



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 (2S)-1-[(2S)-6-amino-2-[[[(2S)-1-hydroxy-1-oxo-4-phenylbutan-2-yl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate(2S)-1-[(2S)-6-amino-2-[[[(1S)-1-carboxy-3-phenylpropyl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate,(s)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)

1.2 Other means of identification

Product number -
Other names Lisinopril; (S)-1-[N2-(1-carboxy-3-phenylpropyl)-L-lysyl]-L-proline dihydrate; Lisinopril Dihydrate

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 Yien Chemical Technology Co., Ltd
Address Building 6, 28 Yingong Road, Fengxian District, Shanghai Chemical Industry Zone, Shanghai, 201400, China
Telephone +86-400-133-2688

1.5 Emergency phone number

Emergency phone number +86-400-133-2688
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

Reproductive toxicity, Category 1A
Specific target organ toxicity – repeated exposure, Category 2

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger
Hazard statement(s) H361 Suspected of damaging fertility or the unborn child
H373 May cause damage to organs through prolonged or repeated exposure
Precautionary statement(s)
Prevention 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.
Response P318 IF exposed or concerned, get medical advice.
P319 Get medical help if you feel unwell.
Storage P405 Store locked up.
Disposal P501 Dispose of contents/container to an appropriate treatment and disposal

carboxylic acid dihydrate 1-[n2-(1-carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate,(s)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2) 6

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
(2S)-1-[(2S)-6-amino-2-[(2S)-1-hydroxy-1-oxo-4-phenylbutan-2-yl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate(2S)-1-[(2S)-6-amino-2-[(1S)-1-carboxy-3-phenylpropyl]amino}hexanoyl]pyrrolidine-2-carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-l-lysyl]-, dihydrate, (s)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-, dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)	(2S)-1-[(2S)-6-amino-2-[(2S)-1-hydroxy-1-oxo-4-phenylbutan-2-yl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate(2S)-1-[(2S)-6-amino-2-[(1S)-1-carboxy-3-phenylpropyl]amino}hexanoyl]pyrrolidine-2-carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-l-lysyl]-, dihydrate, (s)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-, dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)	83915-83-7	-	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

no data available

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

carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-l-lysyl]-, dihydrate, (s)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-, dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)

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6.3 Methods and materials for containment and cleaning up

SECTION 7: Handling and storage

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.

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

8.1 Control parameters

no data available

no data available

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

Eye/face protection

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

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.

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

no data available

Physical state	White to Off-White Crystalline Powder
Colour	no data available
Odour	no data available
Melting point/freezing point	148°C(lit.)
Boiling point or initial boiling point and boiling range	172°C
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	80°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	no data available
Partition coefficient n-octanol/water	no data available
Vapour pressure	no data available
Density and/or relative density	1.251 g/cm3
Relative vapour density	no data available
Particle characteristics	no data available

10.1 Reactivity

10.2 Chemical stability

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid

10.5 Incompatible materials

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

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

Serious eye damage/irritation

Respiratory or skin sensitization

Germ cell mutagenicity

Carcinogenicity

Reproductive toxicity

STOT-single exposure

STOT-repeated exposure

Aspiration hazard

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

12.3 Bioaccumulative potential

phenylpropyl)-L-lysyl]-, dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)

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: Not dangerous goods. (For IMDG: Not dangerous goods. (For IATA: Not dangerous goods. (For reference only, please check.) reference only, please check.) reference only, please check.)

14.2 UN Proper Shipping Name

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

14.3 Transport hazard class(es)

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

14.4 Packing group, if applicable

ADR/RID: Not dangerous goods. (For IMDG: Not dangerous goods. (For IATA: Not dangerous goods. (For reference only, please check.) reference only, please check.) 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
(2S)-1-[(2S)-6-amino-2-[[[(2S)-1-hydroxy-1-oxo-4-phenylbutan-2-yl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate(2S)-1-[(2S)-6-amino-2-[[[(1S)-1-carboxy-3-phenylpropyl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-l-lysyl]-,dihydrate,(S)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)	(2S)-1-[(2S)-6-amino-2-[[[(2S)-1-hydroxy-1-oxo-4-phenylbutan-2-yl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate(2S)-1-[(2S)-6-amino-2-[[[(1S)-1-carboxy-3-phenylpropyl]amino]hexanoyl]pyrrolidine-2-carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-l-lysyl]-,dihydrate,(S)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)	83915-83-7	-
European Inventory of Existing Commercial Chemical Substances (EINECS)			Not Listed.
EC Inventory			Not Listed.

carboxylic acid dihydrate1-[n2-(1-carboxy-3-phenylpropyl)-l-lysyl]-,dihydrate,(S)L-Proline, 1-[N2-(carboxy-3-phenylpropyl)-L-lysyl]-,dihydrate, (S)Lisinopril DihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline dihydrateN2-[(1S)-1-carboxy-3-phenylpropyl]-L-lysyl-L-proline, hydrate (1:2)

United States Toxic Substances Control Act (TSCA) Inventory	Not Listed.
China Catalog of Hazardous chemicals 2015	Not Listed.
New Zealand Inventory of Chemicals (NZIoC)	Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Not Listed.
Vietnam National Chemical Inventory	Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)	Not Listed.
Korea Existing Chemicals List (KECL)	Not 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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