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

Pfizer Animal Health
Pfizer Inc
235 East 42nd Street
New York, NY 10017
Poison Control Center Phone: 1-866-531-8896
Technical Services Phone: 1-800-366-5288
Contact E-Mail: pfizer-MSDS@pfizer.com

Material Name: Lincomycin Hydrochloride Injectable

Trade Name: Lincocin®; LINCOMIX® Injectable
Chemical Family: Mixture
Intended Use: Veterinary product used as antibiotic agent
Restrictions on Use: Not for human use

2. HAZARDS IDENTIFICATION

Appearance: Colorless liquid
Signal Word: WARNING

Statement of Hazard: May cause allergic skin reaction.

Additional Hazard Information:
Short Term: May cause eye, skin and respiratory tract irritation. Individuals sensitive to this chemical or other materials in its chemical class may develop allergic reactions.

Known Clinical Effects: The most common adverse effects reported with clinical use were diarrhea, nausea, rash, and vomiting. Effects on blood and blood-forming organs have also occurred. This compound can cross the placenta in pregnant women. Secreted in human breast milk.

EU Indication of danger: Irritant

EU Hazard Symbols:

EU Risk Phrases: R43 - May cause sensitization by skin contact.


Note: This document has been prepared in accordance with standards for workplace safety, which require the inclusion of all known hazards of the active substance or its intermediates regardless of the potential risk. The precautionary statements and warnings 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

Hazardous

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS/ELINCS List</th>
<th>Classification</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benzyl Alcohol</td>
<td>100-51-6</td>
<td>202-859-9</td>
<td>Xn;R20/22</td>
<td>*</td>
</tr>
<tr>
<td>Lincomycin Hydrochloride</td>
<td>859-18-7</td>
<td>212-726-7</td>
<td>Xi;R43</td>
<td>2.5 - 30</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>231-791-2</td>
<td>Not Listed</td>
<td>*</td>
</tr>
</tbody>
</table>

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

For the full text of the R phrases mentioned in this Section, see Section 16

4. FIRST AID MEASURES

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

Skin Contact: Remove contaminated clothing. Flush area with large amounts of water. Use soap. Seek medical attention. Delayed effects may occur. For information on potential delayed effects, see Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.

Ingestion: Never give anything by mouth to an unconscious person. Wash out mouth with water. Do not induce vomiting unless directed by medical personnel. Seek medical attention immediately.

Inhalation: Remove to fresh air and keep patient at rest. Seek medical attention immediately.

Symptoms and Effects of Exposure: For information on potential signs and symptoms of exposure, See Section 2 - Hazards Identification and/or Section 11 - Toxicological Information.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use carbon dioxide, dry chemical, or water spray.

Hazardous Combustion Products: Not determined

Fire Fighting Procedures: During all fire fighting activities, wear appropriate protective equipment, including self-contained breathing apparatus.

Fire / Explosion Hazards: No data available

6. ACCIDENTAL RELEASE MEASURES

Health and Safety Precautions: Personnel involved in clean-up should wear appropriate personal protective equipment (see Section 8). Minimize exposure.

Measures for Cleaning / Collecting: Contain the source of spill if it is safe to do so. Collect spill with absorbent material. Clean spill area thoroughly.
Measures for Environmental Protections: Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release.

Additional Consideration for Large Spills: 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

General Handling: Avoid breathing vapor or mist. Avoid contact with eyes, skin and clothing. When handling, use appropriate personal protective equipment (see Section 8). Wash thoroughly after handling. 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.

Storage Conditions: Store as directed by product packaging. Keep out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

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

Benzyl Alcohol

<table>
<thead>
<tr>
<th>Country</th>
<th>OEL - TWA</th>
<th>Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>Listed</td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>Listed</td>
<td></td>
</tr>
<tr>
<td>Latvia</td>
<td>Listed</td>
<td></td>
</tr>
<tr>
<td>Lithuania</td>
<td>Listed</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>Listed</td>
<td></td>
</tr>
</tbody>
</table>

Lincomycin Hydrochloride

| OEL TWA-8 Hr:            | 100 µg/m³ |

The exposure limit(s) listed for solid components are only relevant if dust or mist may be generated. Refer to available public information for specific member state Occupational Exposure Limits.

Engineering Controls: Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes. Keep airborne contamination levels below the exposure limits listed above in this section.

Environmental Exposure Controls: Refer to specific Member State legislation for requirements under Community environmental legislation.

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

<table>
<thead>
<tr>
<th>Protection Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hands:</td>
</tr>
<tr>
<td>Impervious gloves are recommended if skin contact with drug product is possible and for bulk processing operations.</td>
</tr>
<tr>
<td>Eyes:</td>
</tr>
<tr>
<td>Wear safety glasses or goggles if eye contact is possible.</td>
</tr>
<tr>
<td>Skin:</td>
</tr>
<tr>
<td>Impervious protective clothing is recommended if skin contact with drug product is possible and for bulk processing operations.</td>
</tr>
<tr>
<td>Respiratory protection:</td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Formula:</td>
<td>Mixture</td>
</tr>
<tr>
<td>Color:</td>
<td>Colorless</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>Mixture</td>
</tr>
<tr>
<td>Solubility:</td>
<td>Soluble: Water</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use.
Conditions to Avoid: Fine particles (such as dust and mists) may fuel fires/explosions.
Incompatible Materials: As a precautionary measure, keep away from strong oxidizers.

11. TOXICOLOGICAL INFORMATION

General Information: The information included in this section describes the potential hazards of the individual ingredients.

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

**Benzyl Alcohol**
- Rat Oral LD50 1230 mg/kg
- Rat Intravenous LD50 53 mg/kg
- Rat Inhalation LC50 46 mg/m³

**Lincomycin Hydrochloride**
- Rat Oral LD 50 > 4000 mg/kg
- Rat Intravenous LD 50 342 mg/kg
- Mouse Intravenous LD 50 214 mg/kg
- Rat Subcutaneous LD 50 9778 mg/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.

Irritation / Sensitization: (Study Type, Species, Severity)

**Benzyl Alcohol**
- Eye Irritation Rabbit Severe
- Skin Irritation Rabbit Moderate
- Skin Irritation Guinea Pig Moderate

Repeated Dose Toxicity: (Duration, Species, Route, Dose, End Point, Target Organ)

**Lincomycin Hydrochloride**
- 30 Day(s) Rat Oral 300 mg/kg/day NOAEL No effects at maximum dose
- 30 Day(s) Rat Subcutaneous 60 mg/kg/day NOAEL None identified
- 3 Month(s) Rat Oral 300 mg/kg/day NOAEL None identified
- 3 Month(s) Dog Oral 400 mg/kg/day LOAEL None identified
- 6 Month(s) Dog Oral 100 mg/kg/day NOAEL Immune system

Reproduction & Developmental Toxicity: (Study Type, Species, Route, Dose, End Point, Effect(s))

LINCOMYCIN HYDROCHLORIDE INJECTABLE
11. TOXICOLOGICAL INFORMATION

Lincomycin Hydrochloride
2 Generation Reproductive Toxicity  
Rat  Oral  100 mg/kg  LOAEL  Fetotoxicity
Prenatal & Postnatal Development  
Rat  Oral  100 mg/kg  NOEL  Not Teratogenic
Fertility and Embryonic Development  
Rat  Subcutaneous  75 mg/kg/day  NOAEL  No effects at maximum dose
Embryo / Fetal Development  
Rat  Subcutaneous  300 mg/kg/day  NOAEL  Not Teratogenic
Peri-/Postnatal Development  
Rat  Subcutaneous  30 mg/kg/day  NOAEL  No effects at maximum dose

Genetic Toxicity:  (Study Type, Cell Type/Organism, Result)

Lincomycin Hydrochloride  
Bacterial Mutagenicity (Ames)  
Salmonella  Negative
Mammalian Cell Mutagenicity  
Mouse Lymphoma  Negative

In Vivo Micronucleus  
Rat  Negative

Direct DNA Interaction  
Human Lymphocytes  Negative

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 have not been thoroughly investigated. Releases to the environment should be avoided. See aquatic toxicity data for individual components below.

Aquatic Toxicity:  (Species, Method, End Point, Duration, Result)

Lincomycin Hydrochloride  
Lepomis macrochirus (Bluegill Sunfish)  
ASTM LC50  96 Hours  >980 mg/L
Daphnia magna (Water Flea)  
ASTM EC50  48 Hours  >900 mg/L
Anabaena flos-aquae (Cyanobacteria)  
OECD EC50  72 Hours  0.03 mg/L
Salmo gairdneri (Trout)  
ASTM LC50  96 Hours  >980 mg/L

Aquatic Toxicity Comments:  
A greater than symbol (>) indicates that aquatic toxicity was not observed at the maximum dose tested.

13. DISPOSAL CONSIDERATIONS

Disposal Procedures:  
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

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

EU Symbol: Xi
EU Indication of danger: Irritant
EU Risk Phrases: R43 - May cause sensitization by skin contact.
EU Safety Phrases: S24 - Avoid contact with skin. S37 - Wear suitable gloves.

OSHA Label:
WARNING
May cause allergic skin reaction.

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

Benzyl Alcohol
Inventory - United States TSCA - Sect. 8(b) Listed
Australia (AICS): Listed
EU EINECS/ELINCS List 202-859-9

Lincomycin Hydrochloride
Australia (AICS): Listed
EU EINECS/ELINCS List 212-726-7

Water
Inventory - United States TSCA - Sect. 8(b) Listed
Australia (AICS): Listed
REACH - Annex IV - Exemptions from the obligations of Register: Present
EU EINECS/ELINCS List 231-791-2

16. OTHER INFORMATION

Text of R phrases mentioned in Section 3
R43 - May cause sensitization by skin contact.
R20/22 - Harmful by inhalation and if swallowed.

Data Sources: Safety data sheets for individual ingredients. Publicly available toxicity information.
Reasons for Revision: Updated Section 1 - Identification of the Substance/Preparation and the Company/Undertaking. Updated Section 4 - First Aid Measures. Updated Section 7 - Handling and Storage. Updated Section 8 - Exposure Controls / Personal Protection. Updated Section 13 - Disposal Considerations.

Prepared by: Toxicology and Hazard Communication
Pfizer Global Environment, Health, and Safety Operations

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End of Safety Data Sheet