



SAFETY DATA SHEET

1. Identification

Product identifier	Elanco AF1404 Rumensin 100 Monensin Sodium
Other means of identification	
Synonyms	Rumensin 100 * Monensin Block * Rumensin 60 * Rumensin 80 * Monensin Sodium Formulation * Monensin Formulation * Monensin Premix * Romensin * Rumensin
Item Code	AF0322, AF0330, AF0342, AF0360, AF0480, AF1404, AF1406, AF1411, MS8251, MS8252, MS8253, MS8255
Recommended use of the chemical and restrictions on use	
Recommended use	Veterinary Pharmaceutical
Restrictions on use	Not available.
Details of manufacturer or importer	
Company name	Elanco Australasia Pty Ltd Macquarie Park
Address	Level 3, 7 Eden Park Drive Sydney AU 2113
Telephone	+61 1800 226 324
E-mail	elanco_sds@elanco.com
24 hr emergency contact number	CHEMTREC 0800 293 702 (Freephone)
24 hr emergency contact number (Local)	CHEMTREC +61 2 9037 2994 (Local)

2. Hazard(s) identification

Classification of the hazardous chemical

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Category 1
	Specific target organ toxicity following repeated exposure	Category 2
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 3

Label elements, including precautionary statements

Hazard symbol(s)



Exclamation mark Corrosion Health hazard

Signal word

Danger

Hazard statement(s)

Harmful if swallowed. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (Heart, Muscles) through prolonged or repeated exposure. Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

Prevention

Do not breathe dust. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. In case of inadequate ventilation wear respiratory protection. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Rinse mouth. IF SWALLOWED: Immediately call a POISON CENTRE/doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.

Storage

Not available.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards which do not result in classification

None known.

Supplemental information

None.

3. Composition/information on ingredients

Mixture

Identity of chemical ingredients	CAS number and other unique identifiers	Concentration of ingredients
Monensin Sodium	22373-78-0	10 - 22
Excipient: Grain Dust	NA	65 - 83

Composition comments

Contains up to 3% anti-dusting oil. The anti-dusting oil reduces potential exposure under normal handling conditions of use. Remaining components of this product are non-hazardous and/or are present at concentrations below reportable levels.

4. First-aid measures

Description of necessary first aid measures

Inhalation

Move to fresh air. Oxygen or artificial respiration if needed. IF exposed or concerned: Get medical advice/attention.

Skin contact

Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.

Eye contact

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate rinsing may prevent permanent damage. Get medical attention immediately.

Ingestion

Give several glasses of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control centre immediately.

Personal protection for first-aid responders

In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Symptoms caused by exposure

Harmful if swallowed. Causes eye burns. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause damage to organs (Heart, Muscles) through prolonged or repeated exposure.

Medical attention and special treatment

Immediate rinsing may prevent permanent damage (eyes).

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Water. Carbon dioxide (CO₂). Dry chemical.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical

Dust may form explosive mixture with air. Fire or excessive heat may produce hazardous decomposition products.

Special protective equipment and precautions for fire fighters

Wear self-contained breathing apparatus and protective clothing.

Hazchem code

None.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Avoid contact with skin, eyes and clothing. Wear suitable protective clothing, gloves and eye/face protection. See Section 8 for personal protective equipment.

For emergency responders Not available.

Environmental precautions Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

Methods and materials for containment and cleaning up
Small Spillages:
Do not sweep. Collect spill using a vacuum cleaner with a HEPA filter. Be aware of potential for dust explosion when using electrical equipment. If vacuum is not available, lightly mist/wet material and remove by mopping or wet wiping.

Large Spillages:
Prevent further migration into the environment. Remove sources of ignition. Collect in a non-combustible container for prompt disposal. Local authorities should be advised if significant spillages cannot be contained.

Other issues relating to spills and releases Clean up in accordance with all applicable regulations.

7. Handling and storage

Precautions for safe handling Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Keep away from heat and sources of ignition. Minimise dust generation and accumulation. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames and high temperatures. Keep container tightly closed. Avoid contact with oxidising agents. Do not store in open or unlabelled containers.

8. Exposure controls and personal protection

Occupational exposure limits

ACGIH Components	Type	Value	Form
Excipient: Grain Dust	TWA	4 mg/m ³	(grain dust)
United Kingdom Components	Type	Value	Form
Excipient: Grain Dust	STEL	30 mg/m ³	inhalable fraction (grain dust)
	TWA	10 mg/m ³	inhalable fraction (grain dust)
Lilly (LEG) Components	Type	Value	
Monensin sodium (CAS 22373-78-0)	TWA (12hrs)	15 ug/m ³	

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls Laboratory fume hood or local exhaust ventilation.

Individual protection measures, for example personal protective equipment (PPE)

Eye/face protection Wear goggles/face shield. (AS/NZS 1337)

Skin protection

Hand protection Chemical resistant gloves. (AS/NZS 2161)

Other Chemical-resistant gloves and impermeable body covering to minimize skin contact.

Respiratory protection Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the respirator. (AS/NZS 1715)

Thermal hazards Not available.

Hygiene measures

NOT INTENDED FOR HUMAN USE. Use good industrial hygiene practices in handling this material.

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.

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.

When mixing and handling, use protective clothing, impervious gloves, and dust respirator (recommended). Operators should wash thoroughly with soap and water after handling. If accidental eye contact occurs, immediately rinse with plenty of water.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Granular.

Colour Brown

Odour Musty.

Odour threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) No test data available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) 1.05 oz/cu ft

Explosive limit - upper (%) Not available.

Vapour pressure Not available.

Vapour density Not available.

Relative density Not available.

Solubility(ies)

Solubility (water) Insoluble.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other physical and chemical parameters

Dust explosion properties

Minimum Ignition Temperature (MIT) - dust layer 190 °C (374 °F) (Rumensin 60)

300 °C (572 °F) (Rumensin 80)

Explosive properties Not explosive.

Oxidising properties The substance or mixture is not classified as oxidizing.

10. Stability and reactivity

Reactivity	Not water reactive.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerisation does not occur.
Conditions to avoid	None known.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Hazardous decomposition products formed under fire conditions..

11. Toxicological information

Acute toxicity Harmful if swallowed.

Product	Species	Test Results
Elanco AF1404 Rumensin 100 Monensin Sodium		
Acute		
Oral		
LD50	Rat	> 200 mg/kg (24% monensin sodium mixture, mortality) 314 mg/kg (Rumensin 60: reduced activity, incoordination)

Components	Species	Test Results
Monensin Sodium (CAS 22373-78-0)		
Acute		
Dermal		
LD	Rabbit	> 500 mg/kg (24% monensin sodium mixture)
Inhalation		
LC50	Rat	> 370 mg/m ³ , 1 h (24% monensin sodium mixture)
Oral		
LD50	Rat	34 mg/kg

Skin corrosion/irritation Rabbit: Slight irritation.

Based on available data, the classification criteria are not met.

Serious eye damage/irritation Rabbit: Corrosive. Immediate rinsing may prevent permanent damage.

Respiratory or skin sensitisation

Respiratory sensitisation Allergic reactions in a manufacturing setting have been reported. (Monensin Sodium)
Grain dusts may cause sensitization by inhalation.

Skin sensitisation Did not cause sensitization on laboratory animals. (Monensin Sodium)
Based on available data, the classification criteria are not met.

Germ cell mutagenicity In vitro and in vivo tests did not show mutagenic effects. (Monensin Sodium)
Based on available data, the classification criteria are not met.

Carcinogenicity Animal testing did not show any carcinogenic effects. (Monensin Sodium)
Based on available data, the classification criteria are not met.

Reproductive toxicity No effects identified in animal studies. (Monensin Sodium)
Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure Heart effects (degenerative and reparative tissue changes, electrocardiogram changes, congestive heart failure), muscle effects (skeletal muscle changes, elevated blood enzymes of muscle origin). (Monensin Sodium)

Aspiration hazard No aspiration toxicity classification.

12. Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Components	Species		Test Results
Monensin Sodium (CAS 22373-78-0)			
Aquatic			
Algae	EC50	Green Algae (<i>Pseudokirchneriella subcapitata</i>)	4.33 mg/l, 72 h (average specific growth rate)
	NOEC	Green Algae (<i>Pseudokirchneriella subcapitata</i>)	0.055 mg/l (biomass)
Crustacea	EC50	<i>Daphnia magna</i>	10.7 mg/l, 48 h
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	16.6 mg/l, 96 h
		Rainbow trout	9 mg/l, 96 h
Terrestrial			
Other	LC50	Quail	85.7 mg/kg, 14 d

LILLY AQUATIC EXPOSURE GUIDELINES:

Monensin Sodium

Drinking water LAEG (at the point where surface water is taken for drinking water): 75 µg/l

Chronic LAEG (at the edge of the chronic mixing zone): 55 µg/l

Acute LAEG (at the edge of the acute mixing zone): 562 µg/l

Persistence and degradability

Photolysis half-life (days): 43.9
 Photolysis rate constant (1/day): 0.0158
 Hydrolysis: none measured (pH 5, 7, 9)
 Soil degradation half-life (days): 7.5
 Greater than 50% loss in sandy, silt, and clay loam soils in less than 14 days. (Monensin Sodium)
 No data is available on the degradability of this product.

Bioaccumulative potential

No data available for this product.

Partition coefficient n-octanol / water (log Kow)

Monensin Sodium
 2.75, (pH 7)
 3.79, (pH 9)
 4.24, (pH 5)

Mobility in soil Not available.

Adsorption

Soil/Sediment Sorption - Log Koc

Monensin Sodium
 > 5.63
 Result: (pH 4.5 and 6)

Other adverse effects Not available.

13. Disposal considerations

Disposal methods Dispose of contents/container in accordance with local/regional/national/international regulations.

14. Transport information

ADG

Not regulated as dangerous goods.

RID

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

Safety, health and environmental regulations

National regulations APVMA approval number: 47359
 Poison Schedule: 6

Australia Medicines & Poisons Appendix A

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix B

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix D

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix E

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix F

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix G

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix H

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix I

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix J

Poisons schedule number not allocated.

Australia Medicines & Poisons Appendix K

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 10

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 2

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 3

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 4

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 5

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 6

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 7

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 8

Poisons schedule number not allocated.

Australia Medicines & Poisons Schedule 9

Poisons schedule number not allocated.

High Volume Industrial Chemicals (HVIC)

Not listed.

Importation of Ozone Deleting Substances (Customs(Prohibited imports) Regulations 1956, Schedule 10)

Not listed.

National Pollutant Inventory (NPI) substance reporting list

Not listed.

Prohibited Carcinogenic Substances

Not regulated.

Prohibited Substances (National Model Regulation for the control of Workplace Hazardous Substances, Schedule 2 NOHSC:1005 (1994) as amended)

Not listed.

Restricted Importation of Organochlorine Chemicals (Customs(Prohibited Imports) Regulations 1956, Schedule 9)

Not listed.

Restricted Carcinogenic Substances

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	28-September-2015
Revision date	02-January-2019
Key abbreviations or acronyms used	EC50: Effective Concentration 50%. LAEG: Lilly Aquatic Exposure Guideline. LC50: Lethal Concentration 50%. LD: Lethal Dose. LD50: Lethal Dose 50%. NOEC: No observed effect concentration. TWA: Time Weighted Average Value.

Disclaimer 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 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.

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Revision information This document has undergone significant changes and should be reviewed in its entirety.