Section 1: Identification

Product Name: UltraFlor (Florfenicol) 4.25%
Chemical Name/Synonyms: Florfenicol, UltraFlor, Florfenicol Concentrate, 2,2-dichloro-N [(1R,2S)-3-fluoro-1-hydroxy-1-(4-methylsulfonylphenyl)propan-2-yl]acetamide

Company: Veterinary Pharmaceutical Solutions
2008 North Sunrise Drive
Saint Peter MN, 56082
United States
507-931-8707

Restrictions on Use: For veterinary use only. Not for human consumption.

In emergency call 911 or CHEMTREC (24hr): 1-800-424-9300
For information about this SDS, contact phone#: 1-877-931-8707

Section 2: Hazard(s) Identification

See https://www.sigmaaldrich.com/safety-center/globally-harmonized.html for a list of hazard classifications, signal words, hazard statements, pictograms, precautionary statements, and a description of hazards.

Hazard Classification:
Florfenicol Liquid: GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Skin Irritation (Category 2), H315
Eye Irritation (Category 2A), H319
Specific Target Organ Toxicity – Single Exposure (Category 3, Respiratory Tract), H335
Reproductive Toxicity (Category 1B), H360Df
Specific Target Organ Toxicity – Repeated Exposure (Category 1, Liver, Brain, Testis, Spinal Cord, Blood, Gallbladder), H372

Signal Word(s): Danger

Hazard Statements:
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H360Df – May damage the unborn child. Suspected of damaging fertility.
H372 – Causes damage to organs (Liver, Brain, Testis, Spinal cord, Blood, gallbladder) through prolonged or repeated exposure.

Pictograms:

2.2 Precautionary Statements:
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P260: Do not breathe mist or vapors.

P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves, protective clothing, eye protection and face protection.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention.
P332 + P313 If skin irritation occurs: Get medical attention.
P337 + P313 If eye irritation persists: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.
P405: Store locked up.
P501: Dispose of contents and container to an approved waste disposal plant.

Description of other hazards: N/A

Section 3: Composition/ Information on Ingredients

Chemical Name	Synonym	CAS#	Conc.
Florfenicol	Florfenicol Injectable Solution (Nuflor) (Norfenicol) & (Loncor)	73231-34-2 76639-94-6	42.5mg/ml
*Trade secret	*Trade Secret	*Trade Secret	*Trade Secret

Comments: * = The Composition of this ingredient is withheld as a trade secret in accordance with OSHA 29 CFR 1910.1200(i).
Florfenicol 4.25% Oral Solution designated for dilution in stock solution environment

Section 4: First-Aid Measures

General Advice: If the exposed individual feels unwell, seek medical attention immediately. Never administer anything by mouth to an unconscious person.
After skin contact: Immediately remove any contaminated clothing. Rinse the affected area thoroughly with water for at least 15 minutes. If irritation persists or develops, obtain medical attention. Contaminated clothing should be washed before reuse.
After eye contact: Flush eyes cautiously with water for at least 15 minutes. Remove contact lenses if present and easy to do, then continue rinsing. If eye irritation persists, seek immediate medical attention.
After inhalation: Remove the affected individual to fresh air and allow them to rest in a position that facilitates breathing. Ensure adequate ventilation of the area. If respiratory symptoms develop or persist, seek medical attention.
After swallowing: Rinse mouth thoroughly with water. Do not induce vomiting unless directed by medical personnel. Seek immediate medical attention and provide information on the substance involved.
Most Important Symptoms and Effects Both Acute and Delayed: The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

Notes to physician: Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

Suitable extinguishing agents: Use extinguishing measures appropriate to local circumstances and the surrounding environment. Suitable extinguishing agents include dry chemical powder, alcohol- resistant foam, and carbon dioxide (CO_2).
Special Hazards arising from the substance or mixture: Thermal decomposition or combustion may produce hazardous gases and/or materials. Keep product and empty container away from heat and sources of ignition.
Special protective equipment for firefighters: Use self-contained breathing apparatus and protective clothing
Additional Considerations: Prevent firefighting runoff from entering drains, sewers, or natural water sources. Combustion of trade secret ingredients may produce carbon oxides.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment, and Emergency Procedures: Restrict access to the affected area until cleanup is complete. Avoid direct contact with the spilled material. Do not breathe vapor, mist, or spray. Eliminate all ignition sources, including open flames, hot surfaces, and static discharge. Ensure adequate ventilation. Appropriate personal protective equipment (PPE) should be worn, including chemical-resistant gloves, protective eyewear, and fire-resistant clothing. If airborne exposure levels are excessive, use an approved respirator
Environmental Precautions: Prevent entry into drains, sewers, surface water, and soil to minimize environmental impact. Contain the spill using non-combustible, inert absorbent materials such as sand or clay. Do not use sawdust, cellulose-based materials, or other combustible absorbents.
Methods and Materials for Containment and Cleanup: For small spills, absorb with inert material and place in a suitable, labeled container for proper disposal. For large spills, dike the area to prevent further spreading. Use non-sparking tools for cleanup. Transfer collected material into sealed containers for disposal in accordance with local, state, and federal regulations. Thoroughly clean contaminated surfaces with water and detergent. Do not allow rinse water to enter drainage systems or waterways.

Section 7: Handling and Storage

Handling: Handle in accordance with good industrial hygiene and safety practice. Use in a well-ventilated area. Avoid inhaling vapors, mist, or spray. Prevent contact with skin, eyes, and clothing. Do not eat, drink, or smoke while handling. Wash hands and exposed skin after use. Remove contaminated clothing and launder before reuse.
Storage: Store at Room Temperature in a cool, dry, well-ventilated area away from direct sunlight. Keep containers tightly closed. Do not store near food, beverages, or animal feed.

Section 8: Exposure Controls/Personal Protection

Chemical Name	OSHA PEL	OSHA PEL (ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
Florfenicol	Not available	Not available	100 µg/m^3 (OEB 2)	Not available

Appropriate engineering Controls: Ensure good ventilation and exhaust in the workplace. Do not allow contact with eyes. Always wash hands after handling.
General protective and hygienic measures: Contains no substances with occupational exposure limit values. Hazardous components without workplace control parameters
Breathing equipment: Wear mask or respirator equipment when exposure to aerosolization is possible.
Protection of hands: Wear suitable protective gloves that are resistant to chemical agents in the event of prolong or repeated skin contact. Ensure work clothing worn by personal is laundered regularly

Eye protection: Wear safety glasses with side shields or goggles. If the work environment or activity involves dusty conditions, mists or aerosols, wear the appropriate goggles. Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols

Section 9: Physical and Chemical Properties

Form: Cloudy Yellow anhydrous solution
Odor: Mild alcohol odor
pH: No data available
Melting point/melting range: No data available
Boiling point/boiling range: No data available
Flash point: No data available
Evaporation rate: No data available
Flammability: No data available
Upper/lower flammability or explosive limits: No data available
Auto ignition temperature: No data available
Danger of explosion: Not explosive
Vapor pressure: No data available
Vapor density: No data available
Relative density: No data available
Solubility in/Miscibility with water: Miscible with water.
Other information: Product requires shaking agitation prior to dispensing into stock solution.

Section 10: Stability and Reactivity

Reactivity: This product is stable under normal handling and storage conditions.
Chemical stability: Stable under normal temperatures and pressures under recommended handling and storage conditions found in Section 7.
Conditions to avoid: Avoid excessive heat, direct sunlight, open flames, and ignition sources. Prevent prolonged exposure to elevated temperatures. The product will turn a dark red/brown and may give off an ammonia vapor
Incompatible materials: Strong oxidizing agents, acids, and bases. Contact may result in hazardous decomposition or violent reactions.
Hazardous decomposition products: Thermal decomposition may produce carbon oxides (CO, CO_2, etc.) and other toxic vapors or gases.

Section 11: Toxicological Information

Likely routes of exposure: Skin, Oral, Eye contact, ingestion
Acute toxicity: Not classified based on available information
Product: Acute oral toxicity: Acute toxicity estimate: > 5,000 mg/kg
Florfenicol:
Acute oral toxicity:
LD50 (Rat): > 2,000 mg/kg
LD50 (Mouse): > 2,000 mg/kg
LD50 (Dog): > 1,280 mg/kg

Acute inhalation toxicity:
LC50 (Rat): > 0.28 mg/l Exposure time: 4 h
Acute dermal toxicity: Remarks: No data available
Acute toxicity (other routes of administration) :
LD50 (Rat): 1,913 - 2,253 mg/kg Application Route: Intraperitoneal

LD50 (Mouse): 100 mg/kg Application Route: Intravenous

Carcinogenicity: Not classified based on available information.
Florfenicol:
Species: Rat Application Route : oral (gavage) Exposure time : 2 Years Result : negative Target Organs : Liver, Testes
Mouse Application Route: oral (gavage) Exposure time : 2 Years Result : negative Target Organs : Testes, Blood

Reproductive toxicity: May damage the unborn child.
Suspected of damaging fertility.
Components: Florfenicol:
Effects on fertility: Test Type: Two-generation reproduction toxicity study
Species: Rat Application Route: Oral Fertility: LOAEL: 12 mg/kg body weight Result: decreased pup survival, reduced lactation Effects on fetal development : Test Type: Embryo-fetal development Species: Rat General Toxicity Maternal: NOAEL: 4 mg/kg body weight Embryo-fetal toxicity.: LOAEL: 40 mg/kg body weight Result: No teratogenic effects., Fetotoxicity.
Remarks: The effects were seen only at maternally toxic doses.
Test Type: Embryo-fetal development Species: Mouse Application Route: oral (gavage) General Toxicity Maternal: NOAEL: 120 mg/kg body weight Embryo-fetal toxicity.: LOAEL: 40 mg/kg body weight Result: Fetotoxicity.
Reproductive toxicity - Assessment: Some evidence of adverse effects on sexual function and fertility, based on animal experiments., Some evidence of adverse effects on development, based on animal experiments.

Section 12: Ecological Information (non-mandatory)

Toxicity to fish: LC50 (Lepomis macrochirus (Bluegill sunfish)): > 830 mg/l Exposure time: 96 h Method: FDA 4.11 LC50 (Oncorhynchus mykiss (rainbow trout)): > 780 mg/l Exposure time: 96 h Method: FDA 4.11

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): > 330 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants: EC50 (Pseudokirchneriella subcapitata (green algae)): > 2.9 mg/l Exposure time: 14 d Method: FDA 4.01 NOEC (Pseudokirchneriella subcapitata (green algae)): 2.9 mg/l Exposure time: 14 d Method: FDA 4.01 IC50 (Skeletonema costatum (marine diatom)): 0.0336 mg/l Exposure time: 72 h Method: ISO 10253 NOEC (Skeletonema costatum (marine diatom)): 0.00423 mg/l Exposure time: 72 h Method: ISO 10253 EC50 (Lemna gibba (gibbous duckweed)): 0.76 mg/l Exposure time: 7 d Method: OECD Test Guideline 221 NOEC (Lemna gibba (gibbous duckweed)): 0.39 mg/l Exposure time: 7 d Method: OECD Test Guideline 221 EC50 (Navicula pelliculosa (Freshwater diatom)): 61 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Navicula pelliculosa (Freshwater diatom)): 19 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC50 (Anabaena flos-aquae): 0.066 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Anabaena flos-aquae): 0.051 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity): NOEC (Pimephales promelas (fathead minnow)): 5.5 mg/l Exposure time: 32 d Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity): NOEC (Daphnia magna (Water flea)): 1.5 mg/l Exposure time: 21 d Method: OECD Test Guideline 211

Biodegradation: N/A

Bioaccumulation:
Florfenicol: Partition coefficient: noctanol/water : log Pow: 0.373 pH: 7

Mobility in Soil: N/A

Section 13: Disposal Considerations (non-mandatory)

Waste Treatment Methods: Dispose of this material and its container in compliance with all applicable federal, state, and local regulations.
Product Disposal: Dispose of in accordance with local, state, and federal regulations. Incineration may be required if deemed hazardous. Do not dispose of into sewage systems, storm drains, or natural waterways.
Container Disposal: Empty containers may contain residue and vapors. Do not cut, weld, or reuse containers. Dispose of in accordance with local regulations.
Regulatory Considerations: U.S. EPA RCRA Classification: Not classified as a hazardous waste under 40 CFR Part 261. Unused product should be evaluated for hazardous waste characteristics before disposal.

Section 14: Transport Information (non-mandatory)

Regulatory Body	Classification
U.S. DOT (49 CFR 172.101)	Not regulated as a hazardous material
IATA (Air Transport)	Not regulated as dangerous goods
IMDG (Maritime Transport)	Not regulated as dangerous goods
TDG (Canada Transport of Dangerous Goods)	Not regulated as dangerous goods

Special Precautions for Transport: Keep containers tightly sealed to prevent leaks. Avoid exposure to extreme temperatures and direct sunlight during transport. Store and transport in accordance with local and international regulations.

Section 15: Regulatory Information (non-mandatory)

US Federal Regulations: Not Applicable.

Section 16: Other Information

SDS Code: VPS UltraFlor
References: SDS sheet for Nuflor Injectable (Merck)
Special Considerations: Major use medication
SDS date of preparation/update: Updated by Dr. Patrick Smith, Pharm D. on 04/18/2025
For More Information: Contact VPS at 1-877-931-8707

Disclaimer: This SDS is intended to provide a summary of health, safety, and environmental information as required by OSHA 29 CFR 1910.1200 and GHS regulations. The information is believed to be accurate but is provided without warranty, express or implied. Users are responsible for compliance with all applicable regulations and safe handling practices.