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## SECTION 1: Identification

### 1.1 GHS Product identifier

**Product name** Lincomycin

### 1.2 Other means of identification

**Product number** -

**Other names** Lincomycin (USAN/INN); Lincomycin; (2S,4R)-N-[(1R,2R)-2-hydroxy-1-[(2R,3R,4S,5R,6R)-3,4,5-trihydroxy-6-methylsulfonyloxan-2-yl]propyl]-1-methyl-4-propylpyrrolidine-2-carboxamide

### 1.3 Recommended use of the chemical and restrictions on use

**Identified uses** Industrial and scientific research uses.

**Uses advised against** no data available

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## 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

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## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Lincomycin	Lincomycin	154-21-2	205-824-6	100%

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## 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

Emergency and supportive measures: Maintain an open airway and assist ventilation if necessary. Treat coma, seizures, hypotension, anaphylaxis, and hemolysis if they occur. Replace fluid losses resulting from gastroenteritis with intravenous crystalloids. Antibacterial agents

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## SECTION 5: Fire-fighting measures

### 5.1 Suitable extinguishing media

As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.

## 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.

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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

Wear approved respiratory protection, chemically compatible gloves, and protective clothing. Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labeled container for disposal. Wash spill site.

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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 in tight, light-resistant container as defined in the USP-NF. This material should be handled and stored per label instructions to ensure product integrity. Store in a cold place.

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# SECTION 8: Exposure controls/personal protection

## 8.1 Control parameters

### Occupational Exposure limit values

Component	Lincomycin			
CAS No.	154-21-2			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Canada - Ontario		0,1		
	Remarks			

### 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>	Solid
<b>Colour</b>	Amorphous solid
<b>Odour</b>	no data available
<b>Melting point/freezing point</b>	148-150Â°C
<b>Boiling point or initial boiling point and boiling range</b>	646.8Â°C at 760 mmHg
<b>Flammability</b>	no data available
<b>Lower and upper explosion limit/flammability limit</b>	no data available
<b>Flash point</b>	345Â°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>	Soluble in methanol, lower alcohols, acetone, ethyl acetate, chloroform. Slightly soluble in water
<b>Partition coefficient n-octanol/water</b>	no data available
<b>Vapour pressure</b>	1.34X10 <sup>-17</sup> mm Hg at 25 deg C (est)
<b>Density and/or relative density</b>	1.29 g/cm <sup>3</sup>
<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

no data available

### 10.2 Chemical stability

Stable in light and air. Lincomycin HCl, USP

### 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 very toxic fumes of /oxides of sulfur and oxides of nitrogen/.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat Sprague-Dawley oral 15,645 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

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

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

- Toxicity to fish: no data available
- Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water Flea) neonate age <24 hr; Conditions: freshwater, static, 20 deg C; Concentration: 23180 ug/L for 24 hr (95% confidence interval: 18960-28330 ug/L); Effect: intoxication, immobilization />99% purity formulation
- Toxicity to algae: EC50; Species: Pseudokirchneriella subcapitata (Green Algae) exponential growth phase 1000 cells/mL; Conditions: freshwater, static, 25 deg C, dissolved oxygen >90% saturated; Concentration: 70 ug/L for 3 days (95% confidence interval: 50-100 ug/L); Effect: decreased population abundance />99% purity formulation
- Toxicity to microorganisms: no data available

**12.2 Persistence and degradability**

AEROBIC: Lincomycin is readily degraded in the environment(1). The class of aminoglycosides, of which lincomycin is a member, were found to have biodegradation half-lives of about 30 days(2).

**12.3 Bioaccumulative potential**

An estimated BCF of 3 was calculated in fish for lincomycin(SRC), using a log Kow of 0.20(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 lincomycin is estimated as 69(SRC), using a log Kow of 0.20(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that lincomycin is expected to have high mobility in soil. However, the pKa of lincomycin is 7.80(4), indicating that this compound will exist partially in the cation form in the environment and cations generally adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

**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: no data available

IMDG: no data available

IATA: no data available

**14.2 UN Proper Shipping Name**

ADR/RID: no data available

IMDG: no data available

IATA: no data available

**14.3 Transport hazard class(es)**

ADR/RID: no data available

IMDG: no data available

IATA: no data available

**14.4 Packing group, if applicable**

ADR/RID: no data available

IMDG: no data available

IATA: no data available

**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**

## 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
Lincomycin	Lincomycin	154-21-2	205-824-6
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
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](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/>