

# SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.0  
Creation Date: July 15, 2019  
Revision Date: July 15, 2019

## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** 2,2'-bipyridyl

### 1.2 Other means of identification

**Product number** -

**Other names** 2,2'-BIPYRIDINE; 2,2'-Dipyridine; 2,2'-BIPYRIDINE-3,3'-DIOL

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research use.

**Uses advised against** no data available

### 1.4 Supplier's details

**Company** Shanghai Baishun Biotechnology Co., Ltd  
**Address** No. 26, Lane 918, Lianye Road, Zhelin Town, Fengxian District, Shanghai, 201400, China  
**Telephone** +86-21-37581181

### 1.5 Emergency phone number

**Emergency phone number** +86-21-37581181

**Service hours** Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

## SECTION 2: Hazard identification

### 2.1 Classification of the substance or mixture

Acute toxicity - Category 3, Oral  
Acute toxicity - Category 3, Dermal

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Danger

**Hazard statement(s)** H301 Toxic if swallowed  
H312 Harmful in contact with skin

**Precautionary statement(s)**

<b>Prevention</b>	P264 Wash ... thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
<b>Response</b>	P301+P316 IF SWALLOWED: Get emergency medical help immediately. P321 Specific treatment (see ... on this label). P330 Rinse mouth. P302+P352 IF ON SKIN: Wash with plenty of water/... P316 Get emergency medical help immediately. P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
<b>Storage</b>	P405 Store locked up.
<b>Disposal</b>	P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

## 2.3 Other hazards which do not result in classification

no data available

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
2,2'-bipyridyl	2,2'-bipyridyl	366-18-7	206-674-4	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Fresh air, rest.

#### Following skin contact

Rinse and then wash skin with water and soap.

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Rinse mouth. Refer for medical attention .

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

no data available

### 4.3 Indication of immediate medical attention and special treatment needed, if necessary

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary . Monitor for shock and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 ml/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal . Aromatic hydrocarbons and related compounds

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry powder, carbon dioxide.

## 5.2 Specific hazards arising from the chemical

Combustible. Gives off irritating or toxic fumes (or gases) in a fire. Finely dispersed particles form explosive mixtures in air.

## 5.3 Special protective actions for fire-fighters

Use water spray, alcohol-resistant foam, dry powder, carbon dioxide.

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# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

## 6.2 Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

## 6.3 Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

NO open flames. Closed system, dust explosion-proof electrical equipment and lighting. Prevent deposition of dust. Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

## 7.2 Conditions for safe storage, including any incompatibilities

Separated from strong oxidants.

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# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Occupational Exposure limit values

Component	2,2'-bipyridyl			
CAS No.	366-18-7			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Latvia	0,2	0,5		
	Remarks			

### Biological limit values

no data available

## 8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

### 8.3 Individual protection measures, such as personal protective equipment (PPE)

#### Eye/face protection

Wear safety spectacles.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use ventilation (not if powder).

#### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Solid.
Colour	White crystals
Odour	no data available
Melting point/freezing point	69.2 °C.
Boiling point or initial boiling point and boiling range	272.2 °C. Atm. press.:99 kPa.;272.25°C. Atm. press.:99 kPa.
Flammability	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	131 °C.
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Very sol in alcohol, ether, and benzene
Partition coefficient n-octanol/water	log Kow= 1.50
Vapour pressure	no data available
Density and/or relative density	no data available
Relative vapour density	no data available
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

On combustion, forms toxic gases including nitrogen oxides. Reacts with oxidants.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Dust explosion possible if in powder or granular form, mixed with air.

### 10.4 Conditions to avoid

no data available

## 10.5 Incompatible materials

no data available

## 10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of /nitrogen oxides/.

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# SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male) - 100 mg/kg bw.
- Inhalation: no data available
- Dermal: LD50 - rat (female) - 938 mg/kg bw.

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

The substance is irritating to the eyes, skin and respiratory tract.

### STOT-repeated exposure

no data available

### Aspiration hazard

A nuisance-causing concentration of airborne particles can be reached quickly when dispersed.

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# SECTION 12: Ecological information

## 12.1 Toxicity

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: no data available
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

## 12.2 Persistence and degradability

no data available

## 12.3 Bioaccumulative potential

According to a classification scheme(1), an estimated BCF of 3(SRC), from its water solubility(2) and a regression-derived equation(3), suggests the potential for bioconcentration in aquatic organisms is low(SRC).

## 12.4 Mobility in soil

The Koc of 2,2'-bipyridine is estimated as 160(SRC), using a log Kow of 1.5(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that 2,2'-bipyridine is expected to have moderate mobility in soil(SRC).

## 12.5 Other adverse effects

no data available

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## SECTION 13: Disposal considerations

### 13.1 Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

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## SECTION 14: Transport information

### 14.1 UN Number

ADR/RID: no data available      IMDG: no data available      IATA: no data available

### 14.2 UN Proper Shipping Name

ADR/RID: no data available      IMDG: no data available      IATA: no data available

### 14.3 Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)      IMDG: 6.1 (For reference only, please check.)      IATA: 6.1 (For reference only, please check.)

### 14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.)      IMDG: III (For reference only, please check.)      IATA: III (For reference only, please check.)

### 14.5 Environmental hazards

ADR/RID: No      IMDG: No      IATA: No

### 14.6 Special precautions for user

no data available

### 14.7 Transport in bulk according to IMO instruments

no data available

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## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
2,2'-bipyridyl	2,2'-bipyridyl	366-18-7	206-674-4
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Not Listed.

<b>New Zealand Inventory of Chemicals (NZIoC)</b>	Listed.
<b>Philippines Inventory of Chemicals and Chemical Substances (PICCS)</b>	Listed.
<b>Vietnam National Chemical Inventory</b>	Listed.
<b>Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)</b>	Listed.
<b>Korea Existing Chemicals List (KECL)</b>	Listed.

## SECTION 16: Other information

### Information on revision

**Creation Date** July 15, 2019

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### Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

### References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### Other Information

Health effects of exposure to the substance have not been investigated adequately.

**Any questions regarding this SDS, Please send your inquiry to [sds@xixisys.com](mailto:sds@xixisys.com)**

*Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.*