# SAFETY DATA SHEET

# Kanamycin Acid Sulfate Formulation

| Version | Revision Date: | SDS Number: | Date of last issue: 25.10.2023 |
|---|---|---|---|
| 3.0 | 15.12.2023 | 11272710-00004 | Date of first issue: 18.09.2023 |

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

### 1.1 Product identifier

Trade name : Kanamycin Acid Sulfate Formulation

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

### 1.3 Details of the supplier of the safety data sheet

Company : MSD
20 Spartan Road
1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

### 1.4 Emergency telephone number

+1-908-423-6000

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

| | |
|---|---|
| Specific target organ toxicity - repeated exposure, Category 1 | H372: Causes damage to organs through prolonged or repeated exposure. |
| Short-term (acute) aquatic hazard, Category 1 | H400: Very toxic to aquatic life. |
| Long-term (chronic) aquatic hazard, Category 1 | H410: Very toxic to aquatic life with long lasting effects. |

### 2.2 Label elements

**Labelling (REGULATION (EC) No 1272/2008)**

Hazard pictograms :

Signal word : Danger

Hazard statements : H372 Causes damage to organs through prolonged or repeated exposure.

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**

P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.

**Response:**

P314 Get medical advice/ attention if you feel unwell.
P391 Collect spillage.

Hazardous components which must be listed on the label:
Kanamycin acid sulfate

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

**Components**

| Chemical name | CAS-No.<br>EC-No.<br>Index-No.<br>Registration number | Classification | Concentration (% w/w) |
|---|---|---|---|
| Kanamycin acid sulfate | 64013-70-3 | STOT RE 1; H372 (Auditory system)<br>Aquatic Acute 1; H400<br>Aquatic Chronic 1; H410<br>———————<br>M-Factor (Acute aquatic toxicity): 10 | >= 20 - < 25 |
| Phenol | 108-95-2<br>203-632-7<br>604-001-00-2 | Acute Tox. 3; H301<br>Acute Tox. 3; H331<br>Acute Tox. 3; H311<br>Skin Corr. 1B; H314<br>Eye Dam. 1; H318<br>Muta. 2; H341<br>STOT RE 2; H373 (Central nervous system, Kidney, Liver, Skin)<br>Aquatic Chronic 2; H411 | >= 0,1 - < 0,25 |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash with water and soap as a precaution.
Get medical attention if symptoms occur.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

### 4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes damage to organs through prolonged or repeated exposure.

### 4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : None known.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides

### 5.3 Advice for firefighters

| | | |
|---|---|---|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus.<br>Use personal protective equipment. |
| Specific extinguishing methods | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so.<br>Evacuate area. |

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

| | | |
|---|---|---|
| Personal precautions | : | Use personal protective equipment.<br>Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8). |

### 6.2 Environmental precautions

| | | |
|---|---|---|
| Environmental precautions | : | Avoid release to the environment.<br>Prevent further leakage or spillage if safe to do so.<br>Prevent spreading over a wide area (e.g. by containment or oil barriers).<br>Retain and dispose of contaminated wash water.<br>Local authorities should be advised if significant spillages cannot be contained. |

### 6.3 Methods and material for containment and cleaning up

| | | |
|---|---|---|
| Methods for cleaning up | : | Soak up with inert absorbent material.<br>For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.<br>Clean up remaining materials from spill with suitable absorbent.<br>Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.<br>Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. |

### 6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

| | | |
|---|---|---|
| Technical measures | : | See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section. |
| Local/Total ventilation | : | Use only with adequate ventilation. |
| Advice on safe handling | : | Do not breathe mist or vapours. |

Do not swallow.
Avoid contact with eyes.
Avoid prolonged or repeated contact with skin.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Do not eat, drink or smoke when using this product.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Store in accordance with the particular national regulations.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Self-reactive substances and mixtures
Organic peroxides
Explosives
Gases

### 7.3 Specific end use(s)

Specific use(s) : No data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

**Occupational Exposure Limits**

| Components | CAS-No. | Value type (Form of exposure) | Control parameters | Basis |
|---|---|---|---|---|
| Kanamycin acid sulfate | 64013-70-3 | TWA | 100 µg/m3 (OEB 2) | Internal |
| Phenol | 108-95-2 | OEL-RL | 10 ppm | ZA OEL |
| | Further information: danger of cutaneous absorption, Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents | | | |
| | | TWA | 2 ppm<br>8 mg/m3 | 2009/161/EU |
| | | STEL | 4 ppm<br>16 mg/m3 | 2009/161/EU |

**Biological occupational exposure limits**

| Substance name | CAS-No. | Control parameters | Sampling time | Basis |
|---|---|---|---|---|
| Phenol | 108-95-2 | Phenol: 250 mg/g creatinine (Urine) | End of shift | ZA BEI |

**Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:**

| Substance name | End Use | Exposure routes | Potential health effects | Value |
|---|---|---|---|---|
| Phenol | Workers | Inhalation | Long-term systemic effects | 8 mg/m3 |
| | Workers | Inhalation | Acute local effects | 16 mg/m3 |
| | Workers | Skin contact | Long-term systemic effects | 1,23 mg/kg bw/day |
| | Consumers | Inhalation | Long-term systemic effects | 1,32 mg/m3 |
| | Consumers | Skin contact | Long-term systemic effects | 0,4 mg/kg bw/day |
| | Consumers | Ingestion | Long-term systemic effects | 0,4 mg/kg bw/day |

**Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:**

| Substance name | Environmental Compartment | Value |
|---|---|---|
| Phenol | Fresh water | 0,0077 mg/l |
| | Marine water | 0,00077 mg/l |
| | Intermittent use/release | 0,031 mg/l |
| | Sewage treatment plant | 2,1 mg/l |
| | Fresh water sediment | 0,0915 mg/kg |
| | Marine sediment | 0,00915 mg/kg |
| | Soil | 0,136 mg/kg |

## 8.2 Exposure controls

**Engineering measures**

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).
All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.
Laboratory operations do not require special containment.

**Personal protective equipment**

Eye/face protection : Wear safety glasses with side shields or goggles.
If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles.
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Hand protection
Material : Chemical-resistant gloves

Skin and body protection : Work uniform or laboratory coat.
Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.
Filter type : Particulates type (P)

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

| | | |
|---|---|---|
| Appearance | : | liquid |
| Colour | : | colourless |
| Odour | : | characteristic |
| Odour Threshold | : | No data available |
| pH | : | 3,5 - 5,5 |
| Melting point/freezing point | : | No data available |
| Initial boiling point and boiling range | : | No data available |
| Flash point | : | No data available |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Upper explosion limit / Upper flammability limit | : | No data available |
| Lower explosion limit / Lower flammability limit | : | No data available |
| Vapour pressure | : | No data available |
| Relative vapour density | : | No data available |
| Relative density | : | No data available |
| Density | : | 1,05 - 1,10 g/cm³ |
| Solubility(ies) | | |
| Water solubility | : | soluble |
| Partition coefficient: n-octanol/water | : | Not applicable |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, kinematic | : | No data available |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |

### 9.2 Other information

| | | |
|---|---|---|
| Flammability (liquids) | : | No data available |
| Molecular weight | : | No data available |

Particle size : Not applicable

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Not classified as a reactivity hazard.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

### 10.4 Conditions to avoid

Conditions to avoid : None known.

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

No hazardous decomposition products are known.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

**Acute toxicity**

Not classified based on available information.

**Product:**

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

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

**Components:**

**Kanamycin acid sulfate:**

Acute oral toxicity : LD50 (Rat): > 4.000 mg/kg

LD50 (Mouse): 12.000 mg/kg

LD50 (Rabbit): > 3.000 mg/kg

**Phenol:**

Acute oral toxicity : LD50 (Rat): 650 mg/kg
Method: OECD Test Guideline 401

Acute toxicity estimate (Humans): 140 - 290 mg/kg
Method: Expert judgement

Acute inhalation toxicity : LC0 (Rat): 0,9 mg/l
Exposure time: 8 h
Test atmosphere: dust/mist
Assessment: Corrosive to the respiratory tract.

Acute toxicity estimate (Humans): > 0,9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Expert judgement

Acute dermal toxicity : LD50 (Rabbit): 660 mg/kg
Method: OECD Test Guideline 402

Acute toxicity estimate (Humans): 300 mg/kg
Method: Expert judgement

**Skin corrosion/irritation**

Not classified based on available information.

**Components:**

**Kanamycin acid sulfate:**

Remarks : No data available

**Phenol:**

Species : Rabbit
Result : Corrosive after 3 minutes to 1 hour of exposure

**Serious eye damage/eye irritation**

Not classified based on available information.

**Components:**

**Kanamycin acid sulfate:**

Remarks : No data available

**Phenol:**

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irreversible effects on the eye

**Respiratory or skin sensitisation**

**Skin sensitisation**

Not classified based on available information.

**Respiratory sensitisation**

Not classified based on available information.

**Components:**

**Kanamycin acid sulfate:**

| | | |
|---|---|---|
| Test Type | : | Maximisation Test |
| Species | : | Guinea pig |
| Assessment | : | Did not cause sensitisation on laboratory animals. |
| Result | : | negative |

**Phenol:**

| | | |
|---|---|---|
| Test Type | : | Buehler Test |
| Exposure routes | : | Skin contact |
| Species | : | Guinea pig |
| Method | : | OECD Test Guideline 406 |
| Result | : | negative |

**Germ cell mutagenicity**

Not classified based on available information.

**Components:**

**Kanamycin acid sulfate:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Ames test<br>Result: negative<br><br>Test Type: mitotic recombination assay<br>Test system: Escherichia coli<br>Result: negative<br><br>Test Type: DNA Repair<br>Test system: Escherichia coli<br>Result: negative |
| Genotoxicity in vivo | : | Test Type: Micronucleus test<br>Species: Mouse<br>Cell type: Bone marrow<br>Result: negative |

**Phenol:**

| | | |
|---|---|---|
| Genotoxicity in vitro | : | Test Type: Chromosome aberration test in vitro<br>Method: OECD Test Guideline 473<br>Result: positive |
| Genotoxicity in vivo | : | Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) |

Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: positive
Remarks: Annex VI From 1272/2008

Germ cell mutagenicity- Assessment : Positive result(s) from in vivo mammalian somatic cell mutagenicity tests.

**Carcinogenicity**

Not classified based on available information.

**Components:**

**Phenol:**

| | | |
|---|---|---|
| Species | : | Mouse |
| Application Route | : | Ingestion |
| Exposure time | : | 103 weeks |
| Method | : | OECD Test Guideline 451 |
| Result | : | negative |

**Reproductive toxicity**

Not classified based on available information.

**Components:**

**Kanamycin acid sulfate:**

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Intravenous injection
Developmental Toxicity: 100 mg/kg body weight
Symptoms: No adverse effects

Test Type: reproductive and developmental toxicity study
Application Route: Intravenous injection
Developmental Toxicity: NOAEL: 400 mg/kg body weight
Symptoms: No adverse effects
Target Organs: Auditory system
Result: Post-natal toxicity

Test Type: Reproduction/Developmental toxicity screening test
Species: Guinea pig
Application Route: Intramuscular
Developmental Toxicity: NOAEL: > 100 mg/kg body weight
Target Organs: Auditory system
Remarks: Significant toxicity observed in testing

**Phenol:**

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 416
Result: negative

| | | |
|---|---|---|
| Effects on foetal development | : | Test Type: Embryo-foetal development<br>Species: Mouse<br>Application Route: Ingestion<br>Method: OECD Test Guideline 414<br>Result: negative |

**STOT - single exposure**

Not classified based on available information.

**STOT - repeated exposure**

Causes damage to organs through prolonged or repeated exposure.

**Components:**

**Kanamycin acid sulfate:**

| | | |
|---|---|---|
| Exposure routes | : | Oral |
| Target Organs | : | Auditory system |
| Assessment | : | Causes damage to organs through prolonged or repeated exposure. |

**Phenol:**

| | | |
|---|---|---|
| Target Organs | : | Central nervous system, Kidney, Liver, Skin |
| Assessment | : | May cause damage to organs through prolonged or repeated exposure. |

**Repeated dose toxicity**

**Components:**

**Kanamycin acid sulfate:**

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | TDlo = 12000 mg/kg |
| Application Route | : | Intraperitoneal |
| Exposure time | : | 30 d |
| Target Organs | : | Kidney, Ureter, Bladder |
| Remarks | : | Significant toxicity observed in testing |
| | | |
| Species | : | Dog |
| LOAEL | : | TDlo= 6500 mg/kg |
| Application Route | : | Subcutaneous |
| Exposure time | : | 17 d |
| Target Organs | : | Auditory system, Eye, Kidney, olfactory sense organs |
| Remarks | : | Significant toxicity observed in testing |
| | | |
| Species | : | Guinea pig |
| NOAEL | : | 100 mg/kg |
| LOAEL | : | > 200 mg/kg |
| Application Route | : | Intramuscular |
| Exposure time | : | 4 Weeks |
| Target Organs | : | Auditory system |
| Remarks | : | Significant toxicity observed in testing |
| | | |
| Species | : | Rabbit, male |

| | | |
|---|---|---|
| LOAEL | : | > 50 mg/kg |
| Application Route | : | Intramuscular |
| Exposure time | : | 30 d |
| Target Organs | : | Auditory system, Kidney |
| Remarks | : | Significant toxicity observed in testing |

**Phenol:**

| | | |
|---|---|---|
| Species | : | Rat |
| LOAEL | : | 300 mg/kg |
| Application Route | : | Ingestion |
| Exposure time | : | 90 Days |
| Method | : | OECD Test Guideline 408 |

| | | |
|---|---|---|
| Species | : | Rat |
| NOAEL | : | >= 0,1 mg/l |
| Application Route | : | inhalation (vapour) |
| Exposure time | : | 74 Days |

| | | |
|---|---|---|
| Species | : | Rabbit |
| LOAEL | : | 260 mg/kg |
| Application Route | : | Skin contact |
| Exposure time | : | 18 Days |

**Aspiration toxicity**

Not classified based on available information.

**Experience with human exposure**

**Components:**

**Kanamycin acid sulfate:**

| | | |
|---|---|---|
| General Information | : | Target Organs: Auditory system<br>Symptoms: Abdominal pain, altered taste, Dizziness<br>Remarks: The most common side effects are:<br>Target Organs: Kidney<br>Symptoms: Vomiting, skin rash, numbness |

## SECTION 12: Ecological information

### 12.1 Toxicity

**Components:**

**Kanamycin acid sulfate:**

| | | |
|---|---|---|
| Toxicity to fish | : | LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l<br>Exposure time: 96 h<br>Method: OECD Test Guideline 203 |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 100 mg/l<br>Exposure time: 48 h<br>Method: OECD Test Guideline 202 |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 0,74 mg/l |

Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 0,31 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC50 (blue-green algae): 0,03 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (blue-green algae): 0,01 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 : > 461 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

NOEC : 4,9 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209

**Ecotoxicology Assessment**

Acute aquatic toxicity : Very toxic to aquatic organisms.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

**Phenol:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 24,9 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Ceriodaphnia dubia (water flea)): 3,1 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Selenastrum capricornutum (green algae)): 61,1 mg/l
Exposure time: 96 h

Toxicity to microorganisms : IC50 (Nitrosomonas sp.): 21 mg/l
Exposure time: 24 h

Toxicity to fish (Chronic toxicity) : NOEC: 0,077 mg/l
Exposure time: 60 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 10 mg/l
Exposure time: 16 d
Species: Daphnia magna (Water flea)

### 12.2 Persistence and degradability

**Components:**

**Kanamycin acid sulfate:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

**Phenol:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 62 %
Exposure time: 10 d
Method: OECD Test Guideline 301C

### 12.3 Bioaccumulative potential

**Components:**

**Phenol:**

Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): 17,5
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 1,47

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

**Product:**

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

**Product:**

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes

| | | |
|---|---|---|
| | | are not product specific, but application specific.<br>Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.<br>Do not dispose of waste into sewer. |
| Contaminated packaging | : | Empty containers should be taken to an approved waste handling site for recycling or disposal.<br>If not otherwise specified: Dispose of as unused product. |

## SECTION 14: Transport information

### 14.1 UN number

| | | |
|---|---|---|
| **ADN** | : | UN 3082 |
| **ADR** | : | UN 3082 |
| **RID** | : | UN 3082 |
| **IMDG** | : | UN 3082 |
| **IATA** | : | UN 3082 |

### 14.2 UN proper shipping name

| | | |
|---|---|---|
| **ADN** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Kanamycin acid sulfate) |
| **ADR** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Kanamycin acid sulfate) |
| **RID** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Kanamycin acid sulfate) |
| **IMDG** | : | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.<br>(Kanamycin acid sulfate) |
| **IATA** | : | Environmentally hazardous substance, liquid, n.o.s.<br>(Kanamycin acid sulfate) |

### 14.3 Transport hazard class(es)

| | | Class | Subsidiary risks |
|---|---|---|---|
| **ADN** | : | 9 | |
| **ADR** | : | 9 | |
| **RID** | : | 9 | |
| **IMDG** | : | 9 | |
| **IATA** | : | 9 | |

### 14.4 Packing group

**ADN**

| | | |
|---|---|---|
| Packing group | : | III |
| Classification Code | : | M6 |
| Hazard Identification Number | : | 90 |

Labels : 9

**ADR**
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

**RID**
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

**IMDG**
Packing group : III
Labels : 9
EmS Code : F-A, S-F

**IATA (Cargo)**
Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

**IATA (Passenger)**
Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

### 14.5 Environmental hazards

**ADN**
Environmentally hazardous : yes

**ADR**
Environmentally hazardous : yes

**RID**
Environmentally hazardous : yes

**IMDG**
Marine pollutant : yes

**IATA (Passenger)**
Environmentally hazardous : yes

**IATA (Cargo)**
Environmentally hazardous : yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

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

**The components of this product are reported in the following inventories:**

AICS : not determined

DSL : not determined

IECSC : not determined

### 15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

**Full text of H-Statements**

H301 : Toxic if swallowed.
H311 : Toxic in contact with skin.
H314 : Causes severe skin burns and eye damage.
H318 : Causes serious eye damage.
H331 : Toxic if inhaled.
H341 : Suspected of causing genetic defects.
H372 : Causes damage to organs through prolonged or repeated exposure if swallowed.
H373 : May cause damage to organs through prolonged or repeated exposure.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.

**Full text of other abbreviations**

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Eye Dam. : Serious eye damage
Muta. : Germ cell mutagenicity
Skin Corr. : Skin corrosion
STOT RE : Specific target organ toxicity - repeated exposure
2009/161/EU : Europe. COMMISSION DIRECTIVE 2009/161/EU establishing a third list of indicative occupational exposure limit values in implementation of Council Directive 98/24/EC and amending Commission Directive 2000/39/EC
ZA BEI : South Africa. The Regulations for Hazardous Chemical Agents, Biological Exposure Indices

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|---|---|---|
| ZA OEL | : | South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits |
| 2009/161/EU / TWA | : | Limit Value - eight hours |
| 2009/161/EU / STEL | : | Short term exposure limit |
| ZA OEL / OEL-RL | : | Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts) |

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

**Further information**

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| Sources of key data used to compile the Safety Data Sheet | : | Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/ |

| **Classification of the mixture:** | | **Classification procedure:** |
|---|---|---|
| STOT RE 1 | H372 | Calculation method |
| Aquatic Acute 1 | H400 | Calculation method |
| Aquatic Chronic 1 | H410 | Calculation method |

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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