

# 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** Cyclopentanone

### 1.2 Other means of identification

**Product number** -

**Other names** Adipic keyone; Cyclopentsnon; Ketocyclopentane

### 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

Flammable liquids, Category 3

Skin irritation, Category 2

Eye irritation, Category 2

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word**

Warning

**Hazard statement(s)**

H226 Flammable liquid and vapour

H315 Causes skin irritation

H319 Causes serious eye irritation

**Precautionary statement(s)**

<b>Prevention</b>	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground and bond container and receiving equipment.</p> <p>P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.</p> <p>P242 Use non-sparking tools.</p> <p>P243 Take action to prevent static discharges.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...</p> <p>P264 Wash ... thoroughly after handling.</p>
<b>Response</b>	<p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].</p> <p>P370+P378 In case of fire: Use ... to extinguish.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water/...</p> <p>P321 Specific treatment (see ... on this label).</p> <p>P332+P317 If skin irritation occurs: Get medical help.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p>
<b>Storage</b> <b>Disposal</b>	<p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>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.</p>

### 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
Cyclopentanone	Cyclopentanone	120-92-3	204-435-9	100%

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## SECTION 4: First-aid measures

### 4.1 Description of necessary first-aid measures

#### If inhaled

Fresh air, rest. Refer for medical attention.

#### 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 with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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

Excerpt from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]: Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control or dilution water may cause pollution. (ERG, 2016)

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

no data available

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Alcohol foam, carbon dioxide, dry chem.

### 5.2 Specific hazards arising from the chemical

Excerpt from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. Substance may be transported hot. For hybrid vehicles, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. If molten aluminum is involved, refer to ERG Guide 169. (ERG, 2016)

### 5.3 Special protective actions for fire-fighters

Use powder, AFFF, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water.

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## SECTION 6: Accidental release measures

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

Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### 6.2 Environmental precautions

Collect leaking liquid in sealable containers. Absorb remaining liquid in sand or inert absorbent. 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, NO sparks and NO smoking. 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

Fireproof. Separated from acids. Cool. Keep in the dark. Keep in a well-ventilated room. Store only if stabilized.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

Component	Cyclopentanone
CAS No.	120-92-3

<b>Component</b>	Cyclopentanone			
<b>CAS No.</b>	120-92-3			
	<b>Limit value - Eight hours</b>		<b>Limit value - Short term</b>	
	<b>ppm</b>	<b>mg/m<sup>3</sup></b>	<b>ppm</b>	<b>mg/m<sup>3</sup></b>
<b>Austria</b>	25	90	50	180
<b>Denmark</b>	25	90	50	180
	<b>Remarks</b>			

#### 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 goggles.

#### Skin protection

Protective gloves.

#### Respiratory protection

Use ventilation, local exhaust or breathing protection.

#### Thermal hazards

no data available

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

<b>Physical state</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	DISTINCTIVE ETHEREAL ODOR, SOMEWHAT LIKE PEPPERMINT
<b>Melting point/freezing point</b>	-53.1 °C.
<b>Boiling point or initial boiling point and boiling range</b>	23 - 24 °C. Atm. press.:13.3 hPa.;130.6 °C. Atm. press.:1 013 hPa.
<b>Flammability</b>	Flammable. Heating will cause rise in pressure with risk of bursting.
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	26 °C.
<b>Auto-ignition temperature</b>	430 °C. Atm. press.:1 025 hPa.
<b>Decomposition temperature</b>	no data available
<b>pH</b>	no data available
<b>Kinematic viscosity</b>	kinematic viscosity (in mm <sup>2</sup> /s) = 1.132. Temperature:25.0°C. Remarks:The density has been measured to be 0,95 g/cm <sup>3</sup> ; the corresponding dynamic viscosity has been determined to be 1,075 cP.
<b>Solubility</b>	Partially miscible with water
<b>Partition coefficient n-octanol/water</b>	log Pow = 0.7. Temperature:25 °C.

<b>Vapour pressure</b>	3.07 hPa. Temperature:0 °C.;8 hPa. Temperature:14 °C.;13.9 hPa. Temperature:24 °C.
<b>Density and/or relative density</b>	0.95. Temperature:18 °C.
<b>Relative vapour density</b>	2.3 (AIR= 1)
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The substance easily polymerizes under the influence of acids.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

DANGEROUS WHEN EXPOSED TO FLAME; CAN REACT WITH OXIDIZING MATERIALS. The vapour is heavier than air. CYCLOPENTANONE polymerizes easily, especially in the presence of acids. Can react with oxidizing materials, i.e. hydrogen peroxide. (NTP, 1992)

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

no data available

### 10.6 Hazardous decomposition products

no data available

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (male/female) - > 2 000 mg/kg bw. Remarks: 95% Conf. limits: not applicable.
- Inhalation: LC50 - rat (male) - >= 19.5 mg/L air.
- Dermal: LD50 - rat (male/female) - > 2 000 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 possibly the respiratory tract.

**STOT-repeated exposure**

no data available

**Aspiration hazard**

No indication can be given about the rate at which a harmful concentration of this substance in the air is reached on evaporation at 20°C.

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**SECTION 12: Ecological information****12.1 Toxicity**

- Toxicity to fish: LC50 - *Oncorhynchus mykiss* (previous name: *Salmo gairdneri*) - > 100 mg/L - 96 h.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - > 100 mg/L - 48 h.
- Toxicity to algae: EC50 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - > 100 mg/L - 72 h.
- Toxicity to microorganisms: EC50 - activated sludge of a predominantly domestic sewage - > 1 000 mg/L - 3 h.

**12.2 Persistence and degradability**

Pure culture studies showed various isolated species of bacteria(1,2) and yeast(3) were unable to utilize cyclopentanone as a single carbon source. A single 5-day BOD screening test, which utilized activated sludge for inocula, indicates cyclopentanone biodegraded rapidly with acclimation(4). After a 20 day acclimation period. 95.4% COD of an initial concn of 100 mg/L was removed in a closed bottle maintained at 20 deg C and a pH of 7.2(4).

**12.3 Bioaccumulative potential**

Based upon an estimated log kow of 0.24(1), the bioconcentration factor (log BCF) for cyclopentanone has been calculated to be -0.05, from a recommended regression-derived equations(2). This BCF value indicates cyclopentanone should not bioconcentrate in aquatic organisms(SRC).

**12.4 Mobility in soil**

Based on an estimated water solubility of 9175 mg/L(1), a Koc value of 30 for cyclopentanone has been calculated from a regression-derived equation(1,SRC). This Koc value indicates cyclopentanone should be very highly mobile in soil(2).

**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: UN2245 (For

IMDG: UN2245 (For

IATA: UN2245 (For

reference only, please check.)    reference only, please check.)    reference only, please check.)

## 14.2 UN Proper Shipping Name

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

## 14.3 Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)    IMDG: 3 (For reference only, please check.)    IATA: 3 (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
Cyclopentanone	Cyclopentanone	120-92-3	204-435-9
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			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

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# 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

Insufficient data are available on the effect of this substance on human health, therefore utmost care must be taken. An added stabilizer or inhibitor can influence the toxicological properties of this substance, consult an expert.

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

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*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.*