

**Safety data sheet**  
according to Regulation (EC) No 1907/2006, Article 31

Printing date 14.02.2025

Version number 4 (replaces version 3)

Revision: 14.02.2025

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

- **1.1 Product identifier**
- **Trade name:** Polymyxin-B-sulfate
- **Article number:** 47976
- **CAS Number:**  
1405-20-5
- **EC number:**  
215-774-7
- **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:** Security Department Phone: +49 6221 13840-35
- **1.4 Emergency telephone number:**  
Emergency medical information in case of poisoning  
Poison Information Centre Mainz-Tel: +49 (0) 6131 19240  
(Counselling in German and English)

**SERVA**  
■ serving scientists ■

**SECTION 2: Hazards identification**

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008:**  
The substance is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms:** GHS07
- **Signal word:** Warning
- **Hazard statements:**  
H302 Harmful if swallowed.
- **Precautionary statements**
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P330 Rinse mouth.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment:**
- **PBT:** PBT - Assessment not available.
- **vPvB:** vPvB - Assessment not available.

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· **Determination of endocrine-disrupting properties** No further relevant information available.

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description:**  
1405-20-5 Polymyxin B, sulfate (salt)
- **Identification number(s):**
- **EC number:** 215-774-7

### 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; consult doctor in case of complaints.
- **After skin contact:**  
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **After eye contact:**  
Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**  
Rinse out mouth and consult a doctor.  
Do not induce vomiting!
- **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:**  
Formation of hazardous vapours and gases possible during heating or in case of fire.  
In case of fire, the following can be formed, but not limited to:  
Carbon monoxide and carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.
- **Additional information**  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Wear protective clothing.  
Ensure adequate ventilation  
Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**  
Dispose contaminated material as waste according to section 13.

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*Pick up mechanically.*

· **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 dust.*

· **Information about protection against explosions and fires:** *Keep ignition sources away - Do not smoke.*

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage**

· **Requirements to be met by storerooms and receptacles:**

*Store only in the original receptacle.*

*Storage at +2 to +8 °C*

· **Information about storage in one common storage facility:** *Not required.*

· **Further information about storage conditions:**

*This product is hygroscopic.*

*Protect from exposure to the light.*

*Store containers tightly closed and dry.*

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

**SECTION 8: Exposure controls/personal protection**

· **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**

· **Appropriate engineering controls:** *No further data; see section 7.*

· **Individual protection measures, such as personal protective equipment:**

· **General protective and hygienic measures:**

*Keep away from foodstuffs, beverages and feed.*

*Store protective clothing separately.*

*Immediately remove all soiled and contaminated clothing*

*Avoid contact with the eyes and skin.*

*Wash hands before breaks and at the end of work.*

· **Breathing equipment:**

*Short term filter device:*

*Filter P2.*

· **Hand protection:**

*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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- **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/face protection:** Safety glasses
- **Body protection:** Protective work clothing.

### SECTION 9: Physical and chemical properties

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

##### · General Information:

- |  |                          |
|--|--------------------------|
| · <b>Physical state:</b>   | Solid.                   |
| · <b>Colour:</b>   | white to almost white    |
| · <b>Odour:</b>  | Recognisable             |
| · <b>Odour threshold:</b>  | not determined.          |
| · <b>Melting point/freezing point:</b>                             | No information available |
| · <b>Boiling point or initial boiling point and boiling range:</b> | No information available |
| · <b>Flammability:</b>   | No information available |
| · <b>Lower and upper explosion limit:</b>                          |                          |
| · <b>Lower:</b>  | No information available |
| · <b>Upper:</b>  | No information available |
| · <b>Flash point:</b>  | No information available |
| · <b>Auto-ignition temperature:</b>                                | no information available |
| · <b>Decomposition temperature:</b>                                | No information available |
| · <b>pH:</b>   | 5-7                      |
| · <b>Viscosity:</b>  |                          |
| · <b>Kinematic viscosity:</b>                                      | No information available |
| · <b>Dynamic viscosity:</b>  | No information available |
| · <b>Solubility:</b>   |                          |
| · <b>Water:</b>  | Soluble                  |
| · <b>Partition coefficient n-octanol/water (log value):</b>        | No information available |
| · <b>Vapour pressure:</b>  | No information available |
| · <b>Density and/or relative density:</b>                          |                          |
| · <b>Density:</b>  | No information available |
| · <b>Relative density:</b>   | No information available |
| · <b>Particle characteristics</b>                                  | No information available |

#### · 9.2 Other information

- |  |   |
|--|---|
| · <b>Appearance:</b>   |   |
| · <b>Form:</b>   | Powder  |
| · <b>Important information on protection of health and environment, and on safety:</b> |   |
| · <b>Explosive properties:</b>   | The product is not explosive, but the formation of explosive dust/air mixtures is possible. |

### 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:**  
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion
- **10.4 Conditions to avoid:**  
Avoid high temperatures, flames and sparks

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Humidity

Exposure to light

- **10.5 Incompatible materials:** Avoid contact with strong oxidising agents.
- **10.6 Hazardous decomposition products:** In case of fire: see section 5

**SECTION 11: Toxicological information**

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**
- **Acute toxicity:** Harmful if swallowed.

- **LD/LC50 values that are relevant for classification:**

Oral	LD50	790 mg/kg (mouse)
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- **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **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.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

**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.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
- Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

**SECTION 13: Disposal considerations**

- **13.1 Waste treatment methods**
- **Recommendation**
- Dispose of in accordance with official regulations.
- Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:**
- Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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**SECTION 14: Transport information**

· 14.1 UN number or ID number · ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class:	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

**SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Poisons Act
- Regulated explosives precursors Substance is not listed.
- Regulated poisons Substance is not listed.
- Reportable explosives precursors Substance is not listed.
- Reportable poisons Substance is not listed.
- Directive 2012/18/EU
- Named dangerous substances - ANNEX I Substance is not listed.
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II  
Substance is not listed.
- REGULATION (EU) 2019/1148
- Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))  
Substance is not listed.
- Annex II - REPORTABLE EXPLOSIVES PRECURSORS Substance is not listed.
- Regulation (EC) No 273/2004 on drug precursors Substance is not listed.
- Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors  
Substance is not listed.
- 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

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· **Contact:** +49 6221 13840-35

· **Date of previous version:** 22.02.2022

· **Version number of previous version:** 3

· **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 (UK REACH)*

*vPvB: very persistent, very bioaccumulative substance (UK REACH)*

*UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals*

*GB CLP: Regulation on classification, labelling and packaging of substances and mixtures*

*bw: body weight*

*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)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*PBT: Persistent, Bioaccumulative and Toxic*

*vPvB: very Persistent and very Bioaccumulative*

*Acute Tox. 4: Acute toxicity – Category 4*

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