



SAFETY DATA SHEET

SENTINEL[®] (milbemycin oxime/lufenuron) FLAVOR TABS[®]

1. IDENTIFICATION

Product Name	SENTINEL [®] (milbemycin oxime/lufenuron) FLAVOR TABS [®]
Recommended use of the chemical and restrictions on use	
Identified uses	Chewable Tablets for Worm and Flea Prevention and Control in Dogs and Puppies
Restrictions on Use	Federal law restricts this drug to use by or on the order of a licensed veterinarian. Not for human use.
Company Identification	Virbac AH, Inc. P.O. Box 162059 Fort Worth, Texas 76161 (800) 338-3659
Customer Information Number	
Emergency Telephone Number	
CHEMTREC Number	(800) 424-9300
Other Emergency Number:	Poison Control Center: 1-800-222-1222 (human) HOT LINE NUMBER: 1-800-345-4735 (human and pet)
Issue Date	March 20, 2017
Supersedes Date	This is the first issue.

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARDS IDENTIFICATION

Hazard Classification

Acute Hazards to the Aquatic Environment - Category 1 (OSHA non-mandatory)
Chronic Hazards to the Aquatic Environment - Category 1 (OSHA non-mandatory)

Label Elements

Hazard Symbols



Signal Word: Warning

Hazard Statements

Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

Avoid release to the environment.

Response

Collect spillage.

Storage

None

Disposal

Dispose of contents/container in accordance with local regulation.



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2. HAZARD IDENTIFICATION

Other Hazards

None

Specific Concentration Limits

The values listed below represent the percentages of ingredients of unknown toxicity.

Acute oral toxicity	<10%
Acute dermal toxicity	20 - 30%
Acute inhalation toxicity	50 - 60%
Acute aquatic toxicity	70 - 80%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:

This product is a mixture.

Component Name	CAS Number	Concentration
Lufenuron	103055-07-8	25 - 35%
Milbemycin oxime	122674-17-3	1 - 5%

4. FIRST - AID MEASURES

Description of necessary first-aid measures

Eyes

Not an expected route of entry. If tablet contacts eye, flush thoroughly with water. If pain or irritation persists, contact a physician.

Skin

If irritation develops, wash skin thoroughly with soap and water. Obtain medical attention if redness or soreness persists.

Ingestion

Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation

Not an expected route of entry.

Most important symptoms/effects, acute and delayed

Aside from the information found under Description of necessary first-aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Extinguishing Media

Use extinguishing media appropriate for surrounding materials.



5. FIRE - FIGHTING MEASURES

Unusual Fire and Explosion Hazards

Can release hazardous vapors during a fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear appropriate protective clothing.

Environmental Precautions

Prevent the material from entering drains or watercourses.

Methods and materials for containment and cleaning up

Sweep and dispose of small amounts in trash. Large amounts should be disposed of in a sanitary landfill.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate protective clothing.

Conditions for safe storage

Store in original container at controlled room temperatures between 59°F and 77°F (15°C - 25°C). Keep out of sunlight. Keep away from children. Wash hands after dispensing to dog and before eating, drinking or smoking.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Milbemycin Oxime

Manufacturer's recommended limit: 0.12 mg/m³ 8h TWA

Lufenuron

Manufacturer's recommended limit: 0.15mg/m³ 8h TWA

Appropriate engineering controls

No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

Individual protection measures

Respiratory Protection

Not required under normal conditions of use.

Skin Protection

Not required under normal conditions of use. Workers should wash hands before eating, drinking or smoking.

Eye/Face Protection

Not required under normal conditions of use.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Physical State	Solid (coated tablet)
	Color	Brown
Odor		Odorless
Odor Threshold		No data available
pH		Not applicable
Density		No data available
Boiling Range/Point (°C/F)		Not applicable
Melting Point (°C/F)		Not applicable
Flash Point (°C/F)		Not applicable
Vapor Pressure		Not applicable
Evaporation Rate (BuAc=1)		Not applicable
Solubility in Water		Soluble
Vapor Density (Air = 1)		Not applicable
VOC		Not applicable
Partition coefficient (n-octanol/water)		Not applicable
Viscosity		Not applicable
Auto-ignition Temperature		No data available
Decomposition Temperature		No data available
Upper explosive limit		No data available
Lower explosive limit		No data available
Flammability (solid, gas)		No data available

10. STABILITY AND REACTIVITY

Reactivity
Data is not available.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Heat - high temperatures

Incompatible Materials
None known.

Hazardous Decomposition Products
None known.



11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Milbemycin oxime

Oral LD50 (rat) >2000 mg/kg

Dermal LD50 (rat) >2000 mg/kg

Inhalation LD50 (rat) 1220 mg/m³ 4h

Lufenuron

Oral LD50 (rat) >2000 mg/kg

Dermal LD50 (rat) >2000 mg/kg

Inhalation LD50 (rat) >2350 mg/m³ 4h

Specific Target Organ Toxicity (STOT) – single exposure

No relevant studies identified.

Specific Target Organ Toxicity (STOT) – repeat exposure

No relevant studies identified.

Serious Eye damage/Irritation

Milbemycin oxime: Not irritating to eyes in rabbit studies.

Lufenuron: Not irritating to eyes in rabbit studies.

Skin Corrosion/Irritation

Milbemycin oxime: Not irritating to skin in rabbit studies.

Lufenuron: Not irritating to skin in rabbit studies.

Respiratory or Skin Sensitization

Product: The tablets are coated and sensitizing effects are not expected.

Milbemycin oxime: Not sensitizing in guinea pig study.

Lufenuron: Sensitizing in guinea pig in Maximisation Test.

Carcinogenicity

Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity

Milbemycin oxime: Negative results for in vivo and in vitro animal studies.

Lufenuron: Negative results for in vivo and in vitro animal studies.

Reproductive Toxicity

Lufenuron: Did not show teratogenic effects in animal experiments.

Milbemycin oxime: Not teratogenic in rat and rabbit studies.

Aspiration Hazard

Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Lufenuron

LC50 (Rainbow Trout) >73 mg/l 96hr

LC50 (Daphnia magna) 0.0011 – 0.0013 mg/l 48hr

EC50 (green algae) 10 mg/l 72hr



12. ECOLOGICAL INFORMATION

Milbemycin Oxime

LC50 (Common carp) 0.059 mg/l 48hr

LC50 (Daphnia pulex) >300 mg/l 3hr

Mobility in soil

No relevant studies identified.

Persistence/Degradability

Lufenuron: Not readily biodegradable.

Bioaccumulative Potential

No relevant studies identified.

Other adverse effects

No relevant studies identified.

13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory

This product is excluded from the US EPA Toxic Substance Control Act and is regulated under the Food, Drug and Cosmetic Act.

California Proposition 65

This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: None

SARA Title III Sect. 311/312 Categorization

None

SARA Title III Sect. 313

This product does not contain any chemicals listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

Legend

ACGIH: American Conference of Governmental Industrial Hygienists

BOD: Biological Oxygen Demand

CAS#: Chemical Abstracts Service Number

FIFRA: Federal Insecticide, Fungicide and Rodenticide Act

IARC: International Agency for Research on Cancer



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16. OTHER INFORMATION

Legend, cont.

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

N/A: Denotes no applicable information found or available

NTP: National Toxicology Program

OSHA: Occupational Safety and Health Administration PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit

TLV: Threshold Limit Value

TSCA: Toxic Substance Control Act

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Replaces: This is the first issue.

Changes made: Not applicable

Prepared By: EnviroNet LLC.

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