

# 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** Lead difluoride

### 1.2 Other means of identification

**Product number** -

**Other names** Lead difluoride;Lead(+2) fluoride;Plumbous fluoride

### 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

Reproductive toxicity, Category 1A

Specific target organ toxicity – repeated exposure, Category 2

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### 2.2 GHS label elements, including precautionary statements

**Pictogram(s)**



**Signal word**

Danger

**Hazard statement(s)**

H302 Harmful if swallowed

H332 Harmful if inhaled  
 H360 May damage fertility or the unborn child  
 H373 May cause damage to organs through prolonged or repeated exposure  
 H410 Very toxic to aquatic life with long lasting effects

**Precautionary statement(s)**

**Prevention**

P264 Wash ... thoroughly after handling.  
 P270 Do not eat, drink or smoke when using this product.  
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
 P271 Use only outdoors or in a well-ventilated area.  
 P203 Obtain, read and follow all safety instructions before use.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
 P273 Avoid release to the environment.

**Response**

P301+P317 IF SWALLOWED: Get medical help.  
 P330 Rinse mouth.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P317 Get medical help.  
 P318 IF exposed or concerned, get medical advice.  
 P319 Get medical help if you feel unwell.  
 P391 Collect spillage.

**Storage**

P405 Store locked up.

**Disposal**

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
Lead difluoride	Lead difluoride	7783-46-2	231-998-8	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**

Not irritating to skin or mucuous membranes; protect against chronic poisoning. Early symptoms of lead intoxication via inhalation or ingestion are most commonly gastrointestinal disorders, colic, constipation, etc.; weakness, which may go on to paralysis chiefly of the extensor muscles of the wrists and less often the ankles, is noticeable in the

most serious cases. Ingestion of a large amount causes local irritation of the alimentary tract; pain, leg cramps, muscle weakness, paresthesias, depression, coma, and death may follow in 1 or 2 days. Contact with eyes causes irritation. (USCG, 1999)

### **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. Lead and related compounds

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## **SECTION 5: Fire-fighting measures**

### **5.1 Suitable extinguishing media**

This chemical does not burn. Use any extinguishing agent suitable for surrounding fire ... If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Notify local health and fire officials and pollution control agencies. Containers may explode in fire. From a secure, explosion-proof location, use water spray to cool exposed containers. If cooling streams are ineffective (venting sound increases in volume and pitch, tank discolors or shows any signs of deforming), withdraw immediately to a secure position.

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

Excerpt from ERG Guide 154 [Substances - Toxic and/or Corrosive (Non-Combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.). Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. For electric vehicles or equipment, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. (ERG, 2016)

### **5.3 Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

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## **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.

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## **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.

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## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure limit values

<b>Component</b>	Lead difluoride
<b>CAS No.</b>	7783-46-2
	NIOSH considers "Lead" to mean metallic lead, lead oxides, and lead salts (including organic salts such as lead soaps but excluding lead arsenate). Recommended Exposure Limit: 10 hr Time-Weighted Avg: 0.050 mg/cu m /Lead/ Air concentrations should be maintained so that worker blood lead remains less than 0.06 mg Pb/100 g of whole blood.

#### 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

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

<b>Physical state</b>	Lead fluoride is an odorless white solid. Sinks in water. (USCG, 1999)
<b>Colour</b>	White to colorless crystals
<b>Odour</b>	Odorless
<b>Melting point/freezing point</b>	824 °C
<b>Boiling point or initial boiling point and boiling range</b>	1293 °C
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available

<b>Flash point</b>	1290°C
<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>	Partially miscible with water
<b>Partition coefficient n-octanol/water</b>	no data available
<b>Vapour pressure</b>	no data available
<b>Density and/or relative density</b>	8.2
<b>Relative vapour density</b>	no data available
<b>Particle characteristics</b>	no data available

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Slightly soluble in water.

### 10.2 Chemical stability

no data available

### 10.3 Possibility of hazardous reactions

Not flammable Calcium carbide mixed with LEAD FLUORIDE, at ordinary temperatures, becomes incandescent [Mellor 5:862-64. 1946-47].

### 10.4 Conditions to avoid

no data available

### 10.5 Incompatible materials

Violent reaction with oxidizers, chemically active metals ... May ignite combustibles such as wood, paper, oil, etc.

### 10.6 Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of /lead and hydrogen fluoride/.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 3031 mg/kg
- 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

Lead, lead compounds: Reasonably anticipated to be a human carcinogen

**Reproductive toxicity**

no data available

**STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

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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**

no data available

**12.4 Mobility in soil**

no data available

**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: UN3077 (For reference only, please check.)

IMDG: UN3077 (For reference only, please check.)

IATA: UN3077 (For reference only, please check.)

**14.2 UN Proper Shipping Name**

ADR/RID:  
ENVIRONMENTALLY  
HAZARDOUS SUBSTANCE,

IMDG:  
ENVIRONMENTALLY  
HAZARDOUS  
SUBSTANCE, SOLID,

IATA:  
ENVIRONMENTALLY  
HAZARDOUS  
SUBSTANCE, SOLID,

SOLID, N.O.S. (For reference only, please check.) N.O.S. (For reference only, please check.) N.O.S. (For reference only, please check.)

### 14.3 Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.) IMDG: 9 (For reference only, please check.) IATA: 9 (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: Yes IMDG: Yes IATA: Yes

### 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
Lead difluoride	Lead difluoride	7783-46-2	231-998-8
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

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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/>

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

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