

# 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** Dicyclohexylammonium nitrite

### 1.2 Other means of identification

**Product number** -

**Other names** dichau; Cyclohexanamine, N-cyclohexyl-, nitrite; dicyclohexyl-amine, nitrite

### 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 4, Oral  
Acute toxicity - Category 4, Inhalation

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word** Warning  
**Hazard statement(s)** H302 Harmful if swallowed  
H332 Harmful if inhaled

**Precautionary statement(s)**  
**Prevention** P264 Wash ... thoroughly after handling.

|                 |  |
|-----------------|--|
| <b>Response</b> | P270 Do not eat, drink or smoke when using this product.<br>P261 Avoid breathing dust/fume/gas/mist/vapours/spray.<br>P271 Use only outdoors or in a well-ventilated area.<br>P301+P317 IF SWALLOWED: Get medical help.<br>P330 Rinse mouth.<br>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.<br>P317 Get medical help. |
| <b>Storage</b>  | none   |
| <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

---

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

| Chemical name                | Common names and synonyms    | CAS number | EC number | Concentration |
|------------------------------|------------------------------|------------|-----------|---------------|
| Dicyclohexylammonium nitrite | Dicyclohexylammonium nitrite | 3129-91-7  | 221-515-9 | 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

Excerpt from ERG Guide 133 [Flammable Solids]: Fire may produce irritating and/or toxic gases. Contact may cause burns to skin and eyes. Contact with molten substance may cause severe burns to skin and eyes. Runoff from fire control may cause pollution. (ERG, 2016)

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

no data available

---

## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

Excerpt from ERG Guide 133 [Flammable Solids]: SMALL FIRE: Dry chemical, CO<sub>2</sub>, sand, earth, water spray or regular foam. LARGE FIRE: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Fire Involving Metal Pigments or Pastes (e.g. "Aluminum Paste") Aluminum Paste fires should be treated as a combustible metal fire. Use DRY sand, graphite powder, dry sodium chloride-based extinguishers, G-

1® or Met-L-X® powder. Also, see ERG Guide 170. FIRE INVOLVING TANKS OR CAR/TRAILER LOADS: Cool containers with flooding quantities of water until well after fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. (ERG, 2016)

## **5.2 Specific hazards arising from the chemical**

Excerpt from ERG Guide 133 [Flammable Solids]: Flammable/combustible material. May be ignited by friction, heat, sparks or flames. Some may burn rapidly with flare-burning effect. Powders, dusts, shavings, borings, turnings or cuttings may explode or burn with explosive violence. Substance may be transported in a molten form at a temperature that may be above its flash point. May re-ignite after fire is extinguished. (ERG, 2016)

## **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

|   |  |
|---|--|
| <b>Physical state</b>   | Dicyclohexylammonium nitrite is a white to light-colored crystalline solid. Insoluble in water and denser than water. Contact may cause irritation to skin, eyes, and mucous membranes. May be toxic by ingestion. Used to make other chemicals. |
| <b>Colour</b>   | no data available  |
| <b>Odour</b>  | no data available  |
| <b>Melting point/freezing point</b>                             | 182 °C   |
| <b>Boiling point or initial boiling point and boiling range</b> | 105°C/12mmHg(lit.)   |
| <b>Flammability</b>   | no data available  |
| <b>Lower and upper explosion limit/flammability limit</b>       | no data available  |
| <b>Flash point</b>  | 138°C(lit.)  |
| <b>Auto-ignition temperature</b>                                | no data available  |
| <b>Decomposition temperature</b>                                | no data available  |
| <b>pH</b>   | no data available  |
| <b>Kinematic viscosity</b>                                      | no data available  |
| <b>Solubility</b>   | Insoluble in water   |
| <b>Partition coefficient n-octanol/water</b>                    | no data available  |
| <b>Vapour pressure</b>  | 3.3 mm Hg ( 25 °C)   |
| <b>Density and/or relative density</b>                          | 0.91g/cm <sup>3</sup>  |
| <b>Relative vapour density</b>                                  | no data available  |
| <b>Particle characteristics</b>                                 | no data available  |

---

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Highly flammable. This chemical may be sensitive to prolonged exposure to air. (NTP, 1992). Insoluble in water.

### 10.2 Chemical stability

no data available

### **10.3 Possibility of hazardous reactions**

An compound that contains both an oxidizing component (nitrite) and a reducing component (ammonium). If mixed with reducing agents, including hydrides, sulfides and nitrides, may begin a vigorous reaction that culminates in a detonation.

### **10.4 Conditions to avoid**

no data available

### **10.5 Incompatible materials**

no data available

### **10.6 Hazardous decomposition products**

no data available

---

## **SECTION 11: Toxicological information**

### **Acute toxicity**

- Oral: no data available
- Inhalation: no data available
- 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: 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

no data available

### 12.4 Mobility in soil

no data available

### 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: UN2687 (For reference only, please check.)    IMDG: UN2687 (For reference only, please check.)    IATA: UN2687 (For reference only, please check.)

### 14.2 UN Proper Shipping Name

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

### 14.3 Transport hazard class(es)

ADR/RID: 4.1 (For reference only, please check.)    IMDG: 4.1 (For reference only, please check.)    IATA: 4.1 (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

---

## 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   |
|---|------------------------------|------------|-------------|
| Dicyclohexylammonium nitrite  | Dicyclohexylammonium nitrite | 3129-91-7  | 221-515-9   |
| <b>European Inventory of Existing Commercial Chemical Substances (EINECS)</b>   |                              |            | Listed.     |
| <b>EC Inventory</b>   |                              |            | Listed.     |
| <b>United States Toxic Substances Control Act (TSCA) Inventory</b>              |                              |            | Listed.     |
| <b>China Catalog of Hazardous chemicals 2015</b>                                |                              |            | 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>                                      |                              |            | Not 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  
**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](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](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.*