according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

Version Revision Date: SDS Number: Date of last issue: 2023/04/04 5.6 2023/09/30 2449584-00022 Date of first issue: 2018/02/13

#### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochlo-

ride / Piroxicam Liquid Formulation

Manufacturer or supplier's details

Company : MSD

Address : No. 485 Jing Tai Road

Pu Tuo District - Shanghai - China 200331

Telephone : +1-908-740-4000

Emergency telephone number : 86-571-87268110

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product Restrictions on use : Not applicable

#### 2. HAZARDS IDENTIFICATION

#### **Emergency Overview**

Appearance : liquid

Colour: No data availableOdour: No data available

May be harmful if swallowed. May cause an allergic skin reaction. Causes eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May damage the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life with long lasting effects.

**GHS Classification** 

Acute toxicity (Oral) : Category 5

Serious eye damage/eye irri-

tation

Category 2B

Respiratory sensitisation : Category 1

Skin sensitisation : Category 1

according to GB/T 16483 and GB/T 17519



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Reproductive toxicity : Category 1A

Specific target organ toxicity - :

single exposure

Category 2

Specific target organ toxicity - :

repeated exposure

Category 1

Short-term (acute) aquatic

hazard

Category 1

Long-term (chronic) aquatic

hazard

Category 1

#### **GHS** label elements

Hazard pictograms





Signal word : Danger

Hazard statements : H303 May be harmful if swallowed.

H317 May cause an allergic skin reaction.

H320 Causes eye irritation.

H334 May cause allergy or asthma symptoms or breathing

difficulties if inhaled.

H360D May damage the unborn child. H371 May cause damage to organs.

H372 Causes damage to organs through prolonged or repeated

exposure.

H410 Very toxic to aquatic life with long lasting effects.

## Precautionary statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe mist or vapours. P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of

the workplace.

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protec-

tion/ face protection.

P284 Wear respiratory protection.

#### Response:

according to GB/T 16483 and GB/T 17519



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P302 + P352 IF ON SKIN: Wash with plenty of water.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.

P362 + P364 Take off contaminated clothing and wash it before

P391 Collect spillage.

### Storage:

P405 Store locked up.

#### Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

#### Physical and chemical hazards

Not classified based on available information.

#### Health hazards

May be harmful if swallowed. Causes eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. May damage the unborn child. May cause damage to organs. Causes damage to organs through prolonged or repeated exposure.

#### **Environmental hazards**

Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

### Additional Labelling

The following percentage of the mixture consists of ingredient(s) with unknown hazards to the aquatic environment: 3 %

#### Other hazards which do not result in classification

None known.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture Mixture

Components

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Chemical name	CAS-No.	Concentration (% w/w)
Benzylpenicillin	61-33-6	>= 10 -< 20
Streptomycin sulphate	3810-74-0	>= 10 -< 20
Procaine hydrochloride	51-05-8	>= 1 -< 10
Piroxicam	36322-90-4	>= 1 -< 3

#### 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical ad-

vice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse.

In case of eye contact : In case of contact, immediately flush eyes with plenty of water

for at least 15 minutes.

If easy to do, remove contact lens, if worn.

Get medical attention.

If swallowed : If swallowed, DO NOT induce vomiting.

Get medical attention.

Rinse mouth thoroughly with water.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and

May be harmful if swallowed.

Causes eye irritation.

delayed

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficul-

ties if inhaled.

May damage the unborn child. May cause damage to organs.

Causes damage to organs through prolonged or repeated

exposure.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reac-

tive airways dysfunction syndrome).

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).

Notes to physician : Treat symptomatically and supportively.

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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#### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical None known.

Unsuitable extinguishing

media

Specific hazards during fire-

fighting

Hazardous combustion prod-

ucts

Carbon oxides

Nitrogen oxides (NOx)

Sulphur oxides

Oxides of phosphorus

Metal oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

Exposure to combustion products may be a hazard to health.

cumstances and the surrounding environment.

Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment :

for firefighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

### **6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal pro-

tective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil

harriers)

Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Soak up with inert absorbent material.

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. Clean up remaining materials from spill with suitable absor-

bent.

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 deter-

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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mine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

#### 7. HANDLING AND STORAGE

Handling

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe mist or vapours.

Do not swallow. Do not get in eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure as-

sessment

Keep container tightly closed.

Already sensitised individuals, and those susceptible

to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respira-

tory irritants or sensitisers.

Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Avoidance of contact : Oxidizing agents

**Storage** 

Conditions for safe storage : Keep in properly labelled containers.

Store locked up. Keep tightly closed.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Packaging material : Unsuitable material: None known.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

Components	CAS-No.	Value type	Control parame-	Basis
		(Form of	ters / Permissible	
		exposure)	concentration	
Benzylpenicillin	61-33-6	TWA	600 μg/m3 (OEB	Internal

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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			2)			
	Further inform	Further information: RSEN, DSEN				
		Wipe limit	100 μg/100 cm2	Internal		
Streptomycin sulphate	3810-74-0	TWA	OEB 2 (>= 100 < 1,000 μg/m3)	Internal		
	Further inform	Further information: DSEN				
Procaine hydrochloride	51-05-8	TWA	60 μg/m3 (OEB 3)	Internal		
		Wipe limit	600 µg/100 cm <sup>2</sup>	Internal		
Piroxicam	36322-90-4	TWA	100 μg/m3 (OEB 2)	Internal		

**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

Respiratory protection : If adequate local exhaust ventilation is not available or expo-

sure assessment demonstrates exposures outside the rec-

ommended guidelines, use respiratory protection.

Filter type : Particulates type

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.

Skin and body protection

Hand protection

Material : Chemical-resistant gloves

Hygiene measures : If exposure to chemical is likely during typical use, provide

Work uniform or laboratory coat.

eye flushing systems and safety showers close to the work-

ing place.

When using do not eat, drink or smoke.

Contaminated work clothing should not be allowed out of the

workplace.

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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Appearance : liquid

Colour : No data available

Odour : No data available

Odour Threshold : No data available

pH : No data available

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

Flammability (liquids) : No data available

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 : No data available

Solubility(ies)

Water solubility : No data available

Partition coefficient: n-

octanol/water

: Not applicable

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : No data available

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle size : Not applicable

### 10. STABILITY AND REACTIVITY

Reactivity : Not classified as a reactivity hazard.
Chemical stability : Stable under normal conditions.
Possibility of hazardous reac- : Can react with strong oxidizing agents.

tions

Conditions to avoid : None known. Incompatible materials : Oxidizing agents

Hazardous decomposition

products

. Oxidizing agents. No hazardous decomposition products are known.

#### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation

Skin contact Ingestion Eye contact

**Acute toxicity** 

May be harmful if swallowed.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: 2,447 mg/kg

Method: Calculation method

**Components:** 

Benzylpenicillin:

Acute oral toxicity : LD50 (Rat): 8,000 mg/kg

LD50 (Mouse): > 5,000 mg/kg

Acute toxicity (other routes of:

administration)

LD50 (Mouse): 3,500 mg/kg

Application Route: Intraperitoneal

LD50 (Mouse): 329 mg/kg Application Route: Intravenous

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Streptomycin sulphate:

Acute oral toxicity : LD50 (Hamster): 400 mg/kg

LD50 (Rat): 430 mg/kg

LD50 (Mouse): 25,000 mg/kg

Acute toxicity (other routes of :

administration)

LD50 (Mouse): 85 - 111 mg/kg Application Route: Intravenous

LD50 (Mouse): 575 - 610 mg/kg Application Route: Intraperitoneal

LD50 (Mouse): 500 - 600 mg/kg Application Route: Subcutaneous

TDLo (Dog): 220 - 440 mg/kg Application Route: Intravenous Symptoms: Lowered blood pressure

LDLo (Monkey): 110 mg/kg Application Route: Intravenous

TDLo (Monkey): 30 - 70 mg/kg Application Route: Subcutaneous Symptoms: respiratory depression

Procaine hydrochloride:

Acute oral toxicity : LD50 (Rat): 200 mg/kg

LD50 (Mouse): 350 mg/kg

Acute toxicity (other routes of:

administration)

LD50 (Rat): 43 mg/kg

**Application Route: Intravenous** 

LD50 (Mouse): 33 mg/kg Application Route: Intravenous

LD50 (Dog): 33 mg/kg

**Application Route: Intravenous** 

Piroxicam:

Acute oral toxicity : LD50 (Rat): 216 mg/kg

LD50 (Dog): 108 mg/kg

LD50 (Hamster): 170 mg/kg

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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LD50 (Guinea pig): 388 mg/kg

LD50 (Monkey): 1,000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg

#### Skin corrosion/irritation

Not classified based on available information.

#### Serious eye damage/eye irritation

Causes eye irritation.

#### **Components:**

### Streptomycin sulphate:

Result : Mild eye irritation

## Procaine hydrochloride:

Result : Moderate eye irritation

### Respiratory or skin sensitisation

### Skin sensitisation

May cause an allergic skin reaction.

### Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

### **Components:**

### Benzylpenicillin:

Test Type : Local lymph node assay (LLNA)

Exposure routes : Dermal Species : Mouse

Result : Weak sensitizer

Test Type : Maximisation Test

Exposure routes : Dermal Species : Guinea pig Result : positive

Remarks : Based on data from similar materials

Result : Strong sensitizer

Remarks : Based on human experience.

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Streptomycin sulphate:

Test Type : Human repeat insult patch test (HRIPT)

Exposure routes : Dermal Species : Humans

Result : Weak sensitizer

**Procaine hydrochloride:** 

Exposure routes : Dermal Result : Sensitiser

Remarks : Based on human experience.

Based on data from similar materials

Germ cell mutagenicity

Not classified based on available information.

Components:

Benzylpenicillin:

Germ cell mutagenicity -

: Weight of evidence does not support classification as a germ

Assessment cell mutagen.

Streptomycin sulphate:

Genotoxicity in vitro : Test Type: Chromosomal aberration

Result: equivocal

Genotoxicity in vivo : Test Type: Chromosomal aberration

Cell type: Human lymphocytes

Result: negative

**Procaine hydrochloride:** 

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: equivocal

Piroxicam:

Genotoxicity in vivo : Test Type: sister chromatid exchange assay

Species: Humans

Cell type: Human lymphocytes

Result: negative

Carcinogenicity

Not classified based on available information.

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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### **Components:**

Streptomycin sulphate:

Species : Rat Application Route : Oral

NOAEL : 5 mg/kg body weight

Result : negative

Carcinogenicity - Assess-

ment

Weight of evidence does not support classification as a car-

cinogen

Reproductive toxicity

May damage the unborn child.

**Components:** 

Benzylpenicillin:

Effects on fertility : Test Type: Fertility

Species: Mouse

Result: No effects on fertility

Test Type: Fertility Species: Rat

Result: No effects on fertility

Test Type: Fertility Species: Rabbit

Result: No effects on fertility

Effects on foetal develop-

ment

Test Type: Development

Species: Mouse

Result: No effects on foetal development

Test Type: Development

Species: Rat

Result: No effects on foetal development

Test Type: Development

Species: Rabbit

Result: No effects on foetal development

Streptomycin sulphate:

Effects on fertility : Test Type: Fertility

Species: Rat

Application Route: Intraperitoneal Fertility: LOAEL: 40 mg/kg body weight Symptoms: male reproductive effects

according to GB/T 16483 and GB/T 17519



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Effects on foetal develop-

ment

Test Type: Development

Species: Mouse

Application Route: Intraperitoneal

Developmental Toxicity: LOAEL: 250 mg/kg body weight

Symptoms: fetal deafness, Embryo-foetal toxicity

Test Type: Development

Species: Rabbit Application Route: Oral

Developmental Toxicity: NOAEL: 10 mg/kg body weight

Result: No teratogenic effects

Reproductive toxicity - As-

sessment

May damage the unborn child.

**Procaine hydrochloride:** 

Reproductive toxicity - As-

sessment

May damage the unborn child.

Piroxicam:

Effects on foetal develop-

ment

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: LOAEL: 10 mg/kg body weight Result: Embryo-foetal toxicity, No teratogenic effects, Fetal

growth retardation

Test Type: Development

Species: Rat

Application Route: Oral

Developmental Toxicity: LOAEL: 30 mg/kg body weight

Symptoms: foetal mortality

Result: Embryo-foetal toxicity, No teratogenic effects, Fetal

growth retardation

Remarks: Maternal toxicity observed.

Test Type: Development

Species: Rat

**Application Route: Oral** 

Developmental Toxicity: LOAEL: 0.4 - 4 mg/kg body weight

Result: Effects on foetal development

Test Type: Development Species: Rabbit

Application Route: Oral

Developmental Toxicity: NOAEL: 10 mg/kg body weight

Result: No embryo-foetal toxicity

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Reproductive toxicity - As-

sessment

Suspected of damaging the unborn child.

STOT - single exposure

May cause damage to organs.

**Components:** 

Procaine hydrochloride:

Target Organs : Nervous system, Heart Assessment : Causes damage to organs.

STOT - repeated exposure

Causes damage to organs through prolonged or repeated exposure.

**Components:** 

Streptomycin sulphate:

Target Organs : Kidney, inner ear

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Piroxicam:

Target Organs : Gastrointestinal tract

Assessment : Causes damage to organs through prolonged or repeated

exposure.

Repeated dose toxicity

**Components:** 

Streptomycin sulphate:

Species : Rat

NOAEL : 100 mg/kg
Application Route : Subcutaneous
Exposure time : 72 Days

Remarks : No significant adverse effects were reported

Species : Cat
LOAEL : 200 mg/kg
Application Route : Oral
Exposure time : 90 Days
Target Organs : inner ear

Species : Dog
LOAEL : 44 mg/kg
Application Route : Intramuscular
Exposure time : 14 Days

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Target Organs : inner ear

Species : Dog

LOAEL : 50 - 100 mg/kg Application Route : Intramuscular Exposure time : 20 Days

Target Organs : inner ear, Kidney

Symptoms : ataxia

Species : Monkey
NOAEL : 50 mg/kg
LOAEL : 100 mg/kg
Application Route : Intramuscular
Exposure time : 5 Days
Target Organs : Liver, Kidney

Species : Rat
NOAEL : 5 mg/kg
Application Route : Oral
Exposure time : 2 yr

Remarks : No significant adverse effects were reported

Species : Monkey
LOAEL : 25 mg/kg
Application Route : Subcutaneous
Exposure time : 66 Days

Target Organs : Blood, Liver, Kidney

Symptoms : anemia

#### **Aspiration toxicity**

Not classified based on available information.

### Experience with human exposure

### **Components:**

Benzylpenicillin:

Inhalation : Symptoms: Allergic reactions, Abdominal pain, bron-

chospasm, skin rash

Streptomycin sulphate:

Inhalation : Target Organs: inner ear

Symptoms: hearing loss Target Organs: Kidney Symptoms: hearing loss Symptoms: skin rash

Skin contact : Symptoms: skin rash

Procaine hydrochloride:

Inhalation : Target Organs: Central nervous system

according to GB/T 16483 and GB/T 17519



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Symptoms: nervousness, Dizziness, Convulsions, Breathing difficulties, Rash, Swelling of tissue, irregular heart beat

Remarks: May cause harm to the unborn child.

Based on clinical use Target Organs: Heart

Symptoms: nervousness, Dizziness, Convulsions, Breathing difficulties, Rash, Swelling of tissue, irregular heart beat

Remarks: May cause harm to the unborn child.

Based on clinical use

Piroxicam:

Ingestion : Target Organs: Gastrointestinal tract

Symptoms: Diarrhoea, constipation, flatulence, Headache, Dizziness, tinnitus, skin rash, Ulceration, chest pain, Ab-

dominal pain

#### 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### **Components:**

#### Benzylpenicillin:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l

Exposure time: 96 hrs

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 3.6 mg/l

Exposure time: 48 hrs

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (Raphidocelis subcapitata (freshwater green alga)): >

100 mg/l

Exposure time: 72 hrs

Method: OECD Test Guideline 201

NOEC (Raphidocelis subcapitata (freshwater green alga)): 50

mg/l

Exposure time: 72 hrs

Method: OECD Test Guideline 201

EC50 (blue-green algae): 0.74 mg/l

Exposure time: 72 hrs

Method: OECD Test Guideline 201

NOEC (blue-green algae): 0.14 mg/l

Exposure time: 72 hrs

Method: OECD Test Guideline 201

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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M-Factor (Acute aquatic tox-

icity)

Toxicity to microorganisms

ı

EC50: > 500 mg/l

Exposure time: 3 h

Test Type: Respiration inhibition Method: OECD Test Guideline 209

NOEC: 5 mg/l Exposure time: 3 h

Test Type: Respiration inhibition Method: OECD Test Guideline 209

Streptomycin sulphate:

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 487 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (Microcystis aeruginosa (blue-green algae)): 0.007 mg/l

Exposure time: 72 h Method: ISO 8692

EC50 (Selenastrum capricornutum (green algae)): 0.133 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic tox-

icitv)

Toxicity to daphnia and other :

aquatic invertebrates (Chron-

ic toxicity)

100

NOEC (Daphnia magna (Water flea)): 32 mg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

100

Procaine hydrochloride:

**Ecotoxicology Assessment** 

Acute aquatic toxicity : Toxic effects cannot be excluded

Chronic aquatic toxicity : Toxic effects cannot be excluded

Piroxicam:

**Ecotoxicology Assessment** 

Acute aquatic toxicity : Toxic effects cannot be excluded

Chronic aquatic toxicity : Toxic effects cannot be excluded

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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### Persistence and degradability

**Components:** 

Benzylpenicillin:

Biodegradability : Result: Readily biodegradable.

Biodegradation: 70.10 % Exposure time: 28 d

Method: OECD Test Guideline 301B

Bioaccumulative potential

**Components:** 

Streptomycin sulphate:

Partition coefficient: n-

octanol/water

log Pow: -3.2

**Procaine hydrochloride:** 

Partition coefficient: n-

octanol/water

log Pow: 2.14

Mobility in soil
No data available

Other adverse effects

No data available

### 13. DISPOSAL CONSIDERATIONS

**Disposal methods** 

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

#### 14. TRANSPORT INFORMATION

### **International Regulations**

**UNRTDG** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Benzylpenicillin, Streptomycin sulphate)

Class : 9 Packing group : III

according to GB/T 16483 and GB/T 17519



# Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Labels : 9 Environmentally hazardous : yes

**IATA-DGR** 

UN/ID No. : UN 3082

Proper shipping name : Environmentally hazardous substance, liquid, n.o.s.

(Benzylpenicillin, Streptomycin sulphate)

Class : 9 Packing group : III

Labels : Miscellaneous

Packing instruction (cargo : 964

aircraft)

Packing instruction (passen: 964

ger aircraft)

Environmentally hazardous : yes

**IMDG-Code** 

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Benzylpenicillin, Streptomycin sulphate)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### **National Regulations**

GB 6944/12268

UN number : UN 3082

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(Benzylpenicillin, Streptomycin sulphate)

Class : 9
Packing group : III
Labels : 9
Marine pollutant : no

#### 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.

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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#### 15. REGULATORY INFORMATION

National regulatory information

Law on the Prevention and Control of Occupational Diseases

### **Yangtze River Protection Law**

This product does not contain any dangerous chemicals prohibited for inland river transport.

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

AICS : not determined

DSL : not determined

IECSC : not determined

#### 16. OTHER INFORMATION

Revision Date : 2023/09/30

**Further information** 

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 Agen-

cy, http://echa.europa.eu/

Date format : yyyy/mm/dd

#### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect

according to GB/T 16483 and GB/T 17519



## Benzylpenicillin / Streptomycin Sulphate / Procaine Hydrochloride / Piroxicam Liquid Formulation

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Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

#### **Disclaimer**

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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