SAFETY DATA SHEET

1. Identification

Product identifier LINCO-SPECTIN® Antibiotic Soluble Powder for Poultry and Swine (48182)

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 australia.animalhealth@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) May cause an allergic skin reaction. Causes serious eye irritation.
- Precautionary Statement(s)
  - 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.
3. Composition/information on ingredients

<table>
<thead>
<tr>
<th>Mixture</th>
<th>Identity of chemical ingredients</th>
<th>CAS number and other unique identifiers</th>
<th>Concentration of ingredients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>7179-49-9</td>
<td>222 mg/g</td>
<td></td>
</tr>
<tr>
<td>Preservative</td>
<td>Proprietary</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>64058-48-6</td>
<td>445 mg/g</td>
<td></td>
</tr>
</tbody>
</table>

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. Get medical attention if symptoms occur. Never give anything by mouth to a victim who is unconscious or is having convulsions.

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
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
Do not breathe dust. Keep unnecessary personnel away. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
For emergency responders
Wear appropriate protective equipment and clothing during clean-up. Keep unnecessary personnel away. 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 contaminated surface thoroughly. 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

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincomycin Hydrochloride Monohydrate (CAS 7179-49-9)</td>
<td>TWA</td>
<td>100 µg/m³</td>
</tr>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate (CAS 64058-48-6)</td>
<td>TWA</td>
<td>2000 µg/m³</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Protection</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye/face protection</td>
<td>Wear safety glasses with side shields (or goggles).</td>
</tr>
<tr>
<td>Skin protection</td>
<td>Wear appropriate chemical resistant gloves.</td>
</tr>
<tr>
<td>Hand protection</td>
<td>Wear appropriate chemical resistant gloves.</td>
</tr>
<tr>
<td>Other</td>
<td>Wear appropriate chemical resistant clothing.</td>
</tr>
</tbody>
</table>
**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**
Wear appropriate thermal protective clothing, when necessary.

**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.

**Eye contact**
Causes serious eye irritation.

**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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
</table>

**Lincomycin Hydrochloride Monohydrate (CAS 7179-49-9)**

**Acute**

<table>
<thead>
<tr>
<th>IntraVenous</th>
<th>Mouse</th>
<th>214 mg/kg</th>
</tr>
</thead>
</table>

**Oral**

<table>
<thead>
<tr>
<th>LD50</th>
<th>Rat</th>
<th>&gt; 4000 mg/kg</th>
</tr>
</thead>
</table>

**Other**

<table>
<thead>
<tr>
<th>LD50</th>
<th>Rat</th>
<th>342 mg/kg (Para-periosteal)</th>
</tr>
</thead>
</table>

**Subcutaneous**

<table>
<thead>
<tr>
<th>LD50</th>
<th>Rat</th>
<th>9778 mg/kg</th>
</tr>
</thead>
</table>

**Chronic**

**Oral**

<table>
<thead>
<tr>
<th>NOAEL</th>
<th>Dog</th>
<th>100 mg/kg/day, 6 months (Target organ(s): Immune system)</th>
</tr>
</thead>
</table>

**Subacute**

**Oral**

<table>
<thead>
<tr>
<th>NOAEL</th>
<th>Rat</th>
<th>300 mg/kg/day, 30 days (No effects at maximum dose)</th>
</tr>
</thead>
</table>

**Subcutaneous**

<table>
<thead>
<tr>
<th>NOAEL</th>
<th>Rat</th>
<th>60 mg/kg/day, 30 days (Target organ(s): None identified)</th>
</tr>
</thead>
</table>

**Subchronic**

**Oral**

<table>
<thead>
<tr>
<th>LOAEL</th>
<th>Dog</th>
<th>400 mg/kg/day, 3 months (Target organ(s): None identified)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>NOAEL</th>
<th>Rat</th>
<th>300 mg/kg/day, 3 months (Target organ(s): None identified)</th>
</tr>
</thead>
</table>

**Spectinomycin Sulfate Tetrahydrate (CAS 64058-48-6)**

**Acute**

<table>
<thead>
<tr>
<th>Intravenous</th>
<th>Mouse</th>
<th>1022 mg/kg</th>
</tr>
</thead>
</table>

Material name: LINCO-SPECTIN® Antibiotic Soluble Powder for Poultry and Swine (48182)
<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
<td>&gt; 5000 mg/kg</td>
</tr>
<tr>
<td>Other LD50</td>
<td>Mouse</td>
<td>3577 mg/kg [Sub-tenon injection (eye)]</td>
</tr>
<tr>
<td><strong>Subchronic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral LOAEL</td>
<td>Rat</td>
<td>3000 mg/kg/day, 13 weeks (Target organ(s): None identified)</td>
</tr>
<tr>
<td>NOAEL</td>
<td>Dog</td>
<td>50 mg/kg/day, 90 days (Target organ(s): None identified)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>400 mg/kg/day, 13 weeks (Target organ(s): None identified)</td>
</tr>
<tr>
<td><strong>Skin corrosion/irritation</strong></td>
<td></td>
<td>Prolonged skin contact may cause temporary irritation.</td>
</tr>
<tr>
<td><strong>Corrosivity</strong></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>Severity: No effect</td>
</tr>
<tr>
<td><strong>Serious eye damage/irritation</strong></td>
<td></td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td><strong>Eye contact</strong></td>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>Severity: Irritant</td>
</tr>
<tr>
<td></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>Species: Rabbit Severity: Minimal</td>
</tr>
<tr>
<td><strong>Respiratory or skin sensitisation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Respiratory sensitisation</strong></td>
<td></td>
<td>Not a respiratory sensitizer.</td>
</tr>
<tr>
<td><strong>Skin sensitisation</strong></td>
<td></td>
<td>May cause an allergic skin reaction.</td>
</tr>
<tr>
<td><strong>Skin sensitisation</strong></td>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>Severity: Sensitiser</td>
</tr>
<tr>
<td></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>Severity: Sensitiser</td>
</tr>
<tr>
<td><strong>Germ cell mutagenicity</strong></td>
<td></td>
<td>No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.</td>
</tr>
<tr>
<td><strong>Mutagenicity</strong></td>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>Bacterial Mutagenicity (Ames) Result: negative Species: Salmonella</td>
</tr>
<tr>
<td></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>Bacterial Mutagenicity (Ames) Result: negative Species: Salmonella</td>
</tr>
<tr>
<td></td>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>Direct DNA Interaction Result: negative Species: Human lymphocytes</td>
</tr>
<tr>
<td></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>In Vitro Chromosome Aberration Result: negative Species: Chinese Hamster Ovary (CHO) cells</td>
</tr>
<tr>
<td></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>In Vitro Unscheduled DNA Synthesis Result: negative Species: Rat Hepatocyte</td>
</tr>
<tr>
<td></td>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>In Vivo Micronucleus Result: negative Species: Mouse Bone Marrow</td>
</tr>
</tbody>
</table>
## Mutagenicity
Lincomycin Hydrochloride Monohydrate
- In Vivo Micronucleus
  - Result: negative
  - Species: Rat

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.

### Developmental effects

<table>
<thead>
<tr>
<th>Compound</th>
<th>Dose/Exposure</th>
<th>Effectation</th>
<th>Toxicity</th>
<th>Result</th>
<th>Species</th>
<th>Organ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>100 mg/kg</td>
<td>Prenatal &amp; Postnatal Development</td>
<td>Not Teratogenic</td>
<td>NOEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>1000 mg/kg/day</td>
<td>Embryo / Fetal Development</td>
<td>(Maternal Toxicity)</td>
<td>NOAEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>2000 mg/kg/day</td>
<td>Embryo / Fetal Development</td>
<td>(Fetotoxicity)</td>
<td>NOAEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
<tr>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>30 mg/kg/day</td>
<td>Peri-/Postnatal Development</td>
<td>No effects at maximum dose</td>
<td>NOAEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
<tr>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>300 mg/kg/day</td>
<td>Embryo/Fetal Development</td>
<td>Not Teratogenic</td>
<td>NOAEL</td>
<td>Rat</td>
<td>Subcutaneous</td>
</tr>
<tr>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>75 mg/kg/day</td>
<td>Fertility and Embryonic Development</td>
<td>No effects at maximum dose</td>
<td>NOAEL</td>
<td>Rat</td>
<td>Subcutaneous</td>
</tr>
</tbody>
</table>

### Reproductivity

<table>
<thead>
<tr>
<th>Compound</th>
<th>Dose/Exposure</th>
<th>Generations</th>
<th>Toxicity</th>
<th>Result</th>
<th>Species</th>
<th>Organ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincomycin Hydrochloride Monohydrate</td>
<td>100 mg/kg</td>
<td>2</td>
<td>Reproductive Toxicity, Fetotoxicity</td>
<td>L0AEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>2000 mg/kg/day</td>
<td></td>
<td>Reproductive &amp; Fertility, (Maternal Toxicity, Paternal toxicity, Fetotoxicity)</td>
<td>NOAEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate</td>
<td>400 mg/kg/day</td>
<td></td>
<td>Reproductive &amp; Fertility, (Maternal toxicity, Paternal toxicity, Fetotoxicity)</td>
<td>NOEL</td>
<td>Rat</td>
<td>Oral</td>
</tr>
</tbody>
</table>

### 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 Test results

<table>
<thead>
<tr>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anabaena flos-aquae (Cyanobacteria)</td>
<td>EC50 0.03 mg/l, 72 Hours</td>
</tr>
<tr>
<td>Daphnia magna (Water Flea)</td>
<td>LC50 &gt; 900 mg/l, 48 Hours</td>
</tr>
<tr>
<td>Lepomis macrochirus (Bluegill Sunfish)</td>
<td>LC50 &gt; 980 mg/l, 96 Hours</td>
</tr>
<tr>
<td>Salmo gairdneri (Trout)</td>
<td></td>
</tr>
</tbody>
</table>

Spectinomycin Sulfate Tetrahydrate (CAS 64058-48-6)

<table>
<thead>
<tr>
<th>Species</th>
<th>Test results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daphnia magna (Water Flea)</td>
<td>EC50 &gt; 1000 mg/l, 48 Hours</td>
</tr>
<tr>
<td>Selenastrum capricornutum (Green Alga)</td>
<td>LC50 1.18 mg/l, 72 Hours</td>
</tr>
<tr>
<td>Oncorhynchus mykiss (Rainbow Trout)</td>
<td>LC50 &gt; 118 mg/l, 96 Hours</td>
</tr>
</tbody>
</table>

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

Bioaccumulative potential

<table>
<thead>
<tr>
<th>Partition coefficient n-octanol / water (log Kow)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectinomycin Sulfate Tetrahydrate</td>
</tr>
</tbody>
</table>

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. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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 (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

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).

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.

Restricted 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

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>No</td>
</tr>
</tbody>
</table>

*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

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.

This SDS replaces version dated 06/21/2016 (issued 28 December 2016)