

## Chemical Safety Data Sheet MSDS / SDS

## cefapirin

Revision Date:2026-05-31 Revision Number:1

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

## Product identifier

Product name : cefapirin  
CBnumber : CB1899423  
CAS : 21593-23-7  
EINECS Number : 244-466-5  
Synonyms : (6R,7R)-3-(Acetoxymethyl)-8-oxo-7-(2-(pyridin-4-ylthio)acetamido)-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,(6R,7R)-3-[(Acetyloxy)Methyl]-8-oxo-7-[[4-(pyridinylthio)acetyl]amino]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P285 In case of inadequate ventilation wear respiratory protection.  
P501 Dispose of contents/container to.....  
P405 Store locked up.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P281 Use personal protective equipment as required.  
P202 Do not handle until all safety precautions have been read and understood.  
P201 Obtain special instructions before use.

P501 Dispose of contents/container to....

P363 Wash contaminated clothing before reuse.

P321 Specific treatment (see ... on this label).

P333+P313 IF SKIN irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: wash with plenty of soap and water.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P272 Contaminated work clothing should not be allowed out of the workplace.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P501 Dispose of contents/container to....

P342+P311 IF experiencing respiratory symptoms: call a POISON CENTER or doctor/physician.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

#### **Hazard statements**

H351 Suspected of causing cancer

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H317 May cause an allergic skin reaction

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name : cefapirin

Synonyms : (6R,7R)-3-(Acetoxymethyl)-8-oxo-7-(2-(pyridin-4-ylthio)acetamido)-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid,(6R,7R)-3-[(Acetyloxy)Methyl]-8-oxo-7-[[4-(pyridinylthio)acetyl]amino]-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic Acid

CAS : 21593-23-7

EC number : 244-466-5

MF : C17H17N3O6S2

MW : 423.46

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **After inhalation**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

#### **After skin contact**

Immediately wash with water and soap and rinse thoroughly.

#### **After eye contact**

Rinse opened eye for several minutes under running water.

#### **After swallowing**

If symptoms persist consult doctor.

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

No further relevant information available.

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

No further relevant information available.

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## SECTION 5: Firefighting measures

### **Extinguishing media**

#### **Suitable extinguishing agents**

Use fire fighting measures that suit the environment.

A solid water stream may be inefficient.

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

No further relevant information available.

#### **Advice for firefighters**

#### **Protective equipment**

No special measures required.

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## SECTION 6: Accidental release measures

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

Not required.

#### **Environmental precautions**

Do not allow to enter sewers/ surface or ground water.

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

Dispose contaminated material as waste according to section 13.

#### **Protective Action Criteria for Chemicals**

##### **PAC-1**

Substance is not listed.

##### **PAC-2**

Substance is not listed.

##### **PAC-3**

Substance is not listed.

### **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.

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## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

### **Information about protection against explosions and fires**

No special measures required.

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

#### **Storage**

Store in accordance with information listed on the product insert.

### **Requirements to be met by storerooms and receptacles**

No special requirements.

### **Information about storage in one common storage facility**

Not required.

### **Further information about storage conditions**

None.

### **Specific end use(s)**

No further relevant information available.

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

### **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.

### **Exposure controls**

### **Appropriate engineering controls**

No further data; see section 7.

### **Personal protective equipment**

#### **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

#### **Breathing equipment**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

#### **Protection of hands**

Protective gloves

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.

#### **Eye protection**

Not required.

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## **SECTION 9: Physical and chemical properties**

### **Information on basic physicochemical properties**

#### **Physical State**

Solid

#### **Color**

White to off-white

#### **Odor**

Characteristic

#### **Structural Formula**

C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>O<sub>6</sub>S<sub>2</sub>

**Molecular Weight**

423.5 g/mol

**Storage Buffer****Odor Threshold**

Not determined.

**Formulation****Melting point/Melting range**

Undetermined.

**Boiling point/Boiling range**

783.9±60.0 °C(Predicted)

**Flammability**

Product is not flammable.

**Explosion limits**

Lower: Not determined.

Upper: Not determined.

**Flash point**

Not applicable.

**Decomposition temperature**

Not determined.

**pH**

Not applicable.

**Viscosity****Kinematic**

Not applicable.

**SOLUBILITY**

DMF: 5 mg/ml; DMSO: 10 mg/ml; PBS (pH 7.2): 10 mg/ml

**Dynamic**

Not applicable.

**Solubility in / Miscibility with**

≤10mg/ml in DMSO;5mg/ml in dimethyl formamide

**Water**

Not determined.

**Partition coefficient (n-octanol/water)**

Not determined.

**Vapor Pressure**

Not applicable.

**Density**

1.4021 (rough estimate)

**Relative Density**

1.4021 (rough estimate)

**Vapor Density**

Not applicable.

**Particle characteristics**

Not determined.

**Other information****Appearance****Form**

Solid

**Important information on protection of health and environment, and on safety.****Ignition temperature**

Not determined.

**Danger of explosion**

Product does not present an explosion hazard.

**Change in condition****Evaporation Rate**

Not applicable.

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**SECTION 10: Stability and reactivity****Reactivity**

No further relevant information available.

## Chemical stability

### Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

### Possibility of hazardous reactions

No dangerous reactions known.

### Conditions to avoid

No further relevant information available.

### Incompatible materials

strong oxidizing agents

### Hazardous decomposition products

carbon dioxide, carbon monoxide, hydrogen sulfide, nitrogen oxides

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## SECTION 11: Toxicological information

### RTECS Number

### Information on toxicological effects

#### Acute toxicity

LD/LC50 values that are relevant for classification:

Route	Endpoint	Value
Oral	LD50	16,356 mg/kg (rat)
Intraperitoneal	LD50	7,850 mg/kg (rat)
Subcutaneous	LD50	>14,400 mg/kg (rat)

#### Primary irritant effect

##### on the skin

No irritant effect.

##### on the eye

No irritating effect.

#### Sensitization

##### Sensitization

possible through inhalation.

##### Sensitization

possible through skin contact.

### **Additional toxicological information**

#### **Interactive effects**

No interactive effects between components are known.

#### **Carcinogenic categories**

#### **IARC (International Agency for Research on Cancer)**

Substance is not listed.

#### **NTP (National Toxicology Program)**

Substance is not listed.

#### **OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

#### **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

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## SECTION 12: Ecological information

### **Toxicity**

#### **Aquatic toxicity**

No further relevant information available.

#### **Persistence and degradability**

No further relevant information available.

#### **Bioaccumulative potential**

No further relevant information available.

#### **Mobility in soil**

No further relevant information available.

### **Results of PBT and vPvB assessment**

#### **PBT**

Not applicable.

#### **vPvB**

Not applicable.

#### **PBT:**

Not applicable.

**vPvB:**

Not applicable.

**Other adverse effects**

**Additional ecological information**

**General notes**

Water hazard class 1 (Self-assessment) slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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## SECTION 13: Disposal considerations

**Waste treatment methods**

**Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**Uncleaned packagings**

**Recommendation**

Disposal must be made according to official regulations.

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## SECTION 14: Transport information

**UN-Number**

DOT, IMDG, IATA not regulated

**UN proper shipping name**

DOT, IMDG, IATA not regulated

**Transport hazard class(es)**

DOT, ADN, IMDG, IATA

Class not regulated

**Packing group**

DOT, IMDG, IATA not regulated

**Environmental hazards**

Not applicable.

**Special precautions for user**

Not applicable.

### Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

MARPOL73/78 and the IBC Code Not applicable.

### UN "Model Regulation"

not regulated

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## SECTION 15: Regulatory information

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

No further relevant information available.

#### Sara

Section 355 (extremely hazardous substances):	Substance is not listed.
Section 313 (Specific toxic chemical listings):	Substance is not listed.
TSCA (Toxic Substances Control Act):	Substance is not listed.
Hazardous Air Pollutants:	Substance is not listed.
Chemicals known to cause cancer:	Substance is not listed.
Chemicals known to cause reproductive toxicity for females:	Substance is not listed.
Chemicals known to cause reproductive toxicity for males:	Substance is not listed.
Chemicals known to cause developmental toxicity:	Substance is not listed.

#### Carcinogenic categories

EPA (Environmental Protection Agency):	Substance is not listed.
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#### TLV (Threshold Limit Value)

Substance is not listed.

#### NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

#### Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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## SECTION 16: Other information

### Abbreviations and acronyms

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Sensitization - respiratory 1: Respiratory sensitisation – Category 1

Sensitization - skin 1: Skin sensitisation – Category 1

Carcinogenicity 2: Carcinogenicity – Category 2

**Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.