1 Identification

- **Product identifier**
- **Trade name:** Penicillin G potassium salt
- **Article number:** 100543
- **CAS Number:** 113-98-4
- **EC number:** 204-038-0
- **Molecular Formula:** C16 H17 N2 O4 S K
- **Molecular Weight:** 372.48
- **Application of the substance / the mixture** For Research Use Only

- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:** MP Biomedicals, LLC
  29525 Fountain Parkway
  Solon, OH 44139
  United States
  www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

2 Hazard(s) identification

- **Classification of the substance or mixture**
  - **GHS08 Health hazard**
  - **Resp. Sens. 1 H334** May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  - **Skin Sens. 1 H317** May cause an allergic skin reaction.

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

- **Hazard pictograms**
  - **GHS08**

- **Signal word** Danger
- **Hazard statements**
  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  May cause an allergic skin reaction.

- **Precautionary statements**
  [In case of inadequate ventilation] wear respiratory protection.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wear protective gloves.
  Contaminated work clothing must not be allowed out of the workplace.
  Specific treatment (see on this label).
Trade name: Penicillin G potassium salt

(Contd. of page 1)

If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Wash contaminated clothing before reuse. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If skin irritation or rash occurs: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 2
    - Fire = 0
    - Reactivity = 0

- HMIS-ratings (scale 0 - 4)
  - HEALTH
    - Health = *2
  - FIRE
    - Fire = 0
  - REACTIVITY
    - Reactivity = 0

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

3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  - 113-98-4 Penicillin G potassium salt
- Identification number(s)
  - EC number: 204-038-0

4 First-aid measures

- Description of first aid measures
  - After inhalation:
    - Supply fresh air and to be sure call for a doctor.
    - If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.
  - After skin contact:
    - Wash off with soap and plenty of water. Consult a Doctor.
  - After eye contact:
    - Flush eyes with running water as a precaution.
  - After swallowing:
    - If symptoms persist consult doctor.
  - Information for doctor
  - Most important symptoms and effects, both acute and delayed
    - No further relevant information available.
  - Indication of any immediate medical attention and special treatment needed
    - No further relevant information available.

5 Fire-fighting measures

- Extinguishing media
- Suitable extinguishing agents:
  - Use fire fighting measures that suit the environment.
- Special hazards arising from the substance or mixture
  - No further relevant information available.
Trade name: Penicillin G potassium salt

6 Accidental release measures

- **Advice for firefighters**
  - **Protective equipment:** No special measures required.

- **Personal precautions, protective equipment and emergency procedures**
  - Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
  - For personal protection see section 8.

- **Environmental precautions:** Do not allow to enter sewers/surface or ground water.

- **Methods and material for containment and cleaning up:**
  - Pick up mechanically, dispose contaminated material as waste according to Section 13. Ensure adequate ventilation.

- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
  - See Section 13 for disposal information.

- **Protective Action Criteria for Chemicals**
  - **PAC-1:** Substance is not listed.
  - **PAC-2:** Substance is not listed.
  - **PAC-3:** Substance is not listed.

7 Handling and storage

- **Handling:**
  - **Precautions for safe handling**
    - Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage:** 2 - 8 °C
  - **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Further information about storage conditions:**
  - **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.

- **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.
Trade name: Penicillin G potassium salt

- **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:** Not required.

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### 9 Physical and chemical properties

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

  - **General Information**

    - **Appearance:**
      
      - Form: Powder
      - Color: White
      - Odor: Indeterminate
      - Odor threshold: Not determined.

    - **pH-value:** Not applicable.

  - **Change in condition**

    - Boiling point/Boiling range: Undetermined.

  - **Flash point:** Not applicable.

  - **Flammability (solid, gaseous):** Product is not flammable.

  - **Ignition temperature:**

    - Decomposition temperature: Not determined.

    - Auto igniting: Not determined.

  - **Danger of explosion:**

    - Explosion limits:
      
      - Lower: Not Applicable
      - Upper: Not Applicable

    - Vapor pressure: Not applicable.

    - Density: Not Applicable

    - Relative density: Not determined.

    - Vapor density: Not applicable.

    - Evaporation rate: Not applicable.

  - **Solubility in / Miscibility with**

    - Water: Soluble.

    - Not Determined

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Trade name: Penicillin G potassium salt

- Partition coefficient (n-octanol/water): Not determined.
- Viscosity:
  - Dynamic: Not applicable.
  - Kinematic: Not applicable.
- Other information: No further relevant information available.

10 Stability and reactivity

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

11 Toxicological information

- Information on toxicological effects
- Acute toxicity:
  - LD/LC50 values that are relevant for classification:
    | Oral  | LD50    |
    |       | (mg/kg) |
    |       | (mouse)|
    |       | 6257   |
    |       | (mouse)|
    |       | 8900   |
    |       | (rat)  |
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: Irritant and potentially harmful
- Sensitization:
  - Sensitization possible through inhalation.
  - Sensitization possible through skin contact.
- 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.
44.3.4. Results of PBT and vPvB assessment

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

44.3.5. Other adverse effects

No further relevant information available.

13 Disposal considerations

- Waste treatment methods
  - Recommendation:
  Can not be disposed together with household garbage. Do not allow product to reach sewage system.

- Uncleaned packagings:
  - Recommendation: Discard must be made according to official regulations.
  - Recommended cleansing agent: Water, if necessary with cleaning agents.

14 Transport information

- UN-Number
  - DOT, ADR, ADN, IMDG, IATA: Not regulated

- UN proper shipping name
  - DOT, ADR, ADN, IMDG, IATA: Not regulated

- Transport hazard class(es)
  - DOT, ADR, ADN, IMDG, IATA: Not regulated
  - Class: Not regulated

- Packing group
  - DOT, ADR, IMDG, IATA: Not regulated

- Environmental hazards: Not applicable.

- Special precautions for user: Not applicable.

- Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

- UN "Model Regulation": Not regulated

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - 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 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.
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- TLV (Threshold Limit Value established by ACGIH) Substance is not listed.
- NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms

GHS08

- Signal word Danger
- Hazard statements
  May cause allergy or asthma symptoms or breathing difficulties if inhaled.
  May cause an allergic skin reaction.
- Precautionary statements
  [In case of inadequate ventilation] wear respiratory protection.
  Avoid breathing dust/fume/gas/mist/vapors/spray
  Wear protective gloves.
  Contaminated work clothing must not be allowed out of the workplace.
  Specific treatment (see on this label).
  If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
  Wash contaminated clothing before reuse.
  If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
  If skin irritation or rash occurs: Get medical advice/attention.
  IF ON SKIN: Wash with plenty of water.
  Dispose of contents/container in accordance with local/regional/national/international regulations.
- Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

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

- Department issuing SDS: Quality Control Dept.
- Date of preparation / last revision 05/22/2017 / -
- Abbreviations and acronyms:
  ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  IMDG: International Maritime Code for Dangerous Goods
  DOT: US Department of Transportation
  IATA: International Air Transport Association
  ACGIH: American Conference of Governmental Industrial Hygienists
  EINECS: European Inventory of Existing Commercial Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  NFPA: National Fire Protection Association (USA)
  HMIS: Hazardous Materials Identification System (USA)
  LC50: Lethal concentration, 50 percent
  LD50: Lethal dose, 50 percent
  PBT: Persistent, Bioaccumulative and Toxic
  vPvB: very Persistent and very Bioaccumulative
  NIOSH: National Institute for Occupational Safety
  OSHA: Occupational Safety & Health
  TLV: Threshold Limit Value
  PEL: Permissible Exposure Limit
  REL: Recommended Exposure Limit
  Resp. Sens. 1: Respiratory sensitisation – Category 1
  Skin Sens. 1: Skin sensitisation – Category 1