SAFETY DATA SHEET

Ultramox Multidose

Section 1. Identification

Product identifier : Ultramox Multidose

Product code : 122000008375

Other means of identification : 59368870; 59368889

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

Identified uses : Veterinary product.

Uses advised against : None known.

Company Name : Elanco New Zealand
106 Wiri Station Road, Manukau, Auckland 2140

Telephone number : +64 0800 352 626

0800 446 121 (Adverse Events Local Number)

Emergency telephone number : CHEMTREC International: 00 1 703-527-3887 (24 hours)
CHEMTREC: +64 9-801 0034 (Local)
CHEMTREC: 0800 425 459 (Freephone)

Email : elanco_sds@elancoah.com

Section 2. Hazards identification

HSNO Approval Number : HSR100757; HSR100758

HSNO Group Standard : Veterinary Medicines (Limited Pack Size, Finished Dose)
Veterinary Medicines (Non-dispersive Closed System Application)

HSNO Classification : RESPIRATORY SENSITISATION - Category 1
SKIN SENSITISATION - Category 1
REPRODUCTIVE TOXICITY - Category 2
REPRODUCTIVE TOXICITY - Effects on or via lactation
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

This material is classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

This material is classified as DANGEROUS GOODS according to criteria in New Zealand Standard 5433:2020 Transport of Dangerous Goods on Land.

GHS label elements

Signal word : Danger

Hazard statements : H317 - May cause an allergic skin reaction.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H361 - Suspected of damaging fertility or the unborn child.
H362 - May cause harm to breast-fed children.
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.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves, protective clothing, eye protection, face protection, or hearing protection.
P284 - Wear respiratory protection.
P273 - Avoid release to the environment.
P260 - Do not breathe vapour.
P263 - Avoid contact during pregnancy and while nursing.

Section 2. Hazards identification

P270 - Do not eat, drink or smoke when using this product.
P264 - Wash thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.

Response : P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical advice or attention.
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Symbol :

Other hazards which do not result in classification : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	% (w/w)	CAS number
Oxfendazole	≥10 - ≤30	53716-50-0
Praziquantel	≤10	55268-74-1
Benzenemethanol	≤5	100-51-6
propane-1,2-diol	≤3	57-55-6
Sodium carboxymethylcellulose	≤3	9004-32-4
silicon dioxide	≤3	7631-86-9
Moxidectin	<1	113507-06-5
Disulfurous acid, disodium salt,	≤0.3	7681-57-4

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

Section 4. First aid measures

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention following exposure or if feeling unwell.

Most important symptoms/effects, acute and delayed

Potential acute health effects

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

Ingestion : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Eye contact : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eyes : No specific data.

Indication of immediate medical attention and special treatment needed, if necessary

Specific treatments : No specific treatment.

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Firefighting measures

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Section 5. Firefighting measures

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Hazchem code : 3Z

Special precautions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Protective measures

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitisation problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid contact during pregnancy or while nursing. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible

Section 7. Handling and storage

material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
praziquantel	**Elanco OEL (ELANCO).** TWA: 3 mg/m³ 8 hours.
propane-1,2-diol	**HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022).** WES-TWA: 10 mg/m³ 8 hours. Form: Particulate WES-TWA: 150 ppm 8 hours. Form: Vapor and particulates WES-TWA: 474 mg/m³ 8 hours. Form: Vapor and particulates **EH40/2005 WELs (United Kingdom (UK), 1/2020).** TWA: 10 mg/m³ 8 hours. Form: Particulate TWA: 474 mg/m³ 8 hours. Form: total vapour and particulates TWA: 150 ppm 8 hours. Form: total vapour and particulates **Safe Work Australia (Australia, 10/2022).** TWA: 10 mg/m³ 8 hours. Form: Particulate TWA: 150 ppm 8 hours. Form: Vapor and particulates TWA: 474 mg/m³ 8 hours. Form: Vapor and particulates
silicon dioxide	**EH40/2005 WELs (United Kingdom (UK), 1/2020). [silica, amorphous inhalable dust/respirable dust]** TWA: 2.4 mg/m³ 8 hours. Form: respirable dust TWA: 6 mg/m³ 8 hours. Form: inhalable dust **Safe Work Australia (Australia, 10/2022).** TWA: 2 mg/m³ 8 hours. Form: Respirable dust and fumes
sodium metabisulphite	**HSWA 2015 - HSW (GRWM) 2016. Workplace exposure standards (WES) (New Zealand, 4/2022). Skin sensitiser. Inhalation sensitiser.** WES-TWA: 5 mg/m³ 8 hours. **EH40/2005 WELs (United Kingdom (UK), 1/2020).** TWA: 5 mg/m³ 8 hours. **Safe Work Australia (Australia, 10/2022).** TWA: 5 mg/m³ 8 hours.

Biological exposure indices

No exposure indices known.

Section 8. Exposure controls/personal protection

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Liquid. [cream / paste]

Colour : Not available.

Odour : Not available.

Odour threshold : Not available.

pH : Not available.

Melting point/freezing point : Not available.

Boiling point, initial boiling point, and boiling range : Not available.

Flash point :

Section 9. Physical and chemical properties and safety characteristics

Ingredient name	Closed cup			Open cup		
	°C	°F	Method	°C	°F	Method
ethyl acetate	-4	24.8				
trans-hex-2-enal	38	100.4				
propane-1,2-diol	99	210.2				
benzyl alcohol	100.56	213				
Sorbitan monooleate, ethoxylated	>93	>199.4				
Poly[oxy (dimethylsilylene)]	>110	>230				
D-glucitol				282.85	541.1	

Evaporation rate : Not available.

Flammability : Not available.

Lower and upper explosion limit/flammability limit : Not available.

Vapour pressure :

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
ethyl acetate	81.59	10.9				
water	17.5	2.3				
propane-1,2-diol	0.15	0.02	EU A.4			
benzyl alcohol	0.05	0.0067				
propyl 4-hydroxybenzoate	0.0000026	0.00000035		0.00034	0.000045	

Relative vapour density : Not available.

Relative density : Not available.

Density : 1.05 to 1.15 g/cm³

Solubility(ies) : Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Auto-ignition temperature :

Ingredient name	°C	°F	Method
propane-1,2-diol	371	699.8	
ethyl acetate	426.67	800	
benzyl alcohol	436	816.8	
methyl 4-hydroxybenzoate	>403	>757.4	

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

Particle characteristics

Median particle size : Not applicable.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on likely routes of exposure

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

Ingestion : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Eye contact : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation : Adverse symptoms may include the following:
wheezing and breathing difficulties
asthma
reduced foetal weight
increase in foetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced foetal weight
increase in foetal deaths
skeletal malformations

Eye contact : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Praziquantel	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	2249 mg/kg	-
Benzenemethanol	LC50 Inhalation Dusts and mists	Rat	>4178 mg/m³	4 hours
	LD50 Dermal	Rabbit	2000 mg/kg	-
	LD50 Oral	Rat	1230 mg/kg	-
propane-1,2-diol	LD50 Dermal	Rabbit	20800 mg/kg	-
	LD50 Oral	Rat	20 g/kg	-
Sodium carboxymethylcellulose	LD50 Oral	Rat	27000 mg/kg	-
silicon dioxide	LC50 Inhalation Dusts and mists	Rat	>58.8 mg/l	4 hours
	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Moxidectin	LC50 Inhalation Dusts and mists	Rat	3.28 mg/l	4 hours

Section 11. Toxicological information

	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	106 mg/kg	-
Disulfurous acid, disodium salt,	LC50 Inhalation Vapour	Rat	>22 mg/l Mortality. None.	1 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	1131 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Benzenemethanol	Eyes - Irritant	Rabbit	-	-	-
propane-1,2-diol	Eyes - Mild irritant	Rabbit	-	100 mg	-
	Eyes - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Human	-	168 hours 500 mg	-
	Skin - Mild irritant	Woman	-	96 hours 30 %	-
	Skin - Moderate irritant	Child	-	96 hours 30 % C	-
	Skin - Moderate irritant	Human	-	72 hours 104 mg l	-
silicon dioxide	Eyes - Mild irritant	Rabbit	-	24 hours 25 mg	-
Disulfurous acid, disodium salt,	Eyes - Mild irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	-	-
	Skin - Not irritant	Rabbit	-	-	-

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Disulfurous acid, disodium salt,	skin	Guinea pig	Not sensitizing

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Inhalation : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Ingestion : No known significant effects or critical hazards.

Skin contact : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Eye contact : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : May cause harm to breast-fed children.

Fertility effects : Suspected of damaging fertility.

Chronic toxicity

Not available.

Carcinogenicity

Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Disulfurous acid, disodium salt,	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative

Section 11. Toxicological information

Teratogenicity

Not available.

Reproductive toxicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Oxfendazole Moxidectin	Category 2 Category 1	- -	- -

Aspiration hazard

Not available.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Ultramox Multidose	5917.3	39050	N/A	N/A	27.4
Praziquantel	500	N/A	N/A	N/A	N/A
Benzenemethanol	1230	2000	N/A	N/A	1.5
propane-1,2-diol	20000	20800	N/A	N/A	N/A
Sodium carboxymethylcellulose	27000	N/A	N/A	N/A	N/A
Moxidectin	5	N/A	N/A	N/A	3.28
Disulfurous acid, disodium salt,	1131	N/A	N/A	N/A	N/A

Section 12. Ecological information

Ecotoxicity : This material is very toxic to aquatic life with long lasting effects.

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
oxfendazole	Acute EC50 1168.4 µg/l Fresh water	Daphnia - *Daphnia magna*	48 hours
praziquantel	Acute EC50 77 mg/l	Algae	72 hours
	Acute EC50 35 mg/l	Crustaceans	48 hours
	Acute LC50 29.22 mg/l Fresh water	Fish - *Carassius auratus*	96 hours
benzyl alcohol	Acute EC50 230 mg/l	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 10 ppm Fresh water	Fish - *Lepomis macrochirus*	96 hours
propane-1,2-diol	EC50 19000 mg/l	Aquatic plants	72 hours
	EC50 34400 mg/l	Daphnia	48 hours
	Acute LC50 1020000 µg/l Fresh water	Crustaceans - *Ceriodaphnia dubia*	48 hours
	Acute LC50 710000 µg/l Fresh water	Fish - *Pimephales promelas*	96 hours
Cellulose, carboxymethyl ether, sodium salt	Acute EC50 87.26 mg/l Fresh water	Crustaceans - *Ceriodaphnia dubia* - Neonate	48 hours
	Acute LC50 >20000000 µg/l Fresh water	Fish - *Oncorhynchus mykiss*	96 hours
silicon dioxide	Acute EC50 2.2 g/L Fresh water	Daphnia - *Daphnia magna* - Neonate	48 hours
	Chronic NOEC 12.5 mg/l Fresh water	Daphnia - *Daphnia magna* - Neonate	21 days
moxidectin	EC50 0.000026 mg/l	Daphnia	48 hours
	LC50 0.00011 mg/l	Fish - *Cyprinus carpio*	96 hours
	NOEC 0.0000031 mg/l	Daphnia	21 days

Section 12. Ecological information

	NOEC 0.0000032 mg/l	Fish - *Pimephales promelas* - Fingerling	28 days
sodium metabisulphite	NOEC >10 mg/l	Daphnia - *Daphnia magna*	21 days
	NOEC 316 mg/l	Fish - *Danio rerio*	34 days
	Acute EC50 43.8 mg/l	Algae	72 hours
	Acute EC50 89 mg/l	Daphnia - *Daphnia magna*	48 hours
	Acute LC50 32 mg/l Fresh water	Fish - *Lepomis macrochirus*	96 hours

Persistence/degradability

Product/ingredient name	Test	Result	Dose	Inoculum
benzyl alcohol	OECD 301C Ready Biodegradability - Modified MITI Test (I)	92 to 96 % - Readily - 28 days	-	-
propane-1,2-diol	OECD 301F Ready Biodegradability - Manometric Respirometry Test	38 % - Not readily - 28 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
benzyl alcohol	-	-	Readily
propane-1,2-diol	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
benzyl alcohol	0.87	-	Low
propane-1,2-diol	-1.07	-	Low
moxidectin	-	>500	High
sodium metabisulphite	-3.7	-	Low

Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

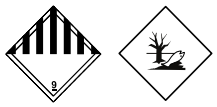
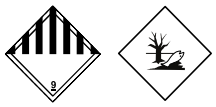
Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

Section 14. Transport information

	New Zealand - Land - road/ railway	IMDG	IATA
UN number	UN3082	UN3082	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MOXIDECTIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MOXIDECTIN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (MOXIDECTIN)
Transport hazard class(es)	9 	9 	9 
Packing group	III	III	III
Environmental hazards	Yes.	Yes.	Yes.

Additional information

New Zealand : **Hazchem code** 3Z
Remarks Land - road/railway: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

HSNO Approval Number : HSR100757; HSR100758

HSNO Group Standard : Veterinary Medicines (Limited Pack Size, Finished Dose)
Veterinary Medicines (Non-dispersive Closed System Application)

HSNO Classification : RESPIRATORY SENSITISATION - Category 1
SKIN SENSITISATION - Category 1
REPRODUCTIVE TOXICITY - Category 2
REPRODUCTIVE TOXICITY - Effects on or via lactation
SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1

ACVM No. : A010237

Inventory list

New Zealand : All components are listed or exempted.

Section 16. Other information

History

Date of issue/Date of revision : 11/23/2023

Date of previous issue : 6/28/2023

Version : 0.02

Key to abbreviations : ADG = Australian Dangerous Goods
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
SGG = Segregation Group
UN = United Nations

References : Not available.

Indicates information that has changed from previously issued version.

Notice to reader

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.

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