

# Safety data sheet

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

Printing date 03.05.2018

Version number 3

Revision: 03.05.2018

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

- **1.1 Product identifier**
- **Trade name:** Penicillin G-K-salt
- **Synonyma** Benzylpenicillin potassium
- **Article number:** 31749
- **CAS Number:**  
113-98-4
- **EC number:**  
204-038-0
- **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:**  
SERVA Electrophoresis GmbH  
Carl-Benz-Str. 7  
D-69115 Heidelberg  
Tel.: +49 6221 13840-0  
FAX: +49 6221 13840-10  
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **1.4 Emergency telephone number:**  
Medical Emergency Information in case of poisoning:  
Poison Information Center Mainz - Phone: +49 (0) 6131 19240  
(advisory service in German or English language)



### SECTION 2: Hazards identification

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



GHS07

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

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard statements**  
H317 May cause an allergic skin reaction.
- **Precautionary statements**  
P261 Avoid breathing dust.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352 IF ON SKIN: Wash with plenty of water.  
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
P362+P364 Take off contaminated clothing and wash it before reuse.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.

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· **vPvB:** vPvB - assessment not available.**SECTION 3: Composition/information on ingredients**

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description:**  
113-98-4 Potassium [2S-(2α,5α,6β)]-3,3-dimethyl-7-oxo-6-(phenylacetamido)-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate
- **Identification number(s):**
- **EC number:** 204-038-0
- **Description:**
- **Empirical formula:** C<sub>16</sub> H<sub>17</sub> N<sub>2</sub> O<sub>4</sub> S K
- **MW:** 372.5

**SECTION 4: First aid measures**

- **4.1 Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact**  
Immediately wash with water and soap and rinse thoroughly.  
If skin irritation continues, consult a doctor.
- **After eye contact**  
Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist In case of complaints.
- **After swallowing** Wash out mouth. Seek medical advice if discomfort occurs.
- **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**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be formed, but not limited to:  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides (SO<sub>x</sub>)  
Carbon monoxide and carbon dioxide  
Potassium oxides
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

**SECTION 6: Accidental release measures**

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid formation of dust.  
Avoid contact with the eyes and skin.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Dispose contaminated material as waste according to item 13.
- **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**  
Prevent formation of dust.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store at +2 to +8 °C
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Keep receptacle tightly sealed and store in dry conditions.
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **8.1 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.
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**  
The usual precautionary measures should be adhered to when handling chemicals.
- **Breathing equipment:**  
Short term filter device:  
Filter P2.
- **Protection of hands:**  
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.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**  
Natural rubber, NR  
Nitrile rubber, NBR
- **Eye protection:** Safety glasses

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· **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

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

##### · General Information

##### · Appearance:

Form:	Powder
Colour:	White
Odour:	Odourless

· **pH-value (100 g/l) at 20 °C:** 5.5 - 7.5

##### · Change in condition

Melting point/freezing point:	ca. 210 °C
Initial boiling point and boiling range:	undetermined

· **Flash point:** Not applicable· **Flammability (solid, gaseous)** Product is not flammable.· **Explosive properties:** Product does not present an explosion hazard.· **Density at 20 °C:** 0.4 g/cm<sup>3</sup>· **Bulk density at 20 °C:** ca. 300 kg/m<sup>3</sup>

· **Solubility in / Miscibility with**  
**Water at 20 °C:** 100 g/l

· **Partition coefficient: n-octanol/water:** 1.83 log POW· **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant informations available· **10.2 Chemical stability**· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **10.3 Possibility of hazardous reactions**

As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion

Reacts with acids and oxidizers

· **10.4 Conditions to avoid** No further relevant information available.· **10.5 Incompatible materials:**Avoid contact with:  
heavy metal salts· **10.6 Hazardous decomposition products:** In case of fire: See Section 5

### SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**· **Acute toxicity** Based on available data, the classification criteria are not met.· **LD/LC50 values that are relevant for classification:**

Oral	LD50	8900 mg/kg (rat)
	LC50/96h	> 500 mg/l (Forelle)

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

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- **Respiratory or skin sensitisation**  
May cause an allergic skin reaction.
- **Sensitisation** Sensitization test (guinea pig): positive (IUCLID)
- **CMR effects (carcinogenity, 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:**

EC50/48h	> 1000 mg/l (Daphnia magna)
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- **12.2 Persistence and degradability** No further relevant information available.

##### · **Other information:**

The product is biodegradable.  
75 % in 25 h

#### · 12.3 Bioaccumulative potential

Due to the distribution coefficient n-octanol/water a worth-mentioning accumulation in organisms is not expected.

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

##### · **Additional ecological information:**

##### · **General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow product to reach ground water, water course or sewage system.

#### · 12.5 Results of PBT and vPvB assessment

- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

#### · 13.1 Waste treatment methods

##### · **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
Disposal must be made according to official regulations.

##### · **Uncleaned packagings:**

##### · **Recommendation:**

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

### SECTION 14: Transport information

#### · 14.1 UN-Number

ADR, ADN, IMDG, IATA	Void
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#### · 14.2 UN proper shipping name

ADR, ADN, IMDG, IATA	Void
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· <b>14.3 Transport hazard class(es)</b>	
· <b>ADR, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>Label</b>	-
· <b>ADN/R Class:</b>	Void
· <b>14.4 Packing group</b>	
· <b>ADR, IMDG, IATA</b>	Void
· <b>14.5 Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>14.6 Special precautions for user</b>	Not applicable.
· <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	Not dangerous according to the above specifications.
· <b>UN "Model Regulation":</b>	Void

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### **SECTION 15: Regulatory information**

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **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.*

- **Department issuing SDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - PBT: persistent, bioaccumulative, toxic substance (REACH)
  - vPvB: very persistent, very bioaccumulative substance (REACH)
  - REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
  - CLP: Regulation on classification, labelling and packaging of substances and mixtures
  - ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Skin Sens. 1: Skin sensitisation – Category 1
- **\* Data compared to the previous version altered.**

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