

# Safety Data Sheet

acc. to OSHA HCS


Printing date 05/11/2022

Reviewed on 05/11/2022

## 1 Identification

- **Product identifier**
- **Trade name:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Article number:** 19320-A, 19321-A
- **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**  
Eye Irritation 2B H320 Causes eye irritation.
  - **Label elements**
  - **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
  - **Hazard pictograms** Void
  - **Signal word** Warning
  - **Hazard statements**  
Causes eye irritation.
  - **Precautionary statements**  
Wash thoroughly after handling.  
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
If eye irritation persists: Get medical advice/attention.
  - **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
- 

Health = 1  
Fire = 0  
Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**
- |            |   |
|------------|---|
| HEALTH     | 1 |
| FIRE       | 0 |
| REACTIVITY | 0 |

Health = 1  
Fire = 0  
Reactivity = 0
- **Other hazards**
  - **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.

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· **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

### 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

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

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of 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.

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### · **Protective Action Criteria for Chemicals**

#### · **PAC-1:**

*None of the ingredients is listed.*

#### · **PAC-2:**

*None of the ingredients is listed.*

#### · **PAC-3:**

*None of the ingredients is listed.*

## 7 Handling and storage

### · **Handling:**

#### · **Precautions for safe handling**

*Ensure good ventilation/exhaustion at the workplace.*

*Prevent formation of aerosols.*

· **Information about protection against explosions and fires:** *No special measures required.*

· **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:** *Not required.*

· **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.*

*Avoid contact with the eyes.*

*Avoid contact with the eyes and skin.*

#### · **Breathing equipment:**

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

#### · **Protection of hands:**



*Protective gloves*

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

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

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

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**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

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· **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:**

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Characteristic
<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 g/cm<sup>3</sup> (8.345 lbs/gal)

· **Relative density** Not determined.

· **Vapor density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

**Water:** Fully miscible.

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

· **Viscosity:**

<b>Dynamic at 20 °C (68 °F):</b>	0.952 mPas
<b>Kinematic:</b>	Not determined.

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<b>Water:</b>	99.9 %
<b>VOC content:</b>	0.00 % 0.0 g/l / 0.00 lb/gal

<b>Solids content:</b>	0.0 %
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<b>Other information</b>	No further relevant information available.
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## 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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
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None of the ingredients is listed.
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· <b>NTP (National Toxicology Program)</b>
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None of the ingredients is listed.
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· <b>OSHA-Ca (Occupational Safety Health Administration)</b>
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None of the ingredients is listed.
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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:** Not hazardous for water.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**


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

## 13 Disposal considerations

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

## 14 Transport information

<ul style="list-style-type: none"> <li>· <b>UN-Number</b></li> <li>· <b>DOT, ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p style="margin-left: 20px;">Void</p> <p style="margin-left: 20px;">UN3082</p>
<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>DOT, ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p style="margin-left: 20px;">Void</p> <p style="margin-left: 20px;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT</p> <p style="margin-left: 20px;">ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>DOT, ADR, ADN</b></li> <li>· <b>Class</b></li> </ul>	<p style="margin-left: 20px;">Void</p>
<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul> <div style="text-align: center; margin: 10px 0;">  </div>	<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul> <p style="margin-left: 20px;">9 Miscellaneous dangerous substances and articles</p> <p style="margin-left: 20px;">9</p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p style="margin-left: 20px;">Void</p> <p style="margin-left: 20px;">III</p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>	<p style="margin-left: 20px;">Symbol (fish and tree)</p> <p style="margin-left: 20px;">Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> </ul>	<p style="margin-left: 20px;">Not applicable.</p> <p style="margin-left: 20px;">F-A, S-</p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b></li> </ul>	<p style="margin-left: 20px;">Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p style="margin-left: 20px;">Void</p>

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## 15 Regulatory information

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

*No further relevant information available.*

· **Sara**

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

*None of the ingredients is listed.*

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

*None of the ingredients is listed.*

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

*ACTIVE*

· **Hazardous Air Pollutants**

*None of the ingredients is listed.*

· **Proposition 65**

· **Chemicals known to cause cancer:**

*None of the ingredients is listed.*

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

*None of the ingredients is listed.*

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

*None of the ingredients is listed.*

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

*None of the ingredients is listed.*

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

*None of the ingredients is listed.*

· **TLV (Threshold Limit Value)**

*None of the ingredients is listed.*

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

*None of the ingredients is listed.*

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

· **Hazard pictograms** *Void*

· **Signal word** *Warning*

· **Hazard statements**

*Causes eye irritation.*

· **Precautionary statements**

*Wash thoroughly after handling.*

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

*Continue rinsing.*

*If eye irritation persists: Get medical advice/attention.*

· **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.*

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**· Contact:****· Date of preparation / last revision** 05/11/2022 / -**· Abbreviations and acronyms:***ADR: Accord relatif au transport international 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**EINECS: European Inventory of Existing Commercial 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)**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****Eye Irritation 2B: Serious eye damage/eye irritation – Category 2B**

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### 1 Identification

- **Product identifier**
- **Trade name:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Article number:** 19320-A, 19321-A
- **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  
www.emsdiasum.com
- ProSciTech Pty Ltd  
11 Carlton Street, Kirwan QLD 4817 Australia  
Telephone Number: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Emergency Contact: (07) 4773 9444 - 8:30am - 5:00pm, Monday to Friday (excluding Public Holidays)  
Website: ems.proscitech.com
- Emgrid Australia Pty. Ltd.  
P.O. Box 118  
The Patch VIC 3792  
Australia  
Tel: 03 9752 1785  
Fax: 03 9752 1784  
Website: www.emgrid.com.au
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 Hazard(s) Identification

- **Classification of the substance or mixture**  
The substance is not classified, according to the Globally Harmonised System (GHS).
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

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**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

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### 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**

### 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire Fighting Measures

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

### 6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Dilute with plenty of 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.

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### 7 Handling and Storage

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

### 8 Exposure controls and personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **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.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **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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· **Eye protection:**

Tightly sealed goggles

### 9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

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

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

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

· **Flash point:** Not applicable.· **Flammability (solid, gas):** Not applicable.· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Not determined.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:**

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

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

· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

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

· <b>Dynamic at 20 °C:</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Water:</b>	99.9 %
· <b>VOC (EC)</b>	0.00 %

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

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### 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**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

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

### 13 Disposal considerations

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

### 14 Transport information

- |                     |               |
|---------------------|---------------|
| · <b>UN-Number</b>  |               |
| · <b>ADG</b>        | not regulated |
| · <b>IMDG, IATA</b> | UN3082        |

(Contd. on page 6)

AU

# Safety Data Sheet



## according to WHS Regulations

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 5)

<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADG</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p style="text-align: right;"><i>not regulated</i></p> <p style="text-align: right;"><i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT</i></p> <p style="text-align: right;"><i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</i></p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADG, ADN</b></li> <li>· <b>Class</b></li> </ul>	<p style="text-align: right;"><i>not regulated</i></p>
<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul> <div style="display: flex; justify-content: center; align-items: center; gap: 20px;">   </div>	
<ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p style="text-align: right;"><i>9 Miscellaneous dangerous substances and articles.</i></p> <p style="text-align: right;"><i>9</i></p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>ADG</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p style="text-align: right;"><i>not regulated</i></p> <p style="text-align: right;"><i>III</i></p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>	<p style="text-align: right;"><i>Symbol (fish and tree)</i></p> <p style="text-align: right;"><i>Symbol (fish and tree)</i></p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> </ul>	<p style="text-align: right;"><i>Not applicable.</i></p> <p style="text-align: right;"><i>F-A, S-</i></p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	<p style="text-align: right;"><i>Not applicable.</i></p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p style="text-align: right;"><i>not regulated</i></p>

### 15 Regulatory information

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

· **Australian Inventory of Industrial Chemicals**

*All ingredients are listed.*

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

*None of the ingredients is listed.*

· **Australia: Priority Existing Chemicals**

*None of the ingredients is listed.*

· **GHS label elements** *Void*

· **Hazard pictograms** *Void*

· **Signal word** *Void*

· **Hazard statements** *Void*

· **Directive 2012/18/EU**

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

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# Safety Data Sheet

## according to WHS Regulations

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 6)

**· 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.*

**· Contact:****· Abbreviations and acronyms:**

*ADR: Accord relatif au transport international 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*

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

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

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

AU

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/11/2022

Reviewed on 05/11/2022

### 1 Identification

- **Product identifier**
- **Trade name:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Article number:** 19320-A, 19321-A
- **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**  
*Eye Irritation - Category 2B H320 Causes eye irritation.*
- **Label elements**
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** Void
- **Signal word** Warning
- **Hazard statements**  
*Causes eye irritation.*
- **Precautionary statements**  
*Wash thoroughly after handling.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*If eye irritation persists: Get medical advice/attention.*
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**
- |            |   |                |
|------------|---|----------------|
| HEALTH     | 1 | Health = 1     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

CA

(Contd. on page 2)



# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/11/2022

Reviewed on 05/11/2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 1)

### 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**

### 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

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

### 6 Accidental release measures

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

CA

(Contd. on page 3)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/11/2022

Reviewed on 05/11/2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 2)

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
*Ensure good ventilation/exhaustion at the workplace.  
 Prevent formation of aerosols.*
- **Information about protection against explosions and fires:** *No special measures required.*
- **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:** *Not required.*
- **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.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.*
- **Breathing equipment:**  
*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*
- **Protection of hands:**



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

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

- **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.*

- **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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CA

# Safety Data Sheet

according to HPR, Schedule 1

Printing date 05/11/2022

Reviewed on 05/11/2022

Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 3)

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

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

· <b>Melting point/Melting range:</b>	0 °C
· <b>Boiling point/Boiling range:</b>	100 °C

· **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:** 23 hPa

· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with**· **Water:** Fully miscible.· **Partition coefficient (n-octanol/water):** Not determined.· **Viscosity:**

· <b>Dynamic at 20 °C:</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Water:</b>	99.9 %

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

CA

(Contd. on page 5)

## Safety Data Sheet according to HPR, Schedule 1

Printing date 05/11/2022

Reviewed on 05/11/2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 4)

### 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:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**

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

None of the ingredients is listed.

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

### 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Not hazardous for water.
- **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.

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CA

## Safety Data Sheet

according to HPR, Schedule 1

Printing date 05/11/2022


Reviewed on 05/11/2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 5)

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

### 14 Transport information

· UN-Number	Void
· DOT/TDG, ADR	Void
· IMDG, IATA	UN3082
· UN proper shipping name	Void
· DOT/TDG, ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
· IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· Transport hazard class(es)	
· DOT, ADR, ADN	Void
· Class	Void
· IMDG, IATA	
	
· Class	9 Miscellaneous dangerous substances and articles
· Label	9
· Packing group	Void
· DOT/TDG, ADR	Void
· IMDG, IATA	III
· Environmental hazards:	
· Marine pollutant:	Symbol (fish and tree)
· Special marking (IATA):	Symbol (fish and tree)
· Special precautions for user	Not applicable.
· EMS Number:	F-A, S-
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· UN "Model Regulation":	Void

### 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.

· **Sara**

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

None of the ingredients is listed.

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

None of the ingredients is listed.

(Contd. on page 7)

# Safety Data Sheet

## according to HPR, Schedule 1

Printing date 05/11/2022

Reviewed on 05/11/2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 6)

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

ACTIVE

· **Canadian substance listings:**

· **Canadian Domestic Substances List (DSL)**

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

· **Canadian Non-Domestic Substances List (NDSL)**

None of the ingredients is listed.

· **Canadian Ingredient Disclosure list (limit 0.1%)**

None of the ingredients is listed.

· **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** Void

· **Signal word** Warning

· **Hazard statements**

Causes eye irritation.

· **Precautionary statements**

Wash thoroughly after handling.

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

Continue rinsing.

If eye irritation persists: Get medical advice/attention.

· **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.

· **Contact:**

· **Date of the latest revision of the safety data sheet** 05/11/2022 / -

· **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

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

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.05.2022

Revision: 11.05.2022

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

- **Product identifier**
- **Trade name:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Article number:** 19320-A, 19321-A
- **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  
www.emsdiasum.com
- **Further information obtainable from:** Product safety department
- **Emergency telephone number:**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

## 2 Hazards identification

- **Classification of the substance or mixture**  
Acute Tox. 5 H303 May be harmful if swallowed.  
Acute Tox. 5 H313 May be harmful in contact with skin.  
Acute Tox. 5 H333 May be harmful if inhaled.  
Eye Irritation 2B H320 Causes eye irritation.
- **Label elements**
- **GHS label elements**  
The substance is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms** Void
- **Signal word** Warning
- **Hazard statements**  
May be harmful if swallowed, in contact with skin or if inhaled.  
Causes eye irritation.
- **Precautionary statements**  
Wash thoroughly after handling.  
IF INHALED: Call a POISON CENTER/doctor if you feel unwell.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
If eye irritation persists: Get medical advice/attention.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

IL

(Contd. on page 2)

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

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 1)

### 3 Composition/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**

### 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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting 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:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

(Contd. on page 3)



# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 2)

## 7 Handling and storage

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

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** *No further data; see item 7.*
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** *Not required.*
- **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.  
 Avoid contact with the eyes.  
 Avoid contact with the eyes and skin.*
- **Respiratory protection:**  
*In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.*
- **Protection of hands:**



Protective gloves

*The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.*

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

- **Material of gloves**

*The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.*

- **Penetration time of glove material**

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

(Contd. on page 4)

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

Printing date 11.05.2022

Revision: 11.05.2022

Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 3)

· **Eye protection:**

Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**· **General Information**· **Appearance:**

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

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

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

· **Flash point:** Not applicable.· **Flammability (solid, gas):** Not applicable.· **Decomposition temperature:** Not determined.· **Auto-ignition temperature:** Not determined.· **Explosive properties:** Product does not present an explosion hazard.· **Explosion limits:**

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

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

· <b>Density at 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.
· <b>Evaporation rate</b>	Not determined.

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

· <b>Dynamic at 20 °C:</b>	0.952 mPas
· <b>Kinematic:</b>	Not determined.
· <b>Water:</b>	99.9 %
· <b>VOC (EC)</b>	0.00 %

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

(Contd. on page 5)

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

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 4)

### 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**
- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** Irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

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

### 13 Disposal considerations

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

### 14 Transport information

- |                     |               |
|---------------------|---------------|
| · <b>UN-Number</b>  |               |
| · <b>ADR</b>        | not regulated |
| · <b>IMDG, IATA</b> | UN3082        |

(Contd. on page 6)


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

Printing date 11.05.2022

Revision: 11.05.2022

Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 5)

<ul style="list-style-type: none"> <li>· <b>UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p><i>not regulated</i></p> <p><i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT</i></p> <p><i>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</i></p>
<ul style="list-style-type: none"> <li>· <b>Transport hazard class(es)</b></li> <li>· <b>ADR, ADN</b></li> <li>· <b>Class</b></li> </ul>	<p><i>not regulated</i></p>
<ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul> 	<p><i>9 Miscellaneous dangerous substances and articles.</i></p> <p><i>9</i></p>
<ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p><i>not regulated</i></p> <p><i>III</i></p>
<ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>	<p><i>Symbol (fish and tree)</i></p> <p><i>Symbol (fish and tree)</i></p>
<ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>EMS Number:</b></li> </ul>	<p><i>Not applicable.</i></p> <p><i>F-A, S-</i></p>
<ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of Marpol and the IBC Code</b></li> </ul>	<p><i>Not applicable.</i></p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p><i>not regulated</i></p>

### 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **GHS label elements**  
*The substance is classified and labelled according to the Globally Harmonised System (GHS).*
- **Hazard pictograms** *Void*
- **Signal word** *Warning*
- **Hazard statements**  
*May be harmful if swallowed, in contact with skin or if inhaled.*  
*Causes eye irritation.*
- **Precautionary statements**  
*Wash thoroughly after handling.*  
*IF INHALED: Call a POISON CENTER/doctor if you feel unwell.*  
*IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*  
*Continue rinsing.*  
*If eye irritation persists: Get medical advice/attention.*
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** *Substance is not listed.*

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

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 6)

**· 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.*

**· Contact:****· Abbreviations and acronyms:**

*ADR: Accord relatif au transport international 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*

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

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

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Acute Tox. 5: Acute toxicity – Category 5*

*Eye Irritation 2B: Serious eye damage/eye irritation – Category 2B*

IL

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

Printing date 11.05.2022

Revision: 11.05.2022

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

- **1.1 Product identifier**
- **Trade name:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Article number:** 19320-A, 19321-A
- **CAS Number:**  
7732-18-5
- **EC number:**  
231-791-2
- **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**  
The substance is not classified, according to the CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **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

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(Contd. on page 2)

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

Printing date 11.05.2022

Revision: 11.05.2022

Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 1)

### **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. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### **SECTION 5: Firefighting measures**

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

### **SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Dilute with plenty of 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.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **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.

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# Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.05.2022

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Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 2)

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

## SECTION 8: Exposure controls/personal protection

· 8.1 **Control parameters**

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **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.
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

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

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

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

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

· **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>           | Characteristic  |
| <b>Odour threshold:</b> | Not determined. |

(Contd. on page 4)



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

Printing date 11.05.2022

Revision: 11.05.2022

Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 3)

· <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 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>	Fully miscible.
· <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>Water:</b>	99.9 %
<b>VOC (EC)</b>	0.00 %
<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.
- **Primary irritant effect:**
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 5)

# Safety data sheet

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

Printing date 11.05.2022

Revision: 11.05.2022

**Trade name: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 4)

- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **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:** Not hazardous for water.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

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

### SECTION 14: Transport information

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>· <b>14.1 UN-Number</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>                                | <p style="margin: 0;">not regulated<br/>UN3082</p>  |
| <ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul> | <p style="margin: 0;">not regulated<br/>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br/>N.O.S., MARINE POLLUTANT<br/>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,<br/>N.O.S.</p> |

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

Printing date 11.05.2022

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Trade name: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Contd. of page 5)

· **14.3 Transport hazard class(es)**· **ADR, ADN**· **Class**

not regulated

· **IMDG, IATA**· **Class**

9 Miscellaneous dangerous substances and articles.

· **Label**

9

· **14.4 Packing group**· **ADR**

not regulated

· **IMDG, IATA**

III

· **14.5 Environmental hazards:**· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (IATA):**

Symbol (fish and tree)

· **14.6 Special precautions for user**

Not applicable.

· **EMS Number:**

F-A, S-

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **UN "Model Regulation":**

not regulated

### 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.**· **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.*

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

# 化学品安全技术说明书

## 根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2022.05.11

在 2022.05.11 审核

### 1 化学品及企业标识

- 产品识别者
- 化学品中文(英文)名称, 化学品俗名或商品名: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW=30,000-70,000)
- 商品编号: 19320-A, 19321-A
- CAS 编号: 7732-18-5
- 欧盟编号: 231-791-2
- 相应纯物质或者混合物的相关下位用途及禁止用途 无相关详细资料。
- 物质或混合物的用途 实验室化学物
- 安全技术说明书内供应商详细信息
- 企业名称: Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- 可获取更多资料的部门: Product safety department
- 紧急联系电话号码: ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 危险性概述

#### · 紧急情况概述:

无色的, 液体, 吞咽、皮肤接触或吸入可能有害。造成眼刺激。

#### · GHS危险性类别

急性毒性(经口) 第5类 H303 吞咽可能有害  
急性毒性(经皮肤) 第5类 H313 皮肤接触可能有害  
急性毒性(吸入) 第5类 H333 吸入可能有害  
严重眼损伤/眼刺激 类别2B H320 造成眼刺激

#### · 标签要素

- GHS卷标元素 本化学物质根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。
- 象形图 无效
- 警示词 警告
- 危险性说明  
吞咽、皮肤接触或吸入可能有害  
造成眼刺激
- 防范说明
- 预防措施  
作业后彻底清洗
- 事故响应  
如误吸入:如感觉不适,呼叫急救中心/医生  
如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗  
如仍觉眼刺激:求医/就诊
- 其他有害性
- PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果
- PBT(残留性、生物浓缩性、毒性物质) 不适用的

(在 2 页继续)

# 化学品安全技术说明书

## 根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2022.05.11

在 2022.05.11 审核

化学品中文(英文)名称, 化学品俗名或商品名: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW=30,000-70,000)

· vPvB(高残留性、高生物浓缩性物质): 不适用的

(在 1 页继续)

### 3 成分/组成信息

- 纯品
- CAS号 化学名, 通用名  
7732-18-5 水 Deionized Water, Reagent Grade A.C.S.
- 鉴别编号:
- 欧盟编号: 231-791-2

### 4 急救措施

- 应急措施要领
- 总说明: 中毒的症状可能会在几个小时以后才出现;因此在发生事故之后起码要有 48 小时的医疗观察.
- 吸入:  
供给新鲜空气. 如有需要,提供人工呼吸. 让病人保暖. 如果症状持续则询问医生.  
万一病人不清醒时,请让病人侧躺以便移动.
- 皮肤接触: 一般的产品不会刺激皮肤.
- 眼睛接触: 张开眼睛在流水下冲洗数分钟. 如果症状仍然持续,请咨询医生.
- 食入: 马上召唤医生.
- 给医生的资料:
- 最重要的急慢性症状及其影响 无相关详细资料.
- 需要及时的医疗处理及特别处理的症状 无相关详细资料.

### 5 消防措施

- 灭火方法
- 灭火的方法和灭火剂: 使用适合四周环境的灭火措施.
- 特别危险性 无相关详细资料.
- 特殊灭火方法
- 消防人员特殊的防护装备: 口腔呼吸保护装置.

### 6 泄漏应急处理

- 保护措施 没有要求.
- 环境保护措施: 用大量的水进行稀释.
- 密封及净化方法和材料:  
吸收液体粘合原料 (沙粒、硅藻土、酸性粘合剂、通用粘合剂、锯屑).  
根据第 13 条条款弃置受污染物.  
确保有足够的通风装置.
- 参照其他部分  
有关安全处理的资料请参阅第 7 节.  
有关个人防护装备的资料请参阅第 8 节.  
有关弃置的资料请参阅第 13 节.

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# 化学品安全技术说明书

## 根据 GB/T 16483-2008, GB/T 17519-2013

打印日期 2022.05.11

在 2022.05.11 审核

化学品中文(英文)名称, 化学品俗名或商品名: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW=30,000-70,000)

(在 2 页继续)

### 7 操作处置与储存

- **操作处置**
- **储存**  
确保工作间有良好的通风/排气装置。  
防止气溶胶的形成。
- **有关火灾及防止爆炸的资料**: 不需特别的措施。
- **混合危险性等安全储存条件**
- **储存**:  
· **储存库和容器须要达到的要求**: 没有特别的要求。  
· **有关使用一个普通的储存设施来储存的资料**: 不需要。  
· **有关储存条件的更多资料**: 将容器密封。  
· **具体的最终用户** 无相关详细资料。

### 8 接触控制和个体防护

- **工程控制方法**: 没有进一步数据;见第 7 项。
- **控制变数**
- **在工作场需要监控的限值成分** 不要求。
- **额外的资料**: 制作期间有效的清单将作为基础来使用。
- **泄漏控制**
- **个人防护设备**:  
· **一般保护和卫生措施**:  
远离食品、饮料和饲料。  
立即除去所有的不洁的和被污染的衣服。  
在休息之前和工作完毕后请清洗双手。  
避免和眼睛接触。  
避免和眼睛及皮肤接触。
- **呼吸系统防护**:  
如果曾短暂接触或在低污染的情况下, 请使用呼吸过滤装置。  
如果曾深入或较长时间接触, 请使用独立的呼吸保护装置。
- **手防护**:



保护手套

- 手套的物料必须是不渗透性的, 且能抵抗该产品/物质/添加剂。  
基于缺乏测试, 对于产品/制剂/化学混合物, 并不会提供手套材料的建议  
选择手套材料时, 请注意材料的渗透时间, 渗透率和降解参数
- **手套材料** 选择合适的手套不单取决于材料, 亦取决于质量特征, 以及来自哪一间生产厂家
  - **渗入手套材料的时间** 请向劳保手套生产厂家获取准确的破裂时间并观察实际的破裂时间
  - **眼睛防护**:



密封的护目镜

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## 9 理化特性

· 有关基本物理及化学特性的信息	
· 一般说明	
· 外观:	
形状:	液体
颜色:	无色的
· 气味:	有特性的
· 嗅觉阈限	未决定.
· pH值:	未决定.
· 条件的更改	
熔点:	0 °C
沸点/初沸点和沸程:	100 °C
· 闪点:	不适用的
· 可燃性(固体、气体):	不适用的
· 分解温度:	未决定.
· 自燃温度:	未决定.
· 爆炸的危险性:	该产品并没有爆炸的危险
· 爆炸极限:	
较低:	未决定.
较高:	未决定.
· 蒸气压在 20 °C:	23 hPa
· 密度在 20 °C:	1 g/cm <sup>3</sup>
· 相对密度	未决定.
· 蒸气密度	未决定.
· 蒸发速率	未决定.
· 溶解性	
水:	完全可拌和的
· n-辛醇/水分配系数:	未决定.
· 黏性:	
动态在 20 °C:	0.952 mPas
运动学的:	未决定.
水:	99.9 %
固体成份:	0.0 %
· 其他信息	无相关详细资料。

## 10 稳定性和反应性

- 反应性 无相关详细资料。
- 稳定性
- 热分解/要避免的情况: 如果遵照规格使用则不会分解。
- 有害反应可能性 未有已知的危险反应。
- 应避免的条件 无相关详细资料。
- 不相容的物质: 无相关详细资料。

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·危险的分解产物: 未知有危险的分解产品.

(在 4 页继续)

## 11 毒理学信息

- 对毒性学影响的信息
- 急性毒性:
- 主要的刺激性影响:
- 皮肤: 没有刺激性影响.
- 在眼睛上面: 刺激的影响.
- 致敏作用: 没有已知的敏化影响.

## 12 生态学信息

- 生态毒性
- 水生毒性: 无相关详细资料.
- 持久性和降解性 无相关详细资料.
- 环境系统习性:
- 潜在的生物累积性 无相关详细资料.
- 土壤内移动性 无相关详细资料.
- 额外的生态学资料:
- 总括注解: 通常来说对水是不危害的
- PBT(残留性、生物浓缩性、毒性物质) 及 vPvB(高残留性、高生物浓缩性物质)评价结果
- PBT(残留性、生物浓缩性、毒性物质) 不适用的
- vPvB(高残留性、高生物浓缩性物质): 不适用的
- 其他副作用 无相关详细资料.

## 13 废弃处置

- 废弃处置方法
- 建议: 不能将该产品和家居垃圾一起丢弃. 不要让该产品接触污水系统.
- 受污染的容器和包装:
- 建议: 必须根据官方的规章来丢弃.
- 建议的清洗剂: 如有必要请使用水及清洁剂进行清洁.

## 14 运输信息

- |                 |  |
|-----------------|--|
| ·联合国危险货物编号(UN号) |  |
| ·ADR            | 无效   |
| ·IMDG, IATA     | UN3082   |
| ·UN适当装船名        |  |
| ·ADR            | 无效   |
| ·IMDG           | ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br>LIQUID, N.O.S., MARINE POLLUTANT |
| ·IATA           | ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br>LIQUID, N.O.S.                   |

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(在 5 页继续)

· 运输危险等级	
· ADR, ADN · 级别	无效
· IMDG, IATA	
	
· Class · Label	9 雜項危險物質和物品, 包括危害環境物質 9
· 包装组别	
· ADR · IMDG, IATA	无效 III
· 环境危害	
· 海运污染物质:	象形符号 (鱼和树)
· 特别标记 (IATA):	象形符号 (鱼和树)
· 用户特别预防措施	不适用的
· EMS 号码:	F-A, S-
· MARPOL73/78(针对船舶引起的海洋污染预防协议)附件书2及根据IBC Code(国际装船货物编码)的大量运送	不适用的
· UN "标准规定":	无效

## 15 法规信息

- 对相应纯物质或者混合物的安全、保健及环境法规/法律 无相关详细资料。
- 危险化学品安全管理条例

### · 危险化学品目录

没有列出成份

- 化学品首次进口及有毒化学品进出口环境管理规定
- 新化学物质环境管理办法

### · 中国现有化学物质名录

7732-18-5 | 水

- GHS卷标元素 本化学物质根据化学物质分类及标记全球协调制度(GHS)进行了分类及标记。
- 象形图 无效
- 警示词 警告
- 危险性说明  
吞咽、皮肤接触或吸入可能有害  
造成眼刺激
- 防范说明
- 预防措施  
作业后彻底清洗
- 事故响应  
如误吸入:如感觉不适,呼叫急救中心/医生  
如进入眼睛:用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出,取出隐形眼镜。继续冲洗

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· 如仍觉眼刺激:求医/就诊

(在 6 页继续)

· 化学物质安全性评价: 尚未进行化学物质安全性评价

## 16 其他信息

该资料是基于我们目前的知识

然而,这并不构成对任何特定产品特性的担保并且不建立一个法律上有效的合同关系.

· 联络:

· 缩写:

ADR: Accord relatif au transport international 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

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

PBT: 持久性生物累积性有毒物质

vPvB: very Persistent and very Bioaccumulative

急性毒性(径口) 第5类: Acute toxicity – Category 5

严重眼损伤/眼刺激 类别2B: Serious eye damage/eye irritation – Category 2B

CN

# Veiligheidsinformatieblad

## volgens 1907/2006/EG, Artikel 31

datum van de druk: 11.05.2022

Herziening van: 11.05.2022

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

- **1.1 Productidentificatie**
- **Handelsnaam:** *POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)*
- **Artikelnummer:** *19320-A, 19321-A*
- **CAS-nummer:**  
*7732-18-5*
- **EC-nummer:**  
*231-791-2*
- **1.2 Relevant geïdentificeerd gebruik van de stof of het mengsel en ontraden gebruik**  
*Geen verdere relevante informatie verkrijgbaar.*
- **Toepassing van de stof / van de bereiding** *Laboratoriumchemicaliën*
- **1.3 Details betreffende de verstrekker van het veiligheidsinformatieblad**
- **Fabrikant/leverancier:**  
*Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com*
- 
- Aurion  
Binnenhaven 5  
6709 PD Wageningen  
The Netherlands  
Tel: 31 317 415094  
Fax: 31 317 415955  
email: info@aurion.nl*
- **Inlichtingengevende sector:** *Product safety department*
- **1.4 Telefoonnummer voor noodgevallen:**  
*ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887*

### RUBRIEK 2: Identificatie van de gevaren

- **2.1 Indeling van de stof of het mengsel**
- **Indeling overeenkomstig Verordening (EG) nr. 1272/2008**  
*De stof is niet geïdentificeerd volgens de CLP-verordening.*
- **2.2 Etiketteringselementen**
- **Etikettering overeenkomstig Verordening (EG) nr. 1272/2008** *Niet van toepassing*
- **Gevarenpictogrammen** *Niet van toepassing*
- **Signaalwoord** *Niet van toepassing*
- **Gevarenaanduidingen** *Niet van toepassing*
- **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*

(Vervolg op blz. 2)

# Veiligheidsinformatieblad

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**Handelsnaam: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Vervolg van blz. 1)

- **Identificatienummer(s)**
- **EC-nummer:** 231-791-2

### 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:**  
Frisse lucht toedienen, eventueel beademing, warmte. Wanneer de klachten niet ophouden, een arts raadplegen.  
Bij bewusteloosheid ligging en vervoer in stabiele zijligging.
- **Na huidcontact:** Over het algemeen is het produkt niet prikkelend voor de huid
- **Na oogcontact:**  
De ogen gedurende verscheidene minuten onder stromend water afspoelen terwijl de oogspleet geopend blijft. Bij aanhoudende klachten een dokter raadplegen.
- **Na inslikken:** Onmiddellijk arts raadplegen.
- **4.2 Belangrijkste acute en uitgestelde symptomen en effecten** Geen verdere relevante informatie verkrijgbaar.
- **4.3 Vermelding van de vereiste onmiddellijke medische verzorging en speciale behandeling**  
Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 5: Brandbestrijdingsmaatregelen

- **5.1 Blusmiddelen**
- **Geschikte blusmiddelen:** Brandblusmaatregelen op omgeving afstemmen.
- **5.2 Speciale gevaren die door de stof of het mengsel worden veroorzaakt**  
Geen verdere relevante informatie verkrijgbaar.
- **5.3 Advies voor brandweerlieden**
- **Speciale beschermende kleding:** Ademhalingsstoestel 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 Milieuvorzorgsmaatregelen:** Met veel water verdunnen.
- **6.3 Insluitings- 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.  
Aërosolvorming vermijden.
- **Informatie m.b.t. brand- en ontploffingsgevaar:** Geen bijzondere maatregelen noodzakelijk.

(Vervolg op blz. 3)

# Veiligheidsinformatieblad

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(Vervolg van blz. 2)

- **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

- **8.1 Controleparameters**
- **Aanvullende gegevens m.b.t. de inrichting van technische installaties:** Geen aanvullende gegevens. Zie 7.
- **Bestanddelen met grenswaarden die m.b.t. de werkruimte in acht genomen moeten worden:** Vervalt.
- **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.  
Aanraking met de ogen vermijden.  
Aanraking met de ogen en de huid vermijden.
- **Ademhalingsbescherming:**  
Bij korte of geringe belasting ademfiltertoestel; bij intensieve resp. langdurige expositie een van de omringende lucht onafhankelijk ademhalingsstoestel gebruiken.
- **Handbescherming:**



Veiligheidshandschoenen

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

- **Handschoenmateriaal**  
De keuze van een geschikte handschoen is niet alleen afhankelijk van het materiaal, maar ook van andere kwaliteitskenmerken en verschilt van fabrikant tot fabrikant.
- **Doordringingstijd van het handschoenmateriaal**  
De precieze penetratietijd kunt u te weten komen bij de handschoenfabrikant; houd er rekening mee.
- **Oogbescherming:**



Nauw aansluitende veiligheidsbril

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(Vervolg op blz. 4)

# Veiligheidsinformatieblad

volgens 1907/2006/EG, Artikel 31

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(Vervolg van blz. 3)

## RUBRIEK 9: Fysische en chemische eigenschappen

### · 9.1 Informatie over fysische en chemische basiseigenschappen

#### · Algemene gegevens

#### · Voorkomen:

Vorm:	Vloeistof
Kleur:	Kleurloos
Geur:	Karakteristiek
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.

· Ontledingstemperatuur: Niet bepaald.

· Zelfontbrandingstemperatuur: Niet bepaald.

· Ontploffingseigenschappen: Het produkt is niet ontploffingsgevaarlijk.

#### · Ontploffingsgrenzen:

Onderste:	Niet bepaald.
Bovenste:	Niet bepaald.

· Dampspanning bij 20 °C: 23 hPa

· Dichtheid bij 20 °C:	1 g/cm <sup>3</sup>
· Relatieve dichtheid	Niet bepaald.
· Dampdichtheid	Niet bepaald.
· Verdampingssnelheid	Niet bepaald.

#### · Oplosbaarheid in/mengbaarheid met

Water: Volledig mengbaar.

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

#### · Viscositeit

Dynamisch bij 20 °C:	0,952 mPas
Kinematisch:	Niet bepaald.
Water:	99,9 %
VOC (EG)	0,00 %

Gehalte aan vaste bestanddelen: 0,0 %

· 9.2 Overige informatie: Geen verdere relevante informatie verkrijgbaar.

## RUBRIEK 10: Stabiliteit en reactiviteit

· 10.1 Reactiviteit: Geen verdere relevante informatie verkrijgbaar.

· 10.2 Chemische stabiliteit

· Thermische afbraak / te vermijden omstandigheden: Geen afbraak bij gebruik volgens voorschrift.

· 10.3 Mogelijke gevaarlijke reacties: Geen gevaarlijke reacties bekend.

· 10.4 Te vermijden omstandigheden: Geen verdere relevante informatie verkrijgbaar.

· 10.5 Chemisch op elkaar inwerkende materialen: Geen verdere relevante informatie verkrijgbaar.

(Vervolg op blz. 5)

# Veiligheidsinformatieblad

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(Vervolg van blz. 4)

- **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.
- **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.
- **Sensibilisatie van de luchtwegen/de huid**  
Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Aanvullende toxicologische informatie:**
- **CMR-effecten (kankerverwekkendheid, mutageniteit en giftigheid voor de voortplanting)**
- **Mutageniteit in geslachtscellen** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Kankerverwekkendheid** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **Giftigheid voor de voortplanting** Gebaseerd op beschikbare gegevens; aan de indelingscriteria is niet voldaan.
- **STOT bij eenmalige blootstelling** 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): B(4) Weinig schadelijk voor in water levende organismen  
Over het algemeen geen gevaar voor water
- **12.5 Resultaten van PBT- en zPzB-beoordeling**
- **PBT:** Niet bruikbaar.
- **zPzB:** Niet bruikbaar.
- **12.6 Andere schadelijke effecten** Geen verdere relevante informatie verkrijgbaar.

### RUBRIEK 13: Instructies voor verwijdering

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

### RUBRIEK 14: Informatie met betrekking tot het vervoer

- **14.1 VN-nummer**
- **ADR** Niet van toepassing
- **IMDG, IATA** UN3082

(Vervolg op blz. 6)



# Veiligheidsinformatieblad


## volgens 1907/2006/EG, Artikel 31

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<ul style="list-style-type: none"> <li>· <b>14.2 Juiste ladingnaam overeenkomstig de modelreglementen van de VN</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p>Niet van toepassing</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</p>
<ul style="list-style-type: none"> <li>· <b>14.3 Transportgevaarklasse(n)</b></li> <li>· <b>ADR, ADN</b></li> <li>· <b>klasse</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>Niet van toepassing</p>
 <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>	<p>9 Diverse gevaarlijke stoffen en voorwerpen</p> <p>9</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Verpakkingsgroep:</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>	<p>Niet van toepassing</p> <p>III</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Milieugevaren:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Bijzondere kenmerking (IATA):</b></li> </ul>	<p>Symbool (vis en boom)</p> <p>Symbool (vis en boom)</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Bijzondere voorzorgen voor de gebruiker</b></li> <li>· <b>EMS-nummer:</b></li> </ul>	<p>Niet bruikbaar.</p> <p>F-A, S-</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Vervoer in bulk overeenkomstig bijlage II bij Marpol en de IBC-code</b></li> </ul>	<p>Niet bruikbaar.</p>
<ul style="list-style-type: none"> <li>· <b>VN "Model Regulation":</b></li> </ul>	<p>Niet van toepassing</p>

### RUBRIEK 15: Regelgeving

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

· **SZW-lijst van kankerverwekkende stoffen**

geen der bestanddelen staat op de lijst.

· **SZW-lijst van mutagene stoffen**

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

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

geen der bestanddelen staat op de lijst.

(Vervolg op blz. 7)



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· **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.

· **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.

· **VERORDENING (EU) 2019/1148**

· **Bijlage I - PRECURSOREN VOOR EXPLOSIEVEN WAARVOOR EEN BEPERKING GELDT (Bovengrenswaarde ten behoeve van vergunningverlening op grond van artikel 5, lid 3)**

geen der bestanddelen staat op de lijst.

· **Bijlage II - PRECURSOREN VOOR EXPLOSIEVEN DIE MOETEN WORDEN GEMELD**

geen der bestanddelen staat op de lijst.

· **Verordening (EG) nr. 273/2004 inzake drugsprecursoren**

geen der bestanddelen staat op de lijst.

· **Verordening (EG) Nr. 111/2005 houdende voorschriften voor het toezicht op de handel tussen de Gemeenschap en derde landen in drugsprecursoren**

geen der bestanddelen staat op de lijst.

· **Nationale voorschriften:**

· **Gevaarklasse v. water:** Waterbezwaarlijkheid (NL): B(4) Weinig schadelijk voor in water levende organismen

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

### RUBRIEK 16: Overige informatie

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

· **Afkortingen en acroniemen:**

ADR: Accord relatif au transport international 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

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

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

- **1.1 Identificateur de produit**
- **Nom du produit:** *POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)*
- **Code du produit:** *19320-A, 19321-A*
- **No CAS:**  
*7732-18-5*
- **Numéro CE:**  
*231-791-2*
- **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** *La substance n'est pas classifiée selon le règlement CLP.*
- **2.2 Éléments d'étiquetage**
- **Etiquetage selon le règlement (CE) n° 1272/2008** *néant*
- **Pictogrammes de danger** *néant*
- **Mention d'avertissement** *néant*
- **Mentions de danger** *néant*
- **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*

FR

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### 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. Assistance respiratoire si nécessaire. Tenir le malade au chaud. Si les troubles persistent, consulter un médecin.

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

#### · Après contact avec la peau: En règle générale, le produit n'irrite pas la peau.

#### · Après contact avec les yeux:

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

#### · Après ingestion: Consulter immédiatement un médecin.

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

#### · 4.3 Indication des éventuels soins médicaux immédiats et traitements particuliers nécessaires

Pas d'autres informations importantes disponibles.

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

#### · 5.1 Moyens d'extinction

#### · Moyens d'extinction: Adapter les mesures d'extinction d'incendie à l'environnement.

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

Pas d'autres informations importantes disponibles.

#### · 5.3 Conseils aux pompiers

#### · Equipement 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: Diluer avec beaucoup d'eau.

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

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

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

Assurer une aération suffisante.

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

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

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

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

### RUBRIQUE 7: Manipulation et stockage

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

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

Eviter la formation d'aérosols.

#### · Préventions des incendies et des explosions: Aucune mesure particulière n'est requise.

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

#### · Stockage:

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

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- **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

- **8.1 Paramètres de contrôle**
- **Indications complémentaires pour l'agencement des installations techniques:**  
Sans autre indication, voir point 7.
- **Composants présentant des valeurs-seuil à surveiller par poste de travail:** Néant
- **Remarques supplémentaires:**  
Le présent document s'appuie sur les listes en vigueur au moment de son élaboration.
- **8.2 Contrôles de l'exposition**
- **Equipement de protection individuel:**
- **Mesures générales de protection et d'hygiène:**  
Tenir à l'écart des produits alimentaires, des boissons et de la nourriture pour animaux.  
Retirer immédiatement les vêtements souillés ou humectés.  
Se laver les mains avant les pauses et en fin de travail.  
Eviter tout contact avec les yeux.  
Eviter tout contact avec les yeux et avec la peau.
- **Protection respiratoire:**  
En cas d'exposition faible ou de courte durée, utiliser un filtre respiratoire; en cas d'exposition intense ou durable, utiliser un appareil de respiration indépendant de l'air ambiant.
- **Protection des mains:**



Gants de protection

- Le matériau des gants doit être imperméable et résistant au produit / à la substance / à la préparation.  
À cause du manque de tests, aucune recommandation pour un matériau de gants pour le produit / la préparation / le mélange de produits chimiques ne peut être donnée.  
Choix du matériau des gants en fonction des temps de pénétration, du taux de perméabilité et de la dégradation.
- **Matériau des gants**  
Le choix de gants appropriés 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

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· <b>Odeur:</b>	Caractéristique
· <b>Seuil olfactif:</b>	Non déterminé.
· <b>valeur du pH:</b>	Non déterminé.
· <b>Changement d'état</b>	
<b>Point de fusion/point de congélation:</b>	0 °C
<b>Point initial d'ébullition et intervalle d'ébullition:</b>	100 °C
· <b>Point d'éclair</b>	Non applicable.
· <b>Inflammabilité (solide, gaz):</b>	Non applicable.
· <b>Température de décomposition:</b>	Non déterminé.
· <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 g/cm <sup>3</sup>
· <b>Densité relative</b>	Non déterminé.
· <b>Densité de vapeur:</b>	Non déterminé.
· <b>Taux d'évaporation:</b>	Non déterminé.
· <b>Solubilité dans/miscibilité avec l'eau:</b>	Entièrement miscible
· <b>Coefficient de partage: n-octanol/eau:</b>	Non déterminé.
· <b>Viscosité:</b>	
<b>Dynamique à 20 °C:</b>	0,952 mPas
<b>Cinématique:</b>	Non déterminé.
<b>Eau:</b>	99,9 %
<b>VOC (CE)</b>	0,00 %
<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.

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- **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.
- **Sensibilisation respiratoire ou cutanée**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Indications toxicologiques complémentaires:**
- **Effets CMR (cancérogène, mutagène et toxique pour la reproduction)**
- **Mutagénicité sur les cellules germinales**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Cancérogénicité** Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité pour la reproduction**  
Compte tenu des données disponibles, les critères de classification ne sont pas remplis.
- **Toxicité spécifique pour certains organes cibles - exposition unique**  
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:** En général non polluant
- **12.5 Résultats des évaluations PBT et VPVB**
- **PBT:** Non applicable.
- **vPvB:** Non applicable.
- **12.6 Autres effets néfastes** Pas d'autres informations importantes disponibles.

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

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

### RUBRIQUE 14: Informations relatives au transport

- |  |        |
|--|--------|
| · <b>14.1 Numéro ONU</b>                                   |        |
| · <b>ADR</b>   | néant  |
| · <b>IMDG, IATA</b>  | UN3082 |
| · <b>14.2 Désignation officielle de transport de l'ONU</b> |        |
| · <b>ADR</b>   | néant  |

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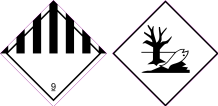
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· <b>IMDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
· <b>IATA</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· <b>14.3 Classe(s) de danger pour le transport</b>	
· <b>ADR, ADN</b>	
· <b>Classe</b>	néant
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	9 Matières et objets dangereux divers.
· <b>Label</b>	9
· <b>14.4 Groupe d'emballage</b>	
· <b>ADR</b>	néant
· <b>IMDG, IATA</b>	III
· <b>14.5 Dangers pour l'environnement:</b>	
· <b>Marine Pollutant:</b>	Signe conventionnel (poisson et arbre)
· <b>Marquage spécial (IATA):</b>	Signe conventionnel (poisson et arbre)
· <b>14.6 Précautions particulières à prendre par l'utilisateur</b>	Non applicable.
· <b>No EMS:</b>	F-A, S-
· <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

· **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.

· **RÈGLEMENT (UE) 2019/1148**

· **Annexe I - PRÉCURSEURS D'EXPLOSIFS FAISANT L'OBJET DE RESTRICTIONS (Valeur limite maximale aux fins de l'octroi d'une licence en vertu de l'article 5, paragraphe 3)**

Aucun des composants n'est compris.

· **Annexe II - PRÉCURSEURS D'EXPLOSIFS DEVANT FAIRE L'OBJET D'UN SIGNALLEMENT**

Aucun des composants n'est compris.

· **Règlement (CE) n° 273/2004 relatif aux précurseurs de drogues**

Aucun des composants n'est compris.

(suite page 7)



# Fiche de données de sécurité

## selon 1907/2006/CE, Article 31

Date d'impression : 11.05.2022

Révision: 11.05.2022

**Nom du produit: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(suite de la page 6)

· **Règlement (CE) n° 111/2005 fixant des règles pour la surveillance du commerce des précurseurs des drogues entre la Communauté et les pays tiers**

Aucun des composants n'est compris.

· **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.

· **Acronymes et abréviations:**

ADR: Accord relatif au transport international 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

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

FR



# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.05.2022

überarbeitet am: 11.05.2022

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

- **1.1 Produktidentifikator**
- **Handelsname:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Artikelnummer:** 19320-A, 19321-A
- **CAS-Nummer:**  
7732-18-5
- **EG-Nummer:**  
231-791-2
- **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** Der Stoff ist gemäß CLP-Verordnung nicht eingestuft.
- **2.2 Kennzeichnungselemente**
- **Kennzeichnung gemäß Verordnung (EG) Nr. 1272/2008** entfällt
- **Gefahrenpiktogramme** entfällt
- **Signalwort** entfällt
- **Gefahrenhinweise** entfällt
- **2.3 Sonstige Gefahren**
- **Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.

DE

(Fortsetzung auf Seite 2)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.05.2022

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**Handelsname: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Fortsetzung von Seite 1)

### 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**

### ABSCHNITT 4: Erste-Hilfe-Maßnahmen

- **4.1 Beschreibung der Erste-Hilfe-Maßnahmen**
- **Allgemeine Hinweise:**  
*Vergiftungssymptome können erst nach vielen Stunden auftreten, deshalb ärztliche Überwachung mindestens 48 Stunden nach einem Unfall.*
- **Nach Einatmen:**  
*Frischluftezufuhr, gegebenenfalls Atemspende, Wärme. Bei anhaltenden Beschwerden Arzt konsultieren. Bei Bewusstlosigkeit Lagerung und Transport in stabiler Seitenlage.*
- **Nach Hautkontakt:** *Im allgemeinen ist das Produkt nicht hautreizend.*
- **Nach Augenkontakt:**  
*Augen mehrere Minuten bei geöffnetem Lidspalt unter fließendem Wasser spülen. Bei anhaltenden Beschwerden Arzt konsultieren.*
- **Nach Verschlucken:** *Sofort Arzt aufsuchen.*
- **4.2 Wichtigste akute und verzögert auftretende Symptome und Wirkungen**  
*Keine weiteren relevanten Informationen verfügbar.*
- **4.3 Hinweise auf ärztliche Soforthilfe oder Spezialbehandlung**  
*Keine weiteren relevanten Informationen verfügbar.*

### ABSCHNITT 5: Maßnahmen zur Brandbekämpfung

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

### ABSCHNITT 6: Maßnahmen bei unbeabsichtigter Freisetzung

- **6.1 Personenbezogene Vorsichtsmaßnahmen, Schutzausrüstungen und in Notfällen anzuwendende Verfahren**  
*Nicht erforderlich.*
- **6.2 Umweltschutzmaßnahmen:** *Mit viel Wasser verdünnen.*
- **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.*

DE

(Fortsetzung auf Seite 3)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.05.2022

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**Handelsname: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Fortsetzung von Seite 2)

### ABSCHNITT 7: Handhabung und Lagerung

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

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

- **8.1 Zu überwachende Parameter**
- **Zusätzliche Hinweise zur Gestaltung technischer Anlagen:** Keine weiteren Angaben, siehe Abschnitt 7.
- **Bestandteile mit arbeitsplatzbezogenen, zu überwachenden Grenzwerten:** Entfällt.
- **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.  
Berührung mit den Augen vermeiden.  
Berührung mit den Augen und der Haut vermeiden.
- **Atemschutz:**  
Bei kurzzeitiger oder geringer Belastung Atemfiltergerät; bei intensiver bzw. längerer Exposition unluftunabhängiges Atemschutzgerät verwenden.
- **Handschutz:**



Schutzhandschuhe

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

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

- **Handschuhmaterial**

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

- **Durchdringungszeit des Handschuhmaterials**

Die genaue Durchbruchzeit ist beim Schutzhandschuhhersteller zu erfahren und einzuhalten.

(Fortsetzung auf Seite 4)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.05.2022

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**Handelsname: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Fortsetzung von Seite 3)

· **Augenschutz:**



Dichtschließende Schutzbrille

### ABSCHNITT 9: Physikalische und chemische Eigenschaften

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

· **Allgemeine Angaben**

· **Aussehen:**

· **Form:** Flüssigkeit

· **Farbe:** Farblos

· **Geruch:** Charakteristisch

· **Geruchsschwelle:** Nicht bestimmt.

· **pH-Wert:** Nicht bestimmt.

· **Zustandsänderung**

· **Schmelzpunkt/Gefrierpunkt:** 0 °C

· **Siedebeginn und Siedebereich:** 100 °C

· **Flammpunkt:** Nicht anwendbar.

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

· **Zersetzungstemperatur:** Nicht bestimmt.

· **Selbstentzündungstemperatur:** Nicht bestimmt.

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

· **Explosionsgrenzen:**

· **Untere:** Nicht bestimmt.

· **Obere:** Nicht bestimmt.

· **Dampfdruck bei 20 °C:** 23 hPa

· **Dichte bei 20 °C:** 1 g/cm<sup>3</sup>

· **Relative Dichte:** Nicht bestimmt.

· **Dampfdichte:** Nicht bestimmt.

· **Verdampfungsgeschwindigkeit:** Nicht bestimmt.

· **Löslichkeit in / Mischbarkeit mit**

· **Wasser:** Vollständig mischbar.

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

· **Viskosität:**

· **Dynamisch bei 20 °C:** 0,952 mPas

· **Kinematisch:** Nicht bestimmt.

· **Wasser:** 99,9 %

· **VOC (EU):** 0,00 %

· **Festkörpergehalt:** 0,0 %

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

DE

(Fortsetzung auf Seite 5)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.05.2022

überarbeitet am: 11.05.2022

**Handelsname: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Fortsetzung von Seite 4)

### ABSCHNITT 10: Stabilität und Reaktivität

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

### ABSCHNITT 11: Toxikologische Angaben

- **11.1 Angaben zu toxikologischen Wirkungen**
- **Akute Toxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **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** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Zusätzliche toxikologische Hinweise:**
- **CMR-Wirkungen (krebserzeugende, erbgutverändernde und fortpflanzungsgefährdende Wirkung)**
- **Keimzell-Mutagenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Karzinogenität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Reproduktionstoxizität** Aufgrund der verfügbaren Daten sind die Einstufungskriterien nicht erfüllt.
- **Spezifische Zielorgan-Toxizität bei einmaliger Exposition**  
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:** Nicht wassergefährdend.
- **12.5 Ergebnisse der PBT- und vPvB-Beurteilung**
- **PBT:** Nicht anwendbar.
- **vPvB:** Nicht anwendbar.
- **12.6 Andere schädliche Wirkungen** Keine weiteren relevanten Informationen verfügbar.

### ABSCHNITT 13: Hinweise zur Entsorgung

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

(Fortsetzung auf Seite 6)

# Sicherheitsdatenblatt

## gemäß 1907/2006/EG, Artikel 31

Druckdatum: 11.05.2022

überarbeitet am: 11.05.2022

**Handelsname: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Fortsetzung von Seite 5)

· **Empfohlenes Reinigungsmittel:** Wasser, gegebenenfalls mit Zusatz von Reinigungsmitteln.

### ABSCHNITT 14: Angaben zum Transport

· **14.1 UN-Nummer**

· **ADR** entfällt  
 · **IMDG, IATA** UN3082

· **14.2 Ordnungsgemäße UN-Versandbezeichnung**

· **ADR** entfällt  
 · **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S., MARINE POLLUTANT  
 · **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
LIQUID, N.O.S.

· **14.3 Transportgefahrenklassen**

· **ADR, ADN**  
 · **Klasse** entfällt

· **IMDG, IATA**



· **Class** 9 Verschiedene gefährliche Stoffe und Gegenstände  
 · **Label** 9

· **14.4 Verpackungsgruppe**

· **ADR** entfällt  
 · **IMDG, IATA** III

· **14.5 Umweltgefahren:**

· **Marine pollutant:** Symbol (Fisch und Baum)  
 · **Besondere Kennzeichnung (IATA):** Symbol (Fisch und Baum)

· **14.6 Besondere Vorsichtsmaßnahmen für den Verwender**

· **EMS-Nummer:** Nicht anwendbar.

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

· **UN "Model Regulation":** 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.

· **Richtlinie 2011/65/EU zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten – Anhang II**

Keiner der Inhaltsstoffe ist enthalten.

(Fortsetzung auf Seite 7)

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

Druckdatum: 11.05.2022

überarbeitet am: 11.05.2022

**Handelsname: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Fortsetzung von Seite 6)

· **VERORDNUNG (EU) 2019/1148**

· **Anhang I - BESCHRÄNKTE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE (Oberer Konzentrationsgrenzwert für eine Genehmigung nach Artikel 5 Absatz 3)**

Keiner der Inhaltsstoffe ist enthalten.

· **Anhang II - MELDEPFLICHTIGE AUSGANGSSTOFFE FÜR EXPLOSIVSTOFFE**

Keiner der Inhaltsstoffe ist enthalten.

· **Verordnung (EG) Nr. 273/2004 betreffend Drogenausgangsstoffe**

Keiner der Inhaltsstoffe ist enthalten.

· **Verordnung (EG) Nr. 111/2005 zur Festlegung von Vorschriften für die Überwachung des Handels mit Drogenaustauschstoffen zwischen der Gemeinschaft und Drittländern**

Keiner der Inhaltsstoffe ist enthalten.

· **Nationale Vorschriften:**

· **Wassergefährdungsklasse:** Im allgemeinen nicht wassergefährdend.

· **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.

· **Abkürzungen und Akronyme:**

ADR: Accord relatif au transport international 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

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative



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

Stampato il: 11.05.2022

Revisione: 11.05.2022

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

- **1.1 Identificatore del prodotto**
- **Denominazione commerciale:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Articolo numero:** 19320-A, 19321-A
- **Numero CAS:**  
7732-18-5
- **Numeri CE:**  
231-791-2
- **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
- **Società 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**  
La sostanza non è classificata conformemente al regolamento CLP.
- **2.2 Elementi dell'etichetta**
- **Etichettatura secondo il regolamento (CE) n. 1272/2008 non applicabile**
- **Pittogrammi di pericolo non applicabile**
- **Avvertenza non applicabile**
- **Indicazioni di pericolo non applicabile**
- **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

(continua a pagina 2)



**Scheda di dati di sicurezza**  
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Stampato il: 11.05.2022

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**Denominazione commerciale: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Segue da pagina 1)

- **Numero/i di identificazione**
- **Numeri CE: 231-791-2**

#### **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 in zona ben areata, praticare eventualmente la respirazione artificiale, tenere al caldo. Se i disturbi persistono consultare il medico.  
Se il soggetto è svenuto provvedere a tenerlo durante il trasporto in posizione stabile su un fianco.
- **Contatto con la pelle:** Generalmente il prodotto non è irritante per la pelle.
- **Contatto con gli occhi:**  
Lavare con acqua corrente per diversi minuti tenendo le palpebre ben aperte. Se persiste il dolore consultare il medico.
- **Ingestione:** Chiamare subito il medico.
- **4.2 Principali sintomi ed effetti, sia acuti che ritardati** Non sono disponibili altre informazioni.
- **4.3 Indicazione dell'eventuale necessità di consultare immediatamente un medico e di trattamenti speciali**  
Non sono disponibili altre informazioni.

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

- **5.1 Mezzi di estinzione**
- **Mezzi di estinzione idonei:** Adottare provvedimenti antiincendio nei dintorni della zona colpita.
- **5.2 Pericoli speciali derivanti dalla sostanza o dalla miscela** Non sono disponibili altre informazioni.
- **5.3 Raccomandazioni per gli addetti all'estinzione degli incendi**
- **Mezzi protettivi specifici:** Indossare il respiratore.

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

- **6.1 Precauzioni personali, dispositivi di protezione e procedure in caso di emergenza** Non necessario.
- **6.2 Precauzioni ambientali:** Diluire abbondantemente con acqua.
- **6.3 Metodi e materiali per il contenimento e per la bonifica:**  
Raccogliere il liquido con materiale assorbente (sabbia, tripoli, legante di acidi, legante universale, segatura).  
Smaltimento del materiale contaminato conformemente al punto 13.  
Provvedere ad una sufficiente areazione.
- **6.4 Riferimento ad altre sezioni**  
Per informazioni relative ad una manipolazione sicura, vedere capitolo 7.  
Per informazioni relative all'equipaggiamento protettivo ad uso personale vedere Capitolo 8.  
Per informazioni relative allo smaltimento vedere Capitolo 13.

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

- **7.1 Precauzioni per la manipolazione sicura**  
Accurata ventilazione/aspirazione nei luoghi di lavoro.  
Evitare la formazione di aerosol.
- **Indicazioni in caso di incendio ed esplosione:** Non sono richiesti provvedimenti particolari.

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**Scheda di dati di sicurezza**  
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- **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**

- **8.1 Parametri di controllo**
- **Ulteriori indicazioni sulla struttura di impianti tecnici:** Nessun dato ulteriore, vedere punto 7.
- **Componenti i cui valori limite devono essere tenuti sotto controllo negli ambienti di lavoro:** Non Necessario.
- **Ulteriori indicazioni:** Le liste valide alla data di compilazione sono state usate come base.
- **8.2 Controlli dell'esposizione**
- **Mezzi protettivi individuali:**
- **Norme generali protettive e di igiene del lavoro:**  
 Tenere lontano da cibo, bevande e foraggi.  
 Togliere immediatamente gli abiti contaminati.  
 Lavarsi le mani prima dell'intervallo o a lavoro terminato.  
 Evitare il contatto con gli occhi.  
 Evitare il contatto con gli occhi e la pelle.
- **Maschera protettiva:**  
 Nelle esposizioni brevi e minime utilizzare la maschera; nelle esposizioni più intense e durature indossare l'autorespiratore.
- **Guanti protettivi:**



Guanti protettivi

Il materiale dei guanti deve essere impermeabile e stabile contro il prodotto/ la sostanza/ la formulazione.  
 A causa della mancanza di tests non può essere consigliato alcun tipo di materiale per i guanti con cui manipolare il prodotto / la formulazione / la miscela di sostanze chimiche.  
 Scelta del materiale dei guanti in considerazione dei tempi di passaggio, dei tassi di permeazione e della degradazione.

- **Materiale dei guanti**  
 La scelta dei guanti adatti non dipende soltanto dal materiale bensì anche da altre caratteristiche di qualità variabili da un produttore a un altro.
- **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

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**Scheda di dati di sicurezza**  
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### SEZIONE 9: Proprietà fisiche e chimiche

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

· **Indicazioni generali**

· **Aspetto:**

**Forma:** Liquido

**Colore:** Incolore

· **Odore:** Caratteristico

· **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.

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

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

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

· **Limiti di infiammabilità:**

**Inferiore:** Non definito.

**Superiore:** Non definito.

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

· **Densità a 20 °C:** 1 g/cm<sup>3</sup>

· **Densità relativa** Non definito.

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

· **Velocità di evaporazione** Non definito.

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

Completamente miscibile.

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

· **Viscosità:**

**Dinamica a 20 °C:** 0,952 mPas

**Cinematica:** Non definito.

**Acqua:** 99,9 %

**VOC (CE)** 0,00 %

**Contenuto solido:** 0,0 %

· **9.2 Altre informazioni** Non sono disponibili altre informazioni.

### SEZIONE 10: Stabilità e reattività

· **10.1 Reattività** Non sono disponibili altre informazioni.

· **10.2 Stabilità chimica**

· **Decomposizione termica/ condizioni da evitare:** Il prodotto non si decompone se utilizzato secondo le norme.

· **10.3 Possibilità di reazioni pericolose** Non sono note reazioni pericolose.

· **10.4 Condizioni da evitare** Non sono disponibili altre informazioni.

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**Scheda di dati di sicurezza**  
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- **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.
- **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.
- **Sensibilizzazione respiratoria o cutanea**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Ulteriori dati tossicologici:**
- **Effetti CMR (cancerogenicità, mutagenicità e tossicità per la riproduzione)**
- **Mutagenicità delle cellule germinali**  
Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Cancerogenicità** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità per la riproduzione** Basandosi sui dati disponibili i criteri di classificazione non sono soddisfatti.
- **Tossicità specifica per organi bersaglio (STOT) - esposizione singola**  
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:** Generalmente non pericoloso
- **12.5 Risultati della valutazione PBT e vPvB**
- **PBT:** Non applicabile.
- **vPvB:** Non applicabile.
- **12.6 Altri effetti avversi** Non sono disponibili altre informazioni.

### **SEZIONE 13: Considerazioni sullo smaltimento**

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

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### SEZIONE 14: Informazioni sul trasporto

· **14.1 Numero ONU**

· **ADR** non applicabile  
· **IMDG, IATA** UN3082

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

· **ADR** non applicabile  
· **IMDG** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT  
· **IATA** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

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

· **ADR, ADN**  
· **Classe** non applicabile

· **IMDG, IATA**



· **Class** 9 Materie ed oggetti pericolosi diversi  
· **Label** 9

· **14.4 Gruppo di imballaggio**

· **ADR** non applicabile  
· **IMDG, IATA** III

· **14.5 Pericoli per l'ambiente:**

· **Marine pollutant:** Simbolo (pesce e albero)  
· **Marcatura speciali (IATA):** Simbolo (pesce e albero)

· **14.6 Precauzioni speciali per gli utilizzatori**

· **Numero EMS:** Non applicabile.

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

Non applicabile.

· **UN "Model Regulation":**

non applicabile

### 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

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

Nessuno dei componenti è contenuto.

· **REGOLAMENTO (UE) 2019/1148**

· **Allegato I - PRECURSORI DI ESPLOSIVI SOGGETTI A RESTRIZIONI (Valore limite superiore ai fini della concessione di licenze a norma dell'articolo 5, paragrafo 3)**

Nessuno dei componenti è contenuto.

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**Scheda di dati di sicurezza**  
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· **Allegato II - PRECURSORI DI ESPLOSIVI SOGGETTI A SEGNALAZIONE**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) n. 273/2004 relativo ai precursori di droghe**

Nessuno dei componenti è contenuto.

· **Regolamento (CE) N. 111/2005 recante norme per il controllo del commercio dei precursori di droghe tra la Comunità e i paesi terzi**

Nessuno dei componenti è contenuto.

· **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.*

· **Abbreviazioni e acronimi:**

*ADR: Accord relatif au transport international 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*

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

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

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

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# 물질안전보건자료

## GHS에 따라

인쇄일자: 2022.05.11

개정: 2022.05.11

### 1 화학제품과 회사에 관한 정보

- 제품 식별자
- 제품명: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**
- 상품번호: 19320-A, 19321-A
- CAS-번호  
7732-18-5
- EC 의번호:  
231-791-2
- 해당 순물질이나 혼합물의 관련 하위용도 및 사용금지용도
- 제품의 권고 용도와 사용상의 제한: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- 제품의 권고 용도와 사용상의 제한: 실험실 화학품
- 안전데이터표(Safety Data Sheet)내 공급업체 관련 상세 정보
- 제조자/수입자/유통업자 정보:  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- Samchang Commercial Co., Ltd.  
Yeo Eui Do  
PO Box 1110  
Seoul, Korea  
Tel: 82 2 703 3040  
Fax: 82 2 717 3298
- 
- Daedok Science, Co. Ltd.  
34141 E10 Korea Advanced Institute of Science  
Guseong-Dong, Yuseong-gu, Daejeon,  
Korea  
Phone: 82 42 710 2091  
Fax: 82 42 367 0005  
Website: www.labsmro.com
- 추가적인 정보 획득 가능: Product safety department
- 비상연락 전화번호:  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### 2 유해성·위험성

- 순물질 또는 혼합물의 분류



심한 눈 손상성/눈 자극성 – 구분 2 H319 눈에 심한 자극을 일으킴

- 라벨표기 요소

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

(2 쪽에 계속)

# 물질안전보건자료 GHS에 따라

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**제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(1 쪽부터 계속)

· GHS 그림문자



GHS07

- 신호어 경고
- 유해·위험문구  
눈에 심한 자극을 일으킴
- 예방조치문구  
취급 후에는 취급 부위를 철저히 씻으시오.  
눈 보호대 / 안면 보호구 착용.  
눈에 묻으면 몇 분간 물로 조심해서 씻으시오. 가능하면 콘택트렌즈를 제거하십시오. 계속 씻으시오.  
눈에 대한 자극이 지속되면 의학적인 조언·주의를 받으시오.
- 기타 유해성
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.

### 3 구성성분의 명칭 및 함유량

- 화학적 특성: 화학물질
- CAS-번호표시  
7732-18-5 물
- 식별 번호
- EC 의번호: 231-791-2

### 4 응급조치 요령

- 응급조치요령 내용
- 일반적 정보:  
중독 증상은 몇 시간이 지난 뒤에 발생할 수 있다. 따라서 사고가 발생한 후에 적어도 48 시간동안은 의료진의 관찰을 받아야 한다.
- 흡입했을 때:  
신선한 공기를 쐬고, 필요할 경우에는 산소호흡기의 도움을 받는다. 환자를 따뜻하게 하고, 증상이 지속될 경우에는 의료진의 도움을 구한다.  
환자가 의식을 잃었을 경우에는 안전한 자세에서 환자를 운반한다.
- 피부에 접촉했을 때: 일반적으로 이 제품은 피부에 자극적이지 않다.
- 눈에 들어갔을 때: 흐르는 물에 눈을 몇분동안 씻어내고나서, 증상이 지속될 경우에는 의사와 상담한다
- 먹었을 때: 즉시 의사의 도움을 구한다.
- 기타 의사의 주의사항:
- 가장 중요한 급·만성 증상 및 영향 추가적인 정보가 존재하지 않습니다.
- 즉각적인 의료처리 및 특별치료가 필요함을 시사하는 징후 추가적인 정보가 존재하지 않습니다.

### 5 폭발·화재시 대처방법

- 소화제
- 적절한 소화제: 주변 환경에 맞는 화재진화방법을 사용한다.
- 본 화학물질이나 혼합물에서 발생하는 특별 유해성 추가적인 정보가 존재하지 않습니다.

(3 쪽에 계속)



# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.11

개정: 2022.05.11

**제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(2 쪽부터 계속)

- 소방관에 대한 권고사항
- 화재 진압 시 착용할 보호구 및 예방조치: 호흡보호장비 설치.

## 6 누출 사고 시 대처방법

- 개인적 예방조치, 보호장비 및 응급처치 절차 필요없음.
- 환경 관련 예방조치: 많은 물로 희석 시킨다.
- 밀폐 및 정화 방법과 소재:  
액체가 혼합된 물질 (모래, 규조토, 산성 결합물, 일반 결합물, 톱밥)에 흡입되도록 한다.  
항목 13에 따라 오염된 물질을 쓰레기로 처분한다.  
충분한 환기가 되도록 한다.
- 타 섹션 참조  
안전 관리에 대한 정보는 제7 장을 참고하십시오.  
개인 보호 장비에 대한 정보는 제8 장을 참고하십시오.  
쓰레기 처리에 대한 정보는 제13 장을 참고하십시오.

## 7 취급 및 저장방법

- 취급:  
· 안전 취급을 위한 예방조치  
작업장에서는 통풍이 잘 되고/습기 제거가 잘 되게 주의한다.  
연무질이 형성되는 것을 피한다.
- 화재 및 폭발 사고 예방대책에 관한 정보: 특별한 조치가 필요없음.
- 혼합위험성 등 안전 저장 조건
- 보관:  
· 안전한 저장 방법: 특별한 요구사항이 없음.
- 하나의 공동 보관 시설에 대한 보관 관련 정보: 필요없음
- 보관 조건에 관한 추가적인 정보: 용기를 새지 않게 밀폐한 채 보관한다.
- 구체적 최종 사용자 추가적인 정보가 존재하지 않습니다.

## 8 노출방지 및 개인보호구

- 첨단시설 디자인에 대한 추가정보: 더 이상의 자료는 없음. 항목 7을 참고하십시오.
- 통제 변수
- 화학물질의 노출기준, 생물학적 노출기준 등: 생략
- 추가 정보: 제조할 당시에 유효한 목록을 기초로 사용했다.
- 노출 통제
- 개인 보호구
- 일반적 보호조치 및 위생조치:  
식품, 음료수 및 사료로부터 멀리 떨어져 놓는다.  
더러워지거나 음료수가 묻은 옷은 즉시 탈의한다.  
휴식 전이나 작업이 끝날 때마다 손을 씻는다.  
눈과의 접촉을 피한다.  
눈과 피부와의 접촉을 피한다.
- 호흡기 보호:  
단 시간 또는 경미한 오염의 경우에는 호흡여과기를 사용한다. 심각한 또는 장기간 노출시에는 호흡보호장비를 사용한다.

(4 쪽에 계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.11

개정: 2022.05.11

**제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(3 쪽부터 계속)

**· 손 보호:**



보호용 장갑

장갑재질은제품 / 원료 / 조제를투과시키지않아야하고, 내구성이있어야한다.  
테스트를하지 않았기 때문에 제품 / 조제 / 화학 혼합 물에 적합한 장갑재질에 대한 추천이 없다.  
투과 시간, 침투율과저하를고려해서 장갑 재료를 선택한다.

**· 장갑의재료**

적합한장갑의선택은재질차이뿐아니라품질기준의차이도고려하여이루어져야하고제조업자에따라서도다르게선정되어야한다.

**· 장갑 재료의 투과 시간** 정확한관통시간은보호장갑제조자에의하여인지되고, 준수되어야한다.

**· 눈 보호:**



꼭조이는보안경

## 9 물리화학적 특성

**· 기본 물리 및 화학적 특성에 대한 정보**

**· 일반정보**

**· 외형**

물리적 상태: 액체  
색: 색소가없는  
·냄새: 특색있는  
·후각역치: 알맞지않다.

· pH: 알맞지않다.

**· 상태변화**

녹는점/어는점: 0 °C  
초기 끓는점과 끓는점 범위: 100 °C

· 인화점: 해당사항 없음.

· 인화성(고체, 기체): 해당사항 없음.

· 분해 온도: 알맞지않다.

· 자기점화: 알맞지않다.

· 폭발위험: 이제품은폭발위험성이없다

**· 인화 또는 폭발 범위의 상한/하한**

아래로: 알맞지않다.  
위로: 알맞지않다.

· 증기압 의경우 20 °C: 23 hPa

· 밀도 의경우 20 °C: 1 g/cm<sup>3</sup>

· 비중: 알맞지않다.

· 증기밀도: 알맞지않다.

· 증발 속도: 알맞지않다.

**· 용해도:**

물: 완전히혼합할수있는

(5 쪽에 계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.11

개정: 2022.05.11

**제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(4 쪽부터계속)

· n 옥탄올/물 분배계수:	알맞지않다.
· 점도:	
역학적 의경우 20 °C:	0.952 mPas
동점성:	알맞지않다.
물:	99.9 %
VOC (EU)	0.00 %
· 고체의 함량:	0.0 %
· 기타 정보	추가적인 정보가 존재하지 않습니다.

## 10 안정성 및 반응성

- 반응성 추가적인 정보가 존재하지 않습니다.
- 화학적 안정성
- 화학적 안정성 및 유해 반응의 가능성 / 피해야 할 조건: 규정에따라사용할경우해체는없다
- 유해반응 가능성 위험한반응으로는알려지지않았다.
- 피해야 할 조건 추가적인 정보가 존재하지 않습니다.
- 혼합 금지 물질: 추가적인 정보가 존재하지 않습니다.
- 유해분해물질: 위험성있는분해물들은알려지지않았다.

## 11 독성에 관한 정보

- 독성학적 영향에 대한 정보
- 급성 독성:
- 일차적 자극 효과:
- 피부 부식성 또는 자극성: 무자극
- 심한 눈 손상 또는 자극성: 자극
- 감각화: 민감한영향이없는것으로알려져있다.

## 12 환경에 미치는 영향

- 독성
- 수생독성: 추가적인 정보가 존재하지 않습니다.
- 지속성 및 분해성 추가적인 정보가 존재하지 않습니다.
- 환경 시스템에서의 행동:
- 생물농축 잠재성 추가적인 정보가 존재하지 않습니다.
- 토양내 이동성 추가적인 정보가 존재하지 않습니다.
- 추가적인 생태학 정보:
- 일반 특징: 일반적으로수질오염이되지않는다
- PBT(잔류성, 생물농축성, 독성 물질) 및 vPvB(고 잔류성, 고 생물농축성 물질) 평가 결과
- PBT(잔류성, 생물농축성, 독성 물질): 해당사항 없음.
- vPvB(고 잔류성, 고 생물농축성 물질): 해당사항 없음.
- 기타 부작용 추가적인 정보가 존재하지 않습니다.

## 13 폐기시 주의사항

- 폐기물 처리 방법
- 권고: 생활쓰레기와함께처리되어서는안된다. 하수도망으로유입되어서는안된다.

(6 쪽에계속)

# 물질안전보건자료 GHS에 따라

인쇄일자: 2022.05.11

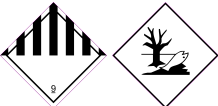
개정: 2022.05.11

**제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(5 쪽부터계속)

- 비위생적 포장:
- 권고: 당국의지침에입각한쓰레기처리.
- 추 천 세정제: 경우에따라서세제가첨가된물

## 14 운송에 필요한 정보

<ul style="list-style-type: none"> <li>· 유엔 번호</li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	<p style="text-align: right;">누락되다 UN3082</p>
<ul style="list-style-type: none"> <li>· UN 적정 선적명</li> <li>· ADR</li> <li>· IMDG</li> <li>· IATA</li> </ul>	<p style="text-align: right;">누락되다 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.</p>
<ul style="list-style-type: none"> <li>· 교통 위험 클래스</li> <li>· ADR, ADN</li> <li>· 등급</li> </ul>	<p style="text-align: right;">누락되다</p>
<ul style="list-style-type: none"> <li>· IMDG, IATA</li> </ul> <div style="text-align: center;">  </div>	<p style="text-align: right;">9 여러모로위험한물질과물체 9</p>
<ul style="list-style-type: none"> <li>· 용기등급</li> <li>· ADR</li> <li>· IMDG, IATA</li> </ul>	<p style="text-align: right;">누락되다 III</p>
<ul style="list-style-type: none"> <li>· 환경적 유해물질:</li> <li>· 해양오염물질:</li> <li>· 특수 마킹 (IATA):</li> </ul>	<p style="text-align: right;">심벌 (물고기와 나무) 심벌 (물고기와 나무)</p>
<ul style="list-style-type: none"> <li>· 이용자 특별 예방조치</li> <li>· EMS-번호:</li> </ul>	<p style="text-align: right;">해당사항 없음. F-A, S-</p>
<ul style="list-style-type: none"> <li>· MARPOL73/78(선박으로부터의 해양오염방지협약) 부속서2 및 IBC Code(국제선적화물코드)에 따른 벌크(bulk) 운송</li> </ul>	<p style="text-align: right;">해당사항 없음.</p>
<ul style="list-style-type: none"> <li>· UN "모범 규제":</li> </ul>	<p style="text-align: right;">누락되다</p>

## 15 법적 규제현황

· 산업안전보건법에 의한 규제:

· 제조 등 금지물질:

어떠한내용물도목록화되어있지않다

(7 쪽에계속)

물질안전보건자료  
GHS에 따라

인쇄일자: 2022.05.11

개정: 2022.05.11

제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)

(6 쪽부터계속)

· 허가대상물질:

어떠한내용물도목록화되어있지않다

· 관리대상유해물질:

어떠한내용물도목록화되어있지않다

· 작업환경측정 대상 유해인자

어떠한내용물도목록화되어있지않다

· 특수건강진단 대상 유해인자

어떠한내용물도목록화되어있지않다

· 해당 순물질 또는 혼합물에 대한 안전, 보건 및 환경 규제/법을 추가적인 정보가 존재하지 않습니다.

· Korean Existing Chemical Inventory

KE-35400

· 화학물질관리법

· 사고대비물질

어떠한내용물도목록화되어있지않다

· 금지물질

어떠한내용물도목록화되어있지않다

· 제한물질

어떠한내용물도목록화되어있지않다

· 유독물질

어떠한내용물도목록화되어있지않다

· 허가물질

어떠한내용물도목록화되어있지않다

· 등록 또는 신고 면제대상 화학물질

7732-18-5 물

· '21년까지 등록하여야 할 암, 돌연변이, 생식능력 이상을 일으키거나 일으킬 우려가 있는 기존화학물질

어떠한내용물도목록화되어있지않다

· 중점관리물질의 지정

· 표1 중점관리물질(제2조 관련)

어떠한내용물도목록화되어있지않다

· 표2 중점관리물질(제2조 관련)

어떠한내용물도목록화되어있지않다

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

· GHS 그림문자



GHS07

· 신호어 경고

· 유해·위험문구

눈에 심한 자극을 일으킴

· 예방조치문구

취급 후에는 취급 부위를 철저히 씻으시오.

눈 보호대 / 안면 보호구 착용.

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

(8 쪽에계속)

# 물질안전보건자료

## GHS에 따라

인쇄일자: 2022.05.11

개정: 2022.05.11

**제품명: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(7 쪽부터계속)

눈에 대한 자극이 지속되면 의학적인 조언·주의를 받으시오.

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

### 16 그 밖의 참고사항

이 보고는 우리 지식에 대한 오늘날의 상태에 대하여 평가하고 있다

하지만 이 보고서는 생산 특성에 관한 보증은 기술하지 않았으며 계약적인 법률 관계에 기반을 두고 있지 않다

· **담당자:**

· **최초 작성일자:** 2022.05.11

· **개정 횟수 및 최종 개정일자:** 1 / 2022.05.11

· **약어와 두문자어:**

ADR: Accord relatif au transport international 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

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

KR

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

Tarikh cetak 11.05.2022

Disemak semula pada 11.05.2022

## 1 Pengenalan bahan kimia berbahaya dan pembekal

- **Pengenal pasti produk**
- **Nama dagang:** *POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)*
- **Nombor artikel:** 19320-A, 19321-A
- **Nombor CAS:**  
7732-18-5
- **Nombor EC:**  
231-791-2
- **Kegunaan yang disarankan bagi bahan dan sekatan penggunaan** *Tiada maklumat lanjut yang diperoleh.*
- **Penggunaan bahan/sediaan** *Bahan kimia makmal*
- **Perincian pembekal** *risalah data keselamatan*
- **Pengilang/Pembekal:**  
*Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com*
- **Maklumat lanjut dapat diperoleh daripada:** *Product safety department*
- **Nombor telefon kecemasan:**  
*ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887*

## 2 Pengenalan bahaya

- **Pengelasan bahan atau campuran** *Bahan ini tidak dikelaskan menurut Sistem Terharmoni Global (GHS).*
- **Melabelkan unsur**
- **Unsur label GHS** *Tidak sah*
- **Piktogram bahaya** *Tidak sah*
- **Kata isyarat** *Tidak sah*
- **Pernyataan Bahaya** *Tidak sah*
- **Bahaya lain**
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** *Tidak berkenaan*
- **vPvB:** *Tidak berkenaan*

## 3 Komposisi dan maklumat mengenai ramuan bahan kimia berbahaya

- **Ciri kimia:** *Bahan*
- **Keterangan No. CAS**  
*7732-18-5 Deionized Water, Reagent Grade A.C.S.*
- **Nombor pengenalpastian**
- **Nombor EC:** *231-791-2*

## 4 Langkah-langkah pertolongan cemas

- **Keterangan langkah pertolongan cemas**
- **Maklumat am:**  
*Gejala keracunan boleh berlaku selepas beberapa jam, maka rawatan perubatan hendaklah diberikan sekurang-kurangnya 48 jam selepas kemalangan.*

(Bersambung ke halaman 2)

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

Tarikh cetak 11.05.2022

Disemak semula pada 11.05.2022

**Nama dagang: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Sambungan halaman 1)

- **Jika tersedut:**  
Berikan udara bersih. Jika perlu berikan pernafasan bantuan. Pastikan pesakit dalam keadaan selesa. Rujuk doktor jika gejala berterusan.  
Jika mangsa tidak sedarkan diri, letakkan pesakit dengan stabil dalam kedudukan mengiring untuk diangkat.
- **Jika terkena kulit:** Biasanya produk tidak merengsakan kulit.
- **Jika terkena mata:**  
Bilas mata sambil membukanya di bawah air yang mengalir selama beberapa minit. Jika gejala berterusan, hubungi doktor.
- **Jika tertelan:** Segera hubungi doctor.
- **Maklumat untuk doktor:**
- **Gejala dan kesan paling penting, akut dan lewat** Tiada maklumat lanjut yang diperoleh.
- **Arahan bagi apa-apa rawatan perubatan dan rawatan khas yang diperlukan**  
Tiada maklumat lanjut yang diperoleh.

### 5 Langkah-langkah pemadaman kebakaran

- **Bahan pemadam api**
- **Agan pemadam yang sesuai:** Gunakan kaedah pemadaman kebakaran yang sesuai dengan keadaan sekeliling.
- **Bahaya khusus yang timbul daripada bahan atau campuran** Tiada maklumat lanjut yang diperoleh.
- **Panduan kepada pemadam kebakaran**
- **Kelengkapan perlindungan:** Peralatan perlindungan pernafasan mulut.

### 6 Langkah-langkah pelepasan tidak sengaja

- **Langkah perlindungan diri, kelengkapan pelindung dan prosedur kecemasan** Tidak diperlukan.
- **Langkah perlindungan alam sekitar:** Cairkan dengan air yang banyak.
- **Kaedah dan bahan untuk pembendungan dan pembersihan:**  
Serap dengan bahan cecair pengikat (pasir, diatomit, pengikat asid, pengikat semesta, habuk papan)  
Lupuskan bahan tercemar sebagai sisa mengikut perkara 13.  
Pastikan pengalihudaraan mencukupi.
- **Rujukan ke bahagian lain**  
Lihat Bahagian 7 untuk maklumat pengendalian yang selamat.  
Lihat Bahagian 8 untuk maklumat kelengkapan perlindungan diri.  
Lihat Bahagian 13 untuk maklumat pelupusan.

### 7 Pengendalian dan penyimpanan

- **Pengendalian:**
- **Langkah perlindungan untuk pengendalian selamat**  
Pastikan pengalihudaraan/ekzos yang mencukupi di tempat kerja.  
Elakkan pembentukan aerosol.
- **Maklumat kebakaran dan perlindungan daripada letupan:** Tiada langkah berjaga-jaga yang khusus diperlukan.
- **Keadaan untuk penyimpanan selamat, termasuk apa-apa ketakserasian**
- **Penyimpanan:**
- **Keperluan yang mesti dipenuhi oleh bilik stor dan ruang simpanan.** Tiada keperluan khusus.
- **Maklumat penyimpanan di dalam satu tempat penyimpanan yang biasa:** Tidak diperlukan.
- **Maklumat lanjut tentang syarat penyimpanan:** Pastikan bekas sentiasa bertutup rapat.
- **Kegunaan akhir yang khusus** Tiada maklumat lanjut yang diperoleh.

MY

(Bersambung ke halaman 3)



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

Tarikh cetak 11.05.2022

Disemak semula pada 11.05.2022

**Nama dagang: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Sambungan halaman 2)

### 8 Kawalan pendedahan dan perlindungan diri

- **Maklumat tambahan tentang reka bentuk kemudahan teknikal:** Tiada maklumat lanjut, lihat perkara 7.
- **Parameter kawalan**
- **Ramuhan dengan nilai had yang memerlukan pemantauan di tempat kerja:** Tidak diperlukan.
- **Maklumat tambahan:** Senarai yang sah semasa pembuatan digunakan sebagai asas.
- **Kawalan pendedahan**
- **Kelengkapan perlindungan diri:**
- **Langkah perlindungan dan kebersihan am:**  
 Jauhkan daripada makanan, minuman dan makanan haiwan.  
 Segera tanggalkan semua pakaian yang tercemar dan kotor.  
 Basuh tangan sebelum berhenti rehat dan apabila kerja selesai.  
 Elakkan daripada terkena mata.  
 Elakkan daripada terkena mata dan kulit.
- **Perlindungan pernafasan:**  
 Jika berlaku pendedahan sekejap atau sedikit pencemaran, gunakan alat penapis pernafasan. Jika berlaku pendedahan yang intensif atau berpanjangan, gunakan alat pernafasan perlindungan serba lengkap.
- **Perlindungan tangan:**



Sarung tangan pelindung.

Bahan sarung tangan hendaklah telus dan kalis terhadap produk/bahan/sediaan.

Oleh sebab tiada ujian yang dijalankan, maka tiada syor bagi bahan sarung tangan yang boleh diberikan untuk produk/sediaan/campuran kimia.

Pemilihan bahan sarung tangan berdasarkan waktu penembusan, kadar pembauran dan degradasi.

- **Bahan sarung tangan**  
 Pemilihan sarung tangan yang sesuai bukan hanya bergantung pada bahannya, tetapi juga tanda kualiti lainnya serta perbezaannya daripada satu pengeluar dengan pengeluar yang lain.
- **Jangka masa penyerapan bahan sarung tangan**  
 Waktu kemunculan yang tepat hendaklah diperoleh pengeluar sarung tangan pelindung dan hendaklah dipatuhi.
- **Perlindungan mata:**



Gogal bertutup rapat

### 9 Sifat fizikal dan kimia

- **Maklumat tentang ciri fizik dan kimia**

- **Maklumat Am**

- **Rupa:**

**Bentuk:**

Cecair

**Warna:**

Tidak berwarna

- **Bau:**

Ciri

- **Ambang bau**

Tidak ditentukan.

- **Nilai pH:**

Tidak ditentukan.

- **Perubahan pada keadaan**

**Takat lebur/takat beku**

0 °C

(Bersambung ke halaman 4)

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

Tarikh cetak 11.05.2022

Disemak semula pada 11.05.2022

**Nama dagang: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Sambungan halaman 3)

<b>Takat didih awal dan julat didih</b>	100 °C
· <b>Takat kilat:</b>	Tidak berkenaan
· <b>Kemudahbakaran (pepejal, gas)</b>	Tidak berkenaan
· <b>Suhu penguraian:</b>	Tidak ditentukan.
· <b>Suhu pengautocucuhan</b>	Tidak ditentukan.
· <b>Bahaya letupan:</b>	Produk tidak ada bahaya letupan.
· <b>Had letupan :</b>	
<b>Bawah:</b>	Tidak ditentukan.
<b>Atas:</b>	Tidak ditentukan.
· <b>Tekanan wap pada 20 °C:</b>	23 hPa
· <b>Ketumpatan pada 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Ketumpatan bandingan</b>	Tidak ditentukan.
· <b>Ketumpatan wap</b>	Tidak ditentukan.
· <b>Kadar penyejatan</b>	Tidak ditentukan.
· <b>Keterlarutan dalam / Keterlarutcampuran dengan Air:</b>	Terlarut campur sepenuhnya.
· <b>Pekali sekatan: n-oktanol/air</b>	Tidak ditentukan.
· <b>Kelikatan:</b>	
<b>Dinamik pada 20 °C:</b>	0.952 mPas
<b>Kinematik:</b>	Tidak ditentukan.
<b>Air:</b>	99.9 %
· <b>Kandungan pepejal:</b>	0.0 %
· <b>Maklumat lain</b>	Tiada maklumat lanjut yang diperoleh.

### 10 Kestabilan dan kereaktifan

- **Kereaktifan** Tiada maklumat lanjut yang diperoleh.
- **Kestabilan kimia**
- **Penguraian terma/keadaan yang perlu dielakkan:** Tiada penguraian jika digunakan mengikut spesifikasi.
- **Kemungkinan tindak balas berbahaya** Tiada tindak balas berbahaya yang diketahui.
- **Keadaan yang perlu dielakkan** Tiada maklumat lanjut yang diperoleh.
- **Bahan tidak serasi:** Tiada maklumat lanjut yang diperoleh.
- **Produk penguraian yang berbahaya:** Tiada produk penguraian berbahaya yang diketahui.

### 11 Maklumat toksikologi

- **Maklumat tentang kesan toksikologi**
- **Ketoksikan akut:**
- **Kesan kerengsaan primer:**
- **Kakisan atau kerengsaan kulit** Tiada kesan merengsa.
- **Kerosakan atau kerengsaan mata yang serius** Kesan merengsa.
- **Pemekaan pernafasan / kulit** Tiada kesan pemekaan yang diketahui.

MY

(Bersambung ke halaman 5)

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

Tarikh cetak 11.05.2022

Disemak semula pada 11.05.2022

**Nama dagang: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Sambungan halaman 4)


### 12 Maklumat ekologi

- **Ketoksikan**
- **Ketoksikan akuatik:** Tiada maklumat lanjut yang diperolehi.
- **Keterusan dan keterdegradasikan** Tiada maklumat lanjut yang diperolehi.
- **Kelakuan dalam sistem alam sekitar:**
- **Potensi bioakumulatif** Tiada maklumat lanjut yang diperolehi.
- **Mobiliti di dalam tanah** Tiada maklumat lanjut yang diperolehi.
- **Maklumat tambahan ekologi:**
- **Nota am:** Biasanya tidak berbahaya kepada air
- **Keputusan penilaian PBT dan vPvB**
- **PBT:** Tidak berkenaan
- **vPvB:** Tidak berkenaan
- **Kesan buruk yang lain** Tiada maklumat lanjut yang diperolehi.

### 13 Maklumat pelupusan

- **Kaedah rawatan sisa**
- **Syor:**  
Tidak boleh dilupuskan bersama dengan sampah isi rumah. Jangan biarkan produk memasuki sistem pembentungan.
- **Pembungkusan yang tidak bersih:**
- **Syor:** Pelupusan mestilah dijalankan menurut peraturan rasmi
- **Agen pencuci yang disyorkan:** Air, jika perlu, digunakan bersama dengan agen pencuci.

### 14 Maklumat pengangkutan

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>· <b>Nombor UN</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG, IATA</b></li> </ul>  | <p style="text-align: center;">Tidak sah<br/>UN3082</p>  |
| <ul style="list-style-type: none"> <li>· <b>Nama penghantaran UN yang betul</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>                                     | <p style="text-align: center;">Tidak sah<br/>ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br/>LIQUID, N.O.S., MARINE POLLUTANT<br/>ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br/>LIQUID, N.O.S.</p> |
| <ul style="list-style-type: none"> <li>· <b>pengangkutan kelas bahaya</b></li> <li>· <b>ADR, ADN</b></li> <li>· <b>Kelas</b></li> </ul>  | <p style="text-align: center;">Tidak sah</p>   |
| <ul style="list-style-type: none"> <li>· <b>IMDG, IATA</b></li> </ul> <div style="text-align: center;">  </div> | <p style="text-align: center;">9 Berbagai-bagai bahan dan artikel berbahaya.<br/>9</p>   |
| <ul style="list-style-type: none"> <li>· <b>Class</b></li> <li>· <b>Label</b></li> </ul>   | <p style="text-align: center;">9 Berbagai-bagai bahan dan artikel berbahaya.<br/>9</p>   |

(Bersambung ke halaman 6)

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

Tarikh cetak 11.05.2022

Disemak semula pada 11.05.2022

**Nama dagang: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(Sambungan halaman 5)

· <b>Kumpulan pembungkusan</b>	
· <b>ADR</b>	Tidak sah
· <b>IMDG, IATA</b>	III
· <b>Hazard persekitaran:</b>	
· <b>Bahan cemar marin:</b>	Tanda (ikan dan pokok)
· <b>Pelabelan khas (IATA):</b>	Tanda (ikan dan pokok)
· <b>Langkah perlindungan khas untuk pengguna</b>	Tidak berkenaan
· <b>Nombor EMS:</b>	F-A, S-
· <b>Pengangkutan dalam pukat menurut Lampiran II MARPOL 73/78 dan Kod IBC</b>	Tidak berkenaan
· <b>"Peraturan Model" UN:</b>	Tidak sah

### 15 Maklumat pengawalseliaan

- **Peraturan/undang-undang keselamatan, kesihatan dan persekitaran khusus untuk bahan atau campuran tersebut**

Tiada maklumat lanjut yang diperolehi.

- **Senarai Rujukan Bahan Berbahaya Alam Sekitar**

Tiada ramuan yang disenaraikan.

- **Unsur label GHS** Tidak sah
- **Piktogram hazard** Tidak sah
- **Perkataan isyarat** Tidak sah
- **Pernyataan hazard** Tidak sah
- **Penilaian keselamatan bahan kimia:** Penilaian Keselamatan Bahan Kimia belum dilakukan.

### 16 Maklumat lain

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

- **Hubungi:**
- **Singkatan dan akronim:**

ADR: Accord relatif au transport international 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

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

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 11.05.2022

revidert den: 11.05.2022

### Avsnitt 1: Identifikasjon av stoffet/stoffblandingen og av selskapet/foretaket

- **1.1 Produktidentifikator**
- **Handelsnavn:** POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)
- **Artikkelnummer:** 19320-A, 19321-A
- **CAS-nummer:**  
7732-18-5
- **EC nummer:**  
231-791-2
- **1.2 Relevante identifiserte bruksområder for stoffet eller stoffblandingen og bruk som frarådes**  
Ikke noe mer relevant informasjon tilgjengelig.
- **Bruk av stoffet/ tilberedning** laboratoriekjemikalier
- **1.3 Opplysninger om leverandøren av sikkerhetsdatabladet**
- **Produsent/leverandør:**  
Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com
- **Avdeling for nærmere informasjon:** Product safety department
- **1.4 Nødtelefonnummer**  
ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887

### Avsnitt 2: Fareidentifikasjon

- **2.1 Klassifisering av stoffet eller stoffblandingen**
- **Klassifisering i henhold til EC-forskrift nr.1272/2008**  
Substansen er ikke klassifisert i henhold til CLP-forordningen.
- **2.2 Merkingselementer**
- **Merking iht. bestemmelse (EC) Nr. 1272/2008 bortfaller**
- **Farepiktogrammer bortfaller**
- **Varselord bortfaller**
- **Faresetninger bortfaller**
- **2.3 Andre farer**
- **Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.

### Avsnitt 3: Sammensetning/opplysninger om bestanddeler

- **3.1 Kjemisk karakterisering: Stoffer**
- **CAS-nr. betegnelse**  
7732-18-5 Deionized Water, Reagent Grade A.C.S.
- **Identifikasjonsnummer(numre)**
- **EC nummer:** 231-791-2

NO

(fortsatt på side 2)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 11.05.2022

revidert den: 11.05.2022

**Handelsnavn: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(fortsatt fra side 1)

### Avsnitt 4: Førstehjelpstiltak

- **4.1 Beskrivelse av førstehjelpstiltak**
- **Generelle informasjoner:**  
*Forgiftningssymptomer kan også oppstå etter mange timer. Personer må derfor ha legetilsyn i minst 48 timer etter en ulykke.*
- **Etter innånding:**  
*Frisklufttilførsel, eventuelt kunstig åndedrett, varme. Ved fortsatt besvær må lege tilkalles.  
 Ved bevisstløshet lagring og transport i stabil sidestilling.*
- **Etter hudkontakt:** *Vanligvis irriterer produktet ikke huden.*
- **Etter øyekontakt:**  
*Skyll øynene med åpne øyenlokk i flere minutter under rennende vann. Ved fortsatt besvær tilkall lege.*
- **Etter svelging:** *Søk lege straks.*
- **4.2 De viktigste symptomene og virkningene, både akutte og forsinkede**  
*Ikke noe mer relevant informasjon tilgjengelig.*
- **4.3 Angivelse av om umiddelbar legehjelp og spesialbehandling er nødvendig**  
*Ikke noe mer relevant informasjon tilgjengelig.*

### Avsnitt 5: Brannsløkkingstiltak

- **5.1 Sløkkingsmidler**
- **Egnede slukningsmidler:** *Brannslukningstiltak tilpasses omgivelsene.*
- **5.2 Særlige farer knyttet til stoffet eller stoffblandingen** *Ikke noe mer relevant informasjon tilgjengelig.*
- **5.3 Råd til brannmannskaper**
- **Spesielt verneutstyr:** *Ta på egnet åndedrettsbeskyttelse.*

### Avsnitt 6: Tiltak ved utilsiktede utslipp

- **6.1 Personlige forsiktighetsregler, personlig verneutstyr og nødrutiner** *Ikke nødvendig.*
- **6.2 Forsiktighetsregler med hensyn til miljø** *Fortynn med rikelig med vann.*
- **6.3 Metoder og materialer for oppsamling og rensing**  
*Ta opp stoffet med væskebindende materiale (sand, kiselgur, syrebindemiddel, universalbindemiddel, sagflis).  
 Bortskaff kontaminert materielle som avfall i.h.t. punkt 13.  
 Sørg for tilstrekkelig ventilasjon.*
- **6.4 Henvisning til andre avsnitt**  
*Informasjoner om sikker håndtering, se kapittel 7.  
 Informasjoner om personlig beskyttelsesutstyr, se kapittel 8.  
 Informasjoner om bortskaffelse/deponering, se kapittel 13.*

### Avsnitt 7: Håndtering og lagring

- **7.1 Forsiktighetsregler for sikker håndtering**  
*Sørg for god ventilasjon/avsugning på arbeidsplassen.  
 Unngå aerosoldannelse.*
- **Henvisninger om brann- og eksplosjonsvern:** *Ingen særlige tiltak nødvendig.*
- **7.2 Vilkår for sikker lagring, herunder eventuelle uforenligheter**
- **Lagring:**
- **Krav til lagerrom og beholdere:** *Ingen spesielle krav.*
- **Informasjoner om felles lagring:** *Ikke nødvendig.*
- **Ytterligere informasjoner om lagervilkårene:** *Hold beholderne tett tillukket.*

(fortsatt på side 3)

# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 11.05.2022

revidert den: 11.05.2022

**Handelsnavn: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(fortsatt fra side 2)

- 7.3 Særlig(e) sluttanvendelse(r) Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 8: Eksponeringskontroll / personlig verneutstyr

- **8.1 Kontrollparametere**
- **Ytterligere informasjon om utforming av tekniske anlegg:** Ingen ytterligere informasjon, se punkt 7.
- **Komponenter med grenseverdier for arbeidsplass som må overholdes:** Bortfaller.
- **Ytterligere informasjon:** Basis: listene som var gyldige ved oppstillingen.
- **8.2 Eksponeringskontroll**
- **Personlig verneutstyr:**
- **Generelle verne- og hygienetiltak:**
  - Holdes adskilt fra næringsmidler, drikkevarer og fødevarer.
  - Fjern omgående forurensede, gjennomvætede klær.
  - Vask hendene før arbeidspauser og ved arbeidets slutt.
  - Unngå berøring med øynene.
  - Unngå berøring med øyne og hud.
- **Åndedrettsvern:**
  - Ved korttidig eller liten belastning åndedrettsfilterapparat; ved intensiv eller lengre utsetting: bruk omluft-uavhengig åndedrettsbeskyttelsesapparat.
- **Håndvern:**



Beskyttelseshansker

- Hanskematerialet må være ugjennomtrengelig og bestandig overfor produktet /stoffet /blandingen. På grunn av manglende tester kan det ikke gis noen anbefaling om hanskemateriale for produktet / tilberedningsprosessen/kjemikalieblanding.
- Hanskematerialet velges under hensyntagen til holdbarhetstid, gjennomtrengelighet og degradering.
- **hanskemateriale**
    - Valget av egnet hanske er ikke bare avhengig av materiale, men også av andre kvalitetskennetegn og er forskjellig fra produsent til produsent.
  - **gjennomtrengingstid for hanskemateriale**
    - Den nøyaktige holdbarhetstiden må bringes på det rene hos hanskeprodusenten og overholdes.
  - **Øyevern:**



Tettsittende vernebrille

### Avsnitt 9: Fysiske og kjemiske egenskaper

- **9.1 Opplysninger om grunnleggende fysiske og kjemiske egenskaper**
- **alminnelige opplysninger**
- **Utseende:**
  - Form:** Væske
  - Farge:** Fargeløs
- **Lukt:** Karakteristisk
- **Luktterskel:** Ikke bestemt.
- **pH-verdi:** Ikke bestemt.

(fortsatt på side 4)



# Sikkerhetsdatablad

## iflg. forordning (EF) nr. 1907/2006, Artikkel 31

Trykkdato: 11.05.2022

revidert den: 11.05.2022

**Handelsnavn: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(fortsatt fra side 3)

· <b>Tilstandsendring</b>	
<b>Smeltepunkt/frysepunkt:</b>	0 °C
<b>Startkokepunkt og kokeområde:</b>	100 °C
· <b>Flammepunkt:</b>	Ikke brukbar.
· <b>Antennelighet (fast stoff, gass):</b>	Ikke brukbar.
· <b>Nedbrytingstemperatur:</b>	Ikke bestemt.
· <b>Selvantennelsestemperatur:</b>	Ikke bestemt.
· <b>Eksplorative egenskaper:</b>	Produktet er ikke eksplosjonsfarlig.
· <b>Ekspljosjonsgrenser:</b>	
<b>Nedre:</b>	Ikke bestemt.
<b>Øvre</b>	Ikke bestemt.
· <b>Damptrykk ved 20 °C:</b>	23 hPa
· <b>Tetthet ved 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Relativ tetthet:</b>	Ikke bestemt.
· <b>Damptetthet:</b>	Ikke bestemt.
· <b>Fordampingshastighet:</b>	Ikke bestemt.
· <b>Løslighet i / blandbarhet med vann:</b>	Fullstendig blandbar.
· <b>Fordelingskoeffisient; n-oktanol/vann:</b>	Ikke bestemt.
· <b>Viskositet:</b>	
<b>Dynamisk ved 20 °C:</b>	0,952 mPas
<b>Kinematisk:</b>	Ikke bestemt.
<b>Vann:</b>	99,9 %
<b>VOC (EF)</b>	0,00 %
<b>Andel faste stoffer:</b>	0,0 %
· <b>9.2 Andre opplysninger</b>	Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 10: Stabilitet og reaktivitet

- **10.1 Reaktivitet** Ikke noe mer relevant informasjon tilgjengelig.
- **10.2 Kjemisk stabilitet**
- **Termisk spaltning / vilkår som må unngås:** Ingen spaltning ved formålsriktig bruk.
- **10.3 Risiko for farlige reaksjoner** Det kjennes ingen farlige reaksjoner.
- **10.4 Forhold som skal unngås** Ikke noe mer relevant informasjon tilgjengelig.
- **10.5 Uforenlige materialer** Ikke noe mer relevant informasjon tilgjengelig.
- **10.6 Farlige nedbrytingsprodukter** Ingen farlige spaltningsprodukter kjente.

### Avsnitt 11: Toksikologiske opplysninger

- **11.1 Opplysninger om toksikologiske virkninger**
- **Akutt giftighet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Primær irritasjonsvirkning:**
- **Hudetsing/hudirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Alvorlig øyeskade/øyeirritasjon** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

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# Sikkerhetsdatablad

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- **Sensibilisering ved innånding eller hudkontakt** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Informasjon om følgende grupper med potensielle virkninger:**
- **CMR-virkninger (kreftfremkallende virkninger, arvestoffskadelige og reproduksjonsskadelige virkninger)**
- **Arvestoffskadelig virkning på kjønnsceller** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Kreftfremkallende egenskap** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Reproduksjonstoksisitet** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – enkelteksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **STOT – gjentatt eksponering** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.
- **Aspirasjonsfare** Basert på tilgjengelige data, klassifiseringskriteriene ikke oppfylt.

### Avsnitt 12: Økologiske opplysninger

- **12.1 Giftighet**
- **Akvatisk toksisitet:** Ikke noe mer relevant informasjon tilgjengelig.
- **12.2 Persistens og nedbrytbarhet** Ikke noe mer relevant informasjon tilgjengelig.
- **12.3 Bioakkumuleringsevne** Ikke noe mer relevant informasjon tilgjengelig.
- **12.4 Mobilitet i jord** Ikke noe mer relevant informasjon tilgjengelig.
- **Ytterligere økologiske informasjoner:**
- **Generelle informasjoner:** Generelt ikke farlig for vann
- **12.5 Resultater av PBT- og vPvB-vurdering**
- **PBT:** Ikke brukbar.
- **vPvB:** Ikke brukbar.
- **12.6 Andre skadevirkninger** Ikke noe mer relevant informasjon tilgjengelig.

### Avsnitt 13: Sluttbehandling

- **13.1 Avfallsbehandlingsmetoder**
- **Anbefaling:** Må ikke bortskaffes sammen med husholdningsavfall. Må ikke komme ned i kloakk.
- **Ikke rengjort emballasje:**
- **Anbefaling:** Deponering i henhold til myndighetenes forskrifter.
- **Anbefalt rengjøringsmiddel:** Vann, eventuelt med tilsetning av rengjøringsmidler.

### Avsnitt 14: Transportopplysninger

- |                                   |   |
|-----------------------------------|---|
| · <b>14.1 FN-nummer</b>           |   |
| · <b>ADR</b>                      | bortfaller  |
| · <b>IMDG, IATA</b>               | UN3082  |
| · <b>14.2 FN-forsendelsesnavn</b> |   |
| · <b>ADR</b>                      | bortfaller  |
| · <b>IMDG</b>                     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT |
| · <b>IATA</b>                     | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.                   |

(fortsatt på side 6)

NO

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· **14.3 Transportfareklasse(r)**

· **ADR, ADN**

· **klasse**

bortfaller

· **IMDG, IATA**



· **Class**

9 Forskjellige farlige stoffer og gjenstander

· **Label**

9

· **14.4 Emballasjegruppe**

· **ADR**

bortfaller

· **IMDG, IATA**

III

· **14.5 Miljøfarer**

· **Marine pollutant:**

Symbol (fisk og treet)

· **Spesielle merking (IATA):**

Symbol (fisk og treet)

· **14.6 Særlige forsiktighetsregler ved bruk**

Ikke brukbar.

· **EMS-nummer:**

F-A, S-

· **14.7 Bulktransport i henhold til vedlegg II til MARPOL 73/78 og IBC-regelverket**

Ikke brukbar.

· **UN "Model Regulation":**

bortfaller

## Avsnitt 15: Opplysninger om regelverk

· **15.1 Særlige bestemmelser / særskilt lovgivning om sikkerhet, helse og miljø for stoffet eller stoffblandingen**

· **Direktiv 2012/18/EU**

· **Spesifiserte farlige stoffer - VEDLEGG I** Inneholder ikke stoffet.

· **Direktiv 2011/65/EF om begrensning av bruken av visse farlige stoffer i elektrisk og elektronisk utstyr - Vedlegg II**

ingen av innholdsstoffene er listet opp

· **Forordning (EF) nr. 273/2004 om utgangsstoffer for narkotika**

ingen av innholdsstoffene er listet opp

· **Forordning (EF) nr. 111/2005 om fastsettelse av regler for overvåking av handelen med utgangsstoffer for narkotika mel-lom Fellesskapet og tredjestater**

ingen av innholdsstoffene er listet opp

· **15.2 Vurdering av kjemikaliesikkerhet** En kjemisk sikkerhetsvurdering er ikke utført.

## Avsnitt 16: Andre opplysninger

Opplysningene er basert på vårt kjennskap i dag. De utgjør dog ingen forsikring om produktegenskaper og er ikke grunnlag for noe kontraktsmessig rettsforhold.

· **Forkortelser og akronymer:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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**Sikkerhetsdatablad**  
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**Handelsnavn: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*  
*EINECS: European Inventory of Existing Commercial Chemical Substances*  
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*  
*VOC: Volatile Organic Compounds (USA, EU)*  
*PBT: Persistent, Bioaccumulative and Toxic*  
*vPvB: very Persistent and very Bioaccumulative*

(fortsatt fra side 6)

NO

**Ficha de dados de segurança**  
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### SECÇÃO 1: Identificação da substância/mistura e da sociedade/empresa

- **1.1 Identificador do produto**
- **Nome comercial:** *POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)*
- **Código do produto:** 19320-A, 19321-A
- **Nº CAS:**  
7732-18-5
- **Número CE:**  
231-791-2
- **1.2 Utilizações identificadas relevantes da substância ou mistura e utilizações desaconselhadas**  
*Não existe mais nenhuma informação relevante disponível.*
- **Utilização da substância / da preparação** *Químicos de laboratório*
- **1.3 Identificação do fornecedor da ficha de dados de segurança**
- **Fabricante/fornecedor:**  
*Electron Microscopy Sciences  
1560 Industry Road  
USA-Hatfield, PA 19440  
Tel: 215-412-8400 Fax: 215-412-8450  
email: info@emsdiasum.com  
www.emsdiasum.com*
- **Entidade para obtenção de informações adicionais:** *Product safety department*
- **1.4 Número de telefone de emergência:**  
*ChemTrec 1-800-424-9300 Contract CCN7661  
1-703-527-3887*

### SECÇÃO 2: Identificação dos perigos

- **2.1 Classificação da substância ou mistura**
- **Classificação em conformidade com o Regulamento (CE) n.º 1272/2008**  
*A substância não se classificou em conformidade com o regulamento CLP.*
- **2.2 Elementos do rótulo**
- **Rotulagem em conformidade com o Regulamento (CE) n.º 1272/2008** *não aplicável*
- **Pictogramas de perigo** *não aplicável*
- **Palavra-sinal** *não aplicável*
- **Advertências de perigo** *não aplicável*
- **2.3 Outros perigos**
- **Resultados da avaliação PBT e mPmB**
- **PBT:** *Não aplicável.*
- **mPmB:** *Não aplicável.*

### SECÇÃO 3: Composição/informação sobre os componentes

- **3.1 Caracterização química: Substâncias**
- **Designação CAS n.º**  
*7732-18-5 água, destilada, condutora ou de similar pureza*
- **Número(s) de identificação**
- **Número CE:** 231-791-2

PT

(continuação na página 2)

# Ficha de dados de segurança

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**Nome comercial: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(continuação da página 1)

### SECÇÃO 4: Medidas de primeiros socorros

#### · 4.1 Descrição das medidas de primeiros socorros

##### · Indicações gerais:

Os sintomas de envenenamento podem surgir apenas após várias horas, por isso é necessária vigilância médica pelo menos 48 horas após o acidente.

##### · Em caso de inalação:

Remover a vítima para um local arejado. Se necessário administrar respiração artificial. Manter a vítima aquecida. Se os sintomas persistirem, consultar o médico.

Se a vítima estiver inconsciente, posicioná-la e transportá-la com estabilidade, deitada lateralmente.

##### · Em caso de contacto com a pele: Em geral o produto não é irritante para a pele.

##### · Em caso de contacto com os olhos:

Enxaguar os olhos durante alguns minutos sob água corrente, mantendo as pálpebras abertas. Em caso de persistência dos sintomas, consultar o médico.

##### · Em caso de ingestão: Consultar imediatamente o médico

#### · 4.2 Sintomas e efeitos mais importantes, tanto agudos como retardados

Não existe mais nenhuma informação relevante disponível.

#### · 4.3 Indicações sobre cuidados médicos urgentes e tratamentos especiais necessários

Não existe mais nenhuma informação relevante disponível.

### SECÇÃO 5: Medidas de combate a incêndios

#### · 5.1 Meios de extinção

· Meios adequados de extinção: Coordenar no local medidas para extinção do fogo.

#### · 5.2 Perigos especiais decorrentes da substância ou mistura

Não existe mais nenhuma informação relevante disponível.

#### · 5.3 Recomendações para o pessoal de combate a incêndios

· Equipamento especial de protecção: Colocar máscara de respiração.

### SECÇÃO 6: Medidas a tomar em caso de fugas accidentais

· 6.1 Precauções individuais, equipamento de protecção e procedimentos de emergência Não necessário.

· 6.2 Precauções a nível ambiental: Diluir em bastante água.

#### · 6.3 Métodos e materiais de confinamento e limpeza:

Recolher com produtos que absorvam líquidos (areia, seixos, absorventes universais, serradura).

Eliminar residualmente as substâncias contaminadas como um resíduo segundo o Ponto 13.

Assegurar uma ventilação adequada.

#### · 6.4 Remissão para outras secções

Para informações sobre uma manipulação segura, ver o capítulo 7.

Para informações referentes ao equipamento de protecção individual, ver o capítulo 8.

Para informações referentes à eliminação residual, ver o capítulo 13.

### SECÇÃO 7: Manuseamento e armazenagem

#### · 7.1 Precauções para um manuseamento seguro

Assegurar uma boa ventilação / exaustão no local de trabalho.

Evitar a formação de aerossóis.

· Precauções para prevenir incêndios e explosões: Não são necessárias medidas especiais.

#### · 7.2 Condições de armazenagem segura, incluindo eventuais incompatibilidades

##### · Armazenagem:

· Requisitos para espaços ou contentores para armazenagem: Sem requisitos especiais.

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# Ficha de dados de segurança

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Nome comercial: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

( continuação da página 2 )

- **Avisos para armazenagem conjunta:** Não necessário.
- **Outros avisos sobre as condições de armazenagem:** Manter o recipiente hermeticamente fechado.
- **7.3 Utilização(ões) final(is) específica(s)** Não existe mais nenhuma informação relevante disponível.

### SECÇÃO 8: Controlo da exposição/Protecção individual

- **8.1 Parâmetros de controlo**
- **Indicações adicionais para concepção de instalações técnicas:** Não existem outras informações, ver ponto 7.
- **Componentes cujo valor do limite de exposição no local de trabalho deve ser monitorizado:** Não aplicável.
- **Indicações adicionais:** Foram utilizadas como base as listas válidas à data da elaboração.
- **8.2 Controlo da exposição**
- **Equipamento de protecção individual:**
- **Medidas gerais de protecção e higiene:**
  - Manter afastado de alimentos, bebidas e forragens.
  - Despir imediatamente a roupa contaminada e embebida.
  - Lavar as mãos antes das pausas e no fim do trabalho.
  - Evitar o contacto com os olhos.
  - Evitar o contacto com os olhos e com a pele.
- **Protecção respiratória:**
  - Utilizar uma máscara respiratória se a exposição for reduzida ou durante um curto espaço de tempo; se esta for mais prolongada ou mais intensa, utilizar uma máscara respiratória independente do ar ambiente.
- **Protecção das mãos:**



Luvas de protecção

- O material das luvas tem de ser impermeável e resistente ao produto / à substância / preparação.
- Uma vez que não foram realizados testes nesta área, não podemos recomendar um determinado tipo de material para as luvas que seja adequado para o produto / a preparação / a mistura de químicos.
- Escolher o material das luvas tendo em consideração a durabilidade, a permeabilidade e a degradação.
- **Material das luvas**
  - A escolha das luvas mais adequadas não depende apenas do material, mas também de outras características qualitativas e varia de fabricante para fabricante.
- **Tempo de penetração no material das luvas**
  - Deve informar-se sobre a validade exacta das suas luvas junto do fabricante e respeitá-la.
- **Protecção dos olhos:**



Óculos de protecção totalmente fechados

### SECÇÃO 9: Propriedades físico-químicas

- **9.1 Informações sobre propriedades físicas e químicas de base**
- **Informações gerais**
- **Aspetto:**
  - Forma:** Líquido
  - Cor:** Incolor
  - Odor:** Característico

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· <b>Limi ar olfactivo:</b>	Não determinado.
· <b>valor pH:</b>	Não determinado.
· <b>Mudança do estado:</b> <b>Ponto de fusão/ponto de congelação:</b>	0 °C
<b>Ponto de ebulição inicial e intervalo de ebulição:</b>	100 °C
· <b>Ponto de inflamação:</b>	Não aplicável.
· <b>Inflamabilidade (sólido, gás):</b>	Não aplicável.
· <b>Temperatura de decomposição:</b>	Não determinado.
· <b>Temperatura de autoignição:</b>	Não determinado.
· <b>Propriedades explosivas:</b>	O produto não corre o risco de explosão.
· <b>Limites de explosão:</b> <b>Inferior:</b>	Não determinado.
<b>Superior:</b>	Não determinado.
· <b>Pressão de vapor em 20 °C:</b>	23 hPa
· <b>Densidade em 20 °C:</b>	1 g/cm <sup>3</sup>
· <b>Densidade relativa</b>	Não determinado.
· <b>Densidade de vapor</b>	Não determinado.
· <b>Taxa de evaporação:</b>	Não determinado.
· <b>Solubilidade em / miscibilidade com água:</b>	Completamente misturável.
· <b>Coefficiente de partição: n-octanol/água</b>	Não determinado.
· <b>Viscosidade:</b> <b>Dinâmico em 20 °C:</b>	0,952 mPas
<b>Cinemático:</b>	Não determinado.
<b>Água:</b>	99,9 %
<b>VOC (UE)</b>	0,00 %
<b>Percentagem de substâncias sólidas:</b>	0,0 %
· <b>9.2 Outras informações</b>	Não existe mais nenhuma informação relevante disponível.

### SECÇÃO 10: Estabilidade e reactividade

- **10.1 Reactividade** Não existe mais nenhuma informação relevante disponível.
- **10.2 Estabilidade química**
- **Decomposição térmica / condições a evitar:** Não existe decomposição se usado de acordo com as especificações.
- **10.3 Possibilidade de reações perigosas** Não se conhecem reacções perigosas.
- **10.4 Condições a evitar** Não existe mais nenhuma informação relevante disponível.
- **10.5 Materiais incompatíveis:** Não existe mais nenhuma informação relevante disponível.
- **10.6 Produtos de decomposição perigosos:** Não se conhecem produtos de decomposição perigosos.

### SECÇÃO 11: Informação toxicológica

- **11.1 Informações sobre os efeitos toxicológicos**
- **Toxicidade aguda** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

( continuação na página 5 )



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- **Efeito de irritabilidade primário:**
- **Corrosão/irritação cutânea** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Lesões oculares graves/irritação ocular**  
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Sensibilização respiratória ou cutânea**  
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Avisos adicionais de toxicologia:**
- **Efeitos CMR (carcinogenicidade, mutagenicidade e efeitos tóxicos na reprodução)**
- **Mutagenicidade em células germinativas**  
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Carcinogenicidade** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade reprodutiva** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição única**  
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Toxicidade para órgãos-alvo específicos (STOT) - exposição repetida**  
Com base nos dados disponíveis, os critérios de classificação não são preenchidos.
- **Perigo de aspiração** Com base nos dados disponíveis, os critérios de classificação não são preenchidos.

### SECÇÃO 12: Informação ecológica

- **12.1 Toxicidade**
- **Toxicidade aquática:** Não existe mais nenhuma informação relevante disponível.
- **12.2 Persistência e degradabilidade** Não existe mais nenhuma informação relevante disponível.
- **12.3 Potencial de bioacumulação** Não existe mais nenhuma informação relevante disponível.
- **12.4 Mobilidade no solo** Não existe mais nenhuma informação relevante disponível.
- **Outras indicações ecológicas:**
- **Indicações gerais:** Em geral não causa perigo para a água
- **12.5 Resultados da avaliação PBT e mPmB**
- **PBT:** Não aplicável.
- **mPmB:** Não aplicável.
- **12.6 Outros efeitos adversos** Não existe mais nenhuma informação relevante disponível.

### SECÇÃO 13: Considerações relativas à eliminação

- **13.1 Métodos de tratamento de resíduos**
- **Recomendação:** Não se pode eliminar juntamente com o lixo doméstico. Não permita que chegue à canalização.
- **Embalagens contaminadas:**
- **Recomendação:** Eliminação residual conforme o regulamento dos serviços públicos.
- **Meio de limpeza recomendado:** Água, eventualmente com adição de produtos de limpeza

### SECÇÃO 14: Informações relativas ao transporte

- |   |               |
|---|---------------|
| · <b>14.1 Número ONU</b>                              |               |
| · <b>ADR</b>  | não aplicável |
| · <b>IMDG, IATA</b>                                   | UN3082        |
| · <b>14.2 Designação oficial de transporte da ONU</b> |               |
| · <b>ADR</b>  | não aplicável |

(continuação na página 6)




**Ficha de dados de segurança**  
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**Nome comercial: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

(continuação da página 5)

· <b>IMDG</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT
· <b>IATA</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
· <b>14.3 Classes de perigo para efeitos de transporte</b>	
· <b>ADR, ADN</b>	
· <b>Classe</b>	não aplicável
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	9 Matérias e objectos perigosos diversos
· <b>Label</b>	9
· <b>14.4 Grupo de embalagem</b>	
· <b>ADR</b>	não aplicável
· <b>IMDG, IATA</b>	III
· <b>14.5 Perigos para o ambiente:</b>	
· <b>Poluente das águas:</b>	Símbolo convencional (peixes e árvore)
· <b>Marcação especial (IATA):</b>	Símbolo convencional (peixes e árvore)
· <b>14.6 Precauções especiais para o utilizador</b>	Não aplicável.
· <b>Nº EMS:</b>	F-A, S-
· <b>14.7 Transporte a granel em conformidade com o anexo II da Convenção MARPOL e o Código IBC</b>	Não aplicável.
· <b>UN "Model Regulation":</b>	não aplicável

### SECÇÃO 15: Informação sobre regulamentação

- **15.1 Regulamentação/legislação específica para a substância ou mistura em matéria de saúde, segurança e ambiente**
- **Diretiva 2012/18/UE**
- **Substâncias perigosas designadas - ANEXO I** A substância não está listada.
- **Directiva 2011/65/UE relativa à restrição do uso de determinadas substâncias perigosas em equipamentos eléctricos e electrónicos - Anexo II**
- Nenhum dos componentes se encontra listado.
- **REGULAMENTO (UE) 2019/1148**
- **Anexo I - PRECURSORES DE EXPLOSIVOS OBJETO DE RESTRIÇÕES (Valor-limite máximo para efeitos de licenciamento nos termos do artigo 5.o, n.o 3)**
- Nenhum dos componentes se encontra listado.
- **Anexo II - PRECURSORES DE EXPLOSIVOS PASSÍVEIS DE PARTICIPAÇÃO**
- Nenhum dos componentes se encontra listado.
- **Regulamento (CE) n.º 273/2004 relativo aos precursores de drogas**
- Nenhum dos componentes se encontra listado.

(continuação na página 7)

**Ficha de dados de segurança**  
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**Nome comercial: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

( continuação da página 6 )

· **Regulamento (CE) n.º 111/2005 que estabelece regras de controlo do comércio de precursores de drogas entre a Comunidade e países terceiros**

Nenhum dos componentes se encontra listado.

· **15.2 Avaliação da segurança química: Não foi realizada nenhuma Avaliação de Segurança Química.**

### **SECÇÃO 16: Outras informações**

As informações fornecidas baseiam-se no estado actual dos nossos conhecimentos, embora não representem uma garantia das propriedades do produto e não fundamentam uma relação contratual.

· **Abreviaturas e acrónimos:**

ADR: Accord relatif au transport international 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

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

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

PT

# Ficha de datos de seguridad

## según 1907/2006/CE, Artículo 31

fecha de impresión 11.05.2022

Revisión: 11.05.2022

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

- **1.1 Identificador del producto**
- **Nombre comercial:** *POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)*
- **Número del artículo:** *19320-A, 19321-A*
- **Número CAS:**  
*7732-18-5*
- **Número CE:**  
*231-791-2*
- **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**  
*La sustancia no se ha clasificado de conformidad con el reglamento CLP.*
- **2.2 Elementos de la etiqueta**
- **Etiquetado con arreglo al Reglamento (CE) n° 1272/2008** *suprimido*
- **Pictogramas de peligro** *suprimido*
- **Palabra de advertencia** *suprimido*
- **Indicaciones de peligro** *suprimido*
- **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*

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**Nombre comercial: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

( se continua en página 1 )

- **Número(s) de identificación**
- **Número CE:** 231-791-2

### 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 aire fresco; eventualmente hacer respiración artificial, calor. Si los trastornos persisten, consultar al médico.*  
*Las personas desmayadas deben tenderse y transportarse de lado con la suficiente estabilidad.*
- **En caso de contacto con la piel:** *Por regla general, el producto no irrita la piel.*
- **En caso de con los ojos:**  
*Limpiar los ojos abiertos durante varios minutos con agua corriente. En caso de trastornos persistentes consultar un médico.*
- **En caso de ingestión:** *Consultar inmediatamente un médico.*
- **4.2 Principales síntomas y efectos, agudos y retardados** *No existen más datos relevantes disponibles.*
- **4.3 Indicación de toda atención médica y de los tratamientos especiales que deban dispensarse inmediatamente**  
*No existen más datos relevantes disponibles.*

### SECCIÓN 5: Medidas de lucha contra incendios

- **5.1 Medios de extinción**
- **Sustancias extintoras apropiadas:** *Combatir los incendios con medidas adaptados al ambiente circundante.*
- **5.2 Peligros específicos derivados de la sustancia o la mezcla** *No existen más datos relevantes disponibles.*
- **5.3 Recomendaciones para el personal de lucha contra incendios**
- **Equipo especial de protección:** *Colocarse la protección respiratoria.*

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

- **6.1 Precauciones personales, equipo de protección y procedimientos de emergencia** *No es necesario.*
- **6.2 Precauciones relativas al medio ambiente:** *Diluir con mucha agua.*
- **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 item 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.*  
*Evitar la formación de aerosoles.*
- **Prevención de incendios y explosiones:** *No se requieren medidas especiales.*

( se continua en página 3 )

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**Nombre comercial: POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

( se continua en página 2 )

- **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

- **8.1 Parámetros de control**
- **Instrucciones adicionales para el acondicionamiento de instalaciones técnicas:**  
Sin datos adicionales, ver punto 7.
- **Componentes con valores límite admisibles que deben controlarse en el puesto de trabajo:** Nulo.
- **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.  
Evitar el contacto con los ojos.  
Evitar el contacto con los ojos y la piel.
- **Protección respiratoria:**  
Si la exposición va a ser breve o de poca intensidad, colocarse una máscara respiratoria. Para una exposición más intensa o de mayor duración, usar un aparato de respiración autónomo.
- **Protección de manos:**



Guantes de protección

El material del guante deberá ser impermeable y resistente al producto / sustancia / preparado.  
Ante la ausencia de tests específicos, no se puede recomendar ningún material específico para guantes de protección contra el producto / preparado / mezcla de sustancias químicas.  
Selección del material de los guantes en función de los tiempos de rotura, grado de permeabilidad y degradación.

- **Material de los guantes**  
La elección del guante adecuado no depende únicamente del material, sino también de otras características de calidad, que pueden variar de un fabricante a otro.
- **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

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### SECCIÓN 9: Propiedades físicas y químicas

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

· **Datos generales**

· **Aspecto:**

**Forma:** Líquido

**Color:** Incoloro

· **Olor:** Característico

· **Umbral olfativo:** No determinado.

· **valor pH:** No determinado.

· **Cambio de estado**

**Punto de fusión/punto de congelación:** 0 °C

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

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

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

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

· **Temperatura de auto-inflamación:** No determinado.

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

· **Límites de explosión:**

**Inferior:** No determinado.

**Superior:** No determinado.

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

· **Densidad a 20 °C:** 1 g/cm<sup>3</sup>

· **Densidad relativa** No determinado.

· **Densidad de vapor** No determinado.

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

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

Completamente mezclable.

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

· **Viscosidad:**

**Dinámica a 20 °C:** 0,952 mPas

**Cinemática:** No determinado.

**Agua:** 99,9 %

**VOC (CE)** 0,00 %

**Contenido de cuerpos sólidos:** 0,0 %

· **9.2 Otros datos** No existen más datos relevantes disponibles.

### SECCIÓN 10: Estabilidad y reactividad

· **10.1 Reactividad** No existen más datos relevantes disponibles.

· **10.2 Estabilidad química**

· **Descomposición térmica / condiciones que deben evitarse:** No se descompone al emplearse adecuadamente.

· **10.3 Posibilidad de reacciones peligrosas** No se conocen reacciones peligrosas.

· **10.4 Condiciones que deben evitarse** No existen más datos relevantes disponibles.

· **10.5 Materiales incompatibles:** No existen más datos relevantes disponibles.

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# Ficha de datos de seguridad

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Nombre comercial: **POLY-L-LYSINE 0.1% AQUEOUS SOLUTION (MW= 30,000-70,000)**

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· **10.6 Productos de descomposición peligrosos:** No se conocen productos de descomposición peligrosos.

### SECCIÓN 11: Información toxicológica

- **11.1 Información sobre los efectos toxicológicos**
- **Toxicidad aguda** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **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**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Indicaciones toxicológicas adicionales:**
- **Efectos CMR (carcinogenicidad, mutagenicidad y toxicidad para la reproducción)**
- **Mutagenicidad en células germinales**  
A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Carcinogenicidad** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad para la reproducción** A la vista de los datos disponibles, no se cumplen los criterios de clasificación.
- **Toxicidad específica en determinados órganos (STOT) – exposición única**  
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:** Por regla general, no es peligroso para el agua
- **12.5 Resultados de la valoración PBT y mPmB**
- **PBT:** No aplicable.
- **mPmB:** No aplicable.
- **12.6 Otros efectos adversos** No existen más datos relevantes disponibles.

### SECCIÓN 13: Consideraciones relativas a la eliminación

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

ES

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# Ficha de datos de seguridad

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### SECCIÓN 14: Información relativa al transporte

#### · 14.1 Número ONU

· ADR *suprimido*  
 · IMDG, IATA UN3082

#### · 14.2 Designación oficial de transporte de las Naciones Unidas

· ADR *suprimido*  
 · IMDG ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
 LIQUID, N.O.S., MARINE POLLUTANT  
 · IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE,  
 LIQUID, N.O.S.

#### · 14.3 Clase(s) de peligro para el transporte

· ADR, ADN  
 · Clase *suprimido*

#### · IMDG, IATA



· Class 9 Materias y objetos peligrosos diversos  
 · Label 9

#### · 14.4 Grupo de embalaje

· ADR *suprimido*  
 · IMDG, IATA III

#### · 14.5 Peligros para el medio ambiente:

· Contaminante marino: Símbolo (pez y árbol)  
 · Marcado especial (IATA): Símbolo (pez y árbol)

· 14.6 Precauciones particulares para los usuarios No aplicable.  
 · Número EMS: F-A, S-

#### · 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.

· 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

· REGLAMENTO (UE) 2019/1148

· Anexo I - PRECURSORES DE EXPLOSIVOS RESTRINGIDOS (Valor límite superior a efectos de la concesión de licencias con arreglo al artículo 5, apartado 3)

ninguno de los componentes está incluido en una lista

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**Ficha de datos de seguridad**  
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· **Anexo II - PRECURSORES DE EXPLOSIVOS NOTIFICABLES**

ninguno de los componentes está incluido en una lista

· **Reglamento (CE) no 273/2004 sobre precursores de drogas**

ninguno de los componentes está incluido en una lista

· **Reglamento (CE) N o 111/2005 por el que establecen normas para la vigilancia del comercio de precursores de drogas entre la Comunidad y terceros países**

ninguno de los componentes está incluido en una lista

· **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.

· **Abreviaturas y acrónimos:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

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EINECS: European Inventory of Existing Commercial Chemical Substances

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PBT: Persistent, Bioaccumulative and Toxic

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