1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

Product Identifier

Material Name: Aureomycin Soluble Powder Concentrate

Trade Name: Aureomycin
Chemical Family: Mixture

Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Intended Use: Feed additive

Details of the Supplier of the Safety Data Sheet

Zoetis Inc.
100 Campus Drive, P.O. Box 651
Florham Park, New Jersey 07932 (USA)
Rocky Mountain Poison Control Center Phone: 1-866-531-8896
Product Support/Technical Services Phone: 1-800-366-5288

Zoetis Belgium S.A.
Mercuriusstraat 20
1930 Zaventem
Belgium

Emergency telephone number:
CHEMTREC (24 hours): 1-800-424-9300
Contact E-Mail: VMIPSrecords@zoetis.com

2. HAZARDS IDENTIFICATION

Appearance: powder

Classification of the Substance or Mixture

GHS - Classification

Acute Oral Toxicity: Category 5
Reproductive Toxicity: Category 1A

US OSHA Specific - Classification

Physical Hazard: Combustible Dust

EU Classification:

EU Indication of danger: Toxic

EU Symbol: T
R61 - May cause harm to the unborn child.

Label Elements

Signal Word: Danger
Hazard Statements:
May form combustible dust concentrations in air
H303 - May be harmful if swallowed
H360 - May damage fertility or the unborn child
Precautionary Statements:  
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P201 - Obtain special instructions before use  
P202 - Do not handle until all safety precautions have been read and understood  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P308 + P313 - IF exposed or concerned: Get medical attention/advice  
P405 - Store locked up  
P501 - Dispose of contents/container in accordance with all local and national regulations

Other Hazards

Short Term: May cause allergic reaction  May be harmful to aquatic organisms.  
Known Clinical Effects: Symptoms of chronic exposure to tetracyclines include redness and swelling of the skin, rash, chills, tooth discoloration, yellowing of the skin and eyes, nausea, vomiting, diarrhea, stomach pain, and chest pain.


Note: This document has been prepared in accordance with standards for workplace safety, which requires the inclusion of all known hazards of the product or its ingredients regardless of the potential risk. The precautionary statements and warning included may not apply in all cases. Your needs may vary depending upon the potential for exposure in your workplace.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS/ELINCS List</th>
<th>EU Classification</th>
<th>GHS Classification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlortetracycline hydrochloride</td>
<td>64-72-2</td>
<td>200-591-7</td>
<td>Repr. Cat.1;R61</td>
<td>Repro Tox 1A (H360)</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS/ELINCS List</th>
<th>EU Classification</th>
<th>GHS Classification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inert Ingredients</td>
<td>Not applicable</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>80</td>
</tr>
</tbody>
</table>

Additional Information: Ingredient(s) indicated as hazardous have been assessed under standards for workplace safety.

For the full text of the R phrases and CLP/GHS abbreviations mentioned in this Section, see Section 16

4. FIRST AID MEASURES

Description of First Aid Measures

Eye Contact: Flush with water while holding eyelids open for at least 15 minutes. Seek medical attention immediately.
5. FIRE-FIGHTING MEASURES

Extinguishing Media: Extinguish fires with CO2, extinguishing powder, foam, or water.

Special Hazards Arising from the Substance or Mixture
Hazardous Combustion: Formation of toxic gases is possible during heating or fire.

Fire / Explosion Hazards: During processing, dust may form explosive mixture in air. Fine particles (such as dust and mists) may fuel fires/explosions.

Advice for Fire-Fighters
During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure. Avoid dust formation.

Environmental Precautions
Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Methods and Material for Containment and Cleaning Up
Measures for Cleaning / Collecting: Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding procedures. Contain the source of the spill if it is safe to do so. Collect spilled material by a method that controls dust generation. Clean spill area thoroughly.

Additional Consideration for Large Spills: Avoid generating airborne dust. Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding procedures. Non-essential personnel should be evacuated from affected area. Report emergency situations immediately. Clean up operations should only be undertaken by trained personnel.

7. HANDLING AND STORAGE

Precautions for Safe Handling
SAFETY DATA SHEET

Material Name: Aureomycin Soluble Powder Concentrate
Revision date: 20-Dec-2013
Version: 1.0

7. HANDLING AND STORAGE

Eliminate possible ignition sources (e.g., heat, sparks, flame, impact, friction, electricity), and follow appropriate grounding and bonding procedures. Avoid open handling. Minimize dust generation and accumulation. When handling, use appropriate personal protective equipment (see Section 8). Releases to the environment should be avoided. Review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure or environmental releases. Potential points of process emissions of this material to the atmosphere should be controlled with dust collectors, HEPA filtration systems or other equivalent controls.

Conditions for Safe Storage, Including any Incompatibilities

Storage Conditions: Store at room temperature in properly labeled containers. Keep away from heat, sparks and flames.

Incompatible Materials: Strong acids and strong bases

Specific end use(s): No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters
Refer to available public information for specific member state Occupational Exposure Limits.

Chlortetracycline hydrochloride
Zoetis OEL TWA 8-hr 0.5 mg/m³

Exposure Controls
Engineering Controls: Engineering controls should be used as the primary means to control exposures. Use process containment, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

Personal Protective Equipment: Refer to applicable national standards and regulations in the selection and use of personal protective equipment (PPE).

Hands: Wear impervious gloves as minimum protection.
Eyes: Wear safety glasses as minimum protection.
Skin: Wear impervious protective clothing when handling this compound.
Respiratory protection: If the applicable Occupational Exposure Limit (OEL) is exceeded, wear an appropriate respirator with a protection factor sufficient to control exposures to below the OEL.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>powder</th>
<th>Color:</th>
<th>No data available.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor:</td>
<td>Fermentation odor</td>
<td>Odor Threshold:</td>
<td>No data available.</td>
</tr>
<tr>
<td>Molecular Formula:</td>
<td>Mixture</td>
<td>Molecular Weight:</td>
<td>Mixture</td>
</tr>
<tr>
<td>Solvent Solubility:</td>
<td>No data available.</td>
<td>Water Solubility:</td>
<td>Soluble</td>
</tr>
<tr>
<td>pH:</td>
<td>No data available.</td>
<td>Melting/Freezing Point (°C):</td>
<td>No data available.</td>
</tr>
<tr>
<td>Boiling Point (°C):</td>
<td>No data available.</td>
<td>Partition Coefficient: (Method, pH, Endpoint, Value)</td>
<td></td>
</tr>
<tr>
<td>Decomposition Temperature (°C):</td>
<td>No data available.</td>
<td>Evaporation Rate (Gram/s):</td>
<td>No data available.</td>
</tr>
<tr>
<td>Vapor Pressure (kPa):</td>
<td>No data available.</td>
<td>Vapor Density (g/ml):</td>
<td>No data available.</td>
</tr>
<tr>
<td>Relative Density:</td>
<td>No data available.</td>
<td>Viscosity:</td>
<td>No data available.</td>
</tr>
</tbody>
</table>
Flammability:
- Autoignition Temperature (Solid) (°C): No data available
- Flammability (Solids): No data available
- Flash Point (Liquid) (°C): No data available
- Upper Explosive Limits (Liquid) (% by Vol.): No data available
- Lower Explosive Limits (Liquid) (% by Vol.): No data available

10. STABILITY AND REACTIVITY

Reactivity: No data available
Chemical Stability: Stable under normal conditions of use.

Possibility of Hazardous Reactions
- Oxidizing Properties: No data available
- Conditions to Avoid: Keep away from heat and other sources of ignition, including electrostatic discharge. Dust may form explosive mixture in air. Fine particles (such as dust and mists) may fuel fires/explosions.
- Incompatible Materials: Strong acids and strong bases
- Hazardous Decomposition Products: Carbon oxides Nitrogen oxides (nox)

11. TOXICOLOGICAL INFORMATION

Information on Toxicological Effects
General Information: Toxicological properties of the formulation have not been investigated. The information in this section describes the hazards of various forms of the active ingredient. The toxicities of the two materials can be expected to be similar.

Acute Toxicity: (Species, Route, End Point, Dose)

Chlortetracycline hydrochloride
- Mouse Oral LD50 2314 mg/kg
- Rat Oral LD50 > 3000mg/kg

Oxytetracycline hydrochloride
- Mouse Oral LD50 6696 mg/kg
- Mouse SC LD50 > 600mg/kg
- Rat SC LD50 800mg/kg
- Mouse IV LD50 100mg/kg
- Rat IV LD50 302mg/kg
Acute Toxicity Comments: A greater than symbol (>) indicates that the toxicity endpoint being tested was not achievable at the highest dose used in the test.

Oxytetracycline hydrochloride
- 13 Week(s) Mouse Oral 3821 mg/kg/day NOAEL None identified
- 13 Week(s) Rat Oral 3352 mg/kg/day NOAEL Liver
- 12 Month(s) Dog Oral 125 mg/kg/day NOAEL Male reproductive system
- 24 Month(s) Dog Oral 250 mg/kg/day NOAEL None identified
- 14 Day(s) Oral 108 g/kg LOEL Brain

Oxytetracycline hydrochloride
- 2 Generation Reproductive Toxicity Rat Oral 18 mg/kg/day NOAEL No effects at maximum dose
- Embryo / Fetal Development Rat Oral 1500 mg/kg/day NOAEL Maternal Toxicity
11. TOXICOLOGICAL INFORMATION

Embryo / Fetal Development  Mouse  Oral  2100 mg/kg/day  NOAEL  Embryotoxicity

Oxytetracycline hydrochloride
Bacterial Mutagenicity (Ames)  Salmonella  Negative
In Vitro Chromosome Aberration  Chinese Hamster Ovary (CHO) cells  Negative
Sister Chromatid Exchange  Chinese Hamster Ovary (CHO) cells  Negative
Micronucleus  Mouse  Negative
Mammalian Cell Mutagenicity  Mouse Lymphoma  Positive with activation

Oxytetracycline hydrochloride
24 Month(s)  Rat  Oral, in feed  150 mg/kg/day  NOEL  Not carcinogenic
103 Week(s)  Mouse  Oral, in feed  1372 mg/kg/day  NOEL  Not carcinogenic

Carcinogen Status:  None of the components of this formulation are listed as a carcinogen by IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Environmental Overview:  Environmental properties of the formulation have not been investigated. Releases to the environment should be avoided. Not expected to bioaccumulate. The following information is available for the individual ingredients.

Toxicity:

Chlortetracycline hydrochloride
Daphnia magna (Water Flea)  OECD  EC50  48 Hours  > 541.1 mg/L
Pseudokirchneriella subcapitata (Green Alga)  OECD  EC50  72 Hours  0.095 mg/L
Oncorhynchus mykiss (Rainbow Trout)  OECD  LC50  96 Hours  59.5 mg/L

Oxytetracycline hydrochloride
Oncorhynchus mykiss (Rainbow Trout)  ASTM EPA  LC50  96 Hours  > 116 mg/L
Daphnia magna (Water Flea)  ASTM EPA  EC50  48 Hours  > 102 mg/L
Lepomis macrochirus (Bluegill Sunfish)  ASTM EPA  LC50  96 Hours  > 94.9 mg/L
Selenastrum capricornutum (Green Alga)  ISO  EC50  72 Hours  4.18 mg/L

Chlortetracycline hydrochloride
Eisenia fetida (Earthworm)  OECD  NOEC  56 Days  1000 mg/kg

Persistence and Degradability:  No data available

Bio-accumulative Potential:  No data available

Mobility in Soil:  No data available
13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods: Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. 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.

14. TRANSPORT INFORMATION

The following refers to all modes of transportation unless specified below.

Not regulated for transport under USDOT, EUADR, IATA, or IMDG regulations.

15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

Canada - WHMIS: Classifications
WHMIS hazard class:
Class D, Division 2, Subdivision A

Inert Ingredients
CERCLA/SARA 313 Emission reporting Not Listed
California Proposition 65 Not Listed
EU EINECS/ELINCS List Not Listed

Chlortetracycline hydrochloride
CERCLA/SARA 313 Emission reporting Not Listed
California Proposition 65 Not Listed
Australia (AICS): Present
EU EINECS/ELINCS List 200-591-7

REACH Authorizations: 1.0

16. OTHER INFORMATION

Text of R phrases and GHS Classification abbreviations mentioned in Section 3
H360 - May damage fertility or the unborn child

R61 - May cause harm to the unborn child.

Data Sources: The data contained in this MSDS may have been gathered from confidential internal sources, raw material suppliers, or from the published literature.

Reasons for Revision: Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking. Updated Section 2 - Hazard Identification. Updated Section 3 - Composition / Information on Ingredients. Updated Section 5 - Fire Fighting Measures. Updated Section 7 - Handling and Storage. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 10 - Stability and Reactivity. Updated Section 11 - Toxicology Information. Updated Section 15 - Regulatory Information.

Prepared by: Toxicology and Hazard Communication Zoetis Global Risk Management

Zoetis Inc. believes that the information contained in this Material 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.

End of Safety Data Sheet