



Rumensin Millmix

Effective Date: 07 February 2017

Section 1 – Identification of the substance and supplier

Product Name:	Rumensin Millmix
Manufacturer's Product Code:	AF0342
UN number:	N/A
Proper Shipping Name:	N/A
Pack Size:	25kg
Recommended use:	An in-feed premix for prevention of coccidiosis in poultry and cattle. For improved feed efficiency in cattle and increased milk protein production in dairy cattle. As an aid in the control of ketosis, and an aid in the reduction of bloat in cattle.

NEW ZEALAND COMPANY DETAILS:

Elanco Animal Health
(A Division of Eli Lilly & Company (NZ) Limited)
Level 1, 123 Ormiston Road
Botany Junction, Auckland 2016
Telephone: 0800 426 633

NEW ZEALAND EMERGENCY PHONE:

CHEMCALL:
0800 CHEMCALL (0800 243 622)
24 hours
National Poisons Centre:
0800 POISON (0800 764 766)
Fire Brigade, Transport Emergency
Phone→111

Section 2 - Hazards Identification

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

Rumensin Millmix is approved pursuant to the HSNO Act 1996, HSR002317. The EPA website www.epa.govt.nz should be consulted for the full list of triggered controls and cited regulations.

HSNO Classifications:

6.1B Acute toxin (oral)
(Regulations 14, 25 and 46 of the Hazardous Substances (Identification) Regulations 2001 are varied such that these regulations apply as if the substance is a class 6.1C hazardous substance but is not a class 6.1B hazardous substance)

6.3B Skin irritant
 6.5B Skin allergen
 8.3A Eye corrosive
 9.1D Aquatic ecotoxin
 9.2D Soil ecotoxin
 9.3A Terrestrial vertebrate ecotoxin

Signal word: DANGER

Hazard Statements: Toxic if swallowed or inhaled
 Causes mild skin irritation
 May cause an allergic skin reaction
 Causes serious eye damage
 Toxic to aquatic life
 Harmful to the soil environment
 Very toxic to terrestrial vertebrates

Precautionary Statements: Read label before use
 Keep out of reach of children
 Wash hands thoroughly after handling
 Do not eat, drink or smoke while using this product
 Wear protective gloves, eye and face protection
 Avoid breathing dust
 Use only outdoors or in a well-ventilated area
 Contaminated work clothing should not be allowed out of the workplace
 Wash contaminated clothing before reuse
 Store locked up in a well-ventilated place.
 Keep container tightly closed
 Avoid release to the environment
 Collect spillage

Section 3 - Composition / Information on Ingredients

Chemical Name	CAS-No.	Concentration [%]
Monensin sodium	22373-78-0	2-22
Diluent	N/A	65-83
Anti-dusting oil	NAIF	1-3

N/A = Not applicable, Not assigned, or Not available.

Diluent may include rice hulls, limestone, corn meal, soybean mill run, wheat bran, or semolina.

Monensin sodium:**Chemical Name:** Monensin sodium**Alternate Chemical Name:** Monensin, monosodium salt**Section 4 - First Aid Measures****SYMPTOMS:****If swallowed:**

When laboratory animals receive a bolus injection of monensin sodium, there are cardiovascular changes such as increased heart rate and elevated blood pressure.

If inhaled:

Respiratory tract irritation has been reported. Prolonged exposure to high concentrations of grain dust or limestone dust may cause irritation of the respiratory tract and mucous membranes.

If on skin:

Skin rash has been reported.

If in eyes:

Based on animal data, may cause burns or permanent tissue damage to the eyes. Immediate rinsing may prevent permanent damage.

Medical Conditions**Aggravated by Exposure:**

Hypersensitivity to monensin sodium. Persons with a history of allergies, contact dermatitis, or chronic rashes should use special precautions to avoid skin contact or exposure to dust. When laboratory animals receive a bolus injection of monensin sodium, there are cardiovascular changes such as increased heart rate and elevated blood pressure. In experience with human exposure, however, there is no corroborative information available that would establish the aggravation of a medical condition by exposure to monensin sodium.

TREATMENT:**If swallowed:**

Immediately call the National Poisons Centre 0800 POISON (0800 764766) or a doctor.

If inhaled:

Rinse mouth. Do not induce vomiting. Product is not expected to present a hazard by inhalation due to its coarse, granular nature. If inhalation does occur, remove individual to fresh air. If not breathing, provide artificial respiration assistance (mouth-to-mouth) and call a physician immediately.

If on skin:

Remove contaminated clothing and clean before reuse. Wash all exposed areas of skin

If in eyes:

with plenty of soap and water. Get medical attention if irritation develops. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Section 5 - Fire Fighting Measures

Flash point	Not known
Lower explosion limit	No ignition up to 1.05 oz/cu ft
Upper explosion limit	Not known
Suitable extinguishing media:	Use water, carbon dioxide, dry chemical, foam, or Halon
Unsuitable extinguishing media:	None known
Unusual Fire and Explosion Hazards:	As a finely divided material, may form dust mixtures in air which could explode if subjected to an ignition source. Minimum Ignition Temperature of Dust Layer: 300°C (572°F) for Rumensin 80 (18% formulation); 190°C (374°F) for Rumensin 60 (13% formulation)
Fire fighting precautions:	May emit toxic fumes when exposed to heat or fire.
Hazchem code:	2Z

Section 6 - Accidental Release Measures

Protective clothing and equipment:	Wear protective equipment, including eye protection, to avoid exposure (see Section 8 for specific handling precautions).
Environmental precautions:	Prevent further migration into the environment. Do not allow material to enter waterways.
Procedure:	Vacuum material with appropriate dust collection filter in place. Be aware of potential for dust explosion when using electrical equipment. If vacuum is not available, lightly mist material and remove by sweeping or wet wiping.
Emergency response assistance:	For specialist advice in an emergency call 0800 CHEMCALL (0800 243 622) and Elanco Animal Health for assistance

Section 7 - Handling and Storage

Storage instructions:	Keep out of reach of children. Store securely in a cool dry place below 30°C.
Handling precautions:	Wash hands and exposed skin thoroughly after handling. Do not breathe dust.
Emergency response plan required:	100kg
Emergency containment required:	N/A
Signage required:	100kg
Approved Handler:	Not required
Packaging requirements:	Packing Group III

Section 8 - Exposure Controls / Personal Protection

Exposure limits or guidelines:	Monensin sodium:	LEG 15 µg/m ³ TWA (12h)
	Grain dust:	PEL 10 mg/m ³ TWA TLV 4mg/m ³ TWA (8h or 12h total)
	Limestone dust:	PEL 5 mg/m ³ TWA (respirable) and 15 mg/m ³ TWA (total) TLV 10 mg/m ³ TWA
		The anti-dusting oil reduces potential exposure under normal conditions of use.
Engineering measures:	In a manufacturing setting, wear chemical-resistant gloves and body covering to minimize skin contact. If handled in a ventilated enclosure, as in a laboratory setting, respirator and goggles or face shield may not be required. Safety glasses are always required.	
Personal protective equipment:	In a manufacturing setting, use protective clothing, impervious gloves, and dust respirator. Chemical goggles and/or face shield. Under normal use and handling conditions, wear goggles to protect eyes and wear impermeable gloves and protective equipment to avoid direct contact with skin. Wash thoroughly with soap and water after handling.	

Precautions: Do not feed undiluted to animals.
Do not allow dogs, horses or other equines access to feeds containing monensin sodium. Ingestion of monensin sodium by horses has been fatal.
The feeding of undiluted premix or feeds containing high concentrations of monensin sodium (mixing errors) could be fatal to cattle. Monensin sodium-medicated feed is safe at approved dosages for use in approved species only. Consumption by unapproved species may result in toxic reactions.

Section 9 - Physical and Chemical Properties

Appearance: Brown, granular meal
Physical state: Solid
Odour: Musty
pH: Not applicable
Boiling point: Not applicable
Freezing point: Not applicable
Solubility: Insoluble
Specific Gravity: No applicable information found
Flammability: No applicable information found

Section 10 - Stability and Reactivity

Stability: Stable at normal temperatures and pressures
Conditions to avoid: None known
Incompatible materials: May react with strong oxidizing agents (e.g., peroxides, permanganates, nitric acid, etc.).
Hazardous decomposition products: May emit toxic fumes when heated to decomposition
Hazardous reactions Hazardous polymerisation does not occur

Section 11 - Toxicological Information

No data available for mixture. Data for ingredients or related materials are presented.

Acute oral toxicity	24% Monensin sodium mixture:	Rat, LD ₅₀ estimated greater than 200mg/kg, mortality.
	Rumensin 60 (13% formulation):	Rat, LD ₅₀ 314 mg/kg, reduced activity, incoordination
Acute inhalation toxicity	24% Monensin sodium mixture:	Rat, 370 mg/m ³ for 1 hour, no deaths

Acute dermal toxicity	24% Monensin sodium mixture:	Rabbit, 500 mg/kg, no deaths or toxicity
Skin irritation	24% Monensin sodium mixture:	Rabbit, slight irritant
Eye irritation	24% Monensin sodium mixture:	Rabbit, corrosive, but permanent damage prevented by immediate rinsing.
Sensitisation	Monensin sodium:	Guinea pig, not a contact sensitizer
Repeated dose toxicity	Monensin sodium:	Heart effects (degenerative and reparative tissue changes, electrocardiogram changes, congestive heart failure), muscle effects (skeletal muscle changes, elevated blood enzymes of muscle origin). Decreased body weight gains, increased kidney, heart, thyroid, adrenal, prostate, testes, liver, and spleen weights.
Carcinogenicity	Monensin sodium:	Not listed by IARC, NTP, ACGIH, or OSHA. Not considered carcinogenic in animal studies conducted by Lilly Research Laboratories.
Reproductive toxicity	Monensin sodium:	No effects identified in animal studies
Mutagenicity	Monensin sodium:	Not mutagenic in bacterial cells

Section 12 - Ecological Information

No data available for mixture. Data for ingredients or related materials are presented.

Toxicity to fish	Monensin sodium:	LC ₅₀ / 96h / Rainbow Trout : 9.0 mg/L LC ₅₀ / 96h / Bluegill : 16.6 mg/L
Toxicity to algae	Monensin sodium:	Green algae (<i>S. capricornutum</i>) median effective concentration (biomass): 0.98 mg/L

Toxicity to daphnia	Monensin sodium:	EC ₅₀ / 48 h / Daphnia magna : 10.7 mg/L
Toxicity to earthworms	Monensin sodium:	LC ₅₀ / 14d / Earthworm : >264.2 mg/kg
Toxicity to birds	Monensin sodium:	LC ₅₀ / 14d oral / Bobwhite : 85.7 mg/kg LC ₅₀ / 5d dietary / Bobwhite : 1090 ppm LC ₅₀ / 5d dietary / Mallard : >5000 ppm
Any other relevant information available	Monensin sodium:	Phytotoxicity 14 species: moderate injury at 4 to 8 mg/kg Phytotoxicity median effective concentration (growth): 12.9 mg/kg (oats), >4.347 mg/kg (radish), 32.9 mg/kg (mung bean) Soil Microflora: Carbon transformation (18.3 mg/kg): < 25% deviation from controls Nitrogen transformation (18.3 mg/kg): < 25% deviation from controls
Environmental Fate	Monensin sodium:	Log Kow: 4.24, 2.75, 3.79 (pH 5, 7, 9) Water Solubility (mg/L): degraded, 4.8, 8.9 (pH 4, 7, 9) Photolysis half-life (days): 43.9 Photolysis rate constant (1/day): 0.0158 Hydrolysis : none measured Soil degradation half-life (days): 7.5 Soil adsorption coefficient (log Koc): >5.63 (pH 4.5, 6) Soil biodegradation half life (days): 18, 13, 15 (sandy, silt, clay loams) Bioconcentration factor (calculated): 72.4
	Monensin sodium:	No volatility expected. Not expected to bioconcentrate in aquatic organisms. Adsorbs strongly to soil. Not persistent in the environment due to biodegradation and photolysis.

Section 13 - Disposal Considerations

Preferably dispose of product by use. Otherwise dispose of product as part of an approved chemical disposal program. Burn empty packaging if conditions such as wind direction permit. Otherwise dispose of packaging at an approved landfill facility.

Section 14 - Transport Information

Land Transport	Not regulated
Air Transport	Not regulated
Sea Transport	Not regulated
UN Number	Not assigned
Proper Shipping Name	Not assigned
DG Class	Not assigned
Subsidiary Risk	Not assigned
Packing Group	III
HAZCHEM Code	N/A
Marine Pollutant	No

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

Section 15 - Regulatory Information

Rumensin Millmix is approved pursuant to the ACVM Act 1997 (A9107).
See www.foodsafety.govt.nz for registration conditions.

A Safety Data Sheet must be provided whenever any amount of Rumensin Millmix is sold or supplied.

Section 16 – Other Information

This SDS is effective as of 7 February 2017.

Sections updated or revised: Formatting of entire document.

Due for revision within 5 years.

Further information

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 MATERIAL SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANTABILITY 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.

For additional information contact:
Elanco Animal Health
0800 426 633