

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Other means of identification : Alliance (A010249)
COOPERS TRIFECTA TRIPLE ACTIVE DRENCH FOR SHEEP AND CATTLE MINERALISED (67327)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Veterinary product

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : MSD
20 Spartan Road
1619 Spartan, South Africa

Telephone : +27119239300

E-mail address of person responsible for the SDS : EHSDATASTEWARD@msd.com

1.4 Emergency telephone number

+1-908-423-6000

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4	H302: Harmful if swallowed.
Respiratory sensitisation, Category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.
Carcinogenicity, Category 2	H351: Suspected of causing cancer.
Reproductive toxicity, Category 1B	H360FD: May damage fertility. May damage the unborn child.
Specific target organ toxicity - repeated exposure, Category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Short-term (acute) aquatic hazard, Category 1	H400: Very toxic to aquatic life.

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

Long-term (chronic) aquatic hazard, Category 1 H410: Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

- H302 Harmful if swallowed.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H360FD May damage fertility. May damage the unborn child.
- H373 May cause damage to organs through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

- P201 Obtain special instructions before use.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
- P391 Collect spillage.

Hazardous components which must be listed on the label:

levamisole hydrochloride
Cobalt disodium ethylenediaminetetraacetate
oxfendazole
Sodium selenate

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
levamisole hydrochloride	16595-80-5 240-654-6	Acute Tox. 3; H301 Repr. 2; H361d STOT RE 2; H373 (Blood, Testis) Aquatic Chronic 3; H412	>= 3 - < 10
Cobalt disodium ethylenediaminetetraacetate	15137-09-4 239-198-0	Resp. Sens. 1B; H334 Muta. 2; H341 Carc. 2; H351 Repr. 2; H361f STOT RE 1; H372 (Respiratory Tract, Thyroid, Heart, Blood) Aquatic Chronic 1; H410 M-Factor (Chronic aquatic toxicity): 1	>= 3 - < 10
oxfendazole	53716-50-0 258-714-5	Repr. 1B; H360FD STOT RE 2; H373 (Liver, Testis) Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 1	>= 2,5 - < 10
Benzyl alcohol	100-51-6 202-859-9 603-057-00-5	Acute Tox. 4; H302 Acute Tox. 4; H332 Eye Irrit. 2; H319	>= 1 - < 10
Citric acid	77-92-9 201-069-1 607-750-00-3	Eye Irrit. 2; H319 STOT SE 3; H335	>= 1 - < 10
Sodium selenate	13410-01-0	Acute Tox. 2; H300	>= 0,1 - < 0,25

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

	236-501-8 034-002-00-8	Acute Tox. 2; H330 Skin Irrit. 2; H315 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2 606-143-00-0	Acute Tox. 2; H300 Acute Tox. 1; H330 Acute Tox. 3; H311 Repr. 2; H361fd STOT RE 1; H372 (Central nervous system) Aquatic Acute 1; H400 Aquatic Chronic 1; H410	>= 0,1 - < 0,25
		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	
		M-Factor (Acute aquatic toxicity): 10.000 M-Factor (Chronic aquatic toxicity): 10.000	

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- 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.
- 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).
- If inhaled : If inhaled, remove to fresh air.
If not breathing, give artificial respiration.
If breathing is difficult, give oxygen.
Get medical attention.
- In case of skin contact : In case of contact, immediately flush skin with soap and plenty

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0	Revision Date: 20.03.2024	SDS Number: 10812597-00008	Date of last issue: 01.02.2024 Date of first issue: 11.07.2022
----------------	------------------------------	-------------------------------	---

of water.
Remove contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Harmful if swallowed.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing genetic defects.
Suspected of causing cancer.
May damage fertility. May damage the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides
Cobalt compounds

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

Nitrogen oxides (NO_x)
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances 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.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items 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.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

SECTION 7: Handling and storage**7.1 Precautions for safe handling**

- 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 mist or vapours.
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.
Already sensitised individuals, and those susceptible to asthma, allergies, chronic or recurrent respiratory disease, should consult their physician regarding working with respiratory irritants or sensitisers.
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. 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.

7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep in properly labelled containers. Store locked up. Keep tightly closed. Store in accordance with the particular national regulations.
- Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Self-reactive substances and mixtures
Organic peroxides
Explosives
Gases

7.3 Specific end use(s)

- Specific use(s) : No data available

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
levamisole hydrochloride	16595-80-5	TWA	20 µg/m ³ (OEB 3)	Internal
	Further information: Skin			
		Wipe limit	200 µg/100 cm ²	Internal
oxfendazole	53716-50-0	TWA	40 µg/m ³ (OEB 3)	Internal
		Wipe limit	400 µg/100 cm ²	Internal
Sodium selenate	13410-01-0	OEL-RL	0,4 mg/m ³ (selenium)	ZA OEL
	Further information: Occupational Exposure Limits - Restricted Limits For Hazardous Chemical Agents			
		TWA	20 µg/m ³ (OEB 3)	Internal
		Wipe limit	200 µg/100 cm ²	Internal
abamectin (combination of avermectin B1a and avermectin B1b) (ISO)	71751-41-2	TWA	15 µg/m ³ (OEB 3)	Internal
		Wipe limit	150 µg/100 cm ²	Internal

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Cobalt disodium ethylenediaminetetraacetate	Workers	Inhalation	Long-term systemic effects	0,349 mg/m ³
	Workers	Skin contact	Long-term systemic effects	1 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,087 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	0,5 mg/kg bw/day
Benzyl alcohol	Consumers	Ingestion	Long-term systemic effects	0,025 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	22 mg/m ³
	Workers	Inhalation	Acute systemic effects	110 mg/m ³
	Workers	Skin contact	Long-term systemic effects	8 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	40 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	5,4 mg/m ³

SAFETY DATA SHEET



Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

	Consumers	Inhalation	Acute systemic effects	27 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	4 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	20 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	4 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	20 mg/kg bw/day
Sodium selenate	Workers	Inhalation	Long-term systemic effects	0,12 mg/m ³
	Workers	Skin contact	Long-term systemic effects	16,73 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,036 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	10,28 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,01028 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Cobalt disodium ethylenediaminetetraacetate	Fresh water	0,1 mg/l
	Marine water	0,01 mg/l
	Fresh water sediment	0,758 mg/kg dry weight (d.w.)
	Marine sediment	0,0758 mg/kg dry weight (d.w.)
	Soil	0,5636 mg/kg dry weight (d.w.)
Benzyl alcohol	Fresh water	1 mg/l
	Marine water	0,1 mg/l
	Intermittent use/release	2,3 mg/l
	Sewage treatment plant	39 mg/l
	Fresh water sediment	5,27 mg/kg
	Marine sediment	0,527 mg/kg
Citric acid	Soil	0,456 mg/kg
	Fresh water	0,44 mg/l
	Marine water	0,044 mg/l
	Sewage treatment plant	1000 mg/l
	Fresh water sediment	34,6 mg/kg dry weight (d.w.)
Sodium selenate	Marine sediment	3,46 mg/kg dry weight (d.w.)
	Soil	33,1 mg/kg dry weight (d.w.)
	Fresh water	6,38 µg/l
	Freshwater - intermittent	6,38 µg/l
	Marine water	4,09 µg/l

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

	Sewage treatment plant	10 mg/l
	Fresh water sediment	19,7 mg/kg dry weight (d.w.)
	Marine sediment	12,6 mg/kg dry weight (d.w.)
	Soil	0,47 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	2,39 mg/kg food

8.2 Exposure controls

Engineering measures

Use appropriate engineering controls and manufacturing technologies to control airborne concentrations (e.g., drip-less quick connections).

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

Eye/face 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.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

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.

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Combined particulates and organic vapour type (A-P)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Aqueous solution, suspension
Colour : pink, to, purple
Odour : No data available
Odour Threshold : No data available

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

pH	:	3,4 - 4,4 (20 °C)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	No data available
Relative vapour density	:	No data available
Relative density	:	1,05 - 1,08
Density	:	No data available
Solubility(ies)		
Water solubility	:	No data available
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	770 - 5000 mm ² /s (20 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids)	:	No data available
Molecular weight	:	No data available
Particle size	:	Not applicable

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

SECTION 10: Stability and reactivity**10.1 Reactivity**

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid : None known.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Harmful if swallowed.

Product:

Acute oral toxicity : Acute toxicity estimate: 980,32 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Components:**levamisole hydrochloride:**

Acute oral toxicity : LD50 (Rat): 180 mg/kg

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

LD50 (Mouse): 223 mg/kg

LD50 (Rabbit): 458 mg/kg

Acute inhalation toxicity : Remarks: No data available

Acute dermal toxicity : Remarks: No data available

Cobalt disodium ethylenediaminetetraacetate:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Remarks: Based on data from similar materials

oxfendazole:

Acute oral toxicity : LD50 (Rat): > 6.000 mg/kg

LD50 (Dog): 1.600 mg/kg

LD50 (sheep): 250 mg/kg

Benzyl alcohol:

Acute oral toxicity : LD50 (Rat): 1.620 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 4,178 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Citric acid:

Acute oral toxicity : LD50 (Mouse): 5.400 mg/kg

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Sodium selenate:

Acute oral toxicity : LD50 (Rat): > 5 - 50 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 0,052 - 0,51 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Acute oral toxicity : LD50 (Rat): 24 mg/kg

LD50 (Mouse): 10 mg/kg

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

		LDLo (Monkey): 24 mg/kg
		Symptoms: Dilatation of the pupil
Acute inhalation toxicity	:	LC50 (Rat): 0,023 mg/l
		Exposure time: 4 h
		Test atmosphere: dust/mist
Acute dermal toxicity	:	LD50 (Rat): 330 mg/kg
		LD50 (Rabbit): 2.000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

levamisole hydrochloride:

Remarks : No data available

Cobalt disodium ethylenediaminetetraacetate:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
Remarks	:	Based on data from similar materials

oxfendazole:

Species	:	Rabbit
Result	:	No skin irritation

Benzyl alcohol:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Citric acid:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Sodium selenate:

Species	:	reconstructed human epidermis (RhE)
Method	:	OECD Test Guideline 431

Species	:	reconstructed human epidermis (RhE)
Method	:	OECD Test Guideline 439

Result	:	Skin irritation
--------	---	-----------------

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rabbit
Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:**levamisole hydrochloride:**

Remarks : No data available

Cobalt disodium ethylenediaminetetraacetate:

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

oxfendazole:

Species : Rabbit
Result : No eye irritation

Benzyl alcohol:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritation to eyes, reversing within 21 days

Citric acid:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritation to eyes, reversing within 21 days

Sodium selenate:

Species : Bovine cornea
Method : OECD Test Guideline 437
Result : No eye irritation

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rabbit
Result : Mild eye irritation

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Components:

levamisole hydrochloride:

||Remarks : No data available

Cobalt disodium ethylenediaminetetraacetate:

||Exposure routes : inhalation (dust/mist/fume)
||Species : Humans
||Result : positive
||Remarks : Based on data from similar materials

||Assessment : Probability or evidence of low to moderate respiratory sensitisation rate in humans

Benzyl alcohol:

||Test Type : Maximisation Test
||Exposure routes : Skin contact
||Species : Guinea pig
||Method : OECD Test Guideline 406
||Result : negative

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

||Test Type : Maximisation Test
||Exposure routes : Skin contact
||Result : Not a skin sensitizer.

Germ cell mutagenicity

Suspected of causing genetic defects.

Components:

levamisole hydrochloride:

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

Test Type: Chromosome aberration test in vitro
Result: negative

Cobalt disodium ethylenediaminetetraacetate:

||Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

			<p>Method: OECD Test Guideline 476 Result: positive Remarks: Based on data from similar materials</p>
			<p>Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: positive Remarks: Based on data from similar materials</p>
	Genotoxicity in vivo	:	<p>Test Type: Micronucleus test Species: Mouse Application Route: Intraperitoneal injection Result: positive Remarks: Based on data from similar materials</p>
			<p>Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Mouse Application Route: Ingestion Result: positive Remarks: Based on data from similar materials</p>
			<p>Test Type: Rodent dominant lethal test (germ cell) (in vivo) Species: Mouse Application Route: Ingestion Result: positive Remarks: Based on data from similar materials</p>
	Germ cell mutagenicity- Assessment	:	<p>Positive result(s) from in vivo mammalian somatic cell mutagenicity tests. Remarks: Based on data from similar materials</p>
oxfendazole:			
	Genotoxicity in vitro	:	<p>Test Type: Bacterial reverse mutation assay (AMES) Result: negative</p>
	Genotoxicity in vivo	:	<p>Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Mouse Application Route: Oral Result: positive</p>
Benzyl alcohol:			
	Genotoxicity in vitro	:	<p>Test Type: Bacterial reverse mutation assay (AMES) Result: negative</p>
	Genotoxicity in vivo	:	<p>Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Result: negative</p>

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

II

Citric acid:

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

Test Type: in vitro micronucleus test
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow
cytogenetic test, chromosomal analysis)
Species: Rat
Application Route: Ingestion
Result: negative

Sodium selenate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

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

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster lung cells
Result: negative

Test Type: Alkaline elution assay
Result: negative

Genotoxicity in vivo : Test Type: Mutagenicity (in vivo mammalian bone-marrow
cytogenetic test, chromosomal analysis)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Carcinogenicity

Suspected of causing cancer.

Components:

levamisole hydrochloride:

Species : Mouse
Application Route : Oral
Exposure time : 2 Years

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

NOAEL : 80 mg/kg body weight
Remarks : No significant adverse effects were reported

Species : Rat
Application Route : Oral
Exposure time : 2 Years
NOAEL : 40 mg/kg body weight
Remarks : No significant adverse effects were reported

Cobalt disodium ethylenediaminetetraacetate:

Species : Rat
Application Route : inhalation (dust/mist/fume)
Exposure time : 105 weeks
Result : positive
Remarks : Based on data from similar materials

Species : Mouse
Application Route : inhalation (dust/mist/fume)
Exposure time : 105 weeks
Result : positive
Remarks : Based on data from similar materials

Carcinogenicity - Assessment : Limited evidence of carcinogenicity in animal studies
Remarks: Based on data from similar materials

oxfendazole:

Species : Rat
Application Route : Oral
Exposure time : 1 Years
Symptoms : No adverse effects
Target Organs : Liver

Species : Rat
Application Route : Oral
Exposure time : 2 Years
Symptoms : No adverse effects
Target Organs : Liver

Benzyl alcohol:

Species : Mouse
Application Route : Ingestion
Exposure time : 103 weeks
Method : OECD Test Guideline 451
Result : negative

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rat
Application Route : Oral
Exposure time : 105 weeks

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

Result : negative

Species : Mouse
Application Route : Oral
Exposure time : 93 weeks
Result : negative

Reproductive toxicity

May damage fertility. May damage the unborn child.

Components:

levamisole hydrochloride:

Effects on fertility : Test Type: Three-generation reproduction toxicity study
Species: Rat
Application Route: Oral
Result: No significant adverse effects were reported

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL: 20 mg/kg body weight
Result: Fetotoxicity

Test Type: Embryo-foetal development
Species: Rabbit
Application Route: Oral
Developmental Toxicity: LOAEL: 40 mg/kg body weight
Result: Fetotoxicity

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

Cobalt disodium ethylenediaminetetraacetate:

Effects on fertility : Test Type: Fertility/early embryonic development
Species: Rat
Application Route: Ingestion
Result: positive
Remarks: Based on data from similar materials

Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: Ingestion
Result: positive
Remarks: Based on data from similar materials

Test Type: Fertility/early embryonic development
Species: Mouse
Application Route: inhalation (dust/mist/fume)
Result: positive
Remarks: Based on data from similar materials

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Effects on foetal development	: Test Type: Fertility/early embryonic development Species: Rat Application Route: inhalation (dust/mist/fume) Result: positive Remarks: Based on data from similar materials
Reproductive toxicity - Assessment	: Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: negative Remarks: Based on data from similar materials
Reproductive toxicity - Assessment	: Some evidence of adverse effects on sexual function and fertility, based on animal experiments. Remarks: Based on data from similar materials

oxfendazole:

Effects on fertility	: Test Type: Fertility/early embryonic development Species: Rat, male Application Route: Oral Fertility: NOAEL: 17 mg/kg body weight Target Organs: Testes Result: Effects on fertility
	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Oral Fertility: NOAEL: 0,9 mg/kg body weight Target Organs: Liver Result: No effects on fertility
	Test Type: Fertility Species: Mouse Application Route: Oral Duration of Single Treatment: 1 Months Fertility: NOAEL: 750 mg/kg body weight Target Organs: Testes Result: Effects on fertility
Effects on foetal development	: Test Type: Embryo-foetal development Species: Rat Application Route: Oral Developmental Toxicity: NOAEL: 10 mg/kg body weight Result: positive, Fetal effects
	Test Type: Embryo-foetal development Species: Rat Developmental Toxicity: NOAEL: 10 mg/kg body weight Result: positive, Embryo-foetal toxicity

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

		<p>Test Type: Embryo-foetal development Species: Mouse Application Route: Oral Developmental Toxicity: NOAEL: 108 mg/kg body weight Result: positive, Embryo-foetal toxicity, foetal abnormalities</p> <p>Test Type: Embryo-foetal development Species: Rabbit Application Route: Oral Developmental Toxicity: NOAEL: 0,625 mg/kg body weight</p>
Reproductive toxicity - Assessment	:	Clear evidence of adverse effects on sexual function and fertility, based on animal experiments., Clear evidence of adverse effects on development, based on animal experiments.

Benzyl alcohol:

Effects on fertility	:	<p>Test Type: Fertility/early embryonic development Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials</p>
Effects on foetal development	:	<p>Test Type: Embryo-foetal development Species: Mouse Application Route: Ingestion Result: negative</p>

Citric acid:

Effects on foetal development	:	<p>Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative</p>
-------------------------------	---	---

Sodium selenate:

Effects on fertility	:	<p>Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials</p>
Effects on foetal development	:	<p>Test Type: Embryo-foetal development Species: Mouse Application Route: Ingestion Result: negative Remarks: Based on data from similar materials</p>

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Effects on fertility	:	<p>Test Type: Fertility Species: Rat, male</p>
----------------------	---	--

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

	Application Route: Oral Result: Effects on fertility
	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Oral Early Embryonic Development: NOAEL: 0,12 mg/kg body weight Result: Fetotoxicity
Effects on foetal development	: Test Type: Embryo-foetal development Species: Mouse Application Route: Oral General Toxicity Maternal: NOAEL: 0,05 mg/kg body weight Developmental Toxicity: NOAEL: 0,2 mg/kg body weight Result: Cleft palate Remarks: Adverse developmental effects were observed
	Test Type: Embryo-foetal development Species: Rabbit Application Route: Oral Developmental Toxicity: LOAEL: 2 mg/kg body weight Result: Cleft palate, Teratogenic effects, Reduced embryonic survival Remarks: Adverse developmental effects were observed
Reproductive toxicity - Assessment	: Test Type: Development Species: Rat Application Route: Oral Developmental Toxicity: LOAEL: 1,6 mg/kg body weight Result: Teratogenic effects
	: 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.

STOT - single exposure

Not classified based on available information.

Components:

Citric acid:

||Assessment : May cause respiratory irritation.

STOT - repeated exposure

May cause damage to organs through prolonged or repeated exposure.

Components:

levamisole hydrochloride:

||Target Organs : Blood, Testis

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Assessment : May cause damage to organs through prolonged or repeated exposure.

Cobalt disodium ethylenediaminetetraacetate:

Exposure routes : inhalation (dust/mist/fume)
Target Organs : Respiratory Tract
Assessment : Shown to produce significant health effects in animals at concentrations of 0.02 mg/l/6h/d or less.
Remarks : Based on data from similar materials

Exposure routes : Ingestion
Target Organs : Thyroid, Heart, Blood
Assessment : Shown to produce significant health effects in animals at concentrations of >10 to 100 mg/kg bw.
Remarks : Based on data from similar materials

oxfendazole:

Exposure routes : Oral
Target Organs : Liver, Testis
Assessment : May cause damage to organs through prolonged or repeated exposure.

Sodium selenate:

Exposure routes : Ingestion
Assessment : Shown to produce significant health effects in animals at concentrations of 10 mg/kg bw or less.

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Exposure routes : Ingestion
Target Organs : Central nervous system
Assessment : Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Components:

levamisole hydrochloride:

Species : Rat
NOAEL : 2,5 mg/kg
Application Route : Oral
Exposure time : 18 Months
Target Organs : Testis

Species : Dog
LOAEL : 20 mg/kg
Application Route : Oral
Exposure time : 18 Months
Target Organs : Blood

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

Species	: Dog
LOAEL	: 40 mg/kg
Application Route	: Oral
Exposure time	: 3 Months

Cobalt disodium ethylenediaminetetraacetate:

Species	: Rat
LOAEL	: > 10 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days
Remarks	: Based on data from similar materials

Species	: Rat
LOAEL	: < 0,01 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 13 Weeks
Method	: OECD Test Guideline 413
Remarks	: Based on data from similar materials

Species	: Mouse
LOAEL	: < 0,01 mg/l
Application Route	: inhalation (dust/mist/fume)
Exposure time	: 13 Weeks
Method	: OECD Test Guideline 413
Remarks	: Based on data from similar materials

oxfendazole:

Species	: Rat
NOAEL	: 11 mg/kg
Application Route	: Oral
Exposure time	: 2 Weeks
Target Organs	: Blood, Liver, Testis

Species	: Rat
NOAEL	: 3,8 mg/kg
Application Route	: Oral
Exposure time	: 3 Months
Target Organs	: Liver, Testis

Species	: Mouse
NOAEL	: 750 mg/kg
Application Route	: Oral
Exposure time	: 1 Months
Target Organs	: Liver

Species	: Mouse
NOAEL	: 37,5 mg/kg
Application Route	: Oral
Exposure time	: 3 Months
Target Organs	: Liver

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Species : Dog
NOAEL : 6 mg/kg
Application Route : Oral
Exposure time : 1 Months
Remarks : No significant adverse effects were reported

Species : Dog
NOAEL : 11 mg/kg
Application Route : Oral
Exposure time : 2 Weeks
Target Organs : Lymph nodes, thymus gland

Species : Dog
NOAEL : 13,5 mg/kg
Application Route : Oral
Exposure time : 12 Months
Target Organs : Liver

Benzyl alcohol:

Species : Rat
NOAEL : 1,072 mg/l
Application Route : inhalation (dust/mist/fume)
Exposure time : 28 Days
Method : OECD Test Guideline 412

Citric acid:

Species : Rat
NOAEL : 4.000 mg/kg
LOAEL : 8.000 mg/kg
Application Route : Ingestion
Exposure time : 10 Days

Sodium selenate:

Species : Rat
NOAEL : 0,4 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Species : Rat
NOAEL : 1,5 mg/kg
Application Route : Oral
Exposure time : 24 Months
Target Organs : Central nervous system
Symptoms : Tremors, ataxia

Species : Mouse
NOAEL : 4,0 mg/kg

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Application Route : Oral
Exposure time : 24 Months
Target Organs : Central nervous system
Symptoms : Tremors, ataxia

Species : Dog
NOAEL : 0,25 mg/kg
LOAEL : 0,5 mg/kg
Application Route : Oral
Exposure time : 53 Weeks
Target Organs : Central nervous system
Symptoms : Tremors, weight loss
Remarks : mortality observed

Species : Monkey
NOAEL : 1,0 mg/kg
Application Route : Oral
Exposure time : 14 Weeks
Target Organs : Central nervous system

Aspiration toxicity

Not classified based on available information.

Experience with human exposure

Components:

levamisole hydrochloride:

Ingestion : Symptoms: Nausea, Vomiting, Headache, Dizziness, hypotension

Cobalt disodium ethylenediaminetetraacetate:

Inhalation : Target Organs: Respiratory system
Remarks: Based on data from similar materials
Ingestion : Target Organs: Blood
Remarks: Based on data from similar materials
Target Organs: Heart
Target Organs: Thyroid

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Ingestion : Symptoms: May cause, Tremors, Diarrhoea, central nervous system effects, Salivation, tearing

SECTION 12: Ecological information

12.1 Toxicity

Components:

levamisole hydrochloride:

Toxicity to fish : LC50 (Oryzias latipes (Japanese medaka)): 37,3 mg/l
Exposure time: 96 h

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 64 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Cobalt disodium ethylenediaminetetraacetate:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green algae)): > 100 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to fish (Chronic toxicity) : EC10: > 1 mg/l
Exposure time: 34 d
Species: Danio rerio (zebra fish)
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: > 0,01 - 0,1 mg/l
Exposure time: 28 d
Species: Hyalella azteca (Amphipod)
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

M-Factor (Chronic aquatic toxicity) : 1

oxfendazole:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): > 2,7 mg/l
Exposure time: 96 h

LC50 (Oncorhynchus mykiss (rainbow trout)): > 2,5 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,059 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): > 4 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

M-Factor (Acute aquatic toxicity) : 10

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,023 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

Benzyl alcohol:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 460 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 230 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 770 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 310 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 51 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Citric acid:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.535 mg/l
Exposure time: 24 h

Sodium selenate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 1 - 10 mg/l
Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l
Exposure time: 48 h
Remarks: Based on data from similar materials

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Toxicity to algae/aquatic plants	:	ErC50 (Chlamydomonas reinhardtii (green algae)): 245 µg/l Exposure time: 96 h NOEC (Chlamydomonas reinhardtii (green algae)): 197 µg/l Exposure time: 96 h
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC10 (activated sludge): 590 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to fish (Chronic toxicity)	:	NOEC: > 0,01 - 0,1 mg/l Exposure time: 258 d Species: Lepomis macrochirus (Bluegill sunfish) Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 0,1 - 1 mg/l Exposure time: 28 d Remarks: Based on data from similar materials
M-Factor (Chronic aquatic toxicity)	:	1

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 3,2 µg/l Exposure time: 96 h LC50 (Lepomis macrochirus (Bluegill sunfish)): 9,6 µg/l Exposure time: 96 h LC50 (Ictalurus punctatus (channel catfish)): 24 µg/l Exposure time: 96 h LC50 (Cyprinus carpio (Carp)): 42 µg/l Exposure time: 96 h LC50 (Cyprinodon variegatus (sheepshead minnow)): 15 µg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Americamysis): 0,022 µg/l Exposure time: 96 h EC50 (Daphnia magna (Water flea)): 0,34 µg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 100 mg/l Exposure time: 72 h
M-Factor (Acute aquatic toxicity)	:	10.000

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version 3.0 Revision Date: 20.03.2024 SDS Number: 10812597-00008 Date of last issue: 01.02.2024
Date of first issue: 11.07.2022

Toxicity to microorganisms	:	EC50 : > 1.000 mg/l Exposure time: 3 h Test Type: Respiration inhibition
Toxicity to fish (Chronic toxicity)	:	NOEC: 0,52 µg/l Exposure time: 32 d Species: Pimephales promelas (fathead minnow)
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 0,03 µg/l Exposure time: 21 d Species: Daphnia magna (Water flea)
		NOEC: 0,0035 µg/l Exposure time: 28 d Species: Mysidopsis bahia (opossum shrimp)
M-Factor (Chronic aquatic toxicity)	:	10.000

12.2 Persistence and degradability

Components:

oxfendazole:

Stability in water : Hydrolysis: < 5 % (4 d)

Benzyl alcohol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 92 - 96 %
Exposure time: 14 d

Citric acid:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 97 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

Stability in water : Hydrolysis: 50 % (< 12 h)

12.3 Bioaccumulative potential

Components:

Cobalt disodium ethylenediaminetetraacetate:

Partition coefficient: n-octanol/water : log Pow: -3,86
Remarks: Calculation

oxfendazole:

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

|| Partition coefficient: n-
octanol/water : log Pow: 1,95

Benzyl alcohol:

|| Partition coefficient: n-
octanol/water : log Pow: 1,05

Citric acid:

|| Partition coefficient: n-
octanol/water : log Pow: -1,72

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

|| Bioaccumulation : Bioconcentration factor (BCF): 52

|| Partition coefficient: n-
octanol/water : log Pow: 4

12.4 Mobility in soil

Components:

oxfendazole:

|| Distribution among environ-
mental compartments : log Koc: 3,2

abamectin (combination of avermectin B1a and avermectin B1b) (ISO):

|| Distribution among environ-
mental compartments : log Koc: > 3,6

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Product:

Endocrine disrupting poten-
tial : The substance/mixture does not contain components consid-
ered to have endocrine disrupting properties according to
REACH Article 57(f) or Commission Delegated regulation
(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at
levels of 0.1% or higher.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes
are not product specific, but application specific.

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADN	:	UN 3082
ADR	:	UN 3082
RID	:	UN 3082
IMDG	:	UN 3082
IATA	:	UN 3082

14.2 UN proper shipping name

ADN	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (abamectin (combination of avermectin B1a and avermectin B1b) (ISO), oxfendazole)
ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (abamectin (combination of avermectin B1a and avermectin B1b) (ISO), oxfendazole)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (abamectin (combination of avermectin B1a and avermectin B1b) (ISO), oxfendazole)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (abamectin (combination of avermectin B1a and avermectin B1b) (ISO), oxfendazole)
IATA	:	Environmentally hazardous substance, liquid, n.o.s. (abamectin (combination of avermectin B1a and avermectin B1b) (ISO), oxfendazole)

14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADN	:	9
ADR	:	9
RID	:	9
IMDG	:	9
IATA	:	9

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

14.4 Packing group

ADN

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

ADR

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)

RID

Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9

IMDG

Packing group : III
Labels : 9
EmS Code : F-A, S-F

IATA (Cargo)

Packing instruction (cargo aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Passenger)

Environmentally hazardous : yes

IATA (Cargo)

**Abamectin / Levamisole Hydrochloride /
Oxfendazole / Cobalt Disodium EDTA / Sodium
Selenate Formulation**

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

Environmentally hazardous : yes

14.6 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.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

AICS : not determined

DSL : not determined

IECSC : not determined

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H300 : Fatal if swallowed.
H301 : Toxic if swallowed.
H302 : Harmful if swallowed.
H311 : Toxic in contact with skin.
H315 : Causes skin irritation.
H319 : Causes serious eye irritation.
H330 : Fatal if inhaled.
H332 : Harmful if inhaled.
H334 : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 : May cause respiratory irritation.
H341 : Suspected of causing genetic defects.
H351 : Suspected of causing cancer.
H360FD : May damage fertility. May damage the unborn child.
H361d : Suspected of damaging the unborn child.
H361f : Suspected of damaging fertility.
H361fd : Suspected of damaging fertility. Suspected of damaging the

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

- unborn child.
- H372 : Causes damage to organs through prolonged or repeated exposure if swallowed.
- H372 : Causes damage to organs through prolonged or repeated exposure.
- H373 : May cause damage to organs through prolonged or repeated exposure.
- H373 : May cause damage to organs through prolonged or repeated exposure if swallowed.
- H400 : Very toxic to aquatic life.
- H410 : Very toxic to aquatic life with long lasting effects.
- H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

- Acute Tox. : Acute toxicity
- Aquatic Acute : Short-term (acute) aquatic hazard
- Aquatic Chronic : Long-term (chronic) aquatic hazard
- Carc. : Carcinogenicity
- Eye Irrit. : Eye irritation
- Muta. : Germ cell mutagenicity
- Repr. : Reproductive toxicity
- Resp. Sens. : Respiratory sensitisation
- Skin Irrit. : Skin irritation
- STOT RE : Specific target organ toxicity - repeated exposure
- STOT SE : Specific target organ toxicity - single exposure
- ZA OEL : South Africa. The Regulations for Hazardous Chemical Agents, Occupational Exposure Limits
- ZA OEL / OEL-RL : Occupational Exposure Limit Restricted limit - 8- hour exposure or equivalent (12 hour shifts)

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; 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; 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; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; 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 sub-

Abamectin / Levamisole Hydrochloride / Oxfendazole / Cobalt Disodium EDTA / Sodium Selenate Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 01.02.2024
3.0	20.03.2024	10812597-00008	Date of first issue: 11.07.2022

stance; 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; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; 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

Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Classification of the mixture:

Acute Tox. 4	H302
Resp. Sens. 1	H334
Muta. 2	H341
Carc. 2	H351
Repr. 1B	H360FD
STOT RE 2	H373
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Classification procedure:

Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method
Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

ZA / EN