

# Safety Data Sheet

acc. to OSHA HCS

Printing date 04/06/2021

Reviewed on 04/06/2021

## 1 Identification

- **Product identifier**
- **Trade name:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4
- **Article number:** 15952-10, 15952-15
- **CAS Number:**  
7732-18-5
- **EC number:**  
231-791-2
- **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)
- **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

Muta. 2 H341 Suspected of causing genetic defects.  
Carc. 1B H350 May cause cancer.



GHS07

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

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



GHS07 GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
formaldehyde
- **Hazard statements**  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May cause cancer.

(Contd. on page 2)

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· **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
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If on skin: Wash with plenty of water.
- IF exposed or concerned: Get medical advice/attention.
- Specific treatment (see on this label).
- If skin irritation or rash occurs: Get medical advice/attention.
- Wash contaminated clothing before reuse.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 0  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*0  
Fire = 0  
Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

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

### 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

7732-18-5 Deionized Water, Reagent Grade A.C.S.

· **Identification number(s)**

· **EC number:** 231-791-2

· **Dangerous components:**

50-00-0 formaldehyde

≤2.5%

### 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.

· **After swallowing:** If symptoms persist consult doctor.

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**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

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

- **PAC-1:**

50-00-0	formaldehyde	0.90 ppm
7778-77-0	potassium dihydrogenorthophosphate	9.6 mg/m <sup>3</sup>
7758-11-4	dipotassium hydrogenorthophosphate	13 mg/m <sup>3</sup>

- **PAC-2:**

50-00-0	formaldehyde	14 ppm
7778-77-0	potassium dihydrogenorthophosphate	110 mg/m <sup>3</sup>
7758-11-4	dipotassium hydrogenorthophosphate	140 mg/m <sup>3</sup>

- **PAC-3:**

50-00-0	formaldehyde	56 ppm
7778-77-0	potassium dihydrogenorthophosphate	630 mg/m <sup>3</sup>
7758-11-4	dipotassium hydrogenorthophosphate	830 mg/m <sup>3</sup>

## 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.

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**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

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- **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:**

### 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
TLV	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.

- **Penetration time of glove material**

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

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**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

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**· 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>	Pungent
· <b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

**· Change in condition**

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

· **Flash point:** Not applicable.

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

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Not determined.

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

**· Explosion limits:**

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

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

· **Density at 20 °C (68 °F):** 1.01 g/cm<sup>3</sup> (8.42845 lbs/gal)

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

**· Solubility in / Miscibility with**

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

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

**· Viscosity:**

· <b>Dynamic at 20 °C (68 °F):</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Organic solvents:</b>	1.0 %
· <b>Water:</b>	98.9 %
· <b>VOC content:</b>	1.00 %
	9,136.4 g/l / 76.25 lb/gal

· **Solids content:** 0.0 %

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

## 10 Stability and reactivity

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

## 11 Toxicological information

- **Information on toxicological effects**
  - **Acute toxicity:**
  - **LD/LC50 values that are relevant for classification:**
- |                      |                  |
|----------------------|------------------|
| 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:** No irritating effect.
  - **Sensitization:** Sensitization possible through skin contact.
  - **Additional toxicological information:**

- **Carcinogenic categories**

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

50-00-0 formaldehyde	I
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- **NTP (National Toxicology Program)**

50-00-0 formaldehyde	K
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- **OSHA-Ca (Occupational Safety Health Administration)**

50-00-0 formaldehyde	
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## 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.
- **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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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

## 15 Regulatory information

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

- **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

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

50-00-0 formaldehyde

B1

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

50-00-0 formaldehyde

A2

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

50-00-0 formaldehyde

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

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Danger

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

formaldehyde

· **Hazard statements**

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **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

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

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

If on skin: Wash with plenty of water.

If exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

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

Wash contaminated clothing before reuse.

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 this hazardous material. Exceptions can be made by the authorities in certain cases.

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

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### 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** 04/06/2021 / -

· **Abbreviations and acronyms:**

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety **Health**

**TLV: Threshold Limit Value**

**PEL: Permissible Exposure Limit**

**REL: Recommended Exposure Limit**

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

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

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

# Safety Data Sheet

## according to WHS Regulations

Printing date 06.04.2021

Revision: 06.04.2021

### 1 Identification

· **Product identifier**

· **Trade name:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4

· **Article number:** 15952-10, 15952-15

· **CAS Number:**

7732-18-5

· **EC number:**

231-791-2

· **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

· **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

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS07

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

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**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

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- **Label elements**

- **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** *Danger*

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

formaldehyde

- **Hazard statements**

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

- **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.

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

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

IF ON SKIN: Wash with plenty of water.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

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

Wash contaminated clothing before reuse.

Store locked up.

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

- **Other hazards**

- **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### 3 Composition and Information on Ingredients

- **Chemical characterisation: Substances**

- **CAS No. Description**

7732-18-5 Deionized Water, Reagent Grade A.C.S.

- **Identification number(s)**

· **EC number:** 231-791-2

- **Dangerous components:**

50-00-0	formaldehyde	≤2.5%
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### 4 First Aid Measures

- **Description of first aid measures**

- **General information:**

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

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**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

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- **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.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire Fighting Measures

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

### 6 Accidental Release Measures

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

### 7 Handling and Storage

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

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· **Control parameters**

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

**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.

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.

· **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

· **Colour:**

Colourless

· **Odour:**

Pungent

· **Odour threshold:**

Not determined.

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· <b>pH-value:</b>	Not determined.
· <b>Change in condition</b>	
· <b>Melting point/freezing point:</b>	0 °C
· <b>Initial boiling point and boiling range:</b>	100 °C
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gas):</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Not determined.
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.01 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic at 20 °C:</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	1.0 %
· <b>Water:</b>	98.9 %
· <b>VOC (EC)</b>	1.00 %
· <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.

-AU-

(Contd. on page 6)

# Safety Data Sheet

## according to WHS Regulations

Printing date 06.04.2021

Revision: 06.04.2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 5)

### 11 Toxicological Information

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

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

**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** No irritating effect.
- **Respiratory or skin sensitisation** Sensitisation possible through skin contact.
- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**  
Muta. 2, Carc. 1B

### 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.
- **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.
- **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>         | not regulated |
| · <b>UN proper shipping name</b> |               |
| · <b>ADG, IMDG, IATA</b>         | not regulated |

(Contd. on page 7)

# Safety Data Sheet

## according to WHS Regulations

Printing date 06.04.2021

Revision: 06.04.2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 6)

· <b>Transport hazard class(es)</b>	
· <b>ADG, ADN, IMDG, IATA</b>	
· <b>Class</b>	not regulated
· <b>Packing group</b>	
· <b>ADG, IMDG, IATA</b>	not regulated
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	not regulated

### 15 Regulatory information

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

· **Australian Inventory of Industrial Chemicals**

All ingredients are listed.

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

50-00-0 formaldehyde

S2, S6, S10

· **Australia: Priority Existing Chemicals**

50-00-0 formaldehyde

· **GHS label elements**

The substance is classified and labelled according to the Globally Harmonised System (GHS).

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** *Danger*

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

formaldehyde

· **Hazard statements**

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

· **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.

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

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

IF ON SKIN: Wash with plenty of water.

IF exposed or concerned: Get medical advice/attention.

Specific treatment (see on this label).

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

Wash contaminated clothing before reuse.

(Contd. on page 8)



# Safety Data Sheet

## according to WHS Regulations

Printing date 06.04.2021

Revision: 06.04.2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 7)

Store locked up.

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

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** Substance is not listed.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to this hazardous material. 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

Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

### 1 Identification

- **Product identifier**
- **Trade name:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4
- **Article number:** 15952-10, 15952-15
- **CAS Number:**  
7732-18-5
- **EC number:**  
231-791-2
- **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)
- **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

Germ Cell Mutagenicity - Category 2 H341 Suspected of causing genetic defects.

Carcinogenicity - Category 1B H350 May cause cancer.



GHS07

Skin Sensitizer - Category 1 H317 May cause an allergic skin reaction.

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



GHS07



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**  
formaldehyde
- **Hazard statements**  
May cause an allergic skin reaction.  
Suspected of causing genetic defects.  
May cause cancer.

(Contd. on page 2)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

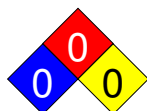
(Contd. of page 1)

· **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.
- Contaminated work clothing should not be allowed out of the workplace.
- Wear protective gloves/protective clothing/eye protection/face protection.
- If on skin: Wash with plenty of water.
- 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.
- Store locked up.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 0  
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = \*0  
Fire = 0  
Reactivity = 0

### 3 Composition/Information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**  
7732-18-5 Deionized Water, Reagent Grade A.C.S.
- **Identification number(s)**
- **EC number: 231-791-2**

· **Dangerous components:**

50-00-0 formaldehyde	0.1-1% w/w *
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\* Actual concentration ranges are withheld as a trade secret.

### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **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.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.

(Contd. on page 3)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 2)

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

### 7 Handling and storage

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

**50-00-0 formaldehyde**

EL	STEL: 0.3 ppm TWA: 0.1 ppm ACGIH A1; IARC 1; S(D), S(R)
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(Contd. on page 4)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 3)

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

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.

· **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:** Pungent

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

· **Melting point/Melting range:** 0 °C

· **Boiling point/Boiling range:** 100 °C

(Contd. on page 5)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 4)

· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gaseous):</b>	Not flammable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
· <b>Lower:</b>	Not determined.
· <b>Upper:</b>	Not determined.
· <b>Vapor pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.01 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with</b>	
· <b>Water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic at 20 °C:</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Organic solvents:</b>	1.0 %
· <b>Water:</b>	98.9 %
· <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:**

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:** No irritating effect.

(Contd. on page 6)

CA

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 5)

- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

- **Carcinogenic categories**

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

50-00-0	formaldehyde	I
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- **NTP (National Toxicology Program)**

50-00-0	formaldehyde	K
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### 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.

- **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.

- **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

- **UN-Number**

- **DOT/TDG, ADR, IMDG, IATA** Void

- **UN proper shipping name**

- **DOT/TDG, ADR, IMDG, IATA** Void

- **Transport hazard class(es)**

- **DOT, ADR, ADN, IMDG, IATA**

- **Class** Void

- **Packing group**

- **DOT/TDG, ADR, IMDG, IATA** Void

(Contd. on page 7)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 6)

- |  |                 |
|--|-----------------|
| · <b>Environmental hazards:</b>  | Not applicable. |
| · <b>Special precautions for user</b>  | Not applicable. |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | Void            |

### 15 Regulatory information

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

- **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%)**

None of the ingredients is listed.

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

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

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

formaldehyde

- **Hazard statements**

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause cancer.

- **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.

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

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

If on skin: Wash with plenty of water.

IF exposed or concerned: Get medical advice/attention.

(Contd. on page 8)



## Safety Data Sheet according to HPR, Schedule 1

Printing date 04/06/2021

Reviewed on 04/06/2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 7)

*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.*

*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 this hazardous material. 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** 04/06/2021 / -

· **Abbreviations and acronyms:**

*IMDG: International Maritime Code for Dangerous Goods*

*DOT: US Department of Transportation*

*IATA: International Air Transport Association*

*EINECS: European Inventory of Existing Commercial Chemical Substances*

*ELINCS: European List of Notified Chemical Substances*

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

*NFPA: National Fire Protection Association (USA)*

*HMIS: Hazardous Materials Identification System (USA)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

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

Printing date 06.04.2021

Revision: 06.04.2021

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

- **1.1 Product identifier**
- **Trade name:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4
- **Article number:** 15952-10, 15952-15
- **CAS Number:**  
7732-18-5
- **EC number:**  
231-791-2
- **UFI:** XRV1-COVK-J002-9J6H
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### SECTION 2: Hazards identification

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



GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.

Carc. 1B H350 May cause cancer.



GHS07

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

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



GHS07 GHS08

- **Signal word** Danger

(Contd. on page 2)

GB

# Safety data sheet

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

Printing date 06.04.2021

Revision: 06.04.2021

**Trade name: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Contd. of page 1)

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

formaldehyde

· **Hazard statements**

H317 May cause an allergic skin reaction.

H341 Suspected of causing genetic defects.

H350 May cause cancer.

· **Precautionary statements**

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

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

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

· **3.1 Chemical characterisation: Substances**

· **CAS No. Description**

7732-18-5 Deionized Water, Reagent Grade A.C.S.

· **Identification number(s)**

· **EC number:** 231-791-2

· **Dangerous components:**

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

### 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.

· **After swallowing:** If symptoms persist consult doctor.

· **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.

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- **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:** 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.
- **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:**

**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
	Carc

- **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.

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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.

· **Penetration time of glove material**

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

· **Eye protection:**



Tightly sealed goggles

## SECTION 9: Physical and chemical properties

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

· **General Information**

· **Appearance:**

- |                           |                 |
|---------------------------|-----------------|
| · <b>Form:</b>            | Liquid          |
| · <b>Colour:</b>          | Colourless      |
| · <b>Odour:</b>           | Pungent         |
| · <b>Odour threshold:</b> | Not determined. |

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

· **Change in condition**

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

· <b>Flash point:</b>	Not applicable.
-----------------------	-----------------

· <b>Flammability (solid, gas):</b>	Not applicable.
-------------------------------------	-----------------

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

· <b>Auto-ignition temperature:</b>	Not determined.
-------------------------------------	-----------------

· <b>Explosive properties:</b>	Product does not present an explosion hazard.
--------------------------------	---

· **Explosion limits:**

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

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· <b>Vapour pressure at 20 °C:</b>	23 hPa
· <b>Density at 20 °C:</b>	1.01 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.
· <b>Solubility in / Miscibility with water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient: n-octanol/water:</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Dynamic at 20 °C:</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Solvent content:</b>	
· <b>Organic solvents:</b>	1.0 %
· <b>Water:</b>	98.9 %
· <b>VOC (EC)</b>	1.00 %
· <b>Solids content:</b>	0.0 %
· <b>9.2 Other information</b>	No further relevant information available.

### SECTION 10: Stability and reactivity

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

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

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

50-00-0 formaldehyde

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

- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation**  
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** Based on available data, the classification criteria are not met.

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- **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.
- **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.
- **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

- |  |                 |
|--|-----------------|
| · <b>14.1 UN-Number</b>  |                 |
| · <b>ADR, IMDG, IATA</b>   | not regulated   |
| · <b>14.2 UN proper shipping name</b>  |                 |
| · <b>ADR, IMDG, IATA</b>   | not regulated   |
| · <b>14.3 Transport hazard class(es)</b>   |                 |
| · <b>ADR, ADN, IMDG, IATA</b>  |                 |
| · <b>Class</b>   | not regulated   |
| · <b>14.4 Packing group</b>  |                 |
| · <b>ADR, IMDG, IATA</b>   | not regulated   |
| · <b>14.5 Environmental hazards:</b>   | Not applicable. |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable. |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>  | not regulated   |

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### 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 Substance is not listed.**
- **REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3, 28, 72**
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
- **None of the ingredients is listed.**
- **National regulations:**
- **Information about limitation of use:**  
Workers are not allowed to be exposed to this hazardous material. 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.
- H331 Toxic if inhaled.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- **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
- Skin Corr. 1B: Skin corrosion/irritation – Category 1B
- Skin Sens. 1: Skin sensitisation – Category 1
- Muta. 2: Germ cell mutagenicity – Category 2
- Carc. 1B: Carcinogenicity – Category 1B

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# Veiligheidsinformatieblad

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

- **1.1 Productidentificatie**
- **Handelsnaam:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4
- **Artikelnummer:** 15952-10, 15952-15
- **CAS-nummer:** 7732-18-5
- **EC-nummer:** 231-791-2
- **UFI:** XRV1-COVK-J002-9J6H
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
Geen verdere relevante informatie verkrijgbaar.
- **Toepassing van de stof / van de bereiding** Laboratoriumchemicaliën
- **1.3 Details betreffende de verstreker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Aurion**  
Binnenhaven 5  
6709 PD Wageningen  
The Netherlands  
Tel: 31 317 415094  
Fax: 31 317 415955  
email: info@aurion.nl
- **Inlichtingengevende sector:** Product safety department
- **1.4 Telefoonnummer voor noodgevallen:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## RUBRIEK 2: Identificatie van de gevaren

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



GHS08 gezondheidsgevaar

Muta. 2 H341 Verdacht van het veroorzaken van genetische schade.

Carc. 1B H350 Kan kanker veroorzaken.



GHS07

Skin Sens. 1 H317 Kan een allergische huidreactie veroorzaken.

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

(Vervolg op blz. 2)

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(Vervolg van blz. 1)

## · Gevarenpictogrammen



GHS07 GHS08

## · Signaalwoord Gevaar

### · Gevaaraanduidende componenten voor de etikettering:

formaldehyde

### · Gevarenaanduidingen

H317 Kan een allergische huidreactie veroorzaken.

H341 Verdacht van het veroorzaken van genetische schade.

H350 Kan kanker veroorzaken.

### · Veiligheidsaanbevelingen

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

P280 Beschermende handschoenen/beschermende kleding/oogbescherming/gelaatsbescherming dragen.

P308+P313 NA (mogelijke) blootstelling: een arts raadplegen.

P333+P313 Bij huidirritatie of uitslag: een arts raadplegen.

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

### · 3.1 Chemische karakterisering: Stoffen

#### · CAS-Nr. omschrijving

7732-18-5 water, gedistilleerd, conductometrisch zuiverwater en dergelijk zuiver water

#### · Identificatienummer(s)

· **EC-nummer:** 231-791-2

#### · Gevaarlijke inhoudstoffen:

CAS: 50-00-0	formaldehyde	≤2,5%
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	

## 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 bij geopend ooglid meerdere minuten met stromend water spoelen

· **Na inslikken:** Als de klachten niet minderen, een arts raadplegen

(Vervolg op blz. 3)

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(Vervolg van blz. 2)

- **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 brandweelieden**
- **Speciale beschermende kleding:** Ademhalingstoestel aantrekken.

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

- **6.1 Persoonlijke voorzorgsmaatregelen, beschermingsmiddelen en noodprocedures** Niet nodig.
- **6.2 Milieuvoorzorgsmaatregelen:** Niet in de riolering/het oppervlaktewater/het grondwater laten terechtkomen.
- **6.3 InsluTINGS- en reinigingsmethoden en -materiaal:**  
Met vloeistofbindend materiaal (zand, bergmeel, zuurbinder, universele binder, zaagmeel) opnemen.  
Besmet materiaal zoals afval volgens punt 13 verwijderen.  
Voor voldoende ventilatie zorgen.
- **6.4 Verwijzing naar andere rubrieken**  
Informatie inzake veilig gebruik - zie hoofdstuk 7.  
Informatie inzake persoonlijke beschermingsuitrusting - zie hoofdstuk 8.  
Informatie inzake berging - zie hoofdstuk 13.

### RUBRIEK 7: Hantering en opslag

- **7.1 Voorzorgsmaatregelen voor het veilig hanteren van de stof of het mengsel**  
Voor goede ventilatie/afzuiging op de werkplaatsen zorgen.  
Tanks voorzichtig openen en behandelen.  
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Ademhalingstoestellen gereedhouden.
- **7.2 Voorwaarden voor een veilige opslag, met inbegrip van incompatibele producten**
- **Opslag:**
- **Eisen ten opzichte van opslagruimte en tanks:** Geen bijzondere eisen.
- **Informatie m.b.t. gezamenlijke opslag:** Niet noodzakelijk.
- **Verdere inlichtingen over eisen m.b.t. de opslag:** Tanks ondoordringbaar gesloten houden.
- **7.3 Specifiek eindgebruik** Geen verdere relevante informatie verkrijgbaar.

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

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

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

#### 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

(Vervolg op blz. 4)

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(Vervolg van blz. 3)

- **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.

- **Doordringingstijd van het handschoenmateriaal**

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

- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

## RUBRIEK 9: Fysische en chemische eigenschappen

- **9.1 Informatie over fysische en chemische basiseigenschappen**

- **Algemene gegevens**

- **Voorkomen:**

- **Vorm:** Vloeistof
- **Kleur:** Kleurloos
- **Geur:** Stekend
- **Geurdrempelwaarde:** Niet bepaald.

- **pH-waarde:** Niet bepaald.

- **Toestandsverandering**

- **Smelt-/vriespunt:** 0 °C
- **Beginkookpunt en kooktraject:** 100 °C

- **Vlampunt:** Niet bruikbaar.

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

(Vervolg op blz. 5)

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(Vervolg van blz. 4)

· <b>Ontledingstemperatuur:</b>	Niet bepaald.
· <b>Zelfontbrandingstemperatuur:</b>	Niet bepaald.
· <b>Ontploffingseigenschappen:</b>	Het produkt is niet ontploffingsgevaarlijk.
· <b>Ontploffingsgrenzen:</b>	
· <b>Onderste:</b>	Niet bepaald.
· <b>Bovenste:</b>	Niet bepaald.
· <b>Dampspanning bij 20 °C:</b>	23 hPa
· <b>Dichtheid bij 20 °C:</b>	1,01 g/cm <sup>3</sup>
· <b>Relatieve dichtheid</b>	Niet bepaald.
· <b>Dampdichtheid</b>	Niet bepaald.
· <b>Verdampingsnelheid</b>	Niet bepaald.
· <b>Oplosbaarheid in/mengbaarheid met</b>	
· <b>Water:</b>	Niet resp. gering mengbaar.
· <b>Verdelingscoëfficiënt: n-octanol/water:</b>	Niet bepaald.
· <b>Viscositeit</b>	
· <b>Dynamisch bij 20 °C:</b>	0,952 mPas
· <b>Kinematisch:</b>	Niet bepaald.
· <b>Oplosmiddelgehalte:</b>	
· <b>Organisch oplosmiddel:</b>	1,0 %
· <b>Water:</b>	98,9 %
· <b>VOC (EG)</b>	1,00 %
· <b>Gehalte aan vaste bestanddelen:</b>	0,0 %
· <b>9.2 Overige informatie</b>	Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 10: Stabiliteit en reactiviteit

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

### RUBRIEK 11: Toxicologische informatie

- **11.1 Informatie over toxicologische effecten**
- **Acute toxiciteit** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

· <b>Indelingsrelevantie LD/LC50-waarden:</b>		
50-00-0 formaldehyde		
Oraal	LD50	>200 mg/kg (rat)

- **Primaire aandoening:**
- **Huidcorrosie/-irritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Ernstig oogletsel/oogirritatie** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.

(Vervolg op blz. 6)

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 06.04.2021

Herziening van: 06.04.2021

**Handelsnaam: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Vervolg van blz. 5)

- **Sensibilisatie van de luchtwegen/de huid**  
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** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **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.
- **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.
- **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>  |                     |
| · <b>ADR, IMDG, IATA</b>   | Niet van toepassing |
| · <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b> |                     |
| · <b>ADR, IMDG, IATA</b>   | Niet van toepassing |
| · <b>14.3 Transportgevaarklasse(n)</b>                                       |                     |
| · <b>ADR, ADN, IMDG, IATA</b>  |                     |
| · <b>klasse</b>  | Niet van toepassing |

(Vervolg op blz. 7)

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(Vervolg van blz. 6)

- |   |                     |
|---|---------------------|
| · <b>14.4 Verpakkingsgroep:</b><br>· <b>ADR, IMDG, IATA</b>                       | Niet van toepassing |
| · <b>14.5 Milieugevaren:</b>  | Niet bruikbaar.     |
| · <b>14.6 Bijzondere voorzorgen voor de gebruiker</b>                             | Niet bruikbaar.     |
| · <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b> | Niet bruikbaar.     |
| · <b>VN "Model Regulation":</b>   | Niet van toepassing |

## RUBRIEK 15: Regelgeving

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

- **SZW-lijst van kankerverwekkende stoffen**

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**

geen der bestanddelen staat op de lijst.

- **Richtlijn 2012/18/EU**

- **Gevaarlijke stoffen die met naam genoemd worden - BIJLAGE I** De stof is niet aanwezig.

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

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

geen der bestanddelen staat op de lijst.

- **Nationale voorschriften:**

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

Werknemers mogen aan deze gevaarlijke stof 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/bioacumulerend vermogen/ toxiciteit of persistentie)

- **15.2 Chemische veiligheidsbeoordeling:** Een chemische veiligheidsbeoordeling is niet uitgevoerd.

NL

(Vervolg op blz. 8)



**Veiligheidsinformatieblad**  
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(Vervolg van blz. 7)

### **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.
- H331 Giftig bij inademing.
- H341 Verdacht van het veroorzaken van genetische schade.
- H350 Kan kanker veroorzaken.

· **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
- Skin Corr. 1B: Huidcorrosie/-irritatie – Categorie 1B
- Skin Sens. 1: Sensibilisatie van de huid – Categorie 1
- Muta. 2: Mutageniteit in geslachtscellen – Categorie 2
- Carc. 1B: Kankerverwekkendheid – Categorie 1B

NL



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 06.04.2021

Révision: 06.04.2021

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

- **1.1 Identificateur de produit**
- **Nom du produit:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4
- **Code du produit:** 15952-10, 15952-15
- **No CAS:**  
7732-18-5
- **Numéro CE:**  
231-791-2
- **UFI:** XRV1-COVK-J002-9J6H
- **1.2 Utilisations identifiées pertinentes de la substance ou du mélange et utilisations déconseillées**  
Pas d'autres informations importantes disponibles.
- **Emploi de la substance / de la préparation** Produits chimiques pour laboratoires
- **1.3 Renseignements concernant le fournisseur de la fiche de données de sécurité**
- **Producteur/fournisseur:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Service chargé des renseignements:** Product safety department
- **1.4 Numéro d'appel d'urgence:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### RUBRIQUE 2: Identification des dangers

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



GHS08 danger pour la santé

Muta. 2 H341 Susceptible d'induire des anomalies génétiques.

Carc. 1B H350 Peut provoquer le cancer.



GHS07

Skin Sens. 1 H317 Peut provoquer une allergie cutanée.

- **2.2 Éléments d'étiquetage**
- **Étiquetage selon le règlement (CE) n° 1272/2008** La substance est classifiée et étiquetée selon le règlement CLP.
- **Pictogrammes de danger**



GHS07



GHS08

- **Mention d'avertissement** Danger
- **Composants dangereux déterminants pour l'étiquetage:**  
Formaldéhyde

(suite page 2)

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**Nom du produit: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(suite de la page 1)

- **Mentions de danger**

H317 Peut provoquer une allergie cutanée.  
 H341 Susceptible d'induire des anomalies génétiques.  
 H350 Peut provoquer le cancer.

- **Conseils de prudence**

P261 Éviter de respirer les poussières/fumées/gaz/brouillards/vapeurs/aérosols.  
 P280 Porter des gants de protection/des vêtements de protection/un équipement de protection des yeux/du visage.  
 P308+P313 EN CAS d'exposition prouvée ou suspectée: consulter un médecin.  
 P333+P313 En cas d'irritation ou d'éruption cutanée: consulter un médecin.  
 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

- **3.1 Caractérisation chimique: Substances**





- **No CAS Désignation**

7732-18-5 eaux distillées, de conductibilité ou de même degré de pureté

- **Code(s) d'identification**

- **Numéro CE:** 231-791-2

- **Composants dangereux:**

CAS: 50-00-0	Formaldéhyde	≤2,5%
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	

### 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, sous l'eau courante, pendant plusieurs minutes, en écartant bien les paupières.

- **Après ingestion:** Si les troubles persistent, consulter un médecin.

- **4.2 Principaux symptômes et effets, aigus et différés** Pas d'autres informations importantes disponibles.

- **4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires**

Pas d'autres informations importantes disponibles.

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

- **5.1 Moyens d'extinction**

- **Moyens d'extinction:** Adapter les mesures d'extinction d'incendie à l'environnement.

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(suite de la page 2)

- **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:**  
Ne pas rejeter dans les canalisations, dans les eaux de surface et dans les nappes d'eau souterraines.
- **6.3 Méthodes et matériel de confinement et de nettoyage:**  
Recueillir les liquides à l'aide d'un produit absorbant (sable, kieselguhr, neutralisant d'acide, liant universel, sciure).  
Évacuer les matériaux contaminés en tant que déchets conformément au point 13.  
Assurer une aération suffisante.
- **6.4 Référence à d'autres rubriques**  
Afin d'obtenir des informations pour une manipulation sûre, consulter le chapitre 7.  
Afin d'obtenir des informations sur les équipements de protection personnels, consulter le chapitre 8.  
Afin d'obtenir des informations sur l'élimination, consulter le chapitre 13.

### RUBRIQUE 7: Manipulation et stockage

- **7.1 Précautions à prendre pour une manipulation sans danger**  
Veiller à une bonne ventilation/aspiration du poste de travail.  
Ouvrir et manipuler les récipients avec précaution.  
Éviter la formation d'aérosols.
- **Préventions des incendies et des explosions:** Tenir des appareils de protection respiratoire prêts.
- **7.2 Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités**
- **Stockage:**
- **Exigences concernant les lieux et conteneurs de stockage:** Aucune exigence particulière.
- **Indications concernant le stockage commun:** Pas nécessaire.
- **Autres indications sur les conditions de stockage:** Tenir les emballages hermétiquement fermés.
- **7.3 Utilisation(s) finale(s) particulière(s)** Pas d'autres informations importantes disponibles.

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

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

#### · 8.1 Paramètres de contrôle

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

#### 50-00-0 Formaldéhyde

VLEP	Valeur momentanée: 1 ppm Valeur à long terme: 0,5 ppm C1B, M2, (7)
------	--

- **Remarques supplémentaires:**

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

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### · 8.2 Contrôles de l'exposition

#### · Equipement de protection individuel:

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

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

Retirer immédiatement les vêtements souillés ou humectés.

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

Conserver à part les vêtements de protection.

Eviter tout contact avec la peau.

Eviter tout contact avec les yeux et avec la peau.

#### · Protection respiratoire:

En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.

#### · Protection des mains:



Gants de protection

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

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

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

#### · Matériau des gants

Le choix de gants appropriés ne dépend pas seulement du matériau, mais également d'autres critères de qualité qui peuvent varier d'un fabricant à l'autre.

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

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

#### · Protection des yeux:



Lunettes de protection hermétiques

## RUBRIQUE 9: Propriétés physiques et chimiques

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

#### · Indications générales

#### · Aspect:

#### · Forme:

Liquide

#### · Couleur:

Incolore

#### · Odeur:

Piquante

#### · Seuil olfactif:

Non déterminé.

#### · valeur du pH:

Non déterminé.

#### · Changement d'état

#### · Point de fusion/point de congélation:

0 °C

#### · Point initial d'ébullition et intervalle d'ébullition:

100 °C

#### · Point d'éclair

Non applicable.

#### · Inflammabilité (solide, gaz):

Non applicable.

#### · Température de décomposition:

Non déterminé.

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(suite de la page 4)

· <b>Température d'auto-inflammabilité:</b>	Non déterminé.
· <b>Propriétés explosives:</b>	Le produit n'est pas explosif.
· <b>Limites d'explosion:</b>	
· <b>Inférieure:</b>	Non déterminé.
· <b>Supérieure:</b>	Non déterminé.
· <b>Pression de vapeur à 20 °C:</b>	23 hPa
· <b>Densité à 20 °C:</b>	1,01 g/cm <sup>3</sup>
· <b>Densité relative</b>	Non déterminé.
· <b>Densité de vapeur:</b>	Non déterminé.
· <b>Taux d'évaporation:</b>	Non déterminé.
· <b>Solubilité dans/miscibilité avec l'eau:</b>	Pas ou peu miscible
· <b>Coefficient de partage: n-octanol/eau:</b>	Non déterminé.
· <b>Viscosité:</b>	
· <b>Dynamique à 20 °C:</b>	0,952 mPas
· <b>Cinématique:</b>	Non déterminé.
· <b>Teneur en solvants:</b>	
· <b>Solvants organiques:</b>	1,0 %
· <b>Eau:</b>	98,9 %
· <b>VOC (CE)</b>	1,00 %
· <b>Teneur en substances solides:</b>	0,0 %
· <b>9.2 Autres informations</b>	Pas d'autres informations importantes disponibles.

### RUBRIQUE 10: Stabilité et réactivité

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

### RUBRIQUE 11: Informations toxicologiques

- **11.1 Informations sur les effets toxicologiques**
- **Toxicité aiguë** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

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

**50-00-0 Formaldéhyde**

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

- **Effet primaire d'irritation:**
- **Corrosion cutanée/irritation cutanée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Lésions oculaires graves/irritation oculaire**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

(suite page 6)

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 06.04.2021

Révision: 06.04.2021

**Nom du produit: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(suite de la page 5)

- **Sensibilisation respiratoire ou cutanée**  
Peut provoquer une allergie cutanée.
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagenicité 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**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition répétée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Danger par aspiration** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.

### RUBRIQUE 12: Informations écologiques

- **12.1 Toxicité**
- **Toxicité aquatique:** Pas d'autres informations importantes disponibles.
- **12.2 Persistance et dégradabilité** Pas d'autres informations importantes disponibles.
- **12.3 Potentiel de bioaccumulation** Pas d'autres informations importantes disponibles.
- **12.4 Mobilité dans le sol** Pas d'autres informations importantes disponibles.
- **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.
- **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

- |  |       |
|--|-------|
| · <b>14.1 Numéro ONU</b>                                   |       |
| · <b>ADR, IMDG, IATA</b>                                   | néant |
| · <b>14.2 Désignation officielle de transport de l'ONU</b> |       |
| · <b>ADR, IMDG, IATA</b>                                   | néant |
| · <b>14.3 Classe(s) de danger pour le transport</b>        |       |
| · <b>ADR, ADN, IMDG, IATA</b>                              |       |
| · <b>Classe</b>  | néant |

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**Nom du produit: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(suite de la page 6)

- |  |                 |
|--|-----------------|
| · <b>14.4 Groupe d'emballage</b><br>· <b>ADR, IMDG, IATA</b>   | néant           |
| · <b>14.5 Dangers pour l'environnement:</b>  | Non applicable. |
| · <b>14.6 Précautions particulières à prendre par l'utilisateur</b>                                  | Non applicable. |
| · <b>14.7 Transport en vrac conformément à l'annexe II de la convention Marpol et au recueil IBC</b> | Non applicable. |
| · <b>"Règlement type" de l'ONU:</b>  | néant           |

### RUBRIQUE 15: Informations relatives à la réglementation

- **15.1 Réglementations/législation particulières à la substance ou au mélange en matière de sécurité, de santé et d'environnement**
- **Directive 2012/18/UE**
- **Substances dangereuses désignées - ANNEXE I** la substance n'est pas comprise
- **RÈGLEMENT (CE) N° 1907/2006 ANNEXE XVII** Conditions de limitation: 3, 28, 72

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

Aucun des composants n'est compris.

- **Prescriptions nationales:**
- **Indications sur les restrictions de travail:**  
Le personnel ne doit pas être exposé à cette substance dangereuse. 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.
- H317 Peut provoquer une allergie cutanée.
- H331 Toxique par inhalation.
- H341 Susceptible d'induire des anomalies génétiques.
- H350 Peut provoquer le cancer.

- **Acronymes et abréviations:**

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

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*vPvB: very Persistent and very Bioaccumulative*  
*Acute Tox. 3: Toxicité aiguë - voie orale – Catégorie 3*  
*Skin Corr. 1B: Corrosion cutanée/irritation cutanée – Catégorie 1B*  
*Skin Sens. 1: Sensibilisation cutanée – Catégorie 1*  
*Muta. 2: Mutagénicité sur les cellules germinales – Catégorie 2*  
*Carc. 1B: Cancérogénicité – Catégorie 1B*

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# Sicherheitsdatenblatt

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

· **1.1 Produktidentifikator**

· **Handelsname:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4

· **Artikelnummer:** 15952-10, 15952-15

· **CAS-Nummer:**

7732-18-5

· **EG-Nummer:**

231-791-2

· **UFI:** XRV1-COVK-J002-9J6H

· **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

Muta. 2 H341 Kann vermutlich genetische Defekte verursachen.

Carc. 1B H350 Kann Krebs erzeugen.



GHS07

Skin Sens. 1 H317 Kann allergische Hautreaktionen verursachen.

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(Fortsetzung von Seite 1)

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



GHS07 GHS08

- **Signalwort Gefahr**
- **Gefahrbestimmende Komponenten zur Etikettierung:**  
Formaldehyd
- **Gefahrenhinweise**  
H317 Kann allergische Hautreaktionen verursachen.  
H341 Kann vermutlich genetische Defekte verursachen.  
H350 Kann Krebs erzeugen.
- **Sicherheitshinweise**  
P261 Einatmen von Staub/Rauch/Gas/Nebel/Dampf/Aerosol vermeiden.  
P280 Schutzhandschuhe/Schutzkleidung/Augenschutz/Gesichtsschutz tragen.  
P308+P313 BEI Exposition oder falls betroffen: Ärztlichen Rat einholen/ärztliche Hilfe hinzuziehen.  
P333+P313 Bei Hautreizung oder -ausschlag: Ärztlichen Rat einholen/ärztliche Hilfe hinzuziehen.  
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

- **3.1 Chemische Charakterisierung: Stoffe**
- **CAS-Nr. Bezeichnung**  
7732-18-5 Wasser
- **Identifikationsnummer(n)**
- **EG-Nummer:** 231-791-2

- **Gefährliche Inhaltsstoffe:**

CAS: 50-00-0	Formaldehyd	≤2,5%
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	

### 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.

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- **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 mit fließendem Wasser spülen.
- **Nach Verschlucken:** Bei anhaltenden Beschwerden Arzt konsultieren.
- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**  
Keine weiteren relevanten Informationen verfügbar.
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**  
Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

- **5.1 Löschmittel**
- **Geeignete Löschmittel:** Feuerlöschaßnahmen 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:** Nicht in die Kanalisation/Oberflächenwasser/Grundwasser gelangen lassen.
- **6.3 Methoden und Material für Rückhaltung und Reinigung:**  
Mit flüssigkeitsbindendem Material (Sand, Kieselgur, Säurebinder, Universalbinder, Sägemehl) aufnehmen.  
Kontaminiertes Material als Abfall nach Abschnitt 13 entsorgen.  
Für ausreichende Lüftung sorgen.
- **6.4 Verweis auf andere Abschnitte**  
Informationen zur sicheren Handhabung siehe Abschnitt 7.  
Informationen zur persönlichen Schutzausrüstung siehe Abschnitt 8.  
Informationen zur Entsorgung siehe Abschnitt 13.

### ABSCHNITT 7: Handhabung und Lagerung

- **7.1 Schutzmaßnahmen zur sicheren Handhabung**  
Für gute Belüftung/Absaugung am Arbeitsplatz sorgen.  
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):** -

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· **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:**

**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 umluftunabhängiges Atemschutzgerät verwenden.

· **Handschutz:**



Schutzhandschuhe

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

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

· **Handschuhmaterial**

Die Auswahl eines geeigneten Handschuhs ist nicht nur vom Material, sondern auch von weiteren Qualitätsmerkmalen abhängig und von Hersteller zu Hersteller unterschiedlich.

· **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

· **Augenschutz:**



Dichtschließende Schutzbrille

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### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

##### · Allgemeine Angaben

##### · Aussehen:

· <b>Form:</b>	Flüssigkeit
· <b>Farbe:</b>	Farblos
· <b>Geruch:</b>	Stechend
· <b>Geruchsschwelle:</b>	Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

##### · Zustandsänderung

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

· **Flammpunkt:** Nicht anwendbar.

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

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Nicht bestimmt.

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

##### · Explosionsgrenzen:

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

· **Dampfdruck bei 20 °C:** 23 hPa

· <b>Dichte bei 20 °C:</b>	1,01 g/cm <sup>3</sup>
· <b>Relative Dichte</b>	Nicht bestimmt.
· <b>Dampfdichte</b>	Nicht bestimmt.
· <b>Verdampfungsgeschwindigkeit</b>	Nicht bestimmt.

##### · Löslichkeit in / Mischbarkeit mit

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

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

##### · Viskosität:

· <b>Dynamisch bei 20 °C:</b>	0,952 mPas
· <b>Kinematisch:</b>	Nicht bestimmt.

##### · Lösemittelgehalt:

· <b>Organische Lösemittel:</b>	1,0 %
· <b>Wasser:</b>	98,9 %
· <b>VOC (EU)</b>	1,00 %

· **Festkörpergehalt:** 0,0 %

· **9.2 Sonstige Angaben** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 10: Stabilität und Reaktivität

· **10.1 Reaktivität** Keine weiteren relevanten Informationen verfügbar.

· **10.2 Chemische Stabilität**

· **Thermische Zersetzung / zu vermeidende Bedingungen:**

Keine Zersetzung bei bestimmungsgemäßer Verwendung.

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- **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** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.

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

#### 50-00-0 Formaldehyd

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

- **Primäre Reizwirkung:**
- **Ätz-/Reizwirkung auf die Haut** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Schwere Augenschädigung/-reizung** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Sensibilisierung der Atemwege/Haut**  
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.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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.
- **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.
- **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.

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(Fortsetzung von Seite 6)

- **Ungereinigte Verpackungen:**
- **Empfehlung:** Entsorgung gemäß den behördlichen Vorschriften.

### ABSCHNITT 14: Angaben zum Transport

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

### 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** Der Stoff ist nicht enthalten.
  - **VERORDNUNG (EG) Nr. 1907/2006 ANHANG XVII** Beschränkungsbedingungen: 3, 28, 72
  - **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**
- Keiner der Inhaltsstoffe ist enthalten.

- **Nationale Vorschriften:**
- **Hinweise zur Beschäftigungsbeschränkung:**  
Arbeitnehmer dürfen diesem Gefahrstoff nicht ausgesetzt sein. Im Einzelfall kann die Behörde Ausnahmen zulassen.

- **Technische Anleitung Luft:**

Klasse	Anteil in %
Wasser	98,9
I	1,0

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

(Fortsetzung auf Seite 8)



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 06.04.2021

überarbeitet am: 06.04.2021

**Handelsname: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Fortsetzung von Seite 7)

- **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.

H331 Giftig bei Einatmen.

H341 Kann vermutlich genetische Defekte verursachen.

H350 Kann Krebs erzeugen.

- **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

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

Skin Sens. 1: Sensibilisierung der Haut – Kategorie 1

Muta. 2: Keimzellmutagenität – Kategorie 2

Carc. 1B: Karzinogenität – Kategorie 1B



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

Stampato il: 06.04.2021

Revisione: 06.04.2021

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

· **1.1 Identificatore del prodotto**

· **Denominazione commerciale:** PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4

· **Articolo numero:** 15952-10, 15952-15

· **Numero CAS:**

7732-18-5

· **Numeri CE:**

231-791-2

· **UFI:** XRV1-COVK-J002-9J6H

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

Non sono disponibili altre informazioni.

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

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

· **Produttore/fornitore:**

Electron Microscopy Sciences

1560 Industry Road

USA-Hatfield, PA 19440

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

email: info@emsdiasum.com

www.emsdiasum.com

Societa Italiana Chimici

Via Rio Nell Ellba 140

00138 Rome, Italy

Tel: 39 06 8800211

Fax: 39 30 06 8815313

Web: www.sichim.com

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

· **1.4 Numero telefonico di emergenza:**

ChemTrec 1-800-424-9300 Contract CCN7661

1-703-527-3887

### SEZIONE 2: Identificazione dei pericoli

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

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



GHS08 pericolo per la salute

Muta. 2 H341 Sospettato di provocare alterazioni genetiche.

Carc. 1B H350 Può provocare il cancro.



GHS07

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

· **2.2 Elementi dell'etichetta**

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

La sostanza è classificata ed etichettata conformemente al regolamento CLP.

(continua a pagina 2)

**Scheda di dati di sicurezza**  
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**Denominazione commerciale: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(Segue da pagina 1)

· **Pittogrammi di pericolo**

GHS07 GHS08

· **Avvertenza Pericolo**

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

· **Indicazioni di pericolo**

H317 Può provocare una reazione allergica cutanea.

H341 Sospettato di provocare alterazioni genetiche.

H350 Può provocare il cancro.

· **Consigli di prudenza**

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

P280 Indossare guanti/indumenti protettivi/Proteggere gli occhi/il viso.

P308+P313 IN CASO di esposizione o di possibile esposizione, consultare un medico.

P333+P313 In caso di irritazione o eruzione della pelle: consultare un medico.

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

· **3.1 Caratteristiche chimiche: Sostanze**· **Numero CAS**

7732-18-5 acque distillate, di conducibilità o dello stesso grado di purezza

· **Numerali di identificazione**· **Numeri CE:** 231-791-2· **Sostanze pericolose:**

CAS: 50-00-0	formaldeide	≤2,5%
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	

### 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 alcuni minuti tenendo le palpebre ben aperte.

· **Ingestione:** Se il dolore persiste consultare il medico.

(continua a pagina 3)

**Scheda di dati di sicurezza**  
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(Segue da pagina 2)

- **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:** 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 un manipolazione sicura, vedere capitolo 7.  
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.  
Per informazioni relative allo smaltimento vedere Capitolo 13.

### SEZIONE 7: Manipolazione e immagazzinamento

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

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

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

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

**50-00-0 formaldeide**

TWA	Limite Ceiling: 0,37 mg/m <sup>3</sup> , 0,3 ppm sen, A2
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- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.

(continua a pagina 4)

**Scheda di dati di sicurezza**  
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**Denominazione commerciale: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

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- **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.
- **Tempo di permeazione del materiale dei guanti**  
Richiedere dal fornitore dei guanti il tempo di passaggio preciso il quale deve essere rispettato.
- **Occhiali protettivi:**



Occhiali protettivi a tenuta

### SEZIONE 9: Proprietà fisiche e chimiche

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

##### · Indicazioni generali

##### · Aspetto:

· **Forma:** Liquido

· **Colore:** Incolore

· **Odore:** Pungente

· **Soglia olfattiva:** Non definito.

· **valori di pH:** Non definito.

##### · Cambiamento di stato

· **Punto di fusione/punto di congelamento:** 0 °C

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

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

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

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**Scheda di dati di sicurezza**  
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· <b>Temperatura di decomposizione:</b>	Non definito.
· <b>Temperatura di autoaccensione:</b>	Non definito.
· <b>Proprietà esplosive:</b>	Prodotto non esplosivo.
· <b>Limiti di infiammabilità:</b>	
· <b>Inferiore:</b>	Non definito.
· <b>Superiore:</b>	Non definito.
· <b>Tensione di vapore a 20 °C:</b>	23 hPa
· <b>Densità a 20 °C:</b>	1,01 g/cm <sup>3</sup>
· <b>Densità relativa</b>	Non definito.
· <b>Densità di vapore:</b>	Non definito.
· <b>Velocità di evaporazione</b>	Non definito.
· <b>Solubilità in/Miscibilità con acqua:</b>	Poco e/o non miscibile.
· <b>Coefficiente di ripartizione: n-ottanolo/acqua:</b>	Non definito.
· <b>Viscosità:</b>	
· <b>Dinamica a 20 °C:</b>	0,952 mPas
· <b>Cinematica:</b>	Non definito.
· <b>Tenore del solvente:</b>	
· <b>Solventi organici:</b>	1,0 %
· <b>Acqua:</b>	98,9 %
· <b>VOC (CE)</b>	1,00 %
· <b>Contenuto solido:</b>	0,0 %
· <b>9.2 Altre informazioni</b>	Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

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

### SEZIONE 11: Informazioni tossicologiche

- **11.1 Informazioni sugli effetti tossicologici**
- **Tossicità acuta** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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

**50-00-0 formaldeide**

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

- **Irritabilità primaria:**
- **Corrosione/irritazione cutanea** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Lesioni oculari gravi/irritazioni oculari gravi**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

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**Scheda di dati di sicurezza**  
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- **Sensibilizzazione respiratoria o cutanea**  
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**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione ripetuta**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Pericolo in caso di aspirazione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.

### SEZIONE 12: Informazioni ecologiche

- **12.1 Tossicità**
- **Tossicità acquatica:** Non sono disponibili altre informazioni.
- **12.2 Persistenza e degradabilità** Non sono disponibili altre informazioni.
- **12.3 Potenziale di bioaccumulo** Non sono disponibili altre informazioni.
- **12.4 Mobilità nel suolo** Non sono disponibili altre informazioni.
- **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.
- **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>                               | non applicabile |
| · <b>14.2 Nome di spedizione dell'ONU</b>              |                 |
| · <b>ADR, IMDG, IATA</b>                               | non applicabile |
| · <b>14.3 Classi di pericolo connesso al trasporto</b> |                 |
| · <b>ADR, ADN, IMDG, IATA</b>                          |                 |
| · <b>Classe</b>  | non applicabile |

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**Scheda di dati di sicurezza**  
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- |   |                         |
|---|-------------------------|
| · <b>14.4 Gruppo di imballaggio</b><br>· <b>ADR, IMDG, IATA</b>                     | <i>non applicabile</i>  |
| · <b>14.5 Pericoli per l'ambiente:</b>  | <i>Non applicabile.</i> |
| · <b>14.6 Precauzioni speciali per gli utilizzatori</b>                             | <i>Non applicabile.</i> |
| · <b>14.7 Trasporto di rinfuse secondo l'allegato II di MARPOL ed il codice IBC</b> | <i>Non applicabile.</i> |
| · <b>UN "Model Regulation":</b>   | <i>non applicabile</i>  |

### 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** La sostanza non è contenuta
- **REGOLAMENTO (CE) n. 1907/2006 ALLEGATO XVII** Restrizioni: 3, 28, 72

- **Direttiva 2011/65/UE sulla restrizione dell'uso di determinate sostanze pericolose nelle apparecchiature elettriche ed elettroniche - Allegato II**

Nessuno dei componenti è contenuto.

- **Disposizioni nazionali:**

- **Indicazioni relative alla limitazione delle attività lavorative:**

*Il personale non deve essere esposto a questa sostanza pericolosa L'autorità può ammettere nei singoli casi delle eccezioni.*

- **Istruzione tecnica aria:**

Classe	quota in %
NC	1,0

- **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.*

- **Frasi rilevanti**

H301 Tossico se ingerito.  
H311 Tossico per contatto con la pelle.  
H314 Provoca gravi ustioni cutanee e gravi lesioni oculari.  
H317 Può provocare una reazione allergica cutanea.  
H331 Tossico se inalato.  
H341 Sospettato di provocare alterazioni genetiche.  
H350 Può provocare il cancro.

- **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

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

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PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

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

Skin Sens. 1: Sensibilizzazione della pelle – Categoria 1

Muta. 2: Mutagenicità sulle cellule germinali – Categoria 2

Carc. 1B: Cancerogenicità – Categoria 1B

IT









# 물질안전보건자료

## GHS에 따라 라다

인쇄일자: 2021.04.06

개정: 2021.04.06

**제품명: PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4**

(3 쪽부터 계속)

통제 ~~문자~~ ~~표지~~ 변수

· 화학물질의 노출기준, 생물학적 노출기준 등:	
50-00-0 포르말린	
TLV (KR)	장기간의값: 0.3 ppm 발암성1A, 생식세포 변이원성2
BOELV (EU)	단기간의값: 0.74 mg/m <sup>3</sup> , 0.6 ppm 장기간의값: 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)	단기간의값: 2 ppm 장기간의값: 0.75 ppm see 29 CFR 1910.1048(c)
REL (US)	장기간의값: 0.016 ppm 최고노출기준: 0.1* ppm *15-min; See Pocket Guide App. A
TLV (US)	단기간의값: 0.37 mg/m <sup>3</sup> , 0.3 ppm 장기간의값: 0.12 mg/m <sup>3</sup> , 0.1 ppm DSEN; RSEN

· ~~추천~~ 정보 정보 할 당시에 유효한 목록을 기초로 사용했다.

노출 ~~통제~~ 통제 통제

개인 개인 ~~보호~~ 보호

· **일반적 보호 조치 및 위생 조치:**

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

· **호흡기 보호 보호**

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

**보충 보호 보호**



보호용 장갑

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

· **장갑의 재료**

· 적합한 장갑의 선정은 재질 차이뿐만 아니라 품질 기준의 차이도 고려하여 이루어져야 하고 제조업자에 따라서도 다르게 선정되어야 한다.

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

**보충 보호 보호**



확조이는 보안경

KR

(5 쪽에 계속)

# 물질안전보건자료 GHS에 따라라다

인쇄일자: 2021.04.06

개정: 2021.04.06

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(4 쪽부터계속)

## 9 물리화학적 특성

기본 물리화학적 특성에 대한 정보

· 일반정보	
외형외형의형	액체
· 물리적 상태	액체
· 색:	색소가 없는
냄새냄새냄새	찌르는 듯한
· 후각역치	알맞지않다.
· pH:	알맞지않다.
· 상태변화	
· 녹는점/어는점:	0 °C
초기 끓는점과 끓는점범위범위	100 °C
· 인화점:	해당사항 없음.
· 인화성 고체/기체/기체	해당사항 없음.
분해 분해 온도	알맞지않다.
· 자기점화:	알맞지않다.
· 폭발위험:	이제품은폭발위험성이없다
인화 안정성/폭발 위험성 상한선 하한	
· 아래로:	알맞지않다.
위로 위로	알맞지않다.
· 증기압 의경우 20 °C:	23 hPa
밀도 밀도 의경우 20 °C:	1.01 g/cm <sup>3</sup>
비중 비중 비중	알맞지않다.
· 증기밀도:	알맞지않다.
중발 중발 중발 속도	알맞지않다.
· 용해도:	
· 물:	각각의경우에따라서는거의혼합할수없는
· n 옥탄올/물 분배계수:	알맞지않다.
점도 점도 점도	
· 역학적 의경우 20 °C:	0.952 mPas
· 동점성:	알맞지않다.
· 용매 내용물	
· 유기용매:	1.0 %
· 물:	98.9 %
· VOC (EU)	1.00 %
· 고체 양 함량 함량	0.0 %
기타 정보 정보	추가적인 정보가 존재하지 않습니다.

## 10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성/유해 반응의 가능성 / 피해 예방 조건에 따라 사용할 경우 해체는 없다
- 유해 반응 가능성 위험한 반응으로는 알려지지 않았다.

(6 쪽에계속)

# 물질안전보건자료

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(5 쪽부터계속)

- **피해예방조건의 추가적인 정보가 존재하지 않습니다.**
- **혼합물의 추가적인 정보가 존재하지 않습니다.**
- **유해분해물질:** 위험성있는분해물들은알려지지않았다.

### 11 독성에 관한 정보

· **독성학적 영향에 대한 정보**  
급성독성독성

· <b>LD/LC50-수체에 대한 분류</b>
<b>50-00-0 포르말린</b>
구간의 LD50 >200 mg/kg (rat)

- **일차적 자극효과**  
피부피부 자극 또는 **자극성:** 피부와접막을자극한다.  
심한심한 **자극성:** 무자극.
- **감각화:** 피부접촉을통하여감각화가가능성이있다.
- **다음다음중류의 잠재적인 효과에 대한 정보**  
· **크로모솜모발유발유연변이성 그리고생식독성**  
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.
- **추가적인 생태학 정보**
- **일반 열안정성**  
수질오염등급 2 (자체등급분류): 수질오염이된 지하수나, 하천으로또는 하수도망에도달하지않게한다. 지하수로경미한양이유입되었을경우엔이미식수오염상태이다
- **PBT(잔류성, 생물농축성, 독성물질) 및 vPvB(고 잔류성, 고 생물농축성 물질)에 대한 평가 결과**
- **PBT(잔류성, 생물농축성, 독성물질)에 대한 평가 결과** 당사항 없음.
- **vPvB(고 잔류성, 고 생물농축성 물질)에 대한 평가 결과** 당사항 없음.
- **기타기타 적용** 추가적인 정보가 존재하지 않습니다.

### 13 폐기시 주의사항

- **폐기물 처리 방법**  
권고권고생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.
- **비위생적 포장포장**  
권고권고당국의지침에입각한쓰레기처리.

KR

(7 쪽에계속)

# 물질안전보건자료 GHS에 따라라따

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(6 쪽부터계속)

## 14 운송에 필요한 정보

유엔 유엔번호 · ADR, IMDG, IATA	누락되다
적정적정적정명 · ADR, IMDG, IATA	누락되다
교통 교통 규정 클래스 · ADR, ADN, IMDG, IATA	누락되다
등급등급등급 · 용기등급 · ADR, IMDG, IATA	누락되다
· 환경적 유해물질:	해당사항 없음.
· 이동특별특별 조치	해당사항 없음.
· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크물질 운송 운송	해당사항 없음.
· 다른 규범 규정 규제	누락되다

## 15 법적 규제 현황

· 산업안전보건법에 의해 규제	
제조제조금지물질:	어떠한내용물도 목록화되어있지않다
· 허가대상물질:	어떠한내용물도 목록화되어있지않다
· 관리대상 유해물질:	50-00-0 포르말린
· 관리대상 유해물질의 종류 종류 화합물: 118	
· 작업환경측정 대상 유해인자	50-00-0 포르말린 1A105
· 특수건강 측정 대상 유해인자	50-00-0 포르말린 1A98
해당 해당 물질 또는 혼합물에 대한 안전보건자료 작성 관련 법률	
· Korean Existing Chemical Inventory	
7732-18-5 물	KE-35400
50-00-0 포르말린	KE-17074
7778-77-0 potassium dihydrogenorthophosphate	KE-28622
7758-11-4 dipotassium hydrogenorthophosphate	KE-12167
· 화학물질관리법	
· 사고대비물질	
50-00-0 포르말린	
· 금지물질	
어떠한내용물도 목록화되어있지않다	

(8 쪽에계속)

# 물질안전보건자료

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(7 쪽부터계속)

· 제한물질	
50-00-0	포르말린

· 유독물질	
50-00-0	포르말린

· 허가물질	
50-00-0	포르말린

· 위험물안전관리법 (위험물 및 지정수량) 제 4: 4,000 리터

· 등록명목명목번호번호 선제대상 화학물질	
7732-18-5	물

· ‘21년까지 등록하여야 할 압, 들언번이, 생식능력 이상을 일으키겠수일으킬우려가 있는 기존화학물질  
어떠한내용물도목록화되어있지않다

· 표1 중점관리물질(제관전관련관련)	
50-00-0	포르말린

· 표2 중점관리물질(제관전관련관련)	
어떠한내용물도목록화되어있지않다	

· ~~라벨 라벨 라벨~~ 요소  
본 화학물질은 화학물질의 분류 및 표기에 관한 국제조화시스템(GHS)에 따라 분류 및 표기되었습니다.



· 신호어 위험  
· **상표상에명확히위험성이표시된성분:**  
포르말린

유해 ~~유해~~ ~~유해~~ ~~유해~~ 문구  
알레르기성 피부 반응을 일으킬 수 있음  
유전적인 결함을 일으킬 것으로 의심됨  
암을 일으킬 수 있음

· **예방조차** 문구문구  
분진·흙·가스·미스트·증기·스프레이의 흡입을 피하십시오.  
보호장갑·보호의·보안경·안면보호구를 착용하십시오.  
노출 또는 접촉이 우려되면 의학적인 조언·주의를 받으시오.  
피부자극성 또는 홍반이 나타나면 의학적인 조언·주의를 받으시오.  
밀봉하여 저장하십시오.  
(지방/지역/국가/국제 규정에 따라) 에 내용물/용기를 폐기하십시오.

· **국내규정:**  
· **사용제한에 대한정보**  
노동자들은 이러한 위험물질을 내버리지말아야한다. 개별적인경우에관청은예외를허가할수있다.  
· **화학물질 안전성 평가** 화학물질 안전성 평가가 수행되지 않음



# 물질안전보건자료

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(8 쪽부터계속)

### 16 그 밖의 참고사항

이보고는우리지식에대한오늘날의상태에대하여평가하고있다, 하지만이보고서는생산특성에관한보증은  
기술향하지않았으며계약적인법률관계에기반을두고있지도않다

최초 최초 작성일자: 2021.04.06

개정 개정 개정 수정 최종 개정일자: 1 / 2021.04.06

· 약어와 두문자어:

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

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

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

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

KR

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 06.04.2021

Revisión: 06.04.2021

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

#### · 1.1 Identificador del producto

· **Nombre comercial:** *PARAFORMALDEHYDE 1% IN 0.1M PHOSPHATE BUFFER, pH 7.4*

· **Número del artículo:** *15952-10, 15952-15*

· **Número CAS:**

*7732-18-5*

· **Número CE:**

*231-791-2*

· **UFI:** *XRV1-COVK-J002-9J6H*

· **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*

*Muta. 2 H341 Se sospecha que provoca defectos genéticos.*

*Carc. 1B H350 Puede provocar cáncer.*



*GHS07*

*Skin Sens. 1 H317 Puede provocar una reacción alérgica en la piel.*

· **2.2 Elementos de la etiqueta**

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

*La sustancia se ha clasificado y etiquetado de conformidad con el reglamento CLP.*

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· **Pictogramas de peligro**



GHS07 GHS08

· **Palabra de advertencia Peligro**

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

formaldehído

· **Indicaciones de peligro**

H317 Puede provocar una reacción alérgica en la piel.

H341 Se sospecha que provoca defectos genéticos.

H350 Puede provocar cáncer.

· **Consejos de prudencia**

P261 Evitar respirar el polvo/el humo/el gas/la niebla/los vapores/el aerosol.

P280 Llevar guantes/prendas/gafas/máscara de protección.

P308+P313 EN CASO DE exposición manifiesta o presunta: Consultar a un médico.

P333+P313 En caso de irritación o erupción cutánea: Consultar a un médico.

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

· **3.1 Caracterización química: Sustancias**

· **Denominación N° CAS**

7732-18-5 agua destilada, de conductividad o de igual grado de pureza

· **Número(s) de identificación**

· **Número CE:** 231-791-2

· **Componentes peligrosos:**

CAS: 50-00-0	formaldehído	≤2,5%
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	

### 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:** Limpiar los ojos abiertos durante varios minutos con agua corriente.

· **En caso de ingestión:** Consultar un médico si los trastornos persisten.

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- **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:**  
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.  
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.

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### · 8.1 Parámetros de control

#### · Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:

##### 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
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· **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.

#### · 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:

Penetrante

#### · Umbral olfativo:

No determinado.

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· <b>valor pH:</b>	No determinado.
· <b>Cambio de estado</b>	
· <b>Punto de fusión/punto de congelación:</b>	0 °C
· <b>Punto inicial de ebullición e intervalo de ebullición:</b>	100 °C
· <b>Punto de inflamación:</b>	No aplicable.
· <b>Inflamabilidad (sólido, gas):</b>	No aplicable.
· <b>Temperatura de descomposición:</b>	No determinado.
· <b>Temperatura de auto-inflamación:</b>	No determinado.
· <b>Propiedades explosivas:</b>	El producto no es explosivo.
· <b>Límites de explosión:</b>	
· <b>Inferior:</b>	No determinado.
· <b>Superior:</b>	No determinado.
· <b>Presión de vapor a 20 °C:</b>	23 hPa
· <b>Densidad a 20 °C:</b>	1,01 g/cm <sup>3</sup>
· <b>Densidad relativa</b>	No determinado.
· <b>Densidad de vapor</b>	No determinado.
· <b>Tasa de evaporación:</b>	No determinado.
· <b>Solubilidad en / miscibilidad con agua:</b>	Poco o no mezclable.
· <b>Coefficiente de reparto: n-octanol/agua:</b>	No determinado.
· <b>Viscosidad:</b>	
· <b>Dinámica a 20 °C:</b>	0,952 mPas
· <b>Cinemática:</b>	No determinado.
· <b>Concentración del disolvente:</b>	
· <b>Disolventes orgánicos:</b>	1,0 %
· <b>Agua:</b>	98,9 %
· <b>VOC (CE)</b>	1,00 %
· <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.

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### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

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

**50-00-0 formaldehído**

Oral	LD50	>200 mg/kg (rat)
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- **Efecto estimulante primario:**
- **Corrosión o irritación cutáneas** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Lesiones o irritación ocular graves**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Sensibilización respiratoria o cutánea**  
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**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición repetida**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Peligro de aspiración** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.

### SECCIÓN 12: Información ecológica

- **12.1 Toxicidad**
- **Toxicidad acuática:** No existen más datos relevantes disponibles.
- **12.2 Persistencia y degradabilidad** No existen más datos relevantes disponibles.
- **12.3 Potencial de bioacumulación** No existen más datos relevantes disponibles.
- **12.4 Movilidad en el suelo** No existen más datos relevantes disponibles.
- **Indicaciones medioambientales adicionales:**
- **Indicaciones generales:**  
Nivel de riesgo para el agua 2 (autoclasiificación): 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.
- **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.

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- **Embalajes sin limpiar:**
- **Recomendación:** Eliminar conforme a las disposiciones oficiales.

### SECCIÓN 14: Información relativa al transporte

- **14.1 Número ONU**  
· **ADR, IMDG, IATA** suprimido
- **14.2 Designación oficial de transporte de las Naciones Unidas**  
· **ADR, IMDG, IATA** suprimido
- **14.3 Clase(s) de peligro para el transporte**  
· **ADR, ADN, IMDG, IATA**  
· **Clase** suprimido
- **14.4 Grupo de embalaje**  
· **ADR, IMDG, IATA** suprimido
- **14.5 Peligros para el medio ambiente:** No aplicable.
- **14.6 Precauciones particulares para los usuarios** No aplicable.
- **14.7 Transporte a granel con arreglo al anexo II del Convenio MARPOL y el Código IBC** No aplicable.
- **"Reglamentación Modelo" de la UNECE:** suprimido

### SECCIÓN 15: Información reglamentaria

- **15.1 Reglamentación y legislación en materia de seguridad, salud y medio ambiente específicas para la sustancia o la mezcla**
- **Directiva 2012/18/UE**
- **Sustancias peligrosas nominadas - ANEXO I** No contiene la sustancia.
- **REGLAMENTO (CE) n° 1907/2006 ANEXO XVII** Restricciones: 3, 28, 72
- **Directiva 2011/65/UE sobre restricciones a la utilización de determinadas sustancias peligrosas en aparatos eléctricos y electrónicos - Anexo II**  
ninguno de los componentes está incluido en una lista
- **Disposiciones nacionales:**
- **Indicaciones sobre las limitaciones de trabajo:**  
Los empleados no deben exponerse a esta sustancia peligrosa. 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.

- **Frasas 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.

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*H317 Puede provocar una reacción alérgica en la piel.*

*H331 Tóxico en caso de inhalación.*

*H341 Se sospecha que provoca defectos genéticos.*

*H350 Puede provocar cáncer.*

**· 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*

*Skin Corr. 1B: Corrosión o irritación cutáneas – Categoría 1B*

*Skin Sens. 1: Sensibilización cutánea – Categoría 1*

*Muta. 2: Mutagenicidad en células germinales – Categoría 2*

*Carc. 1B: Carcinogenicidad – Categoría 1B*

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