

Section 1 – Identification of the Material and Supplier

Elanco Animal Health, division of Eli Lilly and Company (NZ) Limited

Level 1
123 Ormiston Road
Botany Junction
Auckland 2016

Telephone number: 0800 352 626

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

Trade Name: Rumensin Capsule

Product Use: As described on the product label:
An aid in the reduction of bloat in beef and dairy cattle.
An aid in the control of ketosis in dairy and beef cows.
For increased milk protein production in dairy cows.

This version issued: 02 July 2019 and is valid for 5 years from this date.**National Poisons Centre: Phone 0800 764 766 (0800 POISON) in New Zealand****Section 2 - Hazards Identification****EPA Approval Code:** HSR002017**Hazard Classifications:**

6.1A (All), 6.1A (O), 6.3B, 6.5B, 8.3A, 9.1A (All), 9.1A (A), 9.1D (F), 9.1D (C), 9.2B, 9.3A

GHS Pictogram:**GHS Signal word:****Danger****HAZARD STATEMENT:**

- H300: Fatal if swallowed.
- H316: Causes mild skin irritation.
- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H400: Very toxic to aquatic life.
- H422: Toxic to the soil environment.
- H431: Very toxic to terrestrial vertebrates.

PREVENTION

- P102: Keep out of reach of children.
- P103: Read label before use.
- P261: Avoid breathing dust.
- P264: Wash contacted areas thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.
- P280: Wear protective gloves/eye protection/face protection.

RESPONSE

- P101: If medical advice is needed, have product container or label at hand.
- P310: Immediately call a POISON CENTER or doctor/physician.
- P321: See first aid instruction on label.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P330: Rinse mouth.
- P305 + P351 +P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P391: Collect spillage.

STORAGE**SAFETY DATA SHEET**

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P405: Store locked up.

DISPOSAL

P501: Dispose of contents and containers as specified on the registered label.

Section 3 - Composition/Information on Ingredients

Ingredient	CAS number	Concentration
Monensin sodium	22373-78-0	43-50%
Excipients	NA	50-57%

Section 4 - First Aid Measures

General Information: 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.

You should call a National Poisons Centre if you feel irritated by this product. The number is 0800 764 766 in New Zealand, and is available at all times. Have this SDS with you when you call.

Inhalation: 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 inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact: Skin rash has been reported.

Wash gently and thoroughly with warm water (use non-abrasive soap if necessary) for few minutes or until product is removed. Under running water, remove contaminated clothing, shoes and leather goods (e.g. watchbands and belts) and completely decontaminate them before reuse or discard.

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

If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: If swallowed, do NOT induce vomiting. Wash mouth with water and contact a National Poisons Centre, or call a doctor. Effects of exposure may include changes in heart rate/rhythm and heart tissue changes. Do not give anything by mouth to an unconscious person.

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Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: The major hazard in fires is usually inhalation of heated and toxic or oxygen deficient (or both), fire gases. Only small quantities of decomposition products are expected from this product at temperatures normally achieved in a fire. This will only occur after heating to dryness.

Extinguishing Media: In case of fire, use carbon dioxide, dry chemical, foam or halon.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade. Recommended personal protective equipment is full fire kit and breathing apparatus.

Flash point: No data available

Auto ignition temperature: No data available

Flammability Class: No data available

Section 6 - Accidental Release Measures

Personal Precautions: Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained. See Section 8 of the SDS for Personal Protective Equipment. Avoid contact with skin, eyes and clothing.

Environmental Precautions: Prevent spilled material from flowing onto adjacent land or into streams, ponds, or lakes. Avoid release to the environment.

Methods and Materials for Containment and Cleaning up: Prevent material from entering water ways.

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. Dispose of waste safely. Large spills due to traffic accidents, etc., should be reported immediately to Elanco Animal Health for assistance.

Section 7 - Handling and Storage

Handling: Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed. The measures detailed below under "Storage" should be followed during handling in order to minimise risks to persons using the product in the workplace. Also, avoid contact or contamination of product with incompatible materials listed in Section 10. Wash hands and exposed skin thoroughly after handling. Do not breathe dust.

Storage: Store securely below 30°C. Store in a cool dry place. Store in original container, tightly closed, away from direct sunlight. Do not store with food. Keep out of reach of children. Store locked up.

Section 8 - Exposure Controls and Personal Protection

Occupational exposure limits:

Monensin sodium: LEG 15 µg/m³ TWA (12h)

Engineering Controls: Normal room ventilation is sufficient. If handled in a ventilated enclosure, as in a laboratory setting, respirator and goggles or face shield may not be required. In a manufacturing setting, use protective clothing, impervious gloves, and dust respirator. In a manufacturing setting, use protective clothing, impervious gloves, and dust respirator.

Ventilation: Make sure that the work environment remains clean and that dusts are minimised.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when this product is being used.

Skin Protection: Prevent skin contact by wearing impervious gloves and clothes. Make sure that all skin areas are covered.

Protective Material Types: We suggest that protective clothing be made from the following materials: rubber, PVC.

Respirator: In case of insufficient ventilation, wear suitable respiratory equipment.

Precautions: Do not allow dogs, horses or other equines access to feeds containing monensin sodium. Ingestion of monensin sodium by horses has been fatal. Wear impermeable gloves when handling the core. Capsule contains a coiled spring. Caution should be exercised when opening the core. Avoid direct contact with the skin.

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Section 9 - Physical and Chemical Properties:

Appearance:	Yellow to white tablets contained within an orange translucent plastic core, with retaining wings
Odour:	Odourless
Odour threshold:	No data available
pH:	Not applicable
Melting point/freezing point:	No data available
Initial boiling point and boiling range:	No data available
Flash point:	No data available
Flammability:	No data available
Upper/lower flammability or explosive limits:	No data available
Vapour pressure:	No data available
Vapour density:	No data available
Relative density:	No data available
Solubility (ies):	Insoluble
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Kinematic viscosity:	No data available

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf life properties.

Conditions to Avoid: Protect this product from light. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight.

Incompatibilities: May react with strong oxidizing agents (e.g., peroxides, permanganates, nitric acid, etc.).

Hazardous decomposition products: No hazardous products are expected, except when heated to decomposition.

Section 11 - Toxicological Information

Hazardous properties	Ingredient	Toxicological (health) effects
Acute toxicity:	24% Monensin sodium mixture	Oral: Rat, LD50 estimated greater than 200mg/kg, mortality.
	Monensin sodium	Oral: Rat, LD50 34 mg/kg, reduced activity, incoordination, skeletal muscle weakness
	Monensin sodium	Oral: Horse, LD50: 2-3 mg/kg
	Rumensin 60 (13% formulation):	Oral: Rat, LD50 314 mg/kg, reduced activity, incoordination
	24% Monensin sodium mixture	Inhalation: Rat, 370 mg/m ³ for 1 hour, no deaths
	24% Monensin sodium mixture	Dermal: Rabbit, 500 mg/kg, no deaths or toxicity
Aspiration hazard:		No information available
Respiratory irritation:		No information available
Skin corrosion/irritation:	24% Monensin sodium mixture	Rabbit: slight irritant

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Serious eye damage/ irritation:	24% Monensin sodium mixture	Rabbit: corrosive, but permanent damage prevented by immediate rinsing.
Respiratory or skin sensitisation:	Monensin sodium	Guinea pig: not a contact sensitizer
Germ cell mutagenicity:	Monensin sodium	Not mutagenic in bacterial cells
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
Specific organ 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.
Narcotic effects:		No information available

Section 12 - Ecological Information

Hazardous properties	Ingredient	Ecotoxicity
Aquatic:	Monensin sodium	Fish: LC50 / 96h / Rainbow Trout: 9.0 mg/L LC50 / 96h / Bluegill: 16.6 mg/L
	Monensin sodium	Algae: EC50 / 72 h / Green algae (<i>S. capricornutum</i>) (average specific growth rate): 4.33 mg/L
	Monensin sodium	Algal: EC50 / 72 hr / <i>Selenastrum subspicatus</i> : 0.98 mg/l
	Monensin sodium	Daphnia: EC50 / 48 h / <i>Daphnia magna</i> : 10.7 mg/L
Terrestrial:	Monensin sodium	Earthworms: LC50 / 14d / Earthworm: >264.2 mg/kg
	Monensin sodium	Birds: LC50 / 14d oral / Bobwhite: 85.7 mg/kg LC50 / 5d dietary / Bobwhite: 1090 ppm LC50 / 5d dietary / Mallard: >5000 ppm
	Monensin sodium	Horse: LD50: 2-3 mg/kg
Soil:	Monensin sodium	Radish (<i>Raphanus sativus</i>): LC50: 9.8 mg/kg (plant emergence)

Persistence and degradability:

Monensin sodium:

Not persistent in the environment due to biodegradation and photolysis.

Bioaccumulative: Not expected to bioconcentrate in aquatic organisms.

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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

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

Bioconcentration factor (calculated): 72.4

Mobility in soil:

Monensin sodium:

Adsorbs strongly to soil.

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)

Other adverse effects: No information available**Section 13 - Disposal Considerations****Disposal:** Follow the label directions.

Preferably dispose of the product by use. Otherwise dispose of product as part of an approved chemical disposal program. Do not burn empty packaging or product. Do NOT use container for any other purpose.

Section 14 - Transport Information**UN Number:** 2811**UN proper shipping name:** TOXIC SOLID, ORGANIC, N.O.S (monensin sodium)**UN dangerous goods class and subsidiary risk:** 6.1**UN Packaging Group:** III**Environmental hazards:** Marine pollutant**Special precautions when transporting the substance:**

Hazchem: 2Z

**Section 15 - Regulatory Information****EPA Approval Code:** HSR002017**Certified handler:** Required**Tracking:** Not required**ACVM No:** A009676For conditions of registration see www.foodsafety.govt.nz**Section 16 - Other Information****This SDS contains only safety-related information. For other data see product literature.****This version issued:** 2 July 2019 and is valid for 5 years from this date.**Acronyms:**

CAS number	Chemical Abstracts Service Registry Number
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms
TWA	Time Weighted Average/8 Hours Unless Otherwise Noted
LD50	Lethal Dose for 50% of test organisms

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LC50	Lethal Concentration of chemical in the air or water that will kill 50% of the test animals when administered a single exposure.
EC50	Median effective concentration
UN Number	United Nations Number

THIS SDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS SDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS.

OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product.

This SDS is prepared in accordance with the HSNO Safety Data Sheet guidelines.

For additional information contact: 0800 352 626