

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

## 1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4
- **Article number:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: 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**



GHS08 Health hazard

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

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS05 Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

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

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** *Danger*

(Contd. on page 2)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 1)

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

Glutaraldehyde  
formaldehyde

· **Hazard statements**

Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
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.  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
If on skin: Wash with plenty of water.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a poison center/doctor.  
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.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



· **HMIS-ratings (scale 0 - 4)**



· **Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

US

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 2)

### 3 Composition/information on ingredients

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

- **Dangerous components:**

111-30-8	Glutaraldehyde	>2.5-≤10%
50-00-0	formaldehyde	>2.5-≤10%

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

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

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 3)

### · Protective Action Criteria for Chemicals

#### · PAC-1:

7778-77-0	potassium dihydrogenorthophosphate	9.6 mg/m <sup>3</sup>
111-30-8	Glutaraldehyde	0.2 ppm
50-00-0	formaldehyde	0.90 ppm

#### · PAC-2:

7778-77-0	potassium dihydrogenorthophosphate	110 mg/m <sup>3</sup>
111-30-8	Glutaraldehyde	1 ppm
50-00-0	formaldehyde	14 ppm

#### · PAC-3:

7778-77-0	potassium dihydrogenorthophosphate	630 mg/m <sup>3</sup>
111-30-8	Glutaraldehyde	5 ppm
50-00-0	formaldehyde	56 ppm

## 7 Handling and storage

### · Handling:

#### · Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

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

· **Conditions for safe storage, including any incompatibilities**

#### · Storage:

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

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

### · Control parameters

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

#### 111-30-8 Glutaraldehyde

REL Ceiling limit value: 0.8 mg/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

#### 50-00-0 formaldehyde

PEL Short-term value: 2 ppm  
Long-term value: 0.75 ppm  
see 29 CFR 1910.1048(c)

REL Long-term value: 0.016 ppm  
Ceiling limit value: 0.1\* ppm  
\*15-min; See Pocket Guide App. A

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 4)

<b>TLV</b>	Short-term value: 0.37 mg/m <sup>3</sup> , 0.3 ppm Long-term value: 0.12 mg/m <sup>3</sup> , 0.1 ppm DSEN; RSEN
------------	---

· **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 skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

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

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

**Form:** Liquid

**Color:** Colorless

· **Odor:** Like aldehyde

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 5)

· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	100 °C (212 °F)
· <b>Flash point:</b> Not applicable.	
· <b>Flammability (solid, gaseous):</b> Not flammable.	
· <b>Decomposition temperature:</b> Not determined.	
· <b>Auto igniting:</b> Product is not selfigniting.	
· <b>Danger of explosion:</b> Product does not present an explosion hazard.	
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C (68 °F):</b> 23 hPa (17.3 mm Hg)	
· <b>Density at 20 °C (68 °F):</b> 0.99935 g/cm <sup>3</sup> (8.33958 lbs/gal)	
· <b>Relative density</b> Not determined.	
· <b>Vapor density</b> Not determined.	
· <b>Evaporation rate</b> Not determined.	
· <b>Solubility in / Miscibility with Water:</b> Not miscible or difficult to mix.	
· <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>	3.0 %
<b>Water:</b>	86.5 %
<b>VOC content:</b>	3.00 %
	220.8 g/l / 1.84 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.

US

(Contd. on page 7)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 6)

## 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)
--------	------	----------------------

### 50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**

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

- **on the eye:** Strong irritant with the danger of severe eye injury.

- **Sensitization:**

- Sensitization possible through inhalation.

- Sensitization possible through skin contact.

- **Additional toxicological information:**

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

- Harmful

- Irritant

- Carcinogenic.

- **Carcinogenic categories**

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

50-00-0	formaldehyde	I
---------	--------------	---

- **NTP (National Toxicology Program)**

50-00-0	formaldehyde	K
---------	--------------	---

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

50-00-0	formaldehyde	
---------	--------------	--

## 12 Ecological information

- **Toxicity**

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

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

- **Behavior in environmental systems:**

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

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

- **Ecotoxicological effects:**

- **Remark:**

- Toxic for fish

- Harmful to fish

- **Additional ecological information:**

- **General notes:**

- Water hazard class 2 (Self-assessment): hazardous for water

- Do not allow product to reach ground water, water course or sewage system.

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

- Also poisonous for fish and plankton in water bodies.

- Toxic for aquatic organisms

- Harmful to aquatic organisms

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**



(Contd. of page 7)

- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

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

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	<p style="text-align: center;">UNI760</p>
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p style="text-align: center;">Corrosive liquids, n.o.s. (Glutaraldehyde, Formaldehyde solutions)</p> <p style="text-align: center;">1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)</p> <p style="text-align: center;">CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)</p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT</b></li> </ul>	<div style="text-align: center;">  <p>8</p> </div> <p style="text-align: center;">8 Corrosive substances</p> <p style="text-align: center;">8</p>
<ul style="list-style-type: none"> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<div style="text-align: center;">  <p>8</p> </div> <p style="text-align: center;">8 Corrosive substances</p> <p style="text-align: center;">8</p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR, IMDG, IATA</b></li> </ul>	<p style="text-align: center;">II</p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> </ul>	<p style="text-align: center;">Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Segregation groups</b></li> </ul>	<p style="text-align: center;">Warning: Corrosive substances</p> <p style="text-align: center;">80</p> <p style="text-align: center;">F-A,S-B</p> <p style="text-align: center;">Acids</p>

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 8)

· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 1 L On cargo aircraft only: 30 L
· <b>ADR</b>	
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (GLUTARALDEHYDE, FORMALDEHYDE SOLUTION), 8, II

## 15 Regulatory information

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

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

50-00-0 formaldehyde

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

50-00-0 formaldehyde

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

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

50-00-0 formaldehyde

· **Proposition 65**

· **Chemicals known to cause cancer:**

50-00-0 formaldehyde

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 9)

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

50-00-0	formaldehyde	B1
---------	--------------	----

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

111-30-8	Glutaraldehyde	A4
----------	----------------	----

50-00-0	formaldehyde	A2
---------	--------------	----

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

50-00-0	formaldehyde	
---------	--------------	--

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

· **Hazard pictograms**



GHS05    GHS07    GHS08

· **Signal word** *Danger*

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

Glutaraldehyde  
formaldehyde

· **Hazard statements**

Harmful if inhaled.  
Causes skin irritation.  
Causes serious eye damage.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
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.  
Avoid breathing dust/fume/gas/mist/vapors/spray  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear protective gloves/protective clothing/eye protection/face protection.  
[In case of inadequate ventilation] wear respiratory protection.  
If on skin: Wash with plenty of water.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
Immediately call a poison center/doctor.  
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.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

(Contd. on page 11)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 10)

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

· **National regulations:**

· **Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.*

· **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** 03/31/2020 / -

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

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

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

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

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

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

**Muta. 2: Germ cell mutagenicity – Category 2**

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

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

# Safety Data Sheet

## according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

### 1 Identification

· **Product identifier**

· **Trade name:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4

· **Article number:** 16538-06, 16538-07, 16538-08, 16538-07-SP

· **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.

· **Application of the substance / the mixture** Laboratory chemicals

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: [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**



GHS08 health hazard

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

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

(Contd. on page 2)

## Safety Data Sheet according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 1)

*Skin Irrit. 2 H315 Causes skin irritation.*

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

*STOT SE 3 H335 May cause respiratory irritation.*

· **Label elements**

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

· **Hazard pictograms**



GHS05

GHS07

GHS08

· **Signal word** *Danger*

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

*Glutaraldehyde*

*formaldehyde*

· **Hazard statements**

*Harmful if inhaled.*

*Causes skin irritation.*

*Causes serious eye damage.*

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

*May cause an allergic skin reaction.*

*Suspected of causing genetic defects.*

*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.*

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

*Wash thoroughly after handling.*

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

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

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

*Wear respiratory protection.*

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

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

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

*Continue rinsing.*

*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.*

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

*Store locked up.*

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

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

(Contd. on page 3)

# Safety Data Sheet

## according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 2)

· **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

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

· **Dangerous components:**

111-30-8	Glutaraldehyde	>2.5-≤10%
50-00-0	formaldehyde	>2.5-≤10%

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

### 4 First Aid Measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**  
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.  
· **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire Fighting Measures

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

### 6 Accidental Release Measures

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

(Contd. on page 4)

# Safety Data Sheet

## according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 3)

See Section 13 for disposal information.

### 7 Handling and Storage

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

### 8 Exposure controls and personal protection

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

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

#### 111-30-8 Glutaraldehyde

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

#### 50-00-0 formaldehyde

WES	Short-term value: 2.5 mg/m <sup>3</sup> , 2 ppm
	Long-term value: 1.2 mg/m <sup>3</sup> , 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 skin.  
 Avoid contact with the eyes and skin.
- **Respiratory protection:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

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

(Contd. on page 5)

## Safety Data Sheet according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 4)

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

### 9 Physical and Chemical Properties

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

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Colour:</b>	Colourless
<b>Odour:</b>	Like aldehyde
<b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

<b>Melting point/freezing point:</b>	Undetermined.
<b>Initial boiling point and boiling range:</b>	100 °C

· **Flash point:** Not applicable.

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

· **Decomposition temperature:** Not determined.

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

· **Explosive properties:** Product does not present an explosion hazard.

· **Explosion limits:**

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

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

<b>Density at 20 °C:</b>	0.99935 g/cm <sup>3</sup>
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

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

Not miscible or difficult to mix.

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

(Contd. on page 6)



# Safety Data Sheet

## according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 5)

· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	3.0 %
<b>Water:</b>	86.5 %
<b>VOC (EC)</b>	3.00 %
· <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.
- **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)

#### 50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation** Irritant to skin and mucous membranes.
- **Serious eye damage/irritation** Strong irritant with the danger of severe eye injury.
- **Respiratory or skin sensitisation**  
Sensitisation possible through inhalation.  
Sensitisation possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Irritant  
Carcinogenic.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**  
Muta. 2, Carc. 1B

AU

(Contd. on page 7)

## Safety Data Sheet according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 6)

### 12 Ecological Information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
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.

### 14 Transport information

- |                                  |   |
|----------------------------------|---|
| · <b>UN-Number</b>               |   |
| · <b>ADG, IMDG, IATA</b>         | UN1760  |
| · <b>UN proper shipping name</b> |   |
| · <b>ADG</b>                     | 1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION) |
| · <b>IMDG, IATA</b>              | CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)      |

(Contd. on page 8)

AU

# Safety Data Sheet

according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

Trade name: **Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 7)

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

8 Corrosive substances.

· **Label**

8

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

II

· **Environmental hazards:**

Not applicable.

· **Special precautions for user**

Warning: Corrosive substances.

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

80

· **EMS Number:**

F-A,S-B

· **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**

E

· **IMDG**· **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

· **UN "Model Regulation":**UN 1760 CORROSIVE LIQUID, N.O.S.  
(GLUTARALDEHYDE, FORMALDEHYDE SOLUTION), 8,  
II

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**· **Australian Inventory of Chemical Substances**

All ingredients are listed.

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

7558-79-4	disodium hydrogenorthophosphate	S3, S4
111-30-8	Glutaraldehyde	S2, S5, S6
50-00-0	formaldehyde	S2, S6, S10

(Contd. on page 9)

## Safety Data Sheet according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 8)

· **Australia: Priority Existing Chemicals**

111-30-8	Glutaraldehyde
50-00-0	formaldehyde

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



GHS05    GHS07    GHS08

· **Signal word** *Danger*

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

*Glutaraldehyde*  
*formaldehyde*

· **Hazard statements**

*Harmful if inhaled.*  
*Causes skin irritation.*  
*Causes serious eye damage.*  
*May cause allergy or asthma symptoms or breathing difficulties if inhaled.*  
*May cause an allergic skin reaction.*  
*Suspected of causing genetic defects.*  
*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.*  
*Avoid breathing dust/fume/gas/mist/vapours/spray.*  
*Wash thoroughly after handling.*  
*Use only outdoors or in a well-ventilated area.*  
*Contaminated work clothing should not be allowed out of the workplace.*  
*Wear protective gloves/protective clothing/eye protection/face protection.*  
*Wear respiratory protection.*  
*IF ON SKIN: Wash with plenty of water.*  
*IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*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.*  
*Store in a well-ventilated place. Keep container tightly closed.*  
*Store locked up.*  
*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Directive 2012/18/EU**

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

(Contd. on page 10)

## Safety Data Sheet according to WHS Regulations

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 9)

· **National regulations:**

· **Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.*

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

### 16 Other information

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

· **Abbreviations and acronyms:**

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

*IMDG: International Maritime Code for Dangerous Goods*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

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

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

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

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

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

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

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

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

*Muta. 2: Germ cell mutagenicity – Category 2*

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

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

AU

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

### 1 Identification

- **Product identifier**
- **Trade name:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4
- **Article number:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
 Electron Microscopy Sciences  
 1560 Industry Road  
 USA-Hatfield, PA 19440  
 Tel: 215-412-8400 Fax: 215-412-8450  
 email: 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**



GHS08 Health hazard

Respiratory Sensitizer - Category 1

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

Germ Cell Mutagenicity - Category 2

H341 Suspected of causing genetic defects.

Carcinogenicity - Category 1B

H350 May cause cancer.



GHS05 Corrosion

Serious Eye Damage - Category 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity (Inhalation) - Category 4

H332 Harmful if inhaled.

Skin Irritation - Category 2

H315 Causes skin irritation.

Skin Sensitizer - Category 1

H317 May cause an allergic skin reaction.

Specific Target Organ Toxicity - Single Exposure -  
Category 3

H335 May cause respiratory irritation.

- **Label elements**

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

- **Hazard pictograms**



GHS05



GHS07



GHS08

(Contd. on page 2)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 1)

· **Signal word** *Danger*

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

*Glutaraldehyde*

*formaldehyde*

· **Hazard statements**

*Harmful if inhaled.*

*Causes skin irritation.*

*Causes serious eye damage.*

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

*May cause an allergic skin reaction.*

*Suspected of causing genetic defects.*

*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.*

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

*Wash thoroughly after handling.*

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

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

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

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

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

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

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

*Continue rinsing.*

*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.*

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

*Store locked up.*

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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



*Health = 3*

*Fire = 0*

*Reactivity = 0*

· **HMIS-ratings (scale 0 - 4)**



*Health = \*3*

*Fire = 0*

*Reactivity = 0*

### 3 Composition/Information on ingredients

· **Chemical characterization: Mixtures**

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

(Contd. on page 3)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 2)

**· Dangerous components:**

111-30-8	Glutaraldehyde	1-5% w/w *
50-00-0	formaldehyde	1-5% w/w *

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

### 4 First-aid measures

**· Description of first aid measures**

**· General information:**

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

**· After inhalation:**

Supply fresh air and to be sure call for a doctor.

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

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

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

**· After swallowing:** Immediately call a doctor.

**· Information for doctor:**

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

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

No further relevant information available.

### 5 Fire-fighting measures

**· Extinguishing media**

**· Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

**· Special hazards arising from the substance or mixture** No further relevant information available.

**· Advice for firefighters**

**· Protective equipment:** Mouth respiratory protective device.

### 6 Accidental release measures

**· Personal precautions, protective equipment and emergency procedures** Not required.

**· Environmental precautions:**

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

**· Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**· Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

CA

(Contd. on page 4)



# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 3)

### 7 Handling and storage

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

### 8 Exposure controls/ Personal protection

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

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

#### 111-30-8 Glutaraldehyde

EL	Ceiling: 0.05 ppm S(D), S(R)
EV	Ceiling: 0.05 ppm activated and inactivated

#### 50-00-0 formaldehyde

EL	TWA: 0.3 ppm Ceiling: 1 ppm ACGIH A1; IARC 1; S(D), S(R)
EV	STEL: 1.0 ppm
Ceiling	1.5 ppm

- **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 skin.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:**  
 In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

(Contd. on page 5)

CA

## Safety Data Sheet according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 4)

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

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

### 9 Physical and chemical properties

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

· **General Information**

· **Appearance:**

· <b>Form:</b>	Liquid
· <b>Color:</b>	Colorless
· <b>Odor:</b>	Like aldehyde
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

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

· **Flash point:** Not applicable.

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

· **Decomposition temperature:** Not determined.

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

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

· **Explosion limits:**

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

· **Vapor pressure at 20 °C:** 23 hPa

· **Density at 20 °C:** 0.99935 g/cm<sup>3</sup>

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

· **Water:** Not miscible or difficult to mix.

(Contd. on page 6)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 5)

- |   |                 |
|---|-----------------|
| · <b>Partition coefficient (n-octanol/water):</b> Not determined.     |                 |
| · <b>Viscosity:</b>   |                 |
| Dynamic:  | Not determined. |
| Kinematic:  | Not determined. |
| · <b>Solvent content:</b>   |                 |
| Organic solvents:   | 3.0 %           |
| Water:  | 86.5 %          |
| · <b>Solids content:</b> 0.0 %  |                 |
| · <b>Other information</b> No further relevant information available. |                 |

### 10 Stability and reactivity

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

### 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)

#### 50-00-0 formaldehyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.

- **Sensitization:**

Sensitization possible through inhalation.  
Sensitization possible through skin contact.

- **Additional toxicological information:**

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

Harmful  
Irritant  
Carcinogenic.

- **Carcinogenic categories**

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

50-00-0	formaldehyde	I
---------	--------------	---

(Contd. on page 7)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 6)

· **NTP (National Toxicology Program)**

50-00-0 formaldehyde

K

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

### 13 Disposal considerations

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

### 14 Transport information

- |                                   |   |
|-----------------------------------|---|
| · <b>UN-Number</b>                |   |
| · <b>DOT/TDG, ADR, IMDG, IATA</b> | UN1760  |
| · <b>UN proper shipping name</b>  |   |
| · <b>DOT/TDG</b>                  | Corrosive liquids, n.o.s. (Glutaraldehyde, Formaldehyde solutions)    |
| · <b>ADR</b>                      | 1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION) |
| · <b>IMDG, IATA</b>               | CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)      |

(Contd. on page 8)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 7)

· **Transport hazard class(es)**

· **DOT/TDG (Transport dangerous goods):**



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

· **ADR, IMDG, IATA**



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

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

· **Environmental hazards:** Not applicable.

· **Special precautions for user** Warning: Corrosive substances  
 · **Hazard identification number (Kemler code):** 80  
 · **EMS Number:** F-A,S-B  
 · **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: 1 L  
 On cargo aircraft only: 30 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)** 1L  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 1760 CORROSIVE LIQUID, N.O.S. (GLUTARALDEHYDE, FORMALDEHYDE SOLUTION), 8, II

CA

(Contd. on page 9)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 8)

### 15 Regulatory information

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

· **Sara**

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

50-00-0 formaldehyde

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

50-00-0 formaldehyde

· **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%)**

50-00-0 formaldehyde

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

111-30-8 Glutaraldehyde

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

· **Hazard pictograms**



GHS05    GHS07    GHS08

· **Signal word** *Danger*

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

Glutaraldehyde

formaldehyde

· **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye damage.

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

May cause an allergic skin reaction.

Suspected of causing genetic defects.

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.

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

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

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

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

[In case of inadequate ventilation] wear respiratory protection.

If on skin: Wash with plenty of water.

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

(Contd. on page 10)

## Safety Data Sheet according to HPR, Schedule 1

Printing date 03/31/2020

Reviewed on 03/31/2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 9)

*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.*

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

*Store locked up.*

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

· **National regulations:**

· **Information about limitation of use:**

*Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.*

*Exceptions can be made by the authorities in certain cases.*

· **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** 03/31/2020 / -

· **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 31.03.2020

Revision: 31.03.2020

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

- **1.1 Product identifier**
- **Trade name:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4
- **Article number:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [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**



GHS08 health hazard

Resp. Sens. 1      H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Muta. 2            H341 Suspected of causing genetic defects.  
Carc. 1B          H350 May cause cancer.



GHS05 corrosion

Eye Dam. 1      H318 Causes serious eye damage.



GHS07

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

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.

(Contd. on page 2)

GB



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Revision: 31.03.2020

Trade name: **Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 1)

· **Hazard pictograms**

GHS05   GHS07   GHS08

· **Signal word** *Danger*· **Hazard-determining components of labelling:**

Glutaraldehyde  
formaldehyde

· **Hazard statements**

H332 Harmful if inhaled.  
H315 Causes skin irritation.  
H318 Causes serious eye damage.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.  
H341 Suspected of causing genetic defects.  
H350 May cause cancer.  
H335 May cause respiratory irritation.  
H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

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: 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%
CAS: 50-00-0 EINECS: 200-001-8	formaldehyde ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	>2.5-≤10%

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

GB

(Contd. on page 3)

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 2)

### SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · General information:

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

##### · After inhalation:

Supply fresh air and to be sure call for a doctor.

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

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

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

##### · After swallowing: 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: Use fire extinguishing methods suitable to surrounding conditions.

#### · 5.2 Special hazards arising from the substance or mixture No further relevant information available.

#### · 5.3 Advice for firefighters

##### · Protective equipment: Mouth respiratory protective device.

### SECTION 6: Accidental release measures

#### · 6.1 Personal precautions, protective equipment and emergency procedures Not required.

#### · 6.2 Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/ surface or ground water.

#### · 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

#### · 6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

### SECTION 7: Handling and storage

#### · 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

##### · Information about fire - and explosion protection: Keep respiratory protective device available.

#### · 7.2 Conditions for safe storage, including any incompatibilities

##### · Storage:

##### · Requirements to be met by storerooms and receptacles: No special requirements.

##### · Information about storage in one common storage facility: Not required.

##### · Further information about storage conditions: Keep container tightly sealed.

(Contd. on page 4)

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

Printing date 31.03.2020

Revision: 31.03.2020

Trade name: **Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 3)

· **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.· **8.1 Control parameters**· **Ingredients with limit values that require monitoring at the workplace:****111-30-8 Glutaraldehyde**

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

**50-00-0 formaldehyde**

WEL	Short-term value: 2.5 mg/m <sup>3</sup> , 2 ppm
	Long-term value: 2.5 mg/m <sup>3</sup> , 2 ppm

· **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 skin.

Avoid contact with the eyes and skin.

· **Respiratory protection:**

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

· **Protection of hands:**

Protective gloves

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

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

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

· **Material of gloves**

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

· **Penetration time of glove material**

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

(Contd. on page 5)

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

Printing date 31.03.2020

Revision: 31.03.2020

Trade name: *Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4*

(Contd. of page 4)

· **Eye protection:**

Tightly sealed goggles

### SECTION 9: Physical and chemical properties

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

##### · General Information

##### · Appearance:

· <b>Form:</b>	Liquid
· <b>Colour:</b>	Colourless
· <b>Odour:</b>	Like aldehyde
· <b>Odour threshold:</b>	Not determined.

· **pH-value:** Not determined.

##### · Change in condition

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

· **Flash point:** Not applicable.

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

· **Decomposition temperature:** Not determined.

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

· **Explosive properties:** Product does not present an explosion hazard.

##### · Explosion limits:

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

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

· <b>Density at 20 °C:</b>	0.99935 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

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

##### · Viscosity:

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

##### · Solvent content:

· <b>Organic solvents:</b>	3.0 %
· <b>Water:</b>	86.5 %
· <b>VOC (EC)</b>	3.00 %

· **Solids content:** 0.0 %

(Contd. on page 6)

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

Printing date 31.03.2020

Revision: 31.03.2020

Trade name: **Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 5)

**· 9.2 Other information**

No further relevant information available.

**SECTION 10: Stability and reactivity**

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

**SECTION 11: Toxicological information**

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

**· LD/LC50 values relevant for classification:****111-30-8 Glutaraldehyde**

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

**50-00-0 formaldehyde**

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes skin irritation.
- **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**  
Suspected of causing genetic defects.
- **Carcinogenicity**  
May cause cancer.
- **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.

(Contd. on page 7)

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

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**


(Contd. of page 6)

- **Ecotoxicological effects:**
- **Remark:**  
Toxic for fish  
Harmful to fish
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.  
Also poisonous for fish and plankton in water bodies.  
Toxic for aquatic organisms  
Harmful to aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | UN1760  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>                 | 1760 CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)<br>CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)   |
| <ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                               | <div style="text-align: center;">  </div> <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul> |
| <ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  | 8 Corrosive substances.<br>8<br>II  |
| <ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards:</b></li> </ul>   | Not applicable.   |
| <ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> </ul> | Warning: Corrosive substances.<br>80  |

(Contd. on page 8)

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

Printing date 31.03.2020

Revision: 31.03.2020

Trade name: **Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 7)

· <b>EMS Number:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>ADR</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>Transport category</b>	2
· <b>Tunnel restriction code</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1760 CORROSIVE LIQUID, N.O.S. (GLUTARALDEHYDE, FORMALDEHYDE SOLUTION), 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.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 28, 72
- **National regulations:**
- **Information about limitation of use:**  
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

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

- **Relevant phrases**
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.

(Contd. on page 9)

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

Printing date 31.03.2020

Revision: 31.03.2020

**Trade name: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Contd. of page 8)

*H341 Suspected of causing genetic defects.*  
*H350 May cause cancer.*  
*H400 Very toxic to aquatic life.*  
*H411 Toxic to aquatic life with long lasting effects.*

**· Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*  
*IMDG: International Maritime Code for Dangerous Goods*  
*IATA: International Air Transport Association*  
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*ELINCS: European List of Notified Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*LC50: Lethal concentration, 50 percent*  
*LD50: Lethal dose, 50 percent*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*  
*Acute Tox. 3: Acute toxicity - oral – Category 3*  
*Acute Tox. 2: Acute toxicity - inhalation – Category 2*  
*Acute Tox. 4: Acute toxicity - inhalation – Category 4*  
*Skin Corr. 1B: Skin corrosion/irritation – Category 1B*  
*Skin Irrit. 2: Skin corrosion/irritation – Category 2*  
*Eye 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*  
*Muta. 2: Germ cell mutagenicity – Category 2*  
*Carc. 1B: Carcinogenicity – Category 1B*  
*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3*  
*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*  
*Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2*  
*Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3*

GB



# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

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

- **1.1 Productidentificatie**
- **Handelsnaam:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4
- **Artikelnummer:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [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**



GHS08 gezondheidsgevaar

- |               |   |
|---------------|---|
| Resp. Sens. 1 | H334 Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken. |
| Muta. 2       | H341 Verdacht van het veroorzaken van genetische schade.                                    |
| Carc. 1B      | H350 Kan kanker veroorzaken.  |



GHS05 corrosie

- |            |                                     |
|------------|-------------------------------------|
| Eye Dam. 1 | H318 Veroorzaakt ernstig oogletsel. |
|------------|-------------------------------------|



GHS07

- |               |   |
|---------------|---|
| Acute Tox. 4  | H332 Schadelijk bij inademing.                    |
| Skin Irrit. 2 | H315 Veroorzaakt huidirritatie.                   |
| Skin Sens. 1  | H317 Kan een allergische huidreactie veroorzaken. |

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Vervolg van blz. 1)

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



GHS05 GHS07 GHS08

### Signaalwoord Gevaar

### Gevaaraanduidende componenten voor de etikettering:

Glutaaraldehyd

formaldehyde

### Gevarenaanduidingen

H332 Schadelijk bij inademing.

H315 Veroorzaakt huidirritatie.

H318 Veroorzaakt ernstig oogletsel.

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

H317 Kan een allergische huidreactie veroorzaken.

H341 Verdacht van het veroorzaken van genetische schade.

H350 Kan kanker veroorzaken.

H335 Kan irritatie van de luchtwegen veroorzaken.

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

### Veiligheidsaanbevelingen

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.

## RUBRIEK 3: Samenstelling en informatie over de bestanddelen

### 3.2 Chemische karakterisering: Mengsels

Beschrijving: Mengsel van na elkaar aangevoerde stoffen met ongevaarlijke bijmengingen.

### Gevaarlijke inhoudstoffen:

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

(Vervolg op blz. 3)








# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

CAS: 50-00-0	formaldehyde	(Vervolg van blz. 2)
EINECS: 200-001-8	 Acute Tox. 3, H301;  Acute Tox. 3, H311;  Acute Tox. 3, H331;  Muta. 2, H341;  Carc. 1B, H350;  Skin Corr. 1B, H314;  Skin Sens. 1, H317	>2,5-≤10%

**Aanvullende gegevens:**

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

### RUBRIEK 4: Eerstehulpmaatregelen

**4.1 Beschrijving van de eerstehulpmaatregelen**

**Algemene informatie:**

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

**Na het inademen:**

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

Bij bewusteloosheid ligging en vervoer in stabiele zijligging.

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

**Na oogcontact:** Ogen met open ooglid een aantal minuten onder stromend water afspoelen en dokter raadplegen.

**Na inslikken:** Onmiddellijk arts raadplegen.

**4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.

**4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**

Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

**5.1 Blusmiddelen**

**Geschikte blusmiddelen:** Brandblusmaatregelen op omgeving afstemmen.

**5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**

Geen verdere relevante informatie verkrijgbaar.

**5.3 Advies voor brandweertieners**

**Speciale beschermende kleding:** Ademhalingsstoestel aantrekken.

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

**6.1 Persoonlijke voorzorgsmaatregelen, beschermde uitrusting en noodprocedures** Niet nodig.

**6.2 Milieuvoorzorgsmaatregelen:**

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

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

**6.3 Insluifings- en reinigingsmethoden en -materiaal:**

Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.

Besmet materiaal zoals afval volgens punt 13 verwijderen.

Voor voldoende ventilatie zorgen.

**6.4 Verwijzing naar andere rubrieken**

Informatie inzake veilig gebruik - zie hoofdstuk 7.

Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.

Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

**7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**

Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.

(Vervolg op blz. 4)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Vervolg van blz. 3)

- Tanks voorzichtig openen en behandelen.*
- Aërosolvorming vermijden.*
- **Informatie m.b.t. brand- en ontploffingsgevaar:** *Ademhalingstoestellen gereedhouden.*
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** *Geen bijzondere eisen.*
- **Informatie m.b.t. gezamenlijke opslag:** *Niet noodzakelijk.*
- **Verdere inlichtingen over eisen m.b.t. de opslag:** *Tanks ondoordringbaar gesloten houden.*
- **7.3 Specifiek eindgebruik** *Geen verdere relevante informatie verkrijgbaar.*

### RUBRIEK 8: Maatregelen ter beheersing van blootstelling/persoonlijke bescherming

- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** *Geen aanvullende gegevens. Zie 7.*
- **8.1 Controleparameters**

- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:**

#### 50-00-0 formaldehyde

WGW	Korte termijn waarde: 0,5 mg/m <sup>3</sup> , 0,4 ppm
	Lange termijn waarde: 0,15 mg/m <sup>3</sup> , 0,1 ppm

- **Aanvullende gegevens:** *Als basis dienden lijsten die bij opstelling geldig waren.*
- **8.2 Maatregelen ter beheersing van blootstelling**
- **Persoonlijke beschermingsvoorzieningen:**
- **Algemene beschermings- en gezondheidsmaatregelen:**
  - Verwijderd houden van eet- en drinkwaren.*
  - Verontreinigde kleding onmiddellijk uittrekken.*
  - Vóór de pauze en aan het einde van werktijd handen wassen.*
  - Beschermende kleding afzonderlijk bewaren.*
  - Aanraking met de huid vermijden.*
  - Aanraking met de ogen en de huid vermijden.*
- **Ademhalingsbescherming:**
  - Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingstoestel gebruiken.*
- **Handbescherming:**



Veiligheidshandschoenen

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

- **Handschoenmateriaal**

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

- **Doordringingstijd van het handschoenmateriaal**

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

(Vervolg op blz. 5)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Vervolg van blz. 4)

**· Oogbescherming:**

*Nauw aansluitende veiligheidsbril*

### RUBRIEK 9: Fysische en chemische eigenschappen

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

<b>Vorm:</b>	Vloeistof
<b>Kleur:</b>	Kleurloos
<b>Geur:</b>	Aldehydeachtig
<b>Geurdrempelwaarde:</b>	Niet bepaald.

**· pH-waarde:** Niet bepaald.

**· Toestandsverandering**

<b>Smelt-/vriespunt:</b>	Niet bepaald.
<b>Beginkookpunt en kooktraject:</b>	100 °C

**· Vlampunt:** Niet bruikbaar.

**· Ontvlambaarheid (vast, gas):** Niet bruikbaar.

**· Ontledingstemperatuur:** Niet bepaald.

**· Zelfontbrandingstemperatuur:** Het produkt ontbrandt niet uit zichzelf.

**· Ontploffingseigenschappen:** Het produkt is niet ontploffingsgevaarlijk.

**· Ontploffingsgrenzen:**

<b>Onderste:</b>	Niet bepaald.
<b>Bovenste:</b>	Niet bepaald.

**· Dampspanning bij 20 °C:** 23 hPa

**· Dichtheid bij 20 °C:** 0,99935 g/cm<sup>3</sup>
**· Relatieve dichtheid** Niet bepaald.

**· Dampdichtheid** Niet bepaald.

**· Verdampingssnelheid** Niet bepaald.

**· Oplosbaarheid in/mengbaarheid met**
**Water:** Niet resp. gering mengbaar.

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

**· Viscositeit**

<b>Dynamisch:</b>	Niet bepaald.
<b>Kinematisch:</b>	Niet bepaald.

**· Oplosmiddelgehalte:**

<b>Organisch oplosmiddel:</b>	3,0 %
<b>Water:</b>	86,5 %
<b>VOC (EG)</b>	3,00 %

**Gehalte aan vaste bestanddelen:** 0,0 %

(Vervolg op blz. 6)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Vervolg van blz. 5)

· **9.2 Overige informatie** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

- **10.1 Reactiviteit** Geen verdere relevante informatie verkrijgbaar.
- **10.2 Chemische stabiliteit**
- **Thermische afbraak / te vermijden omstandigheden:** Geen afbraak bij gebruik volgens voorschrift.
- **10.3 Mogelijke gevaarlijke reacties** Geen gevaarlijke reacties bekend.
- **10.4 Te vermijden omstandigheden** Geen verdere relevante informatie verkrijgbaar.
- **10.5 Chemisch op elkaar inwerkende materialen:** Geen verdere relevante informatie verkrijgbaar.
- **10.6 Gevaarlijke ontledingsproducten:** Geen gevaarlijke ontbindingsproducten bekend.

### RUBRIEK 11: Toxicologische informatie

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

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

#### 111-30-8 Glutaaraldehyd

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

#### 50-00-0 formaldehyde

Oraal	LD50	>200 mg/kg (rat)
-------	------	------------------

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie**  
Veroorzaakt huidirritatie.
- **Ernstig oogletsel/oogirritatie**  
Veroorzaakt ernstig oogletsel.
- **Sensibilisatie van de luchtwegen/de huid**  
Kan bij inademing allergie- of astmasymptomen of ademhalingsmoeilijkheden veroorzaken.  
Kan een allergische huidreactie veroorzaken.
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen**  
Verdacht van het veroorzaken van genetische schade.
- **Kankerverwekkendheid**  
Kan kanker veroorzaken.
- **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.

(Vervolg op blz. 7)

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**


(Vervolg van blz. 6)

- **Ecotoxische effecten:**
- **Opmerking:**  
Giftig voor vissen.  
Schadelijk voor vissen.
- **Verdere ecologische informatie:**
- **Algemene informatie:**  
Waterbezwaarlijkheid (NL): Z(1) niet afbreekbare stoffen met gevaarlijke eigenschappen voor mens en milieu (carcinogeniteit/mutageniteit/ reprotoxiciteit/bioaccumulerend vermogen/ toxiciteit of persistentie)  
Gevaar voor water klasse 2 (D) (Zelfclassificatie): gevaar voor water  
Niet lozen in grondwater, in oppervlaktewater of in riolering.  
Gevaar voor drinkwater zelfs bij uitlopen van geringe hoeveelheden in de ondergrond.  
In oppervlaktewater ook giftig voor vissen en plankton.  
giftig voor in het water levende organismen  
schadelijk voor in het water levende organismen
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

## RUBRIEK 13: Instructies voor verwijdering

- **13.1 Afvalverwerkingsmethoden**
- **Aanbeveling:** Mag niet tesamen met huisvuil gestort worden of in de riolering terechtkomen.
- **Niet gereinigde verpakkingen:**
- **Aanbeveling:** Afvalverwijdering volgens overheidsbepalingen.

## RUBRIEK 14: Informatie met betrekking tot het vervoer

- |   |   |
|---|---|
| <b>14.1 VN-nummer</b>   | UNI760  |
| <b>ADR, IMDG, IATA</b>  |   |
| <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b>          | 1760 BIJTENDE VLOEISTOF, N.E.G. (Glutaaraldehyd, FORMALDEHYDE, OPLOSSING) |
| <b>ADR</b>  |   |
| <b>IMDG, IATA</b>   | CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)          |
| <b>14.3 Transportgevarenklasse(n)</b>   |   |
| <b>ADR, IMDG, IATA</b>  |   |
|  |   |
| <b>klasse</b>   | 8 Bijtende stoffen  |
| <b>Etiket</b>   | 8   |
| <b>14.4 Verpakkingsgroep:</b>   |   |
| <b>ADR, IMDG, IATA</b>  | II  |
| <b>14.5 Milieugevaren:</b>  | Niet bruikbaar.   |
| <b>14.6 Bijzondere voorzorgen voor de gebruiker</b>                                 | Waarschuwing: Bijtende stoffen  |

(Vervolg op blz. 8)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Vervolg van blz. 7)

· <b>Gevaarsidentificatienummer (Kemler-getal):</b>	80
· <b>EMS-nummer:</b>	F-A,S-B
· <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>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>VN "Model Regulation":</b>	UN 1760 BIJTENDE VLOEISTOF, N.E.G. (GLUTAARALDEHYD, FORMALDEHYDE, OPLOSSING), 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**

50-00-0	formaldehyde
---------	--------------

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

50-00-0	formaldehyde
---------	--------------

· **Lijst van Potentieel Zeer Zorgwekkende Stoffen**

111-30-8	Glutaaraldehyd
----------	----------------

· **Richtlijn 2012/18/EU**

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

· **Verordening (EG) nr. 1907/2006 BIJLAGE XVII** Beperkingsvoorwaarden: 3, 28, 72

(Vervolg op blz. 9)



# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 31.03.2020

Herziening van: 31.03.2020

**Handelsnaam: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Vervolg van blz. 8)

· **Nationale voorschriften:**

· **Aanwijzingen m.b.t. tewerkstellingsbeperking:**

Werknemers mogen aan de kankerverwekkende gevaarlijke stoffen van deze toebereiding niet blootgesteld worden. In uitzonderingsgevallen kan de overheid speciale vergunningen afgeven.

· **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)

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

### RUBRIEK 16: Overige informatie

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

· **Relevante zinnen**

H301 Giftig bij inslikken.

H311 Giftig bij contact met de huid.

H314 Veroorzaakt ernstige brandwonden en oogletsel.

H317 Kan een allergische huidreactie veroorzaken.

H330 Dodelijk bij inademing.

H331 Giftig bij inademing.

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

H335 Kan irritatie van de luchtwegen veroorzaken.

H341 Verdacht van het veroorzaken van genetische schade.

H350 Kan kanker 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

vPvB: very Persistent and very Bioaccumulative

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

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

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

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

Skin Irrit. 2: Huidcorrosie/irritatie – Categorie 2

Eye 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

Muta. 2: Mutageniteit in geslachtscellen – Categorie 2

Carc. 1B: Kankerverwekkendheid – Categorie 1B

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

Date d'impression : 31.03.2020

Révision: 31.03.2020

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

- **1.1 Identificateur de produit**
- **Nom du produit:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4
- **Code du produit:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [info@emsdiasum.com](mailto:info@emsdiasum.com)  
[www.emsdiasum.com](http://www.emsdiasum.com)
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### RUBRIQUE 2: Identification des dangers

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



GHS08 danger pour la santé

- |               |  |
|---------------|--|
| Resp. Sens. 1 | H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation. |
| Muta. 2       | H341 Susceptible d'induire des anomalies génétiques.   |
| Carc. 1B      | H350 Peut provoquer le cancer.   |



GHS05 corrosion

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



GHS07

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

(suite page 2)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 1)

### · Pictogrammes de danger



GHS05 GHS07 GHS08

### · Mention d'avertissement Danger

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

glutaral  
Formaldéhyde

#### · Mentions de danger

H332 Nocif par inhalation.  
H315 Provoque une irritation cutanée.  
H318 Provoque 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.  
H341 Susceptible d'induire des anomalies génétiques.  
H350 Peut provoquer le cancer.  
H335 Peut irriter les voies respiratoires.  
H412 Nocif pour les organismes aquatiques, entraîne des effets néfastes à long terme.

#### · Conseils de prudence

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.

#### · Composants dangereux:

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%
CAS: 50-00-0 EINECS: 200-001-8	Formaldéhyde ----- ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 1B, H350; ☠ Skin Corr. 1B, H314; ☠ Skin Sens. 1, H317	>2,5-≤10%

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

FR

(suite page 3)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 2)

### RUBRIQUE 4: Premiers secours

· **4.1 Description des premiers secours**

· **Remarques générales:**

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

· **Après inhalation:**

*Donner de l'air frais en abondance et consulter un médecin pour plus de sécurité.*

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

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

· **Après contact avec les yeux:**

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

· **Après ingestion:** 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:** Adapter les mesures d'extinction d'incendie à l'environnement.

· **5.2 Dangers particuliers résultant de la substance ou du mélange**

*Pas d'autres informations importantes disponibles.*

· **5.3 Conseils aux pompiers**

· **Équipement spécial de sécurité:** Porter un appareil de protection respiratoire.

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

· **6.1 Précautions individuelles, équipement de protection et procédures d'urgence** Pas nécessaire.

· **6.2 Précautions pour la protection de l'environnement:**

*En cas de pénétration dans les eaux ou les égouts, avvertir les autorités compétentes.*

*Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.*

· **6.3 Méthodes et matériel de confinement et de nettoyage:**

*Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).*

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

*Assurer une aération suffisante.*

· **6.4 Référence à d'autres rubriques**

*Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.*

*Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.*

*Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.*

### RUBRIQUE 7: Manipulation et stockage

· **7.1 Précautions à prendre pour une manipulation sans danger**

*Veiller à une bonne ventilation/aspiration du poste de travail.*

*Ouvrir et manipuler les récipients avec précaution.*

*Eviter la formation d'aérosols.*

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

(suite page 4)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 3)

- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

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

- **Indications complémentaires pour l'agencement des installations techniques:**  
Sans autre indication, voir point 7.

#### · 8.1 Paramètres de contrôle

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

#### **111-30-8 glutaral**

<b>VLEP</b>	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

#### **50-00-0 Formaldéhyde**

<b>VLEP</b>	Valeur momentanée: 1 ppm
	Valeur à long terme: 0,5 ppm
	C1B, M2

- **Remarques supplémentaires:**

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

- **8.2 Contrôles de l'exposition**

- **Équipement de protection individuel:**

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

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

Retirer immédiatement les vêtements souillés ou humectés.

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

Conserver à part les vêtements de protection.

Éviter tout contact avec la peau.

Éviter 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.

(suite page 5)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 4)

· **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:**

· <b>Forme:</b>	Liquide
· <b>Couleur:</b>	Incolore
· <b>Odeur:</b>	Aldéhydique
· <b>Seuil olfactif:</b>	Non déterminé.

· **valeur du pH:** Non déterminé.

· **Changement d'état**

· <b>Point de fusion/point de congélation:</b>	Non déterminé.
· <b>Point initial d'ébullition et intervalle d'ébullition:</b>	100 °C

· **Point d'éclair** Non applicable.

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

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

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

· **Propriétés explosives:** Le produit n'est pas explosif.

· **Limites d'explosion:**

· <b>Inférieure:</b>	Non déterminé.
· <b>Supérieure:</b>	Non déterminé.

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

· **Densité à 20 °C:** 0,99935 g/cm<sup>3</sup>

· **Densité relative** Non déterminé.

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

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

· **Solubilité dans/miscibilité avec l'eau:**

Pas ou peu miscible

· **Coefficient de partage: n-octanol/eau:** Non déterminé.

· **Viscosité:**

· <b>Dynamique:</b>	Non déterminé.
· <b>Cinématique:</b>	Non déterminé.

· **Teneur en solvants:**

· <b>Solvants organiques:</b>	3,0 %
· <b>Eau:</b>	86,5 %
· <b>VOC (CE)</b>	3,00 %

· **Teneur en substances solides:** 0,0 %

(suite page 6)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 5)

· 9.2 Autres informations

Pas d'autres informations importantes disponibles.

### RUBRIQUE 10: Stabilité et réactivité

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

### RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë**  
Nocif par inhalation.

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

#### 111-30-8 glutaral

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

#### 50-00-0 Formaldéhyde

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Provoque une irritation cutanée.
- **Lésions oculaires graves/irritation oculaire**  
Provoque de graves lésions des yeux.
- **Sensibilisation respiratoire ou cutanée**  
Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.  
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**  
Susceptible d'induire des anomalies génétiques.
- **Cancérogénicité**  
Peut provoquer le cancer.
- **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.

(suite page 7)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 6)

- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **Effets écotoxiques:**
- **Remarque:**  
Toxique chez les poissons.  
Nocif pour les poissons.
- **Autres indications écologiques:**
- **Indications générales:**  
Catégorie de pollution des eaux 2 (D) (Classification propre): polluant  
Ne pas laisser pénétrer dans la nappe phréatique, les eaux ou les canalisations.  
Danger pour l'eau potable dès fuite d'une petite quantité dans le sous-sol.  
Dans les eaux, également toxique pour les poissons et le plancton.  
Toxique pour les organismes aquatiques.  
Nocif pour les organismes aquatiques.
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

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

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

### 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>  | <p style="text-align: center;">UN1760</p>  |
| <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, IATA</b></li> </ul> | <p style="text-align: center;">1760 LIQUIDE CORROSIF, N.S.A. (glutaral, FORMALDÉHYDE EN SOLUTION)<br/>CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)</p> |
| <ul style="list-style-type: none"> <li>· <b>14.3 Classe(s) de danger pour le transport</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>                         | <p style="text-align: center;">8 Matières corrosives.<br/>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>  | <p style="text-align: center;">II</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.5 Dangers pour l'environnement:</b></li> </ul>   | <p style="text-align: center;">Non applicable.</p>   |



- **Classe** 8 Matières corrosives.
- **Étiquette** 8

(suite page 8)



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 7)

<ul style="list-style-type: none"> <li>· <b>14.6 Précautions particulières à prendre par l'utilisateur</b></li> <li>· <b>Numéro d'identification du danger (Indice Kemler):</b></li> <li>· <b>No EMS:</b></li> <li>· <b>Segregation groups</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>	<p>Attention: <i>Matières corrosives.</i></p> <p>80</p> <p>F-A,S-B</p> <p>Acids</p> <p>B</p> <p>SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b></li> </ul>	<p><i>Non applicable.</i></p>
<p>· <b>Indications complémentaires de transport:</b></p>	
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Quantités limitées (LQ)</b></li> <li>· <b>Quantités exceptées (EQ)</b></li> </ul>	<p>IL</p> <p>Code: E2</p> <p>Quantité maximale nette par emballage intérieur: 30 ml</p> <p>Quantité maximale nette par emballage extérieur: 500 ml</p>
<ul style="list-style-type: none"> <li>· <b>Catégorie de transport</b></li> <li>· <b>Code de restriction en tunnels</b></li> </ul>	<p>2</p> <p>E</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>IL</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> <li>· <b>"Règlement type" de l'ONU:</b></li> </ul>	<p>UN 1760 LIQUIDE CORROSIF, N.S.A. (GLUTARAL, FORMALDÉHYDE EN SOLUTION), 8, II</p>

### RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** Aucun des composants n'est compris.
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3, 28, 72
- **Prescriptions nationales:**
- **Indications sur les restrictions de travail:**  
Le personnel ne doit pas être exposé aux substances dangereuses cancérigènes contenues dans cette préparation.  
Les autorités peuvent autoriser des exceptions dans des cas particuliers.
- **15.2 Évaluation de la sécurité chimique:** Une évaluation de la sécurité chimique n'a pas été réalisée.

### RUBRIQUE 16: Autres informations

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

- **Phrases importantes**
- H301 Toxique en cas d'ingestion.
- H311 Toxique par contact cutané.
- H314 Provoque des brûlures de la peau et de graves lésions des yeux.

(suite page 9)

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

Date d'impression : 31.03.2020

Révision: 31.03.2020

**Nom du produit: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(suite de la page 8)

*H317 Peut provoquer une allergie cutanée.**H330 Mortel par inhalation.**H331 Toxique par inhalation.**H334 Peut provoquer des symptômes allergiques ou d'asthme ou des difficultés respiratoires par inhalation.**H335 Peut irriter les voies respiratoires.**H341 Susceptible d'induire des anomalies génétiques.**H350 Peut provoquer le cancer.**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**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Toxicité aiguë - voie orale – Catégorie 3**Acute Tox. 2: Toxicité aiguë - inhalation – Catégorie 2**Acute Tox. 4: Toxicité aiguë - inhalation – Catégorie 4**Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B**Skin Irrit. 2: Corrosion cutanée/irritation cutanée – Catégorie 2**Eye 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**Muta. 2: Mutagénicité sur les cellules germinales – Catégorie 2**Carc. 1B: Cancérogénicité – Catégorie 1B**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: 31.03.2020

überarbeitet am: 31.03.2020

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

- **1.1 Produktidentifikator**
- **Handelsname:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4
- **Artikelnummer:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **1.2 Relevante identifizierte Verwendungen des Stoffs oder Gemischs und Verwendungen, von denen abgeraten wird**  
Keine weiteren relevanten Informationen verfügbar.
- **Verwendung des Stoffes / des Gemisches** Laborchemikalien
- **1.3 Einzelheiten zum Lieferanten, der das Sicherheitsdatenblatt bereitstellt**
- **Hersteller/Lieferant:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: [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
- **Auskunftgebender Bereich:** Product safety department
- **1.4 Notrufnummer:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### ABSCHNITT 2: Mögliche Gefahren

- **2.1 Einstufung des Stoffs oder Gemischs**
- **Einstufung gemäß Verordnung (EG) Nr. 1272/2008**



GHS08 Gesundheitsgefahr

- |               |  |
|---------------|--|
| Resp. Sens. 1 | H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen. |
| Muta. 2       | H341 Kann vermutlich genetische Defekte verursachen.                                     |
| Carc. 1B      | H350 Kann Krebs erzeugen.  |



GHS05 Ätzwirkung

- |            |                                       |
|------------|---------------------------------------|
| Eye Dam. 1 | H318 Verursacht schwere Augenschäden. |
|------------|---------------------------------------|



GHS07

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 1)

Acute Tox. 4      H332 Gesundheitsschädlich bei Einatmen.  
 Skin Irrit. 2      H315 Verursacht Hautreizungen.  
 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



GHS05    GHS07    GHS08

#### · Signalwort Gefahr

#### · Gefahrbestimmende Komponenten zur Etikettierung:

Glutaral  
 Formaldehyd

#### · Gefahrenhinweise

H332 Gesundheitsschädlich bei Einatmen.  
 H315 Verursacht Hautreizungen.  
 H318 Verursacht schwere Augenschäden.  
 H334 Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.  
 H317 Kann allergische Hautreaktionen verursachen.  
 H341 Kann vermutlich genetische Defekte verursachen.  
 H350 Kann Krebs erzeugen.  
 H335 Kann die Atemwege reizen.  
 H412 Schädlich für Wasserorganismen, mit langfristiger Wirkung.

#### · Sicherheitshinweise

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.

#### · Zusätzliche Angaben:

Nur für gewerbliche Anwender.

#### · 2.3 Sonstige Gefahren

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

- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

## ABSCHNITT 3: Zusammensetzung/Angaben zu Bestandteilen

### · 3.2 Chemische Charakterisierung: Gemische

· **Beschreibung:** Gemisch aus nachfolgend angeführten Stoffen mit ungefährlichen Beimengungen.

(Fortsetzung auf Seite 3)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 2)

· <b>Gefährliche Inhaltsstoffe:</b>		
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%
CAS: 50-00-0 EINECS: 200-001-8	Formaldehyd ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	>2,5-≤10%

· **Zusätzliche Hinweise:** Der Wortlaut der angeführten Gefahrenhinweise ist dem Abschnitt 16 zu entnehmen.

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**  
Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.
- **Nach Einatmen:**  
Reichlich Frischluftzufuhr und sicherheitshalber Arzt aufsuchen.  
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.
- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**  
Keine weiteren relevanten Informationen verfügbar.
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**  
Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:** Feuerlöschmaßnahmen auf die Umgebung abstimmen.
- **5.2 Besondere vom Stoff oder Gemisch ausgehende Gefahren**  
Keine weiteren relevanten Informationen verfügbar.
- **5.3 Hinweise für die Brandbekämpfung**
- **Besondere Schutzausrüstung:** Atemschutzgerät anlegen.

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
Nicht erforderlich.
- **6.2 Umweltschutzmaßnahmen:**  
Bei Eindringen in Gewässer oder Kanalisation zuständige Behörden benachrichtigen.  
Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.  
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.  
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**  
Informationen zur sicheren Handhabung siehe Abschnitt 7.

(Fortsetzung auf Seite 4)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 3)

Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.  
Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**  
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.  
Behälter mit Vorsicht öffnen und handhaben.  
Aerosolbildung vermeiden.
- **Hinweise zum Brand- und Explosionsschutz:** Atemschutzgeräte bereithalten.
- **7.2 Bedingungen zur sicheren Lagerung unter Berücksichtigung von Unverträglichkeiten**
- **Lagerung:**
- **Anforderung an Lagerräume und Behälter:** Keine besonderen Anforderungen.
- **Zusammenlagerungshinweise:** Nicht erforderlich.
- **Weitere Angaben zu den Lagerbedingungen:** Behälter dicht geschlossen halten.
- **Lagerklasse:**
- **Klassifizierung nach Betriebssicherheitsverordnung (BetrSichV):** -
- **7.3 Spezifische Endanwendungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 8: Begrenzung und Überwachung der Exposition/Persönliche Schutzausrüstungen

- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **8.1 Zu überwachende Parameter**

- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:**

#### 111-30-8 Glutaral

AGW	Langzeitwert: 0,2 mg/m <sup>3</sup> , 0,05 ml/m <sup>3</sup> 2(I);AGS, Sah, Y
-----	--

#### 50-00-0 Formaldehyd

AGW	Langzeitwert: 0,37 mg/m <sup>3</sup> , 0,3 ml/m <sup>3</sup> 2(I);AGS, Sh, Y, X
-----	--

- **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 der Haut vermeiden.  
Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**  
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

(Fortsetzung auf Seite 5)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 4)

Das Handschuhmaterial muss undurchlässig und beständig gegen das Produkt / den Stoff / die Zubereitung sein. Aufgrund fehlender Tests kann keine Empfehlung zum Handschuhmaterial für das Produkt / die Zubereitung / das Chemikaliengemisch abgegeben werden.

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

· **Handschuhmaterial**

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

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

· **Allgemeine Angaben**

· **Aussehen:**

**Form:** Flüssigkeit

**Farbe:** Farblos

· **Geruch:** Aldehydartig

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· **Zustandsänderung**

**Schmelzpunkt/Gefrierpunkt:** Nicht bestimmt.

**Siedebeginn und Siedebereich:** 100 °C

· **Flammpunkt:** Nicht anwendbar.

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

· **Zersetzungstemperatur:** Nicht bestimmt.

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

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

· **Explosionsgrenzen:**

**Untere:** Nicht bestimmt.

**Obere:** Nicht bestimmt.

· **Dampfdruck bei 20 °C:** 23 hPa

· **Dichte bei 20 °C:** 0,99935 g/cm<sup>3</sup>

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

· **Löslichkeit in / Mischbarkeit mit**

**Wasser:** Nicht bzw. wenig mischbar.

(Fortsetzung auf Seite 6)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 5)

- |  |                 |
|--|-----------------|
| · <b>Verteilungskoeffizient: n-Octanol/Wasser:</b> Nicht bestimmt.               |                 |
| · <b>Viskosität:</b>   |                 |
| <b>Dynamisch:</b>  | Nicht bestimmt. |
| <b>Kinematisch:</b>  | Nicht bestimmt. |
| · <b>Lösemittelgehalt:</b>   |                 |
| <b>Organische Lösemittel:</b>  | 3,0 %           |
| <b>Wasser:</b>   | 86,5 %          |
| <b>VOC (EU)</b>  | 3,00 %          |
| · <b>Festkörpergehalt:</b> 0,0 %   |                 |
| · <b>9.2 Sonstige Angaben</b> Keine weiteren relevanten Informationen verfügbar. |                 |

### ABSCHNITT 10: Stabilität und Reaktivität

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

### ABSCHNITT 11: Toxikologische Angaben

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

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

#### 111-30-8 Glutaral

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

#### 50-00-0 Formaldehyd

Oral	LD50	>200 mg/kg (rat)
------	------	------------------

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut**  
Verursacht Hautreizungen.
- **Schwere Augenschädigung/-reizung**  
Verursacht schwere Augenschäden.
- **Sensibilisierung der Atemwege/Haut**  
Kann bei Einatmen Allergie, asthmaartige Symptome oder Atembeschwerden verursachen.  
Kann allergische Hautreaktionen verursachen.
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität**  
Kann vermutlich genetische Defekte verursachen.
- **Karzinogenität**  
Kann Krebs erzeugen.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

(Fortsetzung auf Seite 7)



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 6)

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

### ABSCHNITT 13: Hinweise zur Entsorgung

- **13.1 Verfahren der Abfallbehandlung**
- **Empfehlung:** Darf nicht zusammen mit Hausmüll entsorgt werden. Nicht in die Kanalisation gelangen lassen.
- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

### ABSCHNITT 14: Angaben zum Transport

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Nummer</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>   | <p>UNI760</p>   |
| <ul style="list-style-type: none"> <li>· <b>14.2 Ordnungsgemäße UN-Versandbezeichnung</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul> | <p>1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G. (Glutaral, FORMALDEHYDLÖSUNG)<br/>CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)</p> |

(Fortsetzung auf Seite 8)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 7)

· **14.3 Transportgefahrenklassen**

· **ADR, IMDG, IATA**



· **Klasse** 8 Ätzende Stoffe  
 · **Gefahrzettel** 8

· **14.4 Verpackungsgruppe**

· **ADR, IMDG, IATA** II

· **14.5 Umweltgefahren:** Nicht anwendbar.

· **14.6 Besondere Vorsichtsmaßnahmen für den Verwender**

Achtung: Ätzende Stoffe

· **Nummer zur Kennzeichnung der Gefahr (Kemler-Zahl):** 80

· **EMS-Nummer:** F-A,S-B

· **Segregation groups** Acids

· **Stowage Category** B

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

· **14.7 Massengutbeförderung gemäß Anhang II des MARPOL-Übereinkommens und gemäß IBC-Code** Nicht anwendbar.

· **Transport/weitere Angaben:**

· **ADR**

· **Begrenzte Menge (LQ)** 1L

· **Freigestellte Mengen (EQ)** Code: E2

Höchste Nettomenge je Innenverpackung: 30 ml

Höchste Nettomenge je Außenverpackung: 500 ml

· **Beförderungskategorie** 2

· **Tunnelbeschränkungscode** E

· **IMDG**

· **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

· **UN "Model Regulation":**

UN 1760 ÄTZENDER FLÜSSIGER STOFF, N.A.G.  
(GLUTARAL, FORMALDEHYDLÖSUNG), 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.

· **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3, 28, 72

(Fortsetzung auf Seite 9)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Fortsetzung von Seite 8)

· **Nationale Vorschriften:**

· **Hinweise zur Beschäftigungsbeschränkung:**

Arbeitnehmer dürfen den in dieser Zubereitung enthaltenen krebserzeugenden Gefahrstoffen nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.

· **Technische Anleitung Luft:**

Klasse	Anteil in %
Wasser	86,5
I	6,0

· **Wassergefährdungsklasse:** WGK 2 (Selbsteinstufung): deutlich wassergefährdend.

· **Sonstige Vorschriften, Beschränkungen und Verbotsverordnungen**

Das Produkt unterliegt der Anlage 2 der Chemikalienverbotsverordnung (ChemVerbotsV) - Anforderungen in Bezug auf die Abgabe

· **15.2 Stoffsicherheitsbeurteilung:** Eine Stoffsicherheitsbeurteilung wurde nicht durchgeführt.

### ABSCHNITT 16: Sonstige Angaben

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

· **Relevante Sätze**

H301 Giftig bei Verschlucken.

H311 Giftig bei Hautkontakt.

H314 Verursacht schwere Verätzungen der Haut und schwere Augenschäden.

H317 Kann allergische Hautreaktionen verursachen.

H330 Lebensgefahr bei Einatmen.

H331 Giftig bei Einatmen.

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

H335 Kann die Atemwege reizen.

H341 Kann vermutlich genetische Defekte verursachen.

H350 Kann Krebs erzeugen.

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

vPvB: very Persistent and very Bioaccumulative

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

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

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

Skin Corr. 1B: Hautreizende/-ätzende Wirkung - Kategorie 1B

Skin Irrit. 2: Hautreizende/-ätzende Wirkung - Kategorie 2

Eye Dam. 1: Schwere Augenschädigung/Augenreizung - Kategorie 1

Resp. Sens. 1: Sensibilisierung der Atemwege - Kategorie 1

Skin Sens. 1: Sensibilisierung der Haut - Kategorie 1

Skin Sens. 1A: Sensibilisierung der Haut - Kategorie 1A

Muta. 2: Keimzellmutagenität - Kategorie 2

(Fortsetzung auf Seite 10)

**Sicherheitsdatenblatt**  
gemäß 1907/2006/EG, Artikel 31

Druckdatum: 31.03.2020

überarbeitet am: 31.03.2020

**Handelsname: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

*Carc. 1B: Karzinogenität – Kategorie 1B*

*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*

(Fortsetzung von Seite 9)

DE

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4

· **Articolo numero:** 16538-06, 16538-07, 16538-08, 16538-07-SP

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

Non sono disponibili altre informazioni.

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

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

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: [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**



GHS08 pericolo per la salute

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

Muta. 2            H341 Sospettato di provocare alterazioni genetiche.

Carc. 1B           H350 Può provocare il cancro.



GHS05 corrosione

Eye Dam. 1        H318 Provoca gravi lesioni oculari.



GHS07

Acute Tox. 4        H332 Nocivo se inalato.

Skin Irrit. 2        H315 Provoca irritazione cutanea.

Skin Sens. 1        H317 Può provocare una reazione allergica cutanea.

STOT SE 3         H335 Può irritare le vie respiratorie.

(continua a pagina 2)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 1)

*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**



GHS05 GHS07 GHS08

· **Avvertenza Pericolo**

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

glutarale  
formaldeide

· **Indicazioni di pericolo**

H332 Nocivo se inalato.

H315 Provoca irritazione cutanea.

H318 Provoca gravi lesioni oculari.

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

H317 Può provocare una reazione allergica cutanea.

H341 Sospettato di provocare alterazioni genetiche.

H350 Può provocare il cancro.

H335 Può irritare le vie respiratorie.

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

· **Consigli di prudenza**

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.

· **Sostanze pericolose:**

CAS: 111-30-8 EINECS: 203-856-5	glutarale ⚠ Acute Tox. 3, H301; Acute Tox. 2, H330; ⚠ Resp. Sens. 1, H334; ⚠ Skin Corr. 1B, H314; ⚠ Aquatic Acute 1, H400; Aquatic Chronic 2, H411; ⚠ Skin Sens. 1A, H317; STOT SE 3, H335	>2,5-≤10%
CAS: 50-00-0 EINECS: 200-001-8	formaldeide ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ Muta. 2, H341; Carc. 1B, H350; ⚠ Skin Corr. 1B, H314; ⚠ Skin Sens. 1, H317	>2,5-≤10%

(continua a pagina 3)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 2)

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

#### **SEZIONE 4: Misure di primo soccorso**

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

· **Indicazioni generali:**

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

· **Inalazione:**

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

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

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

· **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.

· **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.

· **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**

Non sono disponibili altre informazioni.

#### **SEZIONE 5: Misure antincendio**

· **5.1 Mezzi di estinzione**

· **Mezzi di estinzione idonei:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.

· **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.

· **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**

· **Mezzi protettivi specifici:** Indossare il respiratore.

#### **SEZIONE 6: Misure in caso di rilascio accidentale**

· **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.

· **6.2 Precauzioni ambientali:**

In caso di infiltrazione nei corpi d'acqua o nelle fognature avvertire le autorità competenti.

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

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

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

Smaltimento del materiale contaminato conformemente al punto 13.

Provvedere ad una sufficiente areazione.

· **6.4 Riferimento ad altre sezioni**

Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.

Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.

Per informazioni relative allo smaltimento vedere Capitolo 13.

#### **SEZIONE 7: Manipolazione e immagazzinamento**

· **7.1 Precauzioni per la manipolazione sicura**

Accurata ventilazione/aspirazione nei luoghi di lavoro.

Aprire e manipolare i recipienti con cautela.

Evitare la formazione di aerosol.

· **Indicazioni in caso di incendio ed esplosione:** Tener pronto il respiratore.

(continua a pagina 4)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 3)

- **7.2 Condizioni per lo stoccaggio sicuro, comprese eventuali incompatibilità**
- **Stoccaggio:**
- **Requisiti dei magazzini e dei recipienti:** Non sono richiesti requisiti particolari.
- **Indicazioni sullo stoccaggio misto:** Non necessario.
- **Ulteriori indicazioni relative alle condizioni di immagazzinamento:** Mantenere i recipienti ermeticamente chiusi.
- **7.3 Usi finali particolari** Non sono disponibili altre informazioni.

### SEZIONE 8: Controllo dell'esposizione/protezione individuale

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

#### 8.1 Parametri di controllo

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

##### 111-30-8 glutarale

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

##### 50-00-0 formaldeide

TWA Limite Ceiling: 0,37 mg/m<sup>3</sup>, 0,3 ppm  
sen, A2

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

#### 8.2 Controlli dell'esposizione

##### Mezzi protettivi individuali:

##### Norme generali protettive e di igiene del lavoro:

- Tenere lontano da cibo, bevande e foraggi.
- Togliere immediatamente gli abiti contaminati.
- Lavarsi le mani prima dell'intervallo o a lavoro terminato.
- Custodire separatamente l'equipaggiamento protettivo.
- Evitare il contatto con la pelle.
- Evitare il contatto con gli occhi e la pelle.

##### Maschera protettiva:

Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.

##### Guanti protettivi:



Guanti protettivi

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

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

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

##### Materiale dei guanti

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

##### Tempo di permeazione del materiale dei guanti

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

(continua a pagina 5)



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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 4)

· **Occhiali protettivi:**

Occhiali protettivi a tenuta

### SEZIONE 9: Proprietà fisiche e chimiche

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

##### · Indicazioni generali

##### · Aspetto:

**Forma:** Liquido

**Colore:** Incolore

· **Odore:** Aldeidico

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

##### · Cambiamento di stato

**Punto di fusione/punto di congelamento:** Non definito.

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

· **Punto di infiammabilità:** Non applicabile.

· **Infiammabilità (solidi, gas):** Non applicabile.

· **Temperatura di decomposizione:** Non definito.

· **Temperatura di autoaccensione:** Prodotto non autoinfiammabile.

· **Proprietà esplosive:** Prodotto non esplosivo.

##### · Limiti di infiammabilità:

**Inferiore:** Non definito.

**Superiore:** Non definito.

· **Tensione di vapore a 20 °C:** 23 hPa

· **Densità a 20 °C:** 0,99935 g/cm<sup>3</sup>

· **Densità relativa** Non definito.

· **Densità di vapore:** Non definito.

· **Velocità di evaporazione** Non definito.

##### · Solubilità in/Miscibilità con acqua:

Poco e/o non miscibile.

· **Coefficiente di ripartizione: n-ottanolo/acqua:** Non definito.

##### · Viscosità:

**Dinamica:** Non definito.

**Cinematica:** Non definito.

##### · Tenore del solvente:

**Solventi organici:** 3,0 %

**Acqua:** 86,5 %

**VOC (CE)** 3,00 %

**Contenuto solido:** 0,0 %

(continua a pagina 6)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 5)

· 9.2 Altre informazioni

Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

- 10.1 Reattività Non sono disponibili altre informazioni.
- 10.2 Stabilità chimica
- **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.
- 10.3 Possibilità di reazioni pericolose Non sono note reazioni pericolose.
- 10.4 Condizioni da evitare Non sono disponibili altre informazioni.
- 10.5 Materiali incompatibili: Non sono disponibili altre informazioni.
- 10.6 Prodotti di decomposizione pericolosi: Non sono noti prodotti di decomposizione pericolosi.

### SEZIONE 11: Informazioni tossicologiche

- 11.1 Informazioni sugli effetti tossicologici
- **Tossicità acuta**  
Nocivo se 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)

#### 50-00-0 formaldeide

Orale	LD50	>200 mg/kg (rat)
-------	------	------------------

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea**  
Provoca irritazione cutanea.
- **Lesioni oculari gravi/irritazioni oculari gravi**  
Provoca gravi lesioni oculari.
- **Sensibilizzazione respiratoria o cutanea**  
Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.  
Può provocare una reazione allergica cutanea.
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**  
Sospettato di provocare alterazioni genetiche.
- **Cancerogenicità**  
Può provocare il cancro.
- **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.

(continua a pagina 7)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**


(Segue da pagina 6)

- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **Effetti tossici per l'ambiente:**
- **Osservazioni:**  
Tossico per i pesci.  
Nocivo per i pesci.
- **Ulteriori indicazioni in materia ambientale:**
- **Ulteriori indicazioni:**  
Pericolosità per le acque classe 2 (D) (Autoclassificazione): pericoloso  
Non immettere nelle acque freatiche, nei corsi d'acqua o nelle fognature.  
Pericolo per le acque potabili anche in caso di perdite nel sottosuolo di piccole quantità di prodotto.  
Tossico per pesci e plancton.  
tossico per gli organismi acquatici  
nocivo per gli organismi acquatici
- **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.

### SEZIONE 14: Informazioni sul trasporto

· <b>14.1 Numero ONU</b> · <b>ADR, IMDG, IATA</b>	UN1760
· <b>14.2 Nome di spedizione dell'ONU</b> · <b>ADR</b> · <b>IMDG, IATA</b>	1760 LIQUIDO CORROSIVO, N.A.S. (glutarale, FORMALDEIDE IN SOLUZIONE) CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)
· <b>14.3 Classi di pericolo connesso al trasporto</b> · <b>ADR, IMDG, IATA</b>	
	
· <b>Classe</b> · <b>Etichetta</b>	8 Materie corrosive 8
· <b>14.4 Gruppo di imballaggio</b> · <b>ADR, IMDG, IATA</b>	II
· <b>14.5 Pericoli per l'ambiente:</b>	Non applicabile.
· <b>14.6 Precauzioni speciali per gli utilizzatori</b> · <b>N° identificazione pericolo (Numero Kemler):</b>	Attenzione: Materie corrosive 80

(continua a pagina 8)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 7)

· <b>Numero EMS:</b>	F-A,S-B
· <b>Segregation groups</b>	Acids
· <b>Stowage Category</b>	B
· <b>Stowage Code</b>	SW2 Clear of living quarters.
· <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b>	Non applicabile.
· <b>Trasporto/ulteriori indicazioni:</b>	
· <b>ADR</b>	
· <b>Quantità limitate (LQ)</b>	1L
· <b>Quantità esenti (EQ)</b>	Codice: E2 Quantità massima netta per imballaggio interno: 30 ml Quantità massima netta per imballaggio esterno: 500 ml
· <b>Categoria di trasporto</b>	2
· <b>Codice di restrizione in galleria</b>	E
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	1L
· <b>Excepted quantities (EQ)</b>	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· <b>UN "Model Regulation":</b>	UN 1760 LIQUIDO CORROSIVO, N.A.S. (GLUTARALE, FORMALDEIDE IN SOLUZIONE), 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.
  - **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3, 28, 72
  - **Disposizioni nazionali:**
  - **Indicazioni relative alla limitazione delle attività lavorative:**  
Il personale non deve essere esposto alle sostanze cancerogene contenute in questo preparato L'autorità può ammettere nei singoli casi delle eccezioni.
  - **Istruzione tecnica aria:**
- | Classe | quota in % |
|--------|------------|
| NC     | 3,0        |
- **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.

- **Fraasi rilevanti**
- H301 Tossico se ingerito.
- H311 Tossico per contatto con la pelle.
- H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.

(continua a pagina 9)

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

Stampato il: 31.03.2020

Revisione: 31.03.2020

**Denominazione commerciale: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(Segue da pagina 8)

*H317 Può provocare una reazione allergica cutanea.**H330 Letale se inalato.**H331 Tossico se inalato.**H334 Può provocare sintomi allergici o asmatici o difficoltà respiratorie se inalato.**H335 Può irritare le vie respiratorie.**H341 Sospettato di provocare alterazioni genetiche.**H350 Può provocare il cancro.**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**vPvB: very Persistent and very Bioaccumulative**Acute Tox. 3: Tossicità acuta per via orale – Categoria 3**Acute Tox. 2: Tossicità acuta per inalazione – Categoria 2**Acute Tox. 4: Tossicità acuta per inalazione – Categoria 4**Skin Corr. 1B: Corrosione/irritazione della pelle – Categoria 1B**Skin Irrit. 2: Corrosione/irritazione della pelle – Categoria 2**Eye 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**Muta. 2: Mutagenicità sulle cellule germinali – Categoria 2**Carc. 1B: Cancerogenicità – Categoria 1B**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*



# 물질안전보건자료

## GHS에 따라라따

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(1 쪽부터계속)



급성 독성 - 흡입 - 구분 4	H332 흡입하면 유해함
피부 부식성/피부 자극성 - 구분 2	H315 피부에 자극을 일으킴
피부 과민성 - 구분 1	H317 알레르기성 피부 반응을 일으킬 수 있음
특정표적장기 독성 - 1회 노출 - 구분 3	H335 호흡 자극성을 일으킬 수 있음
수생환경 유해성 - 만성3	H412 장기적 영향에 의해 수생생물에 유해함

· 라벨 표기 요소요소

· 라벨 라벨 요소

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

· 그림문자



GHS05 GHS07 GHS08

· 신호어 위험

· 상표상에명확히위험성이표시된성분:

글루타르알데히드

포르말린

유해 위험성 함량 문구

- 흡입하면 유해함
- 피부에 자극을 일으킴
- 눈에 심한 손상을 일으킴
- 흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음
- 알레르기성 피부 반응을 일으킬 수 있음
- 유전적인 결함을 일으킬 것으로 의심됨
- 암을 일으킬 수 있음
- 호흡 자극성을 일으킬 수 있음
- 장기적 영향에 의해 수생생물에 유해함

· 예방 조치 문구문구

- 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) 및 vPvB(고 잔류성, 고 생물농축성, 물질분해성)에 해당하지 않음.
- PBT(잔류성, 생물농축성, 물질분해성)에 해당하지 않음.
- vPvB(고 잔류성, 고 생물농축성, 물질분해성)에 해당하지 않음.

### 3 구성성분의 명칭 및 함유량

· 화학적 특성: 혼합물

설명설명: 무색한 첨가물이 함유된 아래에 열거된 물질로 만들어진 혼합물.

(3 쪽에계속)





# 물질안전보건자료 GHS에 따라라다

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(3 쪽부터 계속)

쓰레기 처리에 대한 정보는 제13 장을 참고하십시오.

## 7 취급 및 저장방법

취급 취급 취급

안전 안전 안전을 위한 예방 조치

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

화재 화재 위험을 예방하기 위해 화재에 관한 정보와 보호장비를 항상 비치한다.

· 혼합 위험성: 혼합 위험성 조건

보관 보관 보관

- 안전 관련 저장 방법: 특별한 요구사항이 없음.
- 하위 위험성: 하위 위험성에 대한 예방 조치와 정보 없음
- 보관 조건에 관한 추가 정보: 용기를 새지 않게 밀폐한 채 보관한다.
- 구체적 최종 사용자: 추가적인 정보가 존재하지 않습니다.

## 8 노출방지 및 개인보호구

- 첨단 시설 디자인에 대한 추가 정보: 더 이상의 자료는 없음. 항목 7을 참고하십시오.

통제 통제 통제 변수

· 화학 물질의 노출 기준, 생물학적 노출 기준 등:

### 111-30-8 글루타르알데히드

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

### 50-00-0 포르말린

TLV (KR)	장기간 의값: 0.3 ppm 발암성1A, 생식세포 변이원성2
BOELV (EU)	단기간 의값: 0.74 mg/m <sup>3</sup> , 0.6 ppm 장기간 의값: 0.37 (0.62)* mg/m <sup>3</sup> , 0.3 (0.5)* ppm Skin sens; *health/funeral/embalming till 11/7/24
PEL (US)	단기간 의값: 2 ppm 장기간 의값: 0.75 ppm see 29 CFR 1910.1048(c)
REL (US)	장기간 의값: 0.016 ppm 최고 노출 기준: 0.1* ppm *15-min; See Pocket Guide App. A
TLV (US)	단기간 의값: 0.37 mg/m <sup>3</sup> , 0.3 ppm 장기간 의값: 0.12 mg/m <sup>3</sup> , 0.1 ppm DSEN; RSEN

- 추가 정보: 정보 할 당시에 유효한 목록을 기초로 사용했다.

노출 통제 통제 통제

개인 개인 개인 보호구

· 일반적 보호 조치 및 위생 조치:

- 식료품, 음료수와 사료로부터 멀리 떨어져 두는 다.

(5 쪽에 계속)

# 물질안전보건자료 GHS에 따라라따

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(4 쪽부터 계속)

더러워지거나 음료가 묻은 옷은 즉시 탈의한다.  
휴식 전이나 작업이 끝날 때마다 손을 씻는다.  
방호복은 따로 보관한다.  
피부와 의 접촉을 피한다.  
눈과 피부와의 접촉을 피한다.

**· 호흡기 보호**

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

**· 보호장비**



보호용 장갑

장갑재질은 제품 / 원료 / 조제를 투과시키지 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 조제가 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 보호장갑 제조자에 의하여 인지되고, 준수되어야 한다.

**· 보호장비**



확조이는 보안경

## 9 물리화학적 특성

기본 물리화학적 특성에 대한 기본 정보

**· 일반정보**

외형 외형 외형

물리적 상태 상태

액체

색:

색소가 없는

냄새 냄새 냄새

알데히드 성질의

· 후각역치

알맞지 않다.

· pH:

알맞지 않다.

**· 상태변화**

녹는점/어는점:

맞지 않는다

초기초기 끓는점과 끓는점 범위 범위 100 °C

· 인화점:

해당 사항 없음.

· 인화성 고체/기체

해당 사항 없음.

분해 분해 온도

알맞지 않다.

· 자기점화:

이 제품은 자연발화성이 없다.

· 폭발위험:

이 제품은 폭발위험성이 없다

인화 인화 인화 폭발 위험성 상한선 하한

아래로:

알맞지 않다.

(6 쪽에 계속)



# 물질안전보건자료 GHS에 따라라따

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(6 쪽부터계속)

**· 추가적인 독성에 관한 정보**

이제 품은 유럽공동체의공통분류원칙의합법적인절차에근거하여최근에발효된원고에서아래위험들의사전 준비에대하여제시하고있다.

- 건강에해로운
- 자극적인
- 암을유발하는

**· 다음다음종류의 잠재적인 효과에 대한 정보**

- CMR과 효과유발, 유전자변이성, 그리고 생식독성 특성
- 생식세포 변이원성 - 구분 2, 발암성 - 구분 1B

## 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
- 어류에해로움

**· 추가적인 생태정보정보**

**일반 열안정성특징**

- 수질오염등급 2 (자체등급분류): 수질오염이된 지하수나, 하천으로또는 하수도망에도달하지않게한다.
- 지하수로경미한양이유입되었을경우엔이미식수오염상태이다
- 하천에서는역시물고기나플랑크톤게는독성이있다.
- 물속의유기체에독이되는것
- 물속의유기체에해가되는것

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

기타기타 부속용 추가적인 정보가 존재하지 않습니다.

## 13 폐기시 주의사항

**· 폐기물처리방법**

권고 권고 건설할 쓰레기와 함께 처리되어서는 안 된다. 하수도망으로 유입되어서는 안 된다.

**· 비위생적 포장포장**

권고 권고 권고 의지침에 입각한 쓰레기 처리.

## 14 운송에 필요한 정보

**유엔 유엔 번호**

- ADR, IMDG, IATA

UN1760

(8 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(7 쪽부터계속)

<ul style="list-style-type: none"> <li>· <b>적정적정정명</b></li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	<p>1760 CORROSIVE LIQUID, N.O.S. (글루타르알데히드, FORMALDEHYDE SOLUTION)</p> <p>CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)</p>
<p><b>교통 위험물 분류 및 라벨</b></p> <ul style="list-style-type: none"> <li>· ADR, IMDG, IATA</li> </ul>	<p>8 부식작용하는물질</p> <p>8</p>
<p><b>등급</b></p> <ul style="list-style-type: none"> <li>· 위험물 라벨라벨</li> </ul>	<p>8 부식작용하는물질</p> <p>8</p>
<ul style="list-style-type: none"> <li>· <b>용기등급</b></li> <li>· ADR, IMDG, IATA</li> </ul>	<p>II</p>
<ul style="list-style-type: none"> <li>· <b>환경적 유해물질:</b></li> </ul>	<p>해당사항 없음.</p>
<ul style="list-style-type: none"> <li>· <b>이동시 특별 예방조치</b></li> <li>위험물 코드</li> <li>· E 번호</li> <li>· Segregation groups</li> <li>· Stowage Category</li> <li>· Stowage Code</li> </ul>	<p>경고: 부식작용하는물질</p> <p>80</p> <p>F-A,S-B</p> <p>Acids</p> <p>B</p> <p>SW2 Clear of living quarters.</p>
<ul style="list-style-type: none"> <li>· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크물질 운송 규정</li> </ul>	<p>해당사항 없음.</p>
<ul style="list-style-type: none"> <li>· <b>운송/취급/처리 정보</b></li> <li>· ADR</li> </ul>	<p>1L</p> <p>Code: E2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<p><b>한정량</b></p> <ul style="list-style-type: none"> <li>· Excepted quantities (EQ)</li> </ul>	<p>2</p> <p>Maximum net quantity per inner packaging: 30 ml</p> <p>Maximum net quantity per outer packaging: 500 ml</p>
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	<p>2</p> <p>Code: E</p>
<ul style="list-style-type: none"> <li>· <b>UN 번호</b></li> </ul>	<p>UN 1760 CORROSIVE LIQUID, N.O.S. (글루타르알데히드, FORMALDEHYDE SOLUTION), 8, II</p>

KR

(9 쪽에계속)

# 물질안전보건자료

## GHS에 따라 라다

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(8 쪽부터 계속)

### 15 법적 규제 현황

· 산업안전보건법에 의해 규제

제조제 조성 금지 물질:

어떠한 내용물도 목록화 되어있지 않다

· 허가대상 물질:

어떠한 내용물도 목록화 되어있지 않다

· 관리대상 유해물질:

111-30-8 글루타르알데히드

50-00-0 포르말린

· 관리대상 유해물 **중류 중류** 화합물: 117

· 작업환경측정 대상 유해인자

111-30-8 글루타르알데히드

1A1

50-00-0 포르말린

1A105

· 특수건강 집관 대상 유해인자

111-30-8 글루타르알데히드

1A2

50-00-0 포르말린

1A98

해당 해당 순물질 또는 혼합물에 대한 안전보건자료 작성 의무를 가짐

· Korean Existing Chemical Inventory

7558-79-4 disodium hydrogenorthophosphate

KE-12344

7778-77-0 potassium dihydrogenorthophosphate

KE-28622

111-30-8 글루타르알데히드

KE-27969

50-00-0 포르말린

KE-17074

7732-18-5 물

KE-35400

· 화학물질관리법

· 사고대비물질

50-00-0 포르말린

· 금지물질

어떠한 내용물도 목록화 되어있지 않다

· 제한물질

50-00-0 포르말린

· 유독물질

111-30-8 글루타르알데히드

50-00-0 포르말린

· 허가물질

111-30-8 글루타르알데히드

50-00-0 포르말린

· 위험물 안전관리법 (위험물 및 지정수량) 제 4: 4,000 리터

등록 등록 물질 또는 선제대상 화학물질

7732-18-5 물

· '21년까지 등록하여야 할 압, 들언병이, 생식능력 이상을 일으킬 우려가 있는 기존 화학물질

어떠한 내용물도 목록화 되어있지 않다

(10 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(9 쪽부터계속)

· **중점관리물 짚깻지정지정**

· **표1 중점관리물 짚(제관전)관련관련**

50-00-0 포르말린

· **표2 중점관리물 짚(제관전)관련관련**

어떠한내용물도목록화되어있지않다

· **라벨 라벨과 발 요소**

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

· **그림문자**



GHS05 GHS07 GHS08

· **신호어 위험**

· **상표상에 명확히 위험성이 표시된 성분:**

글루타르알데히드  
포르말린

· **유해 유해 유해 유해 유해 문구**

- 흡입하면 유해함
- 피부에 자극을 일으킴
- 눈에 심한 손상을 일으킴
- 흡입 시 알레르기성 반응, 천식 또는 호흡 곤란 등을 일으킬 수 있음
- 알레르기성 피부 반응을 일으킬 수 있음
- 유전적인 결함을 일으킬 것으로 의심됨
- 암을 일으킬 수 있음
- 호흡 자극성을 일으킬 수 있음
- 장기적 영향에 의해 수생생물에 유해함

· **예방 조차 문구 문구**

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

· **국내 규정:**

· **사용 제한에 대한 정보**

노동자들은 이러한 예방 준비 하에 암을 유발시키는 성분을 함유한 위험물을 버리지 말아야 한다. 개별적인 경우 예외는 예외를 허가할 수 있다.

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

### 16 그 밖의 참고 사항

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

최초 최초 확정일자: 2020.03.31

개정 개정 개정 개정 개정 최종 확정일자: 1 / 2020.03.31

· **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

(11 쪽에 계속)

# 물질안전보건자료

## GHS에 따라라따

인쇄일자: 2020.03.31

개정: 2020.03.31

**제품명: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

(10 쪽부터계속)

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

-KR-



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

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

- **1.1 Identificador del producto**
- **Nombre comercial:** *Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4*
- **Número del artículo:** 16538-06, 16538-07, 16538-08, 16538-07-SP
- **1.2 Usos pertinentes identificados de la sustancia o de la mezcla y usos desaconsejados**  
*No existen más datos relevantes disponibles.*
- **Utilización del producto / de la elaboración** *Sustancias químicas de laboratorio*
- **1.3 Datos del proveedor de la ficha de datos de seguridad**
- **Fabricante/distribuidor:**  
*Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com*
- **Aname**  
*C/ Perez Galdos no. 2  
28693 Quijorna  
Madrid, Spain  
Tel: +34.91.816.89.50  
Fax: +34.91.816.85.94  
email: ventas@aname.es*
- **Área de información:** *Product safety department*
- **1.4 Teléfono de emergencia:**  
*ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887*

### SECCIÓN 2: Identificación de los peligros

- **2.1 Clasificación de la sustancia o de la mezcla**
- **Clasificación con arreglo al Reglamento (CE) n° 1272/2008**



GHS08 peligro para la salud

- |                      |   |
|----------------------|---|
| <i>Resp. Sens. 1</i> | <i>H334 Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.</i> |
| <i>Muta. 2</i>       | <i>H341 Se sospecha que provoca defectos genéticos.</i>   |
| <i>Carc. 1B</i>      | <i>H350 Puede provocar cáncer.</i>  |



GHS05 corrosión

- |                   |   |
|-------------------|---|
| <i>Eye Dam. 1</i> | <i>H318 Provoca lesiones oculares graves.</i> |
|-------------------|---|



GHS07

- |                      |  |
|----------------------|--|
| <i>Acute Tox. 4</i>  | <i>H332 Nocivo en caso de inhalación.</i>                    |
| <i>Skin Irrit. 2</i> | <i>H315 Provoca irritación cutánea.</i>                      |
| <i>Skin Sens. 1</i>  | <i>H317 Puede provocar una reacción alérgica en la piel.</i> |

( se continua en página 2 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 1 )

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



GHS05 GHS07 GHS08

#### Palabra de advertencia Peligro

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

glutaral  
formaldehído

#### Indicaciones de peligro

H332 Nocivo en caso de inhalación.

H315 Provoca irritación cutánea.

H318 Provoca lesiones oculares graves.

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

H317 Puede provocar una reacción alérgica en la piel.

H341 Se sospecha que provoca defectos genéticos.

H350 Puede provocar cáncer.

H335 Puede irritar las vías respiratorias.

H412 Nocivo para los organismos acuáticos, con efectos nocivos duraderos.

#### Consejos de prudencia

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.

## SECCIÓN 3: Composición/información sobre los componentes

### 3.2 Caracterización química: Mezclas

Descripción: Mezcla formada por las sustancias especificadas a continuación con adiciones no peligrosas.

#### Componentes peligrosos:

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

( se continua en página 3 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial:** Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4

( se continua en página 2 )

CAS: 50-00-0	formaldehído	>2,5-≤10%
EINECS: 200-001-8	Acute Tox. 3, H301;  Acute Tox. 3, H311;  Acute Tox. 3, H331;  Muta. 2, H341;  Carc. 1B, H350;  Skin Corr. 1B, H314;  Skin Sens. 1, H317	

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

### SECCIÓN 4: Primeros auxilios

#### · 4.1 Descripción de los primeros auxilios

##### · Instrucciones generales:

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

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

Suministrar suficiente aire fresco y, para mayor seguridad, consultar el médico.

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

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

##### · 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.

#### · 4.2 Principales síntomas y efectos, agudos y retardados No existen más datos relevantes disponibles.

#### · 4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente No existen más datos relevantes disponibles.

### SECCIÓN 5: Medidas de lucha contra incendios

#### · 5.1 Medios de extinción

· **Sustancias extintoras apropiadas:** Combatir los incendios con medidas adaptados al ambiente circundante.

#### · 5.2 Peligros específicos derivados de la sustancia o la mezcla No existen más datos relevantes disponibles.

#### · 5.3 Recomendaciones para el personal de lucha contra incendios

· **Equipo especial de protección:** Colocarse la protección respiratoria.

### SECCIÓN 6: Medidas en caso de vertido accidental

#### · 6.1 Precauciones personales, equipo de protección y procedimientos de emergencia No es necesario.

#### · 6.2 Precauciones relativas al medio ambiente:

Al penetrar en las aguas o en el alcantarillado, avisar a las autoridades pertinentes.

Evitar que penetre en la canalización /aguas de superficie /agua subterráneas.

#### · 6.3 Métodos y material de contención y de limpieza:

Quitar con material absorbente (arena, kieselgur, aglutinante de ácidos, aglutinante universal, aserrín).

Desechar el material contaminado como vertido según 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.

( se continua en página 4 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 3 )

- Evitar la formación de aerosoles.
- **Prevención de incendios y explosiones:** Tener preparados los aparatos respiratorios.
- **7.2 Condiciones de almacenamiento seguro, incluidas posibles incompatibilidades**
- **Almacenamiento:**
- **Exigencias con respecto al almacén y los recipientes:** No se requieren medidas especiales.
- **Normas en caso de un almacenamiento conjunto:** No es necesario.
- **Indicaciones adicionales sobre las condiciones de almacenamiento:**  
Mantener el recipiente cerrado herméticamente.
- **7.3 Usos específicos finales** No existen más datos relevantes disponibles.

### SECCIÓN 8: Controles de exposición/protección individual

- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**  
Sin datos adicionales, ver punto 7.

#### · 8.1 Parámetros de control

- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:**

#### 111-30-8 glutaral

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

#### 50-00-0 formaldehído

LEP	Valor de corta duración: 0,74 mg/m <sup>3</sup> , 0,6 ppm
	Valor de larga duración: 0,37 mg/m <sup>3</sup> , 0,3 ppm
	CIB, Sen, s

- **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 la piel.  
Evitar el contacto con los ojos y la piel.
- **Protección respiratoria:**  
Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.
- **Protección de manos:**



Guantes de protección

- El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.  
Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.  
Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.
- **Material de los guantes**  
La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro. Teniendo en cuenta que el producto está fabricado a partir de diferentes materiales, su calidad no puede ser evaluada de antemano, de modo que los guantes deberán ser controlados antes de su utilización.

( se continua en página 5 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 4 )

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

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

· **Protección de ojos:**



Gafas de protección herméticas

### SECCIÓN 9: Propiedades físicas y químicas

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

· **Datos generales**

· **Aspecto:**

**Forma:** Líquido

**Color:** Incoloro

· **Olor:** Aldehídico

· **Umbral olfativo:** No determinado.

· **valor pH:** No determinado.

· **Cambio de estado**

**Punto de fusión/punto de congelación:** Indeterminado.

**Punto inicial de ebullición e intervalo de ebullición:** 100 °C

· **Punto de inflamación:** No aplicable.

· **Inflamabilidad (sólido, gas):** No aplicable.

· **Temperatura de descomposición:** No determinado.

· **Temperatura de auto-inflamación:** El producto no es autoinflamable.

· **Propiedades explosivas:** El producto no es explosivo.

· **Límites de explosión:**

**Inferior:** No determinado.

**Superior:** No determinado.

· **Presión de vapor a 20 °C:** 23 hPa

· **Densidad a 20 °C:** 0,99935 g/cm<sup>3</sup>

· **Densidad relativa** No determinado.

· **Densidad de vapor** No determinado.

· **Tasa de evaporación:** No determinado.

· **Solubilidad en / miscibilidad con agua:**

Poco o no mezclable.

· **Coefficiente de reparto: n-octanol/agua:** No determinado.

· **Viscosidad:**

**Dinámica:** No determinado.

**Cinemática:** No determinado.

· **Concentración del disolvente:**

**Disolventes orgánicos:** 3,0 %

**Agua:** 86,5 %

( se continua en página 6 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 5 )

<b>VOC (CE)</b>	3,00 %
<b>Contenido de cuerpos sólidos:</b>	0,0 %
<b>· 9.2 Otros datos</b>	No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

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

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda**  
Nocivo en caso de inhalación.

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

<b>111-30-8 glutaral</b>		
Oral	LD50	134 mg/kg (rat)
Dermal	LD50	2.560 mg/kg (rabbit)
<b>50-00-0 formaldehído</b>		
Oral	LD50	>200 mg/kg (rat)

- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas**  
Provoca irritación cutánea.
- **Lesiones o irritación ocular graves**  
Provoca lesiones oculares graves.
- **Sensibilización respiratoria o cutánea**  
Puede provocar síntomas de alergia o asma o dificultades respiratorias en caso de inhalación.  
Puede provocar una reacción alérgica en la piel.
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
Se sospecha que provoca defectos genéticos.
- **Carcinogenicidad**  
Puede provocar cáncer.
- **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.

ES

( se continua en página 7 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 6 )


### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Efectos ecotóxicos:**
- **Observación:**  
Tóxico para peces.  
Nocivo para los peces.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 2 (autoclasificación): peligroso para el agua  
No dejar que se infiltre en aguas subterráneas, aguas superficiales o en alcantarillados.  
Una cantidad mínima vertida en el subsuelo ya representa un peligro para el agua potable.  
Vertido en aguas superficiales, también es tóxico para los peces y el plancton.  
tóxico para organismos acuáticos  
nocivo para organismos acuáticos
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

- **13.1 Métodos para el tratamiento de residuos**
- **Recomendación:** No debe desecharse con la basura doméstica. No debe llegar al alcantarillado.
- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### SECCIÓN 14: Información relativa al transporte

- |   |   |
|---|---|
| · <b>14.1 Número ONU</b>  |   |
| · <b>ADR, IMDG, IATA</b>  | UN1760  |
| · <b>14.2 Designación oficial de transporte de las Naciones Unidas</b>              |   |
| · <b>ADR</b>  | 1760 LÍQUIDO CORROSIVO, N.E.P. (glutaral, FORMALDEHÍDO EN SOLUCIÓN) |
| · <b>IMDG, IATA</b>   | CORROSIVE LIQUID, N.O.S. (Glutaraldehyde, FORMALDEHYDE SOLUTION)    |
| · <b>14.3 Clase(s) de peligro para el transporte</b>                                |   |
| · <b>ADR, IMDG, IATA</b>  |   |
|  |   |
| · <b>Clase</b>  | 8 Materias corrosivas   |
| · <b>Etiqueta</b>   | 8   |

( se continua en página 8 )

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 7 )

· 14.4 Grupo de embalaje · ADR, IMDG, IATA	II
· 14.5 Peligros para el medio ambiente:	No aplicable.
· 14.6 Precauciones particulares para los usuarios · Número de identificación de peligro (Número Kemler): · Número EMS: · Segregation groups · Stowage Category · Stowage Code	Atención: Materias corrosivas 80 F-A,S-B Acids B 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) · Cantidades exceptuadas (EQ)	1L Código: E2 Cantidad neta máxima por envase interior: 30 ml Cantidad neta máxima por embalaje exterior: 500 ml
· Categoría de transporte · Código de restricción del túnel	2 E
· IMDG · Limited quantities (LQ) · Excepted quantities (EQ)	1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· "Reglamentación Modelo" de la UNECE:	UN 1760 LÍQUIDO CORROSIVO, N.E.P. (GLUTARAL, FORMALDEHÍDO EN SOLUCIÓN), 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
  - REGLAMENTO (CE) n° 1907/2006 ANEXO XVII Restricciones: 3, 28, 72
- Disposiciones nacionales:
- Indicaciones sobre las limitaciones de trabajo:  
Los empleados no deben exponerse a las sustancias cancerígenas contenidas en el producto. En casos aislados las autoridades pueden hacer excepciones.
- 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.

( se continua en página 9 )



# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 31.03.2020

Revisión: 31.03.2020

**Nombre comercial: Glutaraldehyde 3% Paraformaldehyde 3% in Phosphate Buffer, pH 7.4**

( se continua en página 8 )

· **Frases relevantes**

- H301 Tóxico en caso de ingestión.
- H311 Tóxico en contacto con la piel.
- 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.
- H331 Tóxico 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.
- H341 Se sospecha que provoca defectos genéticos.
- H350 Puede provocar cáncer.
- 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
- vPvB: very Persistent and very Bioaccumulative
- Acute Tox. 3: Toxicidad aguda - oral – Categoría 3
- Acute Tox. 2: Toxicidad aguda - por inhalación – Categoría 2
- Acute Tox. 4: Toxicidad aguda - por inhalación – Categoría 4
- Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B
- Skin Irrit. 2: Corrosión o irritación cutáneas – Categoría 2
- Eye 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
- Muta. 2: Mutagenicidad en células germinales – Categoría 2
- Carc. 1B: Carcinogenicidad – Categoría 1B
- 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