# 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** 1,3-dihydroxyacetone

## 1.2 Other means of identification

**Product number** -
**Other names** 2-Propanone, 1,3-dihydroxy-; 1,3-Dihydroxyacetone; 1,3-dihydroxypropan-2-one

## 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

Not classified.

## 2.2 GHS label elements, including precautionary statements

**Pictogram(s)** No symbol.
**Signal word** No signal word
**Hazard statement(s)** none
**Precautionary statement(s)**
**Prevention** none
**Response** none
**Storage** none
**Disposal** none

## 2.3 Other hazards which do not result in classification

no data available

# SECTION 3: Composition/information on ingredients

## 3.1 Substances

| Chemical name | Common names and synonyms | CAS number | EC number | Concentration |
|---|---|---|---|---|
| 1,3-dihydroxyacetone | 1,3-dihydroxyacetone | 96-26-4 | 202-494-5 | 100% |

# SECTION 4: First-aid measures

## 4.1 Description of necessary first-aid measures

**If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**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

no data available

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand-valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR as necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature. Obtain medical attention. Ketones and related compounds

# SECTION 5: Fire-fighting measures

## 5.1 Suitable extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

## 5.2 Specific hazards arising from the chemical

no data available

## 5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

## 6.2 Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

## 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.

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

**Occupational Exposure limit values**

no data available

**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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

**Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

**Thermal hazards**

no data available

# SECTION 9: Physical and chemical properties and safety characteristics

| | |
|---|---|
| **Physical state** | Solid. Powder. |
| **Colour** | White. |
| **Odour** | Characteristic odor |

| | |
|---|---|
| **Melting point/freezing point** | Ca. 96.5 °C. Atm. press.:Ca. 1 013 hPa. Remarks:Melting from 70 - 130 °C. |
| **Boiling point or initial boiling point and boiling range** | Ca. 188 °C. Atm. press.:Ca. 1 013 hPa. Remarks:Boiling/decomposition range: 175-260 °C. |
| **Flammability** | no data available |
| **Lower and upper explosion limit/flammability limit** | no data available |
| **Flash point** | 97.3°C |
| **Auto-ignition temperature** | no data available |
| **Decomposition temperature** | no data available |
| **pH** | no data available |
| **Kinematic viscosity** | no data available |
| **Solubility** | In water, 9.3X10+5 mg/L at 25 dege C |
| **Partition coefficient n-octanol/water** | log Pow = -1.95. Temperature:20 °C. |
| **Vapour pressure** | Ca. 0.002 Pa. Temperature:Ca. 20 °C.;Ca. 0.006 Pa. Temperature:Ca. 25 °C.;Ca. 0.33 Pa. Temperature:Ca. 50 °C. |
| **Density and/or relative density** | Ca. 1.52. Temperature:24.2 °C. |
| **Relative vapour density** | no data available |
| **Particle characteristics** | no data available |

# SECTION 10: Stability and reactivity

## 10.1 Reactivity

no data available

## 10.2 Chemical stability

no data available

## 10.3 Possibility of hazardous reactions

no data available

## 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 acrid smoke and irritating vapors.

# SECTION 11: Toxicological information

**Acute toxicity**

- Oral: LD50 - rat (male/female) - > 16 000 mg/kg bw.
- Inhalation: LC50 - rat (male/female) - > 5 mg/L air.
- Dermal: no data available

**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**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

# SECTION 12: Ecological information

## 12.1 Toxicity

- Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - > 100 mg/L - 96 h. Remarks:And all other clinical findings.
- Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia magna - >= 0.1 g/L - 48 h.
- Toxicity to algae: NOEC - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - >= 100 mg/L - 72 h.
- Toxicity to microorganisms: EC20 - activated sludge, domestic - > 1 000 mg/L - 3 h. Remarks:Respiration rate.

## 12.2 Persistence and degradability

Biodegradation data in soil or water were not available. (SRC, 2012)

## 12.3 Bioaccumulative potential

An estimated BCF of 9 was calculated in fish for dihydroxyacetone(SRC), using a log Kow of -1.95(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

## 12.4 Mobility in soil

The Koc of dihydroxyacetone is estimated as 9(SRC), using a log Kow of -1.95(1) and a regression-derived equation(2). According to a classification scheme(2), this estimated Koc value suggests that dihydroxyacetone is expected to have very high mobility in soil. [

## 12.5 Other adverse effects

no data available

# 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.

# SECTION 14: Transport information

## 14.1 UN Number

| | | |
|---|---|---|
| ADR/RID: Not dangerous goods. (For reference only, please check.) | IMDG: Not dangerous goods. (For reference only, please check.) | IATA: Not dangerous goods. (For reference only, please check.) |

## 14.2 UN Proper Shipping Name

| | | |
|---|---|---|
| ADR/RID: Not dangerous goods. (For reference only, please check.) | IMDG: Not dangerous goods. (For reference only, please check.) | IATA: Not dangerous goods. (For reference only, please check.) |

## 14.3 Transport hazard class(es)

| | | |
|---|---|---|
| ADR/RID: Not dangerous goods. (For reference only, please check.) | IMDG: Not dangerous goods. (For reference only, please check.) | IATA: Not dangerous goods. (For reference only, please check.) |

## 14.4 Packing group, if applicable

| | | |
|---|---|---|
| ADR/RID: Not dangerous goods. (For reference only, please check.) | IMDG: Not dangerous goods. (For reference only, please check.) | IATA: Not dangerous goods. (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

# 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 |
|---|---|---|---|
| 1,3-dihydroxyacetone | 1,3-dihydroxyacetone | 96-26-4 | 202-494-5 |
| **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. |
| **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. |

# SECTION 16: Other information

**Information on revision**

| | |
|---|---|
| **Creation Date** | July 15, 2019 |
| **Revision Date** | July 15, 2019 |

**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
- 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/


**Any questions regarding this SDS, Please send your inquiry to sds@xixisys.com**

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