

## SAFETY DATA SHEET

### Stenorol

#### Section 1: Identification of the Substance and Supplier

<b>Product Name:</b>	<b>Stenorol</b>
<b>ACVM Registration Number:</b>	A11396
<b>Recommended Use:</b>	<i>As an aid in the prevention of coccidiosis caused by Eimeria acervulina, E. maxima, E. necatrix and E. tenella in broiler chickens.</i>
<b>Company Details:</b>	AgriHealth NZ Ltd Unit 1.2, 89 Grafton Road, Grafton, Auckland 1010, New Zealand Phone: +64 9 215 1199      Fax: +64 9 984 9455 Website: <a href="http://www.agrihealth.co.nz">www.agrihealth.co.nz</a>
<b>Emergency Telephone:</b>	National Poisons Centre: 0800 764 766 (0800 POISON) Fire Service, Ambulance: Dial 111

#### Section 2: Hazards Identification

Classified as a hazardous substance according to the criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

**Stenorol** is approved pursuant to the HSNO Act 1996, **HSR101250**. The EPA website [www.epa.govt.nz](http://www.epa.govt.nz) should be consulted for the full list of triggered controls and cited regulations.

<b>Hazard Classifications:</b>	6.1D Acute toxin 6.5B Skin sensitiser 9.1B Aquatic ecotoxin 9.3B Terrestrial vertebrate toxin
<b>Signal word:</b>	WARNING
<b>Hazard statements:</b>	Read label before use Keep out of reach of children Harmful if swallowed May cause an allergic skin reaction Toxic to aquatic life with long lasting effects Toxic to terrestrial vertebrates
<b>Precautionary statements:</b>	The substance must only be used as a veterinary medicine applied to poultry feed.

Wear protective gloves, face protection and coveralls buttoned to the neck when handling.

Do not eat drink or smoke when using this product

Wash hands and exposed skin thoroughly after handling. Take off contaminated clothing and wash before reuse.

Contaminated work clothing should not be allowed out of the workplace.

Do not breathe dust.

Avoid release to the environment

Collect spillage

### Section 3: Composition / Information on Ingredients

#### Product Components:

Name	CAS Number	Concentration
Halofuginone hydrobromide	64294-67-0	0.6%
Non-hazardous components	N/A	>99%

N/A = not applicable or not available

### Section 4: First Aid Measures

**General information:** For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor. If medical advice is needed, have product container or label at hand.

**After inhalation:** Remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, get medical advice/attention.

**After contact with skin:** Remove all contaminated clothing. Rinse skin with water/shower. If skin irritation or rash occurs, or if you feel unwell: Get medical advice/attention.

**After contact with eyes:** Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation develops, get medical advice/attention.

**After ingestion:** Rinse mouth. Do not induce vomiting. Call the National Poisons Centre 0800 POISON (0800 764 766) or a doctor/physician if you feel unwell.

**Workplace Facilities:** No special facilities are required.

**Notes for Medical Personnel:** Treat exposed patients symptomatically.

## Section 5: Fire Fighting Measures

<b>Type of hazard:</b>	Non-flammable
<b>Fire Hazard Properties:</b>	This material is assumed to be combustible.
<b>Extinguishing Media and Methods:</b>	Water spray
<b>Hazchem Code:</b>	N/A
<b>Recommended Protective Clothing:</b>	Wear full protective clothing and self-contained breathing apparatus (SCBA)

## Section 6: Accidental Release Measures

<b>Personal precautions:</b>	Wear suitable protective clothing buttoned to the neck, gloves, eye and face protection.
<b>Methods for cleaning up:</b>	Restrict access to contaminated area. Prevent further spillage, and prevent spilled material from flowing onto adjacent land or into waterways. Retrieve intact containers from site. Place damaged containers into containment devices. Sweep up spillage and place the spillage into sealable containers for disposal. Avoid dust formation. Avoid contamination of water courses or sewers. Dispose of waste safely.

## Section 7: Handling and Storage

<b>Precautions for Safe Handling:</b>	Avoid the formation and deposition of dust. Provide exhaust ventilation if dust is formed.
<b>Precautions for protection against fire and explosion</b>	Take precautionary measures against electrostatic loading. Avoid formation of dust. Observe the general rules of industrial fire protection.
<b>Storage</b>	Keep only in the original container. Keep container tightly closed, cool and dry, avoiding direct sunlight and temperatures above 25°C.
<b>Regulatory Requirements:</b>	An emergency response plan is required for this substance when stored in quantities > 1000kg. Signage is required for this substance when stored in quantities > 1000kg.
<b>Approved Handlers:</b>	Not required

## Section 8: Exposure Control / Personal Protection

### Personal protective equipment

#### General protective measures

Do not inhale dust/mist.  
Avoid contact with eyes and skin.

#### Hygienic measures

Do not eat, drink or smoke during work time.  
Keep away from foodstuffs and beverages.  
After worktime and during work intervals the affected skin areas must be thoroughly cleaned.

#### Hand protection:

Rubber gloves

#### Eye protection:

Safety glasses with side protective shield

#### Skin protection:

Protective clothing buttoned to the neck

#### Respiratory protection:

Not normally required if good ventilation is maintained.  
If the operations involve the risk of exposure to dust, wear either a disposable filter and half mask or a non-disposable respirator.

## Section 9: Physical and Chemical Properties

Appearance:

Powder

Physical state:

Solid

Color:

Yellowish to brown

Melting point (halofuginone hydrobromide): 294°C

Solubility in % m/V at 24°C (halofuginone hydrobromide):

- *Water* approx. 0.25
- *Chloroform* ≤ 0.10
- *Methanol* approx. 0.10
- *Ethanol* ≤ 0.10
- *Acetone* ≤ 0.10
- *Water/ethanol 50V/50V* approx. 0.75
- *Dimethylformamide* approx. 0.50

Minimum layer ignition temperature (MLIT): 290°C

Minimum ignition energy (MIE): 30 mJ < MIE (1 mH) < 100 mJ

Minimum cloud ignition temperature (MCIT): 430°C

Vapour pressure (halofuginone hydrobromide):  $P_s(100^{\circ}\text{C}) \leq 4 \cdot 10^{-10}$  mm Hg

Partition coefficient octanol/water (Log Kow) (halofuginone hydrobromide):  
 $P = 23.4; \sigma = 3.2; n = 9$

Specific absorbance (halofuginone hydrobromide): 920 at about 243 nm

## Section 10: Stability and Reactivity

### Stability:

Stable under normal conditions and recommended use

### Conditions to avoid

Do not mix with other chemicals.

**Hazardous decomposition products:** May include and are not limited to oxides of carbon, oxides of nitrogen, phosgene when heated to decomposition.

## Section 11: Toxicological Information

**HSNO Classification:** 6.1D, 6.5B

No data is available for the formulated product. The following information relates to halofuginone hydrobromide.

**Acute toxicity:**

Animal species	Route of administration	LD <sub>50</sub> (mg/kg body weight)
Mouse	Oral	4.9mg/kg (m), 4.4mg/kg (f)
Rat	Oral	31mg/kg (m), 28mg/kg (f)
Rabbit	Dermal	16.4mg/kg
Rat	Inhalation	0.053mg/L/4h

Eye contact: Slightly irritant

Skin contact: Slightly irritant

**Chronic Exposure:**

- *Mouse* 100 week reproductive performance and carcinogenicity study. There were no reproductive effects and no effect on tumour incidence (not a carcinogen). The NOEL was established at 0.07mg/kg/day.
- *Rat* Long-term dietary study established a NOEL of 0.2 mg/kg/day.
- *Rat* Oral gavage teratology study indicated halofuginone hydrobromide is not a teratogen.
- *Mouse* Oral dietary study of reproductive function through three generations indicated no adverse affects.

## Section 12: Environmental Information

**HSNO Classification:** 9.1B, 9.3B

**Ecotoxicity Data (halofuginone):**

- Rainbow trout 96-hour median lethal concentration: 1.8 mg/L.
- *Daphnia magna* 48-hour median effective concentration: 0.018 mg/L.
- Earthworm: Doses above 21 ppm of halofuginone in soil are only slightly toxic.
- Phytotoxicity: No symptoms of phytotoxicity have been observed in the following 4 species: tomato, lettuce, cucumber, and tobacco.

**Environmental Fate (halofuginone):**

- Partition coefficient (n-octanol/water):
  - 1.06 at pH 5 at 20°C.
  - 1.27 at pH 7 at 20°C.
  - 2.58 at pH 9 at 20°C.

Water solubility: Slightly soluble (about 3 g/L).

Not expected to bioaccumulate. Not readily biodegradable.

### Section 13: Disposal Considerations

**Disposal Information:** Preferably dispose of the product by use. Otherwise dispose of product and packaging at an approved landfill or other approved facility.

### Section 14: Transport Information

<b>Land Transport</b>	Not classified as dangerous goods for transport under NZ Standard 5433:2007 Transport of Dangerous Goods on Land.
<b>Air Transport</b>	Not classified as dangerous goods for transport under International Civil Aviation Organisation and International Air Transport Association regulations
<b>Sea Transport</b>	Not classified as dangerous goods for transport under International Maritime Organisation regulations
<b>UN Number</b>	N/A
<b>Proper Shipping Name</b>	N/A
<b>DG Class</b>	N/A
<b>Subsidiary Risk</b>	N/A
<b>Packing Group</b>	N/A
<b>HAZCHEM Code</b>	N/A
<b>Marine Pollutant</b>	No

The maximum quantity of this substance allowed for carriage on public service vehicles is 0.5kg.

### Section 15: Regulatory Information

**Regulatory Status:** Registered pursuant to the ACVM Act 1997, No A11396.

**HSNO and ACVM Controls:** Refer to section 2

**List Exposure Limits:** None set

An SDS must be provided whenever **3kg** of Stenorol is supplied.

An emergency response plan is required when stored in quantities of **1000kg** or greater.

Signage is required for this substance when stored in quantities of **1000kg** or greater.

**Section 16: Other Information**

**Additional Information:** For product information see the AgriHealth website:  
[www.agrihealth.co.nz](http://www.agrihealth.co.nz)

Date of preparation: 20 October 2017  
Due for revision within 5 years.

The SDS summarises, at the date of issue, AgriHealth's best knowledge of the health and safety hazard information. Although reasonable care has been taken in the preparation of this document, AgriHealth NZ Ltd extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. AgriHealth NZ Ltd urges the recipient of this SDS to study it carefully to become aware of, and understand, the hazards associated with the product as well as determine the suitability of the information for the intended purpose.