SAFETY DATA SHEET

1. Identification

Product identifier **LINCO-SPECTIN® Antibiotic Soluble Powder for Poultry and Swine**

Other means of identification

Synonyms Linco-spectin soluble powder

Recommended use of the chemical and restrictions on use

Recommended use Veterinary product used as antibiotic agent

Restrictions on use Not for human use

Details of manufacturer or importer

Company Name (AU) Zoetis Australia Pty Ltd
ABN 94 156 476 425
Level 6, 5 Rider Boulevard
Rhodes NSW 2138 AUSTRALIA

Tel 1800 814 883

Fax (02) 8876 0444

Email productsupport.au@zoetis.com

Emergency Phone 1800 814 883 (all hours)

Police and Fire Brigade Dial 000

If ineffective Dial Poisons Information Centre (13 1126 from anywhere in Australia)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards	Not classified.	
Health hazards	Serious eye damage/eye irritation	Category 2A
	Sensitization, skin	Category 1
Environmental hazards	Not classified.	

Label elements, including precautionary statements

Hazard symbol(s)

Exclamation mark

Signal word Warning

Hazard statement(s) Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statement(s)

Prevention Avoid breathing dust. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/face protection. Wear protective gloves. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Prevent dust accumulation to minimize explosion hazard. Ground and bond container and receiving equipment. Observe good industrial hygiene practices.

Response IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification May form combustible dust concentrations in air. The most common adverse effects reported with clinical use were diarrhea, nausea, rash, and vomiting.

Supplemental information None.

3. Composition/information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients (%)
Lincomycin Hydrochloride Monohydrate	7179-49-9	222 mg/g
Preservative	Proprietary	*
Spectinomycin Sulfate Tetrahydrate	64058-48-6	445 mg/g

Composition comments *Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Description of necessary first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.

Eye contact Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Call a physician or poison control centre immediately. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconsious person.

Personal protection for first-aid responders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

Symptoms caused by exposure Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.

Medical attention and special treatment Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2). Apply extinguishing media carefully to avoid creating airborne dust.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed. Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

Special protective equipment and precautions for fire fighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers. During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

Hazchem code None.

General fire hazards May form combustible dust concentrations in air. Fine particles (such as mists) may fuel fires/explosions.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Keep unnecessary personnel away.

For emergency responders Wear appropriate protective equipment and clothing during clean-up. Keep people away from and upwind of spill/leak. Ventilate the contaminated area. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not breathe dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up

Ensure adequate ventilation. Avoid the generation of dusts during clean-up. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Collect spill with an inert, non-combustible absorbent material and transfer to labeled container for disposal. Clean surface thoroughly to remove residual contamination. Prevent release to the environment.

Small Spills: Wipe up with a damp cloth and place in container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling

Use with adequate ventilation. Minimise dust generation and accumulation. Avoid significant deposits of material, especially on horizontal surfaces, which may become airborne and form combustible dust clouds and may contribute to secondary explosions. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Provide adequate precautions, such as electrical grounding and bonding, or inert atmospheres. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not breathe dust. Provide appropriate exhaust ventilation at places where dust is formed. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. When handling, use appropriate personal protective equipment (see Section 8).

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Store below 30°C.

8. Exposure controls and personal protection

Control parameters

Follow standard monitoring procedures.

Occupational exposure limits

Zoetis

Components	Type	Value
Lincomycin Hydrochloride Monohydrate (CAS 7179-49-9)	TWA	100 µg/m3
Spectinomycin Sulfate Tetrahydrate (CAS 64058-48-6)	TWA	2000 µg/m³

Biological limit values

No biological exposure limits noted for the ingredient(s).

Exposure guidelines

No exposure standards allocated.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. Provide eyewash station.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapour cartridge, full facepiece, dust and mist filter. Respiratory protection should be provided in instances where exposure to dust, mists, aerosols or vapors are likely.

Thermal hazards	Not applicable.
Hygiene measures	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Powder.
Colour	Off-white to Light tan
Odour	Not available.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit – upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Soluble
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other physical and chemical parameters	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Keep away from heat, sparks and open flame. Minimise dust generation and accumulation. Dust may form explosive mixture with air. Fine particles (such as dust and mists) may fuel fires/explosions.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Thermal decomposition products may include oxides of carbon, nitrogen, and sulfur. May include hydrogen chloride.

11. Toxicological information

Information on possible routes of exposure

Inhalation	Dust may irritate respiratory system. Prolonged inhalation may be harmful.	
Skin contact	Dust or powder may irritate the skin. May cause an allergic skin reaction.	
Spectinomycin Sulfate Tetrahydrate		Species: Rabbit Severity: No effect
Eye contact	Causes serious eye irritation.	
Lincomycin Hydrochloride Monohydrate		Severity: Irritant
Spectinomycin Sulfate Tetrahydrate		Species: Rabbit Severity: Minimal
Ingestion	Expected to be a low ingestion hazard.	
Symptoms related to exposure	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Dusts may irritate the respiratory tract, skin and eyes. May cause an allergic skin reaction. Dermatitis. Rash.	
Acute toxicity	May cause an allergic skin reaction.	

Components	**Species**	**Test Results**
Lincomycin Hydrochloride Monohydrate (CAS 7179-49-9)		
Acute		
Intravenous		
LD50	Mouse	214 mg/kg
Oral		
LD50	Rat	> 4000 mg/kg
Other		
LD50	Rat	342 mg/kg (Para-periosteal)
Subcutaneous		
LD50	Rat	9778 mg/kg
Chronic		
Oral		
NOAEL	Dog	100 mg/kg/day, 6 months (Target organ(s): Immune system)
Subacute		
Oral		
NOAEL	Rat	300 mg/kg/day, 30 days (No effects at maximum dose)
Subcutaneous		
NOAEL	Rat	60 mg/kg/day, 30 days (Target organ(s): None identified)
Subchronic		
Oral		
LOAEL	Dog	400 mg/kg/day, 3 months (Target organ(s): None identified)
NOAEL	Rat	300 mg/kg/day, 3 months (Target organ(s): None identified)
Spectinomycin Sulfate Tetrahydrate (CAS 64058-48-6)		
Acute		
Intravenous		
LD50	Mouse	1022 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg

Components	Species	Test Results
Other		
LD50	Mouse	3577 mg/kg [Sub-tenon injection (eye)]
Subchronic		
Oral		
LOAEL	Rat	3000 mg/kg/day, 13 weeks (Target organ(s): None identified)
NOAEL	Dog	50 mg/kg/day, 90 days (Target organ(s): None identified)
	Rat	400 mg/kg/day, 13 weeks (Target organ(s): None identified)

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Corrosivity

Spectinomycin Sulfate Tetrahydrate	Severity: No effect

Serious eye damage/irritation Causes serious eye irritation.

Eye contact

Lincomycin Hydrochloride Monohydrate	Severity: Irritant
Spectinomycin Sulfate Tetrahydrate	Species: Rabbit Severity: Minimal

Respiratory or skin sensitisation

Respiratory sensitisation Not a respiratory sensitizer.

Skin sensitisation May cause an allergic skin reaction.

Skin Sensitisation

Lincomycin Hydrochloride Monohydrate	Severity: Sensitiser
Spectinomycin Sulfate Tetrahydrate	Severity: Sensitiser

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Mutagenicity

Lincomycin Hydrochloride Monohydrate	Bacterial Mutagenicity (Ames) Result: Negative Species: Salmonella
Spectinomycin Sulfate Tetrahydrate	Bacterial Mutagenicity (Ames) Result: Negative Species: Salmonella
Lincomycin Hydrochloride Monohydrate	Direct DNA Interaction Result: Negative Species: Human lymphocytes
Spectinomycin Sulfate Tetrahydrate	In Vitro Chromosome Aberration Result: Negative Species: Chinese Hamster Ovary (CHO) cells
	In Vitro Unscheduled DNA Synthesis Result: Negative Species: Rat Hepatocyte
	In Vivo Micronucleus Result: Negative Species: Mouse Bone Marrow
Lincomycin Hydrochloride Monohydrate	In Vivo Micronucleus Result: Negative Species: Rat

Mutagenicity

Lincomycin Hydrochloride Monohydrate	Mammalian Cell Mutagenicity Result: Negative Species: Mouse Lymphoma

Carcinogenicity Due to partial or complete lack of data the classification is not possible.

Reproductive toxicity This compound can cross the placenta in pregnant women.; may be secreted in human breast milk. This product is not expected to cause reproductive or developmental effects. Based on available data, the classification criteria are not met.

Developmental effects

Lincomycin Hydrochloride Monohydrate	100 mg/kg Prenatal & Postnatal Development, Not Teratogenic Result: NOEL Species: Rat Organ: Oral
Spectinomycin Sulfate Tetrahydrate	1000 mg/kg/day Embryo / Fetal Development, (Maternal Toxicity) Result: NOAEL Species: Rat Organ: Oral 2000 mg/kg/day Embryo / Fetal Development, (Fetotoxicity) Result: NOAEL Species: Rat Organ: Oral
Lincomycin Hydrochloride Monohydrate	30 mg/kg/day Peri-/Postnatal Development, No effects at maximum dose Result: NOAEL Species: Rat Organ: Subcutaneous 300 mg/kg/day Embryo/Fetal Development, Not Teratogenic Result: NOAEL Species: Rat Organ: Subcutaneous 75 mg/kg/day Fertility and Embryonic Development, No effects at maximum dose Result: NOAEL Species: Rat Organ: Subcutaneous

Reproductivity

Lincomycin Hydrochloride Monohydrate	100 mg/kg 2 Generation Reproductive Toxicity, Fetotoxicity Result: LOAEL Species: Rat Organ: Oral
Spectinomycin Sulfate Tetrahydrate	2000 mg/kg/day Reproductive & Fertility, (Maternal Toxicity, Paternal toxicity, Fetotoxicity) Result: NOAEL Species: Rat Organ: Oral 400 mg/kg/day Reproductive & Fertility, (Maternal toxicity, Paternal toxicity, Fetotoxicity) Result: NOEL Species: Rat Organ: Oral

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment. Avoid release to the environment.

Components		Species	Test Results
Lincomycin Hydrochloride Monohydrate (CAS 7179-49-9)			
	EC50	Anabaena flos-aquae (Cyanobacteria)	0.03 mg/l, 72 Hours
	LC50	Salmo gairdneri (Trout)	> 980 mg/l, 96 Hours
Aquatic			
Crustacea	EC50	Daphnia magna (Water Flea)	> 900 mg/l, 48 Hours
Fish	LC50	Lepomis macrochirus (Bluegill Sunfish)	> 980 mg/l, 96 Hours
Spectinomycin Sulfate Tetrahydrate (CAS 64058-48-6)			
	EC50	Selenastrum capricornutum (Green Alga)	1.18 mg/l, 72 Hours
Aquatic			
Crustacea	EC50	Daphnia magna (Water Flea)	> 1000 mg/l, 48 Hours
Fish	LC50	Oncorhynchus mykiss (rainbow trout)	> 118 mg/l, 96 Hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential See below

Partition coefficient n-octanol / water (log Kow)	
Spectinomycin Sulfate Tetrahydrate	-2.44, (Log D, measured, pH 7.4)

Mobility in soil This product is miscible in water.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal methods Avoid release to the environment. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. Dispose of contents/container in accordance with local/regional/national/international regulations.

Residual waste Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

ADG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Safety, health and environmental regulations

National regulations

This Safety Data Sheet was prepared in accordance with Australia Model Code of Practice for the preparation of Safety Data Sheets for Hazardous Chemicals (23/12/2011).

APVMA No. 48182

Poison Schedule (Product): Schedule 4

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix F

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 6

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

Not listed.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Resricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 14-December-2016

Revision date 20-December-2021

Disclaimer Zoetis Inc. believes that the information contained in this Safety Data Sheet is accurate, and while it is provided in good faith, it is without warranty of any kind, expressed or implied. If data for a hazard are not included in this document there is no known information at this time. The information in the sheet was written based on the best knowledge and experience currently available.

Revision information Identification: Restrictions on use
First-aid measures: Ingestion
Accidental release measures: Methods and materials for containment and cleaning up
Accidental release measures: For emergency responders
Accidental release measures: For non-emergency personnel
Handling and storage: Conditions for safe storage, including any incompatibilities
Exposure controls and personal protection: Thermal hazards
Toxicological information: Reproductivity
Ecological information: Bioaccumulative potential
Disposal considerations: Disposal methods