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

Material Name: Ceftiofur Hydrochloride Sterile Suspension

Trade Name: Excenel RTU Sterile Suspension
Synonyms: Excenel RTU
Chemical Family: Cephalosporin antibiotic, b-lactam antibiotic, b-lactamase inhibitor
Intended Use: Veterinary product used as antibiotic agent.

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS List</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceftiofur Hydrochloride</td>
<td>103980-44-5</td>
<td>Not listed</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>EU EINECS List</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogenated Soy Lecithin</td>
<td>97281-48-6</td>
<td>306-549-5</td>
<td>*</td>
</tr>
<tr>
<td>Sorbitan oleate</td>
<td>1338-43-8</td>
<td>215-665-4</td>
<td>*</td>
</tr>
<tr>
<td>Cottonseed Oil</td>
<td>8001-29-4</td>
<td>232-280-7</td>
<td>*</td>
</tr>
</tbody>
</table>

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

3. HAZARDS IDENTIFICATION

Appearance: Off-white to pale buff colored suspension
Signal Word: WARNING

Statement of Hazard:
- Eye Contact: May cause mild irritation based on components.
- Skin Contact: May cause mild irritation based on components. May cause allergic skin reaction based on components.
- Inhalation: Repeated inhalation may result in sensitization. An Occupational Exposure Limit has been established for one or more of the ingredients (see Section 8).
- Ingestion: Not acutely toxic based on components

Known Clinical Effects: Individuals who are sensitive to beta lactam antibiotics, both penicillins and cephalosporins, may experience contact or systemic hypersensitivity and anaphylaxis upon exposure to this drug.

Potential Health Effects: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Effects on blood and blood forming organs have also occurred. If an allergic reaction occurs, the worker should be removed to the nearest emergency room and the appropriate therapy instituted.

EU Indication of danger: Harmful
EU Risk Phrases: R42/43 - May cause sensitization by inhalation and 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.

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. This material may not be completely removed by conventional laundering. Consult professional laundry service. Do not home launder.

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.

5. FIRE FIGHTING MEASURES

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

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, oxides of nitrogen, sulfur, hydrogen chloride and other chlorine- and sulfur-containing compounds

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

Fire / Explosion Hazards: Fine particles (such as dust and mists) may fuel fires/explosions.

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: Prevent inhalation, contact with eye, skin and clothing. When handling, use appropriate personal protective equipment (see Section 8). Use with adequate ventilation. Wash thoroughly after handling.

Storage Conditions: Store at controlled room temperature. Protect from freezing.

Storage Temperature: 20-25°C

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ceftiofur Hydrochloride
Pfizer OEL TWA-8 Hr: 0.2 mg/m³, Sensitizer

Analytical Method: Ceftiofur Hydrochloride: STP C 192.0; CAM-CLJ-03-0003 (Contact Pfizer for additional details)

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

Personal Protective Equipment:

- Hands: Wear two layers of disposable gloves.
- Eyes: Safety glasses or goggles
- Skin: Protective coveralls should be worn. The sleeves should either be taped or have gloves worn over them to prevent material from contacting the skin.
- 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:

Physical State: Suspension
Color: Off-white to pale buff-colored
Molecular Formula: Mixture
Molecular Weight: Mixture

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of use.
Conditions to Avoid: Do not freeze
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 active ingredient(s).

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

Ceftiofur Hydrochloride
Rat Oral LD 50 >7760 mg/kg
Rat Intraperitoneal LD 50 927 mg/kg
Rat Inhalation LC 50 >8.3 mg/ L
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)

Ceftiofur Hydrochloride
- Eye Irritation: Rabbit, Minimal
- Skin Irritation: Rabbit, Minimal

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

Ceftiofur Hydrochloride
- 90 Day(s) Dog Oral 30 mg/kg/day NOEL Blood forming organs

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

Ceftiofur Hydrochloride
- 2 Generation Reproductive Toxicity Rat Oral 1000 mg/kg/day NOEL Fetotoxicity
- Embryo / Fetal Development Rat Oral 3200 mg/kg/day NOAEL Not Teratogenic

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

Ceftiofur Hydrochloride
- Bacterial Mutagenicity (Ames) Salmonella, E. coli Negative
- Unscheduled DNA Synthesis Rat Negative
- Mammalian Cell Mutagenicity Chinese Hamster Ovary (CHO) cells 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.

13. DISPOSAL CONSIDERATIONS

Disposal Procedures: The material should be disposed of by incineration in a chemical incinerator in compliance with national and regional requirements.

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION
EU Labeling: Xn
EU Indication of danger: Harmful
EU Risk Phrases:
R42/43 - May cause sensitization by inhalation and skin contact.

EU Safety Phrases:
S24 - Avoid contact with skin.
S37 - Wear suitable gloves.
S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

OSHA Label:
WARNING
May cause allergic skin and respiratory reaction

Canada - WHMIS: Classifications

WHMIS hazard class:
D2a  very toxic materials
D2b  toxic materials

Hydrogenated Soy Lecithin
EU EINECS List 306-549-5

Sorbitan oleate
EU EINECS List 215-665-4
Inventory - United States TSCA - Sect. 8(b) Listed

Cottonseed Oil
EU EINECS List 232-280-7
Inventory - United States TSCA - Sect. 8(b) Listed

16. OTHER INFORMATION

Prepared by: Corporate Occupational Toxicology & Hazard Assessment

Pfizer 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.

End of Safety Data Sheet