

# Milbemycin Oxime / Lufenuron Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 28.09.2024 6365222-00009 Date of first issue: 21.09.2020

#### **SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Milbemycin Oxime / Lufenuron Formulation

Manufacturer or supplier's details

Company name of supplier : MSD

Address : 126 E. Lincoln Avenue

Rahway, New Jersey U.S.A. 07065

Telephone : 908-740-4000 Emergency telephone : 1-908-423-6000

E-mail address : EHSDATASTEWARD@msd.com

Recommended use of the chemical and restrictions on use

:

Recommended use : Veterinary product Restrictions on use : Not applicable

#### **SECTION 2. HAZARDS IDENTIFICATION**

**GHS Classification** 

Skin sensitization : Category 1

Reproductive toxicity : Category 1B

Specific target organ toxicity

- repeated exposure

Category 1 (Central nervous system)

Specific target organ toxicity

- repeated exposure (Oral)

Category 1 (Central nervous system, Lungs, Liver, Stomach)

**GHS** label elements

Hazard pictograms





Signal Word : Danger

Hazard Statements : H317 May cause an allergic skin reaction.

H360D May damage the unborn child.

H372 Causes damage to organs (Central nervous system)

through prolonged or repeated exposure.

H372 Causes damage to organs (Central nervous system, Lungs, Liver, Stomach) through prolonged or repeated exposure

if swallowed.

Precautionary Statements : Prevention:

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read

and understood.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.



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P270 Do not eat, drink or smoke when using this product. P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear protective gloves/ protective clothing/ eye protection/

face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water. P308 + P313 IF exposed or concerned: Get medical advice/

attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/

attention.

P362 + P364 Take off contaminated clothing and wash it before

reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/ container to an approved waste dis-

posal plant.

Other hazards

None known.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

#### Components

Chemical name	CAS-No.	Concentration (% w/w)
Lufenuron (ISO)	103055-07-8	>= 30 -< 50
Cellulose	9004-34-6	>= 10 -< 20
Starch	9005-25-8	>= 5 -< 10
Milbemycin Oxime	129496-10-2	>= 1 -< 5

#### **SECTION 4. FIRST AID MEASURES**

In case of eye contact

General advice : In the case of accident or if you feel unwell, seek medical

advice immediately.

When symptoms persist or in all cases of doubt seek medical

advice.

If inhaled : If inhaled, remove to fresh air.

Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with soap and plenty

of water.

Remove contaminated clothing and shoes.

Get medical attention. Wash clothing before reuse.

Thoroughly clean shoes before reuse. Flush eyes with water as a precaution.

Get medical attention if irritation develops and persists.

If swallowed, DO NOT induce vomiting.

Get medical attention.



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Rinse mouth thoroughly with water. May cause an allergic skin reaction.

Most important symptoms and effects, both acute and

May damage the unborn child.

delayed

Causes damage to organs through prolonged or repeated

exposure.

Protection of first-aiders : First Aid responders should pay attention to self-protection.

and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

Notes to physician : Treat symptomatically and supportively.

**SECTION 5. FIRE-FIGHTING MEASURES** 

Suitable extinguishing media : Water spray

Alcohol-resistant foam Carbon dioxide (CO2)

Dry chemical

Unsuitable extinguishing

media

None known.

Specific hazards during fire

fighting

Exposure to combustion products may be a hazard to health.

Hazardous combustion prod: :

ucts

Carbon oxides

Nitrogen oxides (NOx)

Metal oxides

Specific extinguishing meth-

ods

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment. Use water spray to cool unopened containers.

Remove undamaged containers from fire area if it is safe to do

SO.

Evacuate area.

Special protective equipment:

for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

Use personal protective equipment.

**SECTION 6. ACCIDENTAL RELEASE MEASURES** 

Personal precautions, protec: :

tive equipment and emer-

gency procedures

Use personal protective equipment.

Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.

Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water.

Local authorities should be advised if significant spillages

cannot be contained.

Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable

container for disposal.

Local or national regulations may apply to releases and disposal of this material, as well as those materials and items



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employed in the cleanup of releases. You will need to

determine which regulations are applicable.

Sections 13 and 15 of this SDS provide information regarding

certain local or national requirements.

### **SECTION 7. HANDLING AND STORAGE**

Technical measures : See Engineering measures under EXPOSURE

CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust

ventilation.

Advice on safe handling : Do not get on skin or clothing.

Do not breathe dust, fume, gas, mist, vapors or spray.

Do not swallow.

Avoid contact with eyes.

Wash skin thoroughly after handling.

Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure

assessment

Keep container tightly closed.

Do not eat, drink or smoke when using this product.

Take care to prevent spills, waste and minimize release to the

environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working

place.

When using do not eat, drink or smoke.

Contaminated work clothing should not be allowed out of the

workplace.

Wash contaminated clothing before re-use.

The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the

use of administrative controls.

Conditions for safe storage : Keep in properly labeled containers.

Store locked up. Keep tightly closed.

Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:

Strong oxidizing agents

Self-reactive substances and mixtures

Organic peroxides

Explosives Gases

#### **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

#### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis
		exposure)	concentration	



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Lufenuron (ISO)	103055-07-8	TWA	60 μg/m3 (OEB 3)	Internal	
	Further inform	Further information: DSEN			
		Wipe limit	100 µg/100 cm2	Internal	
Cellulose	9004-34-6	VLE-PPT	10 mg/m³	NOM-010- STPS-2014	
		TWA	10 mg/m <sup>3</sup>	ACGIH	
Starch	9005-25-8	VLE-PPT	10 mg/m³	NOM-010- STPS-2014	
		TWA	10 mg/m <sup>3</sup>	ACGIH	
Milbemycin Oxime	129496-10-2	TWA	0.1 mg/m3 (OEB2)	Internal	

**Engineering measures** All engineering controls should be implemented by facility

design and operated in accordance with GMP principles to

protect products, workers, and the environment.

Containment technologies suitable for controlling compounds are required to control at source and to prevent migration of

the compound to uncontrolled areas (e.g., open-face

containment devices). Minimize open handling.

Personal protective equipment

Respiratory protection If adequate local exhaust ventilation is not available or

exposure assessment demonstrates exposures outside the

recommended guidelines, use respiratory protection.

Filter type

Hand protection

Particulates type

Material Chemical-resistant gloves

Remarks : Consider double gloving.

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.

Skin and body protection Work uniform or laboratory coat.

> Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.

Use appropriate degowning techniques to remove potentially

contaminated clothing.

#### **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**Appearance** solid

Color brown

Odor odorless

Odor Threshold No data available



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pH : No data available

Melting point/freezing point : No data available

Initial boiling point and boiling

range

No data available

Flash point : Not applicable

Evaporation rate : Not applicable

Flammability (solid, gas) : No data available

Flammability (liquids) : Not applicable

Upper explosion limit / Upper

flammability limit

No data available

Lower explosion limit / Lower

flammability limit

No data available

Vapor pressure : Not applicable

Relative vapor density : Not applicable

Relative density : No data available

Density : No data available

Solubility(ies)

Water solubility : soluble

Partition coefficient: n-

octanol/water

Not applicable

Autoignition temperature : No data available

Decomposition temperature : No data available

Viscosity

Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle characteristics

Particle size : No data available

### **SECTION 10. STABILITY AND REACTIVITY**

Reactivity : Not classified as a reactivity hazard.



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Chemical stability : Stable under normal conditions.

Possibility of hazardous reac-

tions

: Can react with strong oxidizing agents.

Conditions to avoid : None known.

Incompatible materials : Oxidizing agents
Hazardous decomposition : No hazardous decomposition products are known.

products

#### **SECTION 11. TOXICOLOGICAL INFORMATION**

#### Information on likely routes of exposure

Skin contact Ingestion Eye contact

## **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 10 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg

Method: Calculation method

**Components:** 

Lufenuron (ISO):

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

LD50 (Mouse): > 2,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): 2,350 mg/m³

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Cellulose:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.8 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Starch:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg



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Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

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Acute oral toxicity : LD50 (Rat): 532 - 863 mg/kg

LD50 (Mouse): 722 - 946 mg/kg

Acute inhalation toxicity : LC50 (Rat): 1,200 mg/m<sup>3</sup>

Exposure time: 4 h

Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

**Components:** 

Lufenuron (ISO):

Species : Rabbit
Method : Draize Test
Result : No skin irritation

Milbemycin Oxime:

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

**Components:** 

Lufenuron (ISO):

Species : Rabbit

Result : No eye irritation Method : Draize Test

Starch:

Species : Rabbit

Result : No eye irritation

Milbemycin Oxime:

Species : Rabbit

Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.



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#### Respiratory sensitization

Not classified based on available information.

#### Components:

Lufenuron (ISO):

Test Type **Maximization Test** 

Species : Guinea pig

: May cause sensitization by skin contact. Assessment

Result Sensitizer

Starch:

Test Type Maximization Test Routes of exposure Skin contact **Species** : Guinea pig

Result negative

Milbemycin Oxime:

Routes of exposure Skin contact **Species** Guinea pig Result negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Lufenuron (ISO):

Genotoxicity in vitro Test Type: Ames test

Result: negative

Test Type: Mouse Lymphoma Test system: Chinese hamster cells

Result: negative

Test Type: Cytogenetic assay

Test system: Chinese hamster ovary cells

Result: negative

Test Type: DNA damage and repair, unscheduled DNA syn-

thesis in mammalian cells (in vitro) Test system: rat hepatocytes

Result: negative

Test system: Human lymphocytes

Result: negative

Genotoxicity in vivo Test Type: Mammalian erythrocyte micronucleus test (in vivo

> cytogenetic assay) Species: Mouse Result: negative

Test Type: Unscheduled DNA synthesis test (UDS) in testicu-



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lar cells Species: Rat Result: negative

Germ cell mutagenicity -

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

Cellulose:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse

Application Route: Ingestion

Result: negative

Starch:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Milbemycin Oxime:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: Chromosome aberration test in vitro

Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo

cytogenetic assay) Species: Mouse Result: negative

Carcinogenicity

Not classified based on available information.

**Components:** 

Lufenuron (ISO):

Species : Rat
Application Route : Ingestion
Exposure time : 18 month(s)
Result : negative

Carcinogenicity - Assess-

ment

: Weight of evidence does not support classification as a car-

cinogen

Cellulose:

Species : Rat



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Application Route : Ingestion Exposure time : 72 weeks Result : negative

Reproductive toxicity

May damage the unborn child.

Components:

Lufenuron (ISO):

Effects on fertility : Test Type: Two-generation reproduction toxicity study

Species: Rat

Application Route: Oral

General Toxicity Parent: NOAEL: 8.3 mg/kg wet weight Early Embryonic Development: NOAEL: 20.9 mg/kg body

weight

Result: Animal testing did not show any effects on fertility.

Effects on fetal development : Test Type: Development

Species: Rat

Application Route: Oral

General Toxicity Maternal: NOAEL: 500 mg/kg body weight Developmental Toxicity: NOAEL: 1,000 mg/kg body weight

Symptoms: No adverse effects.

Remarks: No significant adverse effects were reported

Test Type: Fertility/early embryonic development

Species: Rat

**Application Route: Ingestion** 

General Toxicity Maternal: NOAEL: 20.9 mg/kg body weight

Embryo-fetal toxicity.: 8.3 mg/kg body weight

Result: Fetal abnormalities.

Reproductive toxicity - As-

sessment

Clear evidence of adverse effects on development, based on

animal experiments.

Cellulose:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Rat

**Application Route: Ingestion** 

Result: negative

Effects on fetal development : Test Type: Fertility/early embryonic development

Species: Rat

Application Route: Ingestion

Result: negative

Milbemycin Oxime:

Effects on fertility : Test Type: One-generation reproduction toxicity study

Species: Dog

Application Route: Ingestion

Result: negative



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Effects on fetal development : Test Type: Embryo-fetal development

Species: Rat

Application Route: Ingestion

Result: negative

Test Type: Embryo-fetal development

Species: Rabbit

Application Route: Ingestion

Result: negative

Test Type: Embryo-fetal development

Species: Dog

**Application Route: Ingestion** 

Result: negative

### STOT-single exposure

Not classified based on available information.

#### **Components:**

#### Lufenuron (ISO):

Assessment : The substance or mixture is not classified as specific target

organ toxicant, single exposure.

### STOT-repeated exposure

Causes damage to organs (Central nervous system) through prolonged or repeated exposure. Causes damage to organs (Central nervous system, Lungs, Liver, Stomach) through prolonged or repeated exposure if swallowed.

#### **Components:**

### Lufenuron (ISO):

Routes of exposure : Oral

Target Organs : Central nervous system, Lungs, Liver, Stomach

Assessment : Shown to produce significant health effects in animals at con-

centrations of 10 mg/kg bw or less.

#### Milbemycin Oxime:

Routes of exposure : Ingestion

Target Organs : Central nervous system

Assessment : Shown to produce significant health effects in animals at con-

centrations of 10 mg/kg bw or less.

#### Repeated dose toxicity

#### Components:

### Lufenuron (ISO):

Species : Rat

NOAEL : 5.34 mg/kg
Application Route : oral (feed)
Exposure time : 4 Months

Target Organs : Central nervous system, digestive system



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Symptoms : central nervous system effects

Species : Rat
NOAEL : 1.93 mg/kg
Application Route : oral (feed)
Exposure time : 2 y

Symptoms : central nervous system effects, Convulsions

Species : Mouse
NOAEL : 2.12 mg/kg
Application Route : oral (feed)
Exposure time : 18 Months

Target Organs : Central nervous system, Liver, Prostate Symptoms : central nervous system effects, Convulsions

Species : Dog NOAEL : 7.02 mg/kg Application Route : oral (feed)

Exposure time : 1 y

Target Organs : Central nervous system, Liver, Lungs Symptoms : Convulsions, Fatality, Irregularities

Cellulose:

Species : Rat

NOAEL : >= 9,000 mg/kg
Application Route : Ingestion
Exposure time : 90 Days

Starch:

Species : Rat

NOAEL : >= 2,000 mg/kg
Application Route : Skin contact
Exposure time : 28 Days

Method : OECD Test Guideline 410

Milbemycin Oxime:

Species : Rat

NOAEL : 3 mg/kg

LOAEL : 15 mg/kg

Application Route : Ingestion

Exposure time : 90 Days

Symptoms : Liver disorders, Blood disorders

Species : Dog
LOAEL : 8.6 mg/kg
Application Route : Ingestion
Exposure time : 3 Days
Symptoms : Tremors

**Aspiration toxicity** 

Not classified based on available information.



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## Experience with human exposure

**Components:** 

Lufenuron (ISO):

General Information : Remarks: May be harmful if swallowed.

May cause neurotoxic effects.

Milbemycin Oxime:

Ingestion : Symptoms: Salivation, Convulsions, Diarrhea, Weakness,

Vomiting, Tremors, Coma

Remarks: Based on Animal Evidence

#### **SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity** 

**Components:** 

Lufenuron (ISO):

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 73,100 μg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): > 29,000 µg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

LC50 (Oncorhynchus mykiss (rainbow trout)): 370 µg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Americamysis): 0.042 µg/l

Exposure time: 96 h

Method: US-EPA OPPTS 850.1035

EC50 (Daphnia magna (Water flea)): 0.41 μg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

Toxicity to algae/aquatic

plants

EC50 (Raphidocelis subcapitata (freshwater green alga)): 209

ua/l

Exposure time: 72 h

Method: OECD Test Guideline 201

EC50 (Scenedesmus subspicatus): 17 μg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

Toxicity to fish (Chronic tox-

icity)

NOEC (Oncorhynchus mykiss (rainbow trout)): 80 µg/l

Exposure time: 33 d

Method: OECD Test Guideline 210

NOEC (Oncorhynchus mykiss (rainbow trout)): 20 µg/l

Exposure time: 359 d



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Method: OECD Test Guideline 229

Toxicity to daphnia and other aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 8.38 μg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

NOEC (Daphnia magna (Water flea)): 90 μg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

NOEC (Chironomus riparius (harlequin fly)): 2 µg/l

Exposure time: 21 d

Method: OECD Test Guideline 211

Cellulose:

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): > 100 mg/l

Exposure time: 48 h

Remarks: Based on data from similar materials

Milbemycin Oxime:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.16 μg/l

Exposure time: 96 h

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): 0.03 µg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50: > 87 μg/l Exposure time: 72 h

Toxicity to daphnia and other : aquatic invertebrates (Chron-

ic toxicity)

NOEC (Daphnia magna (Water flea)): 0.01 µg/l

Persistence and degradability

**Components:** 

Cellulose:

Biodegradability : Result: Readily biodegradable.

**Bioaccumulative potential** 

**Components:** 

Lufenuron (ISO):

Bioaccumulation : Species: Lepomis macrochirus (Bluegill sunfish)

Bioconcentration factor (BCF): 28 Method: OECD Test Guideline 305

Partition coefficient: n-

octanol/water

: log Pow: 5.12

Milbemycin Oxime:

Bioaccumulation : Bioconcentration factor (BCF): 440



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Partition coefficient: n-

octanol/water

log Pow: 7

Mobility in soil

Components:

Lufenuron (ISO):

Distribution among environ-

mental compartments

log Koc: 5.38

Method: OECD Test Guideline 106

Other adverse effects

No data available

#### **SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods** 

Waste from residues Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Empty containers should be taken to an approved waste Contaminated packaging

handling site for recycling or disposal.

If not otherwise specified: Dispose of as unused product.

#### **SECTION 14. TRANSPORT INFORMATION**

### International Regulations

**UNRTDG** 

**UN** number UN 3077

Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Milbemycin Oxime, Lufenuron (ISO))

Class 9

Ш Packing group Environmentally hazardous ves

**IATA-DGR** 

UN/ID No. **UN 3077** 

Proper shipping name Environmentally hazardous substance, solid, n.o.s.

(Milbemycin Oxime, Lufenuron (ISO))

Class Ш Packing group

Miscellaneous Labels

Packing instruction (cargo 956

aircraft)

Packing instruction (passen-

ger aircraft)

956

Environmentally hazardous yes

**IMDG-Code** 

**UN** number UN 3077

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, Proper shipping name

N.O.S.



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Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

**Domestic regulation** 

NOM-002-SCT

UN number : UN 3077

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,

N.O.S.

(Milbemycin Oxime, Lufenuron (ISO))

Class : 9
Packing group : III
Labels : 9

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

#### **SECTION 15. REGULATORY INFORMATION**

Safety, health and environmental regulations/legislation specific for the substance or mixture

Federal Law for the control of chemical precursors,

essential chemical products and machinery for producing capsules, tablets and pills.

Not applicable

The ingredients of this product are reported in the following inventories:

AICS : not determined

DSL : not determined

IECSC : not determined

### **SECTION 16. OTHER INFORMATION**

Revision Date : 28.09.2024 Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)

NOM-010-STPS-2014 : Mexico. Norm NOM-010-STPS-2014 on Chemicals Polluting

the Work Environment - Identification, Assessment and Con-

trol - Appendix 1 Occupational Exposure Limits

ACGIH / TWA : 8-hour, time-weighted average



## Milbemycin Oxime / Lufenuron Formulation

Version Revision Date: SDS Number: Date of last issue: 30.09.2023 28.09.2024 6365222-00009 Date of first issue: 21.09.2020

NOM-010-STPS-2014 / VLE- : Time weighted average limit value

PPT

AllC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR -Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China: IMDG - International Maritime Dangerous Goods: IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet

Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agen-

cy, http://echa.europa.eu/

The information is considered as correct, but not exhaustive, and will be used only as a guide, which is based in the current knowledge of the substance or mixture, and is applicable to proper safety precautions for the product.

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