 변화**

· **녹는 점/어는 점:** 맞지 않는다

(6 쪽에 계속)

**제품명: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(5 쪽부터 계속)

초기초기 끓는점과 끓는점 범위	78 °C
· 인화점:	13 °C
· 인화성 고체/기체	해당 사항 없음.
· 점화온도:	425 °C
분해 분해 온도	알맞지 않다.
· 자기점화:	이 제품은 자연발화성이 없다.
· 폭발 위험:	이 제품은 폭발 위험성이 없지만, 폭발 가능성이 있는 증기화합물/공기화합물의 형성 가능성이 있다.
인화 인화 인화 폭발 위험성의 상한/하한	하한
· 아래로:	3.5 Vol %
위로 위로	15 Vol %
· 증기압 의 경우 20 °C:	59 hPa
밀도 밀도 의 경우 20 °C:	0.816 g/cm <sup>3</sup>
비중 비중 비중	알맞지 않다.
· 증기 밀도:	알맞지 않다.
증발 증발 속도	알맞지 않다.
· 용해도:	
· 물:	완전히 혼합할 수 있는
· n 옥탄올/물 분배계수:	알맞지 않다.
점도 점도 점도	
· 역학적:	알맞지 않다.
· 동점성:	알맞지 않다.
· 용매 내용물	
· 유기용매:	90.0 %
· VOC (EU)	90.00 %
· 고체 함량 함량	0.0 %
기타 정보	추가적인 정보가 존재하지 않습니다.

**10 안정성 및 반응성**

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

# 물질안전보건자료

## GHS에 따라라따

인쇄일자: 2021.08.31

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**제품명: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(6 쪽부터계속)

### 11 독성에 관한 정보

· **독성학적 영향에 대한 정보**  
급성독성독성독성

· LD/LC50-수체에 대한 분류

**111-30-8 글루타르알데히드**

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

· **일차적 자극효과**  
피부 **피부 자극성** 또는 **자극성**: 피부와 점막에 강한 부식 작용.

심한 **심한 자극성** 또는 **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.

독성의  
건강에 해로운  
부식 작용의  
자극적인  
삼킬 경우 식도나 위 등의 내장 기관 벽에 상처를 주는 위험과 마찬가지로 입 주변이나 구강에 강한 부식 작용을 한다

### 12 환경에 미치는 영향

독성독성독성

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

의견의견의견

어류에독이됨  
어류에 해로움

· **추가적인 생태학 정보**

일반 **일반적인 특징**

수질오염등급 3 (자체등급분류): 심하게 수질오염이 된  
지하수나, 하천으로 또는 하수도망에도 달하지 않게 한다. 역시 극소수의 양이라도 안 된다.  
회색시키지 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 독이 되는 것  
물속의 유기체에 해가 되는 것

· PBT(잔류성, 생물농축성, 물질독성) 및 vPvB(고 잔류성, 고 생물농축성, 물질독성)에 해당하지 않음.

· PBT(잔류성, 생물농축성, 물질독성) 및 vPvB(고 잔류성, 고 생물농축성, 물질독성)에 해당하지 않음.

· vPvB(고 잔류성, 고 생물농축성, 물질독성)에 해당하지 않음.

(8 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

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기타기타 **부작용** 추가적인 정보가 존재하지 않습니다.

(7 쪽부터계속)

### 13 폐기시 주의사항

- 폐기물처리방법  
권고권고생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- 비위생적 포장포장  
권고권고국립의지침에입각한쓰레기처리.
- 추천 세정제: 경우에따라서세제가첨가된물

### 14 운송에 필요한 정보

유엔 **위험물질** 번호

· ADR, IMDG, IATA UN2924

· **정적정적명**

· ADR 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (글루타르알데히드, ETHANOL (ETHYL ALCOHOL))

· IMDG FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))

· IATA FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)

교통 **위험물질** 라벨

· ADR



등급 **위험물질**

· 위험물질라벨

3 발화성용액  
3+8

· IMDG



· Class

· Label

3 발화성용액  
3/8

· IATA



· Class

· Label

8 부식작용하는물질  
3 (8)

· 용기등급

· ADR, IMDG, IATA

II

(9 쪽에계속)

# 물질안전보건자료

## GHS에 따라 라다

인쇄일자: 2021.08.31

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**제품명: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(8 쪽부터 계속)

<ul style="list-style-type: none"> <li>· <b>환경적 유해물질:</b></li> </ul>	해당사항 없음.
<ul style="list-style-type: none"> <li>· <b>이동지별 특별 취급 조치</b></li> </ul>	경고: 발화성용액
<ul style="list-style-type: none"> <li>· <b>위험 위험 코드</b></li> </ul>	883
<ul style="list-style-type: none"> <li>· <b>번호 번호</b></li> </ul>	F-E,S-C
<ul style="list-style-type: none"> <li>· <b>Segregation groups</b></li> </ul>	Acids
<ul style="list-style-type: none"> <li>· <b>Stowage Category</b></li> </ul>	B
<ul style="list-style-type: none"> <li>· <b>Stowage Code</b></li> </ul>	SW2 Clear of living quarters.
<ul style="list-style-type: none"> <li>· <b>MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크물질 운송 운송</b></li> </ul>	해당사항 없음.
<ul style="list-style-type: none"> <li>· <b>운송/추진 정보</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> </ul>	1L
<ul style="list-style-type: none"> <li>· <b>한정 양 (수량 수량)</b></li> </ul>	Code: E2
<ul style="list-style-type: none"> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
<ul style="list-style-type: none"> <li>· <b>운송 운송 구분</b></li> </ul>	2
<ul style="list-style-type: none"> <li>· <b>터널 운송 코드</b></li> </ul>	D/E
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Limited quantities (LQ)</b></li> </ul>	0
<ul style="list-style-type: none"> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	Code: E0 Not permitted as Excepted Quantity
<ul style="list-style-type: none"> <li>· <b>UN 번호</b></li> </ul>	UN 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S. (글루타르알데히드, ETHANOL (ETHYL ALCOHOL)), 3 (8), II

### 15 법적 규제 현황

<ul style="list-style-type: none"> <li>· <b>산업안전보건법에 의한 유해물질 규제</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>제조제조 금지 물질:</b></li> </ul>	어떠한 내용물도 목록화되어 있지 않다
<ul style="list-style-type: none"> <li>· <b>허가대상 물질:</b></li> </ul>	어떠한 내용물도 목록화되어 있지 않다
<ul style="list-style-type: none"> <li>· <b>관리대상 유해물질:</b></li> </ul>	111-30-8 글루타르알데히드
<ul style="list-style-type: none"> <li>· <b>작업환경 측정 대상 유해인자</b></li> </ul>	111-30-8 글루타르알데히드 <span style="float: right;">1A1</span>
<ul style="list-style-type: none"> <li>· <b>특수건강 집합 대상 유해인자</b></li> </ul>	111-30-8 글루타르알데히드 <span style="float: right;">1A2</span>
<ul style="list-style-type: none"> <li>· <b>해당 해당 물질 또는 혼합물에 대한 유해인자 및 환경 위험 평가를 위한 법률</b></li> </ul>	
<ul style="list-style-type: none"> <li>· <b>Korean Existing Chemical Inventory</b></li> </ul>	
64-17-5 Ethyl alcohol	KE-13217
111-30-8 글루타르알데히드	KE-27969

(10 쪽에 계속)

# 물질안전보건자료 GHS에 따라라따

인쇄일자: 2021.08.31

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**제품명: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

(9 쪽부터계속)

· **화학물질관리법**

· **사고대비물질**

어떠한내용물도목록화되어있지않다

· **금지물질**

어떠한내용물도목록화되어있지않다

· **제한물질**

어떠한내용물도목록화되어있지않다

· **유독물질**

111-30-8 글루타르알데히드

· **허가물질**

111-30-8 글루타르알데히드

· **위험물안전관리법 (위험물 및 지정수량) 제 4: 400 리터**

**등록등록대상물질(선제대상 화학물질)**

어떠한내용물도목록화되어있지않다

· **‘21년까지 등록하여야 할 압, 들언번이, 생식능력 이상을 일으킬 우려가 있는 기존화학물질**

어떠한내용물도목록화되어있지않다

· **중점관리물 질(양) 지정지정**

· **표1 중점관리물질(제한관련관련)**

어떠한내용물도목록화되어있지않다

· **표2 중점관리물질(제한관련관련)**

어떠한내용물도목록화되어있지않다

· **라벨 라벨 필수 요소**

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

· **그림문자**



GHS02 GHS05 GHS06 GHS08

· **신호어 위험**

· **상표상에명확히위험성이표시된성분:**

글루타르알데히드

· **유해 유해 유해 유해 문구**

고인화성 액체 및 증기

삼키면 유해함

흡입하면 유독함

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

장기적 영향에 의해 수생생물에 유해함

· **예방 조치 문구문구**

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

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

즉시 독성물질센터/병원 연락 필요.

(라벨 참조) 처치를 하시오.

(11 쪽에계속)

# 물질안전보건자료

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오염된 의복은 벗고 다시 사용 전 세척하십시오.  
 밀봉하여 저장하십시오.  
 (지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.  
 · **화학물질 안전성 평가** 화학물질 안전성 평가가 수행되지 않음

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은  
 기술하지않았으며계약적인법률관계에기반을두고있지도않다

최초 최초 작성일자: 2021.08.31

개정 개정 개수: 1 / 최종 개정일자: 1 / 2021.08.31

· **약어와 두문자어:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.08.2021

Revisión: 31.08.2021

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

#### · 1.1 Identificador del producto

· **Nombre comercial:** ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL

· **Número del artículo:** 16531

· **UFI:** 14A1-M0D6-R00M-PJR9

#### · 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](mailto:info@emsdiasum.com)

[www.emsdiasum.com](http://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](mailto: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**



GHS02 llama

Flam. Liq. 2      H225 Líquido y vapores muy inflamables.



GHS06 calavera y tibias cruzadas

Acute Tox. 3      H331 Tóxico 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

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*Skin Corr. 1B*      *H314 Provoca quemaduras graves en la piel y lesiones oculares graves.*

*Eye Dam. 1*      *H318 Provoca lesiones oculares graves.*



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.*

*Aquatic Chronic 3*      *H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.*

### · 2.2 Elementos de la etiqueta

#### · Etiquetado con arreglo al Reglamento (CE) n° 1272/2008

El producto se ha clasificado y etiquetado de conformidad con el reglamento CLP.

#### · Pictogramas de peligro



GHS02

GHS05

GHS06

GHS08

#### · Palabra de advertencia Peligro

#### · Componentes peligrosos a indicar en el etiquetaje:

glutaral

#### · Indicaciones de peligro

*H225 Líquido y vapores muy inflamables.*

*H302 Nocivo en caso de ingestión.*

*H331 Tóxico 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.*

*H412 Nocivo 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.*

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

*P362+P364 Quitar las prendas contaminadas y lavarlas antes de volver a usarlas.*

*P405 Guardar bajo llave.*

*P501 Eliminar el contenido o el recipiente conforme a la reglamentación local/regional/nacional/internacional.*

### · 2.3 Otros peligros

#### · Resultados de la valoración PBT y mPmB

· **PBT:** No aplicable.

· **mPmB:** No aplicable.

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### 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: 64-17-5 EINECS: 200-578-6	etanol Flam. Liq. 2, H225	>50-≤100%
CAS: 111-30-8 EINECS: 203-856-5	glutaral Acute Tox. 3, H301; Acute Tox. 2, H330; Resp. Sens. 1, H334; Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 2, H411; Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%

#### · SVHC

64-17-5	etanol
111-30-8	glutaral

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

### SECCIÓN 4: Primeros auxilios

#### · 4.1 Descripción de los primeros auxilios

##### · Instrucciones generales:

Quitarse de inmediato toda prenda contaminada con el producto.

Los síntomas de intoxicación pueden presentarse después de muchas horas, por lo que se requiere una supervisión médica durante un mínimo de 48 horas después del accidente.

Antes de quitarse la protección respiratoria, quítese la ropa contaminada.

En caso de respiración irregular o apnea (paro respiratorio), hágase la respiración artificial.

##### · En caso de inhalación del producto:

Suministrar aire fresco u oxígeno; solicitar ayuda médica.

Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.

##### · En caso de contacto con la piel: Lavar inmediatamente con agua y jabón y enjuagar bien.

##### · En caso de con los ojos:

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:

CO<sub>2</sub>, 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:**  
Mantener alejadas las fuentes de encendido. No fumar.  
Proteger del calor.  
Tomar medidas contra las cargas electrostáticas.  
Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** Almacenar en un lugar fresco.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**  
Mantener el recipiente cerrado herméticamente.  
Almacenarlo en envases bien cerrados en un lugar fresco y seco.  
Proteger del calor y de la luz directa del sol.
- **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:**

**64-17-5 etanol**

LEP	Valor de corta duración: 1910 mg/m <sup>3</sup> , 1000 ppm
s	

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### 111-30-8 glutaral

LEP Valor de corta duración: 0,2 mg/m<sup>3</sup>, 0,05 ppm  
Sen

· **Indicaciones adicionales:** Como base se han utilizado las listas vigentes en el momento de la elaboración.

#### · 8.2 Controles de la exposición

##### · Equipo de protección individual:

##### · Medidas generales de protección e higiene:

Mantener alejado de alimentos, bebidas y alimentos para animales.

Quitarse de inmediato la ropa ensuciada o impregnada.

Lavarse las manos antes de las pausas y al final del trabajo.

Guardar la ropa protectora por separado.

Evitar el contacto con los ojos.

Evitar el contacto con los ojos y la piel.

##### · Protección respiratoria:

Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.

##### · Protección de manos:



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.

Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.

Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

##### · Material de los guantes

La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

##### · Tiempo de penetración del material de los guantes

El tiempo de resistencia a la penetración exacto deberá ser pedido al fabricante de los guantes. Este tiempo debe ser respetado.

##### · Protección de ojos:



Gafas de protección herméticas

## SECCIÓN 9: Propiedades físicas y químicas

### · 9.1 Información sobre propiedades físicas y químicas básicas

#### · Datos generales

##### · Aspecto:

· Forma: Líquido

· Color: Según denominación del producto

· Olor: Característico

· Umbral olfativo: No determinado.

· valor pH: No determinado.

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· Cambio de estado	
· Punto de fusión/punto de congelación:	Indeterminado.
· Punto inicial de ebullición e intervalo de ebullición:	78 °C
· Punto de inflamación:	13 °C
· Inflamabilidad (sólido, gas):	No aplicable.
· Temperatura de ignición:	425 °C
· Temperatura de descomposición:	No determinado.
· Temperatura de auto-inflamación:	El producto no es autoinflamable.
· Propiedades explosivas:	El producto no es explosivo; sin embargo, pueden formarse mezclas explosivas de vapor / aire.
· Límites de explosión:	
· Inferior:	3,5 Vol %
· Superior:	15 Vol %
· Presión de vapor a 20 °C:	59 hPa
· Densidad a 20 °C:	0,816 g/cm <sup>3</sup>
· Densidad relativa	No determinado.
· Densidad de vapor	No determinado.
· Tasa de evaporación:	No determinado.
· Solubilidad en / miscibilidad con agua:	Completamente mezclable.
· Coeficiente de reparto: n-octanol/agua:	No determinado.
· Viscosidad:	
· Dinámica:	No determinado.
· Cinemática:	No determinado.
· Concentración del disolvente:	
· Disolventes orgánicos:	90,0 %
· VOC (CE)	90,00 %
· Contenido de cuerpos sólidos:	0,0 %
· 9.2 Otros datos	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

- **10.1 Reactividad** No existen más datos relevantes disponibles.
- **10.2 Estabilidad química**
- **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.
- **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.
- **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.
- **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.
- **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

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( se continua en página 7 )

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### SECCIÓN 11: Información toxicológica

#### · 11.1 Información sobre los efectos toxicológicos

##### · Toxicidad aguda

Nocivo en caso de ingestión.

Tóxico 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.

##### · Sensibilización respiratoria o cutánea

Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

Puede provocar una reacción alérgica en la piel.

##### · Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)

##### · Mutagenicidad en células germinales

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

##### · Carcinogenicidad A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

##### · Toxicidad para la reproducción A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

##### · Toxicidad específica en determinados órganos (STOT) – exposición única

Puede irritar las vías respiratorias.

##### · Toxicidad específica en determinados órganos (STOT) – exposición repetida

A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

##### · Peligro de aspiración A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

#### · 12.1 Toxicidad

· Toxicidad acuática: No existen más datos relevantes disponibles.

· 12.2 Persistencia y degradabilidad No existen más datos relevantes disponibles.

· 12.3 Potencial de bioacumulación No existen más datos relevantes disponibles.

· 12.4 Movilidad en el suelo No existen más datos relevantes disponibles.

#### · Efectos ecotóxicos:

##### · Observación:

Tóxico para peces.

Nocivo para los peces.

##### · Indicaciones medioambientales adicionales:

##### · Indicaciones generales:

Nivel de riesgo para el agua 3 (autoclasiificación): 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.

tóxico para organismos acuáticos

nocivo para organismos acuáticos

#### · 12.5 Resultados de la valoración PBT y mPmB

· PBT: No aplicable.

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- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

**SECCIÓN 13: Consideraciones relativas a la eliminación**

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.
- **Producto de limpieza recomendado:** Agua, eventualmente añadiendo productos de limpieza.

**SECCIÓN 14: Información relativa al transporte**

- **14.1 Número ONU**
- **ADR, IMDG, IATA** UN2924

- **14.2 Designación oficial de transporte de las Naciones Unidas**
- **ADR** 2924 LÍQUIDO INFLAMABLE, CORROSIVO, N.E.P. (glutaral, ETANOL (ALCOHOL ETÍLICO))
- **IMDG** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL (ETHYL ALCOHOL))
- **IATA** FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Glutaraldehyde, ETHANOL)

- **14.3 Clase(s) de peligro para el transporte**

- **ADR**



- **Clase** 3 Líquidos inflamables
- **Etiqueta** 3+8

- **IMDG**



- **Class** 3 Líquidos inflamables
- **Label** 3/8

- **IATA**



- **Class** 8 Materias corrosivas
- **Label** 3 (8)

- **14.4 Grupo de embalaje**
- **ADR, IMDG, IATA** II

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· 14.5 Peligros para el medio ambiente:	No aplicable.
· 14.6 Precauciones particulares para los usuarios	Atención: Líquidos inflamables
· Número de identificación de peligro (Número Kemler):	883
· Número EMS:	F-E,S-C
· Segregation groups	Acids
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· 14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC	No aplicable.
· Transporte/datos adicionales:	
· ADR	
· Cantidades limitadas (LQ)	1L
· Cantidades exceptuadas (EQ)	Código: E2 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 500 ml
· Categoría de transporte	2
· Código de restricción del túnel	D/E
· IMDG	
· Limited quantities (LQ)	0
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· "Reglamentación Modelo" de la UNECE:	UN 2924 LÍQUIDO INFLAMABLE, CORROSIVO, N.E.P. (GLUTARAL, ETANOL (ALCOHOL ETÍLICO)), 3 (8), II

### SECCIÓN 15: Información reglamentaria

- 15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla
- Directiva 2012/18/UE
- Sustancias peligrosas nominadas - ANEXO I ninguno de los componentes está incluido en una lista
- Categoría Seveso  
H2 TOXICIDAD AGUDA  
P5c LÍQUIDOS INFLAMABLES
- 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

64-17-5	etanol
111-30-8	glutaral

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# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.08.2021

Revisión: 31.08.2021

**Nombre comercial: ANHYDROUS 10% GLUTARALDEHYDE IN ETHANOL**

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· **15.2 Evaluación de la seguridad química:** Una evaluación de la seguridad química no se ha llevado a cabo.

### SECCIÓN 16: Otra información

Los datos se fundan en el estado actual de nuestros conocimientos, pero no constituyen garantía alguna de cualidades del producto y no generan ninguna relación jurídica contractual.

· **Frases relevantes**

H225 Líquido y vapores muy inflamables.

H301 Tóxico en caso de ingestión.

H314 Provoca quemaduras graves en la piel y lesiones oculares graves.

H317 Puede provocar una reacción alérgica en la piel.

H330 Mortal en caso de inhalación.

H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.

H335 Puede irritar las vías respiratorias.

H400 Muy tóxico para los organismos acuáticos.

H411 Tóxico para los organismos acuáticos, con efectos nocivos duraderos.

· **Abreviaturas y acrónimos:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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. 2: Líquidos inflamables – Categoría 2

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

Aquatic Chronic 3: Peligroso para el medio ambiente acuático - peligro acuático a largo plazo – Categoría 3