SAFETY DATA SHEET
according to Regulation (EC) No. 1907/2006

Date of issue: 26.09.2016
Version 1.0

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier
Catalogue No. 543687
Product name Penicillin/Streptomycin A221
REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses Antibiotic
For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet
Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department EQ-RS * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number
Please contact the regional company representation in your country.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture
This mixture is not classified as dangerous according to European Union legislation.

2.2 Label elements
Labelling (REGULATION (EC) No 1272/2008)
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

Safety data sheet available on request.

2.3 Other hazards
None known.
SECTION 3. Composition/information on ingredients

Chemical nature: Aqueous solution of inorganic and organic compounds.

3.1 Substance
Not applicable

3.2 Mixture

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical Name (Concentration)

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>Registration number</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>streptomycin sulphate (&gt;= 1 % - &lt; 3 %)</td>
<td>3810-74-0 *)</td>
<td>Acute toxicity, Category 4, H302 Reproductive toxicity, Category 2, H361fd</td>
</tr>
</tbody>
</table>

*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

4.2 Most important symptoms and effects, both acute and delayed

We have no description of any toxic symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.
SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.
Ambient fire may liberate hazardous vapours.

5.3 Advice for firefighters

Special protective equipment for firefighters
In the event of fire, wear self-contained breathing apparatus.

Further information
Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.
6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses
Hand protection

full contact:
Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

splash contact:
Glove material: Nitrile rubber
Glove thickness: 0,11 mm
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Respiratory protection

Not required; except in case of aerosol formation.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form liquid

Colour clear

Odour No strong odour known.

Odour Threshold No information available.

pH No information available.
Melting point  
No information available.

Boiling point  
No information available.

Flash point  
Not applicable

Evaporation rate  
No information available.

Flammability (solid, gas)  
No information available.

Lower explosion limit  
No information available.

Upper explosion limit  
No information available.

Vapour pressure  
No information available.

Relative vapour density  
No information available.

Density  
No information available.

Relative density  
No information available.

Water solubility  
at 20 °C  
soluble

Partition coefficient: n-octanol/water  
No information available.

Auto-ignition temperature  
No information available.

Decomposition temperature  
No information available.

Viscosity, dynamic  
No information available.

Explosive properties  
Not classified as explosive.

Oxidizing properties  
none

9.2 Other data
SECTION 10. Stability and reactivity

10.1 Reactivity
   See section 10.3

10.2 Chemical stability
   The product is chemically stable under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions
   Violent reactions possible with:
   The generally known reaction partners of water.

10.4 Conditions to avoid
   no information available

10.5 Incompatible materials
   no information available

10.6 Hazardous decomposition products
   no information available

SECTION 11. Toxicological information

11.1 Information on toxicological effects
   Mixture

   Acute oral toxicity
   Acute toxicity estimate: > 2.000 mg/kg
   Calculation method

   Acute inhalation toxicity
   This information is not available.

   Acute dermal toxicity
   This information is not available.

   Skin irritation
   This information is not available.
Eye irritation
This information is not available.

Sensitisation
This information is not available.

Germ cell mutagenicity
This information is not available.

Carcinogenicity
This information is not available.

Reproductive toxicity
This information is not available.

Teratogenicity
This information is not available.

Specific target organ toxicity - single exposure
This information is not available.

Specific target organ toxicity - repeated exposure
This information is not available.

Aspiration hazard
This information is not available.

11.2 Further information
Hazardous properties cannot be excluded, but are relatively improbable due to the low concentration of the dissolved substance(s).
Handle in accordance with good industrial hygiene and safety practice.

Components

streptomycin sulphate

Acute oral toxicity
LD50 Rat: 430 mg/kg
(Lit.)

SECTION 12. Ecological information

Mixture

12.1 Toxicity
No information available.

12.2 Persistence and degradability
12.3 Bioaccumulative potential
No information available.

12.4 Mobility in soil
No information available.

12.5 Results of PBT and vPvB assessment
Substance(s) in the mixture do(es) not meet the criteria for PBT or vPvB according to Regulation (EC) No 1907/2006, Annex XIII, or a PBT/vPvB assessment was not conducted.

12.6 Other adverse effects
Discharge into the environment must be avoided.

Components
streptomycin sulphate

Toxicity to fish
LC50 Oncorhynchus mykiss (rainbow trout): > 180 mg/l; 96 h
(Lit.)

Toxicity to daphnia and other aquatic invertebrates
EC50 Ceriodaphnia (water flea): 487 mg/l; 48 h
(Lit.)

SECTION 13. Disposal considerations

Waste treatment methods
See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)
14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Inland waterway transport (ADN)
Not relevant

Air transport (IATA)
SAFETY DATA SHEET
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14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)
14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III
Legislation Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated


Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of ≥ 0.1 % (w/w).

National legislation

Storage class 10 - 13

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.
SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H302  Harmful if swallowed.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

Training advice
Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet
Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation
This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.