

----- MATERIAL SAFETY DATA SHEET -----

Intervet

STENOROL (R)

VERSION DATE: 6/2002

1. CHEMICAL PRODUCT and COMPANY IDENTIFICATION

Product Name: Stenorol(R)
 Product Family: POULTRY PHARMACEUTICALS
 PRODUCT: PRODUCT CODE:

 Stenorol(R) FA-484-50
 SYNONYMS: HALOFUGINONE HYDROBROMIDE
 PRODUCT USE: Refer to product packaging or insert for proper usage.
 COMPANY ADDRESS- Intervet Inc - 405 State Street - Millsboro, DE. 19966

2. COMPOSITION / INFORMATION on INGREDIENTS

PRODUCT COMPONENT:	CAS NUMBER:
HALOFUGINONE HYDROBROMIDE	64924-67-0
7-BROMO-6-CHLORO-3-3 (3-(3-HYDROXY-2-PIPERIDYL)-, (ACETONYL)-4 (3H) QUINAZOLINONE HYDROBROMIDE	
CALCIUM CARBONATE	471-34-1
MINERAL OIL	8012-95-1
CALCIUM SILICATE	1344-95-2

3. HAZARDS IDENTIFICATION

ROUTES OF ENTRY: Dermal, Inhalation, Ingestion
 ACUTE EFFECTS OF EXPOSURE: Halofuginone hydrobromide is toxic by inhalation and ingestion. It is irritating to the eyes, respiratory system and skin. Halofuginone hydrobromide is toxic to fish. Do not contaminate streams, lakes, ponds, sewers, etc.
 CHRONIC EFFECTS OF EXPOSURE: None known
 MED. COND. AGGRIEVED BY EXP.: None known
 CARCINOGENIC EFFECTS: This product is not considered a carcinogen and is not listed by OSHA, IARC or NTP.

4. FIRST AID MEASURES

SKIN: Wash immediately affected area with soap and water. Contact a physician if irritation occurs.
 EYES: Immediately flush with plenty of water for fifteen minutes. Contact a physician
 INHALATION: In cases of difficult breathing, remove to fresh air. If conscious, make victim blow his or her nose. If not breathing, give artificial respiration and get medical attention immediately.
 INGESTION: If swallowed, DO NOT induce vomiting. Seek immediate medical attention. Take this sheet and the original container with you.

5. FIRE FIGHTING MEASURES

FLAMMABILITY: If involved in a fire, this product will emit toxic gases.
 EXTINGUISHING METHODS: Use water, or water mist, to extinguish fire.
 FIRE FIGHTING INSTRUCTIONS: Wear full bunker gear, including SCBA, for fighting fires involving large quantities of this material. Divert runoff to a safe area. Keep upwind.

6. ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF SPILL OR LEAK: Wear appropriate protective equipment. Collect and place in a plastic container. Decontaminate the area with a solution of alkaline and water. Rinse with plenty of water. Do not flush untreated material into waterways, sewers, lakes or streams.

7. HANDLING and STORAGE

STORAGE: Store at room temperature. Keep material dry, in tightly closed containers, away from light. Protect containers from damage. Keep out of reach of children.
 SHELF LIFE: See expiration date on product label.
 HANDLING PRECAUTIONS: Wear appropriate personal protective equipment for handling tasks. Handle in dust tight enclosure whenever possible. Use local exhaust ventilation. After handling, equipment should be decontaminated with a methanol/sodium hydroxide solution. Wash thoroughly after handling. Recommend shower and wash hair. Wash all contaminated clothing before re-use.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

EYES: Prevent eye contact by wearing appropriate eye protection for handling tasks.
 SKIN: Avoid skin contact. Wear chemical resistant gloves, long-sleeves and trousers to prevent dermal contact.
 RESPIRATOR PROTECTION: Respiratory protection is necessary.

9. PHYSICAL and CHEMICAL PROPERTIES

APPEARANCE: Not Available
 pH: Not Available
 BOILING POINT: Not Available
 MELTING POINT: Not Available
 SOLUBILITY IN WATER: Not Available
 DENSITY: Approximately 45 lbs/ft3

10. STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable
 CONDITIONS TO AVOID: Avoid contact with alkaline materials.
 INCOMPATIBILITY: None Known
 HAZARDOUS POLYMERIZATION: Will not occur

11. TOXICOLOGICAL INFORMATION

All toxicology testing was performed using the active ingredient, halofuginone hydrobromide.
 Oral LD 50 Rat: 31mg/kg (m); 28.0 mg/kg (f)
 Oral LD 50 Mouse: 4.9 mg/kg (m); 4.4 mg/kg (f)
 Percutaneous LD 50 Rabbit: 16.4 mg/kg
 Inhalation LC 50 Rat: 0.051 mg/L 4 hr
 Intraperitoneal LD50 (rat): Not available
 Intraperitoneal LD50 (mouse): Not available
 Oral, Dog dietary: NOEL 0.08 mg/kg/day
 Mouse: 100 week reproductive performance and carcinogen study. There were no reproductive effects and no effect on tumor incidence (not a carcinogen.) The NOEL was established as 0.07 mg/kg/day.
 Rat: Long term dietary study established a NOEL as 0.2 mg/kg/day. Oral gavage teratology study indicated halofuginone hydrobromide is not a teratogen.
 Mouse: Oral dietary study of reproductive function through three generations indicated no adverse effects.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:
 Median lethal tolerance in carp is 0.3-0.7 ppm (72 hr)
 LC 50 in rainbow trout is 2.9 mg/L (48 hr)
 LC 50 in the guppy is 1.6 mg/L (48 hr)
 LC 50 in the Daphnia Magna is 0.018 mg/L (48 hr)
 LC 50 in the bluegill sunfish is 0.12 mg/L (96 hr)
 This material is toxic to aquatic life

Intervet

STENOROL (R)

13. DISPOSAL CONSIDERATIONS

Dispose in accordance with all applicable Federal, State and Local regulations.

14. TRANSPORTATION

DOT SHIPPING INFORMATION: Not regulated by the DOT

15. REGULATORY INFORMATION

This product is an FDA regulated medicated article.

U.S. FEDERAL REGULATIONS:

SARA: No components listed.

16. OTHER INFORMATION

DISCLAIMER: The information contained herein is true and accurate to the best of the knowledge of Intervet Inc. However, all data, instructions and/or recommendations are made without guarantee. The buyer and handler assume all risk and liability of use, storage and/or handling of this product not in accordance with the terms of the product label.

EMERGENCY:

HUMAN, FIRE, SPILL OR ENVIRONMENTAL: 1-800-630-9206

ANIMAL: 1-800-345-4735 EXT. 104 24 HRS.

CHEMTREC (R) FOR CHEMICAL EMERGENCY SPILL, LEAK, FIRE:

1-800-424-9300

PRODUCT INFORMATION: 1-800-441-8272 OR 1-302-934-8051

8:00 A.M. - 5:00 P.M. EST

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES: although preparer and owner have taken reasonable care in the preparation of this document, we extend no warranties and make no representation as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each user should make a determination as to the suitability of the information for their particular purpose(s). A request has been made to the manufacturer to approve the contents of this material safety data sheet. Upon receipt of any changes a new MSDS will be made available.

COMPAS Code: 46501781