

Printing date 04/21/2023

Revision date 04/21/2023

Page 1/8

US

1 Identification

- · Product identifier
- · Trade name: <u>Glycerophosphorylethanolamine (sodium salt)</u>
- · Article number: 34460
- CAS Number: 883288-78-6
- **Application of the substance / the mixture** This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- Details of the supplier of the safety data sheet
 Manufacturer/Supplier: Cayman Chemical Co.
 1180 E. Ellsworth Rd.
- Ann Arbor, MI 48108 USA
- Information department: Product safety department
 Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

| Acute Toxicity - Oral 4H302 Harmful if swallowed.Acute Toxicity - Dermal 4H312 Harmful in contact with skin.Acute Toxicity - Inhalation 4H332 Harmful if inhaled.Skin Irritation 2H315 Causes skin irritation.Eye Irritation 2AH319 Causes serious eye irritation. | Classification of the substance or | nixture |
|--|--|---|
| Acute Toxicity - Dermal 4H312 Harmful in contact with skin.Acute Toxicity - Inhalation 4H332 Harmful if inhaled.Skin Irritation 2H315 Causes skin irritation.Eye Irritation 2AH319 Causes serious eye irritation. | GHS07 | |
| Acute Toxicity - Inhalation 4H332 Harmful if inhaled.Skin Irritation 2H315 Causes skin irritation.Eye Irritation 2AH319 Causes serious eye irritation. | Acute Toxicity - Oral 4 | H302 Harmful if swallowed. |
| Skin Irritation 2H315 Causes skin irritation.Eye Irritation 2AH319 Causes serious eye irritation. | Acute Toxicity - Dermal 4 | H312 Harmful in contact with skin. |
| Eye Irritation 2AH319 Causes serious eye irritation. | Acute Toxicity - Inhalation 4 | H332 Harmful if inhaled. |
| | Skin Irritation 2 | H315 Causes skin irritation. |
| Specific Torget Orgen Toxicity Single Expectes 2, U225 May course requiritant initiation | Eye Irritation 2A | H319 Causes serious eye irritation. |
| Specific Target Organ Toxicity - Single Exposure 5 H555 May cause respiratory initiation. | Specific Target Organ Toxicity - Singl | e Exposure 3 H335 May cause respiratory irritation. |

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

| Hazard pictog | rams (Contd. from page |
|---------------------|---|
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| | |
| | |
| GHS07 | |
| Signal word W | /arning |
| Hazard statem | |
| | 332 Harmful if swallowed, in contact with skin or if inhaled. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| Precautionary | |
| P261 | Avoid breathing dust/fume/gas/mist/vapors/spray |
| P264 | Wash thoroughly after handling. |
| P270 | Do not eat, drink or smoke when using this product. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301+P312 | If swallowed: Call a poison center/doctor if you feel unwell. |
| P330 | Rinse mouth. |
| P302+P352 | If on skin: Wash with plenty of water. |
| P321 | Specific treatment (see on this label). |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P305+P351+P3 | 338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, |
| | present and easy to do. Continue rinsing. |
| P332+P313 | If skin irritation occurs: Get medical advice/attention. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P337+P313 | If eye irritation persists: Get medical advice/attention. |
| P403+P233 | Store in a well-ventilated place. Keep container tightly closed. |
| P405 | Store locked up. |
| P501 | Dispose of contents/container in accordance with local/regional/national/internation |
| | regulations. |
| Classification | system: |
| NFPA ratings (| |
| | ealth = 3 |
| | re = 0 |
| | |
| | |
| HMIS-ratings (| (scale 0 - 4) |
| HEALTH 2 | lealth = 2 |
| | Fire = 0 |
| | Reactivity = 0 |
| | |
| A (1 1 1 | |

- · Other hazards
- · Results of PBT and vPvB assessment
- · **PBT:** Not applicable.
- **vPvB:** Not applicable.

US

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

(Contd. from page 2)

3 Composition/information on ingredients

- · Chemical characterization: Substances
- · CAS No. Description

883288-78-6 Glycerophosphorylethanolamine (sodium salt)

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: Immediately wash with water and soap and rinse thoroughly.
- 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.

- A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- · Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Ensure adequate ventilation.
- Reference to other sections See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- PAC-1: Substance is not listed.
- PAC-2: Substance is not listed.

(Contd. on page 4)

US -

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

(Contd. from page 3)

· PAC-3: Substance is not listed.

7 Handling and storage

- · Handling:
- **Precautions for safe handling** Thorough dedusting.
- Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- · 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 section 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 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.

(Contd. on page 5)

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

(Contd. from page 4) · Eye protection: Tightly sealed goggles 9 Physical and chemical properties · Information on basic physical and chemical properties General Information · Appearance: Form: Solid Color: Not determined. · Odor: Characteristic · Structural Formula C5H13NO6P • Na · Molecular Weight 237.1 g/mol · Odor threshold: Not determined. · pH-value: Not applicable. · Change in condition Melting point/Melting range: Undetermined. Boiling point/Boiling range: Undetermined. · Flash point: Not applicable. · Flammability (solid, gaseous): Product is not flammable. · Decomposition temperature: Not determined. · Ignition temperature: Not determined. Danger of explosion: Product does not present an explosion hazard. · Explosion limits: Lower: Not determined. Upper: Not determined. · Vapor pressure: Not applicable. · Density: Not determined. · Relative density Not determined. · Vapor density Not applicable. **Evaporation rate** Not applicable. · Solubility in / Miscibility with Water: Not determined. · Partition coefficient (n-octanol/water): Not determined. · Viscosity: **Dynamic:** Not applicable. **Kinematic:** Not applicable. SOLUBILITY Water: slightly soluble Other information No further relevant information available.

(Contd. on page 6)

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

(Contd. from page 5)

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: Strong oxidizing agents
- · Hazardous decomposition products:

Carbon monoxide, carbon dioxide, nitrogen oxides, oxides of phosphor

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
- Primary irritant effect:
- · on the skin: Irritant to skin and mucous membranes.
- · on the eye: Irritating effect.
- · Sensitization: No sensitizing effects known.
- · Additional toxicological information:
- · Carcinogenic categories
- · IARC (International Agency for Research on Cancer) Substance is not listed.
- · NTP (National Toxicology Program) Substance is not listed.
- · OSHA-Ca (Occupational Safety & Health Administration) Substance is not 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:
- Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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

(Contd. on page 7)

119

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

(Contd. from page 6)

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.

| 4 Transport information | |
|---|-----------------------------------|
| · UN-Number · DOT, IMDG, IATA | not regulated |
| · UN proper shipping name · DOT, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA · Class | not regulated |
| · Packing group · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| Transport in bulk according to Annex MARPOL73/78 and the IBC Code | k II of Not applicable. |
| · UN "Model Regulation": | not regulated |

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): Substance is not listed.
- Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.
- · Proposition 65
- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.

(Contd. on page 8)

US

Printing date 04/21/2023

Revision date 04/21/2023

Trade name: Glycerophosphorylethanolamine (sodium salt)

(Contd. from page 7)

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

16 Other information

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

- · Department issuing SDS: Environment protection department.
- · Contact: -

 Date of preparation / last revision 04/21/2023 · Abbreviations and acronyms: IMDG: International Maritime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association 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 NIOSH: National Institute for Occupational Safety OSHA: Occupational Safety & Health TLV: Threshold Limit Value PEL: Permissible Exposure Limit REL: Recommended Exposure Limit Acute Toxicity - Oral 4: Acute toxicity - Category 4 Skin Irritation 2: Skin corrosion/irritation - Category 2 Eye Irritation 2A: Serious eye damage/eye irritation - Category 2A Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) - Category 3 * * Data compared to the previous version altered.