

## SAFETY DATA SHEET

### Monotec 100 microGranulate Premix

#### Section 1: Identification of the Substance and Supplier

<b>Product Name:</b>	Monotec 100 microGranulate Premix
<b>ACVM Registration Number:</b>	A10036
<b>Pack size:</b>	20kg, 25kg
<b>Recommended Use:</b>	A premix feed-additive. Aids in the prevention and control of coccidiosis in poultry, sheep, goats and cattle. Improves milk protein production in dairy cattle. Aids in the control of ketosis in dairy cattle. Aids in the reduction of bloat in cattle.
<b>Company Details:</b>	AgriHealth NZ Ltd Level 2, 89 Grafton Road, Grafton, Auckland 1010, New Zealand Phone: +64 9 215 1199 Fax: +64 9 984 9455 Website: <a href="http://www.agrihealth.co.nz">www.agrihealth.co.nz</a>
<b>Emergency Telephone:</b>	National Poisons Centre: 0800 764 766 (0800 POISON) Fire Service, Ambulance: Dial 111

#### Section 2: Hazards Identification

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

**Monotec 100 microGranulate Premix** is approved pursuant to the HSNO Act 1996, **HSR002317**. The EPA website [www.epa.govt.nz](http://www.epa.govt.nz) should be consulted for the full list of triggered controls and cited regulations.

<b>Hazard Classifications:</b>	6.1B (acute toxin) 6.3B (skin irritant) 6.5B (contact sensitizer) 8.3A (eye corrosive) 9.1D (aquatic ecotoxin) 9.2D (soil ecotoxin) 9.3A (terrestrial vertebrate ecotoxin)
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<b>Signal word:</b>	DANGER
<b>Hazard statements:</b>	Toxic if swallowed 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
<b>Precautionary statements:</b>	Keep out of reach of children Read label before use If medical advice is needed, have product container or label at hand Wear protective gloves, clothing, face and eye protection Wash hands and exposed skin thoroughly after handling Do not eat, drink or smoke when using this product Contaminated work clothing should not be allowed out of the workplace Wash contaminated clothing before reuse IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Rinse mouth 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 Avoid breathing dust IF ON SKIN: Wash with plenty of soap and water If skin irritation or rash occurs: Get medical advice/attention Avoid release to the environment Collect spillage Store locked up

### Section 3: Composition / Information on Ingredients

#### Product Components:

Name	CAS Number	Concentration
Monensin sodium	22373-78-0	10%
Non-hazardous components	N/A	90%

N/A = not applicable or not available

## Section 4: First Aid Measures

- First Aid Measures:** For advice contact the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor, immediately.
- Skin Contact: If skin contact occurs remove contaminated clothing and wash skin with soap and water. If skin irritation, rash or symptoms occur or persist, consult a doctor.
- Eyes: If eye contact occurs, flush eyes with water for at least 15 minutes. See an ophthalmologist or other physician immediately. Immediate rinsing may prevent permanent eye damage. If wearing contact lenses, remove only after initial rinse and continue rinsing.
- Ingestion: If swallowed seek medical attention. DO NOT induce vomiting.
- Inhalation: Remove to fresh air. If symptoms occur or persist, consult a doctor.
- Workplace Facilities:** No special facilities are required.
- Required Instructions:** Observe good work practices and avoid skin contact.
- Wash hands and exposed skin before meals and after use.
- Do not eat or drink while using.
- Persons who present hypersensitivity to Monotec 100 microGranulate Premix should be withdrawn from the production area.
- Notes for Medical Personnel:** Treat exposed patients symptomatically.

## Section 5: Fire Fighting Measures

- Type of Hazard:** Non flammable
- Fire Hazard Properties:** May emit toxic fumes when exposed to heat or fire.
- Extinguishing Media and Methods:** Water, dry chemical, carbon dioxide, or foam
- Hazchem Code:** Not applicable
- Recommended Protective Clothing:** Wear full protective clothing and self-contained breathing apparatus (SCBA)

## Section 6: Accidental Release Measures

- Emergency Procedures:** Wear suitable protective clothing including eye protection. Restrict access to contaminated area. Prevent further spillage. Retrieve intact containers from site. Place damaged containers into containment devices. 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. Take care not to disperse the dust. Place spilled material in sealable containers for disposal. Wash the area with water and detergent. Absorb washings and place in the same sealable container for disposal. Avoid contamination of water courses or sewers. Dispose of waste safely.

## Section 7: Handling and Storage

<b>Precautions for Safe Handling:</b>	Wear protective gloves, clothing, eye and face protection Avoid contact with skin, eyes and mucous membranes Avoid the formation of dust and aerosols. Avoid breathing dust. Provide exhaust ventilation if dust is formed
<b>Regulatory Requirements:</b>	Not applicable
<b>Handling Practices:</b>	When handling and mixing, use protective clothing, impervious gloves and dust respirator. Avoid skin contact. Wash hands and exposed skin thoroughly after handling and before meals. Do not eat, drink or smoke while using this product.  Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.
<b>Approved Handlers:</b>	Not required
<b>Conditions for Safe Storage:</b>	Store below 25°C. Store in the original container in a dry place, away from direct heat or direct sunlight. Keep container sealed when not in use. Keep out of reach of children. Secure this product when not in use so that it cannot be accessed by people who should not have access (store locked up).
<b>Store Site Requirements:</b>	This product is subject to a requirement for an emergency response plan whenever it is held in quantities of 100kg or more. Signage is required when it is held in quantities of 100kg or more.
<b>Packaging:</b>	Store in original container, away from foodstuffs.  UN packing group III

## Section 8: Exposure Control / Personal Protection

<b>Workplace Exposure Standards:</b>	None set
<b>Application in the Workplace:</b>	Prevent exposure by using engineering controls, personal protective equipment and work practices that prevent skin contact. When handling and mixing, use protective clothing, impervious gloves and dust respirator. Avoid skin

contact. Wash hands and exposed skin thoroughly after handling. If accidental eye contact occurs, immediately rinse with plenty of water.

**Exposure Standards outside the Workplace:**

None set

**Engineering Controls:**

Ensure adequate ventilation.

**Personal Protection:**

Wear protective gloves, eye safety glasses and protective clothing and face protection. Do not eat, drink or smoke when using this product. Wash hands with soap and water before breaks and after work. Keep away from foodstuffs and beverages.

**Additional Exposure Precautions:** Do not feed undiluted to animals. Do not allow 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 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

<b>Product Properties:</b>	<u>Appearance:</u>	Brown granules
	<u>pH of 1% Solution:</u>	6.0 – 9.0
	<u>Ignition Temperature:</u>	440 °C (swirled up dust)
	<u>Self-ignition temperature:</u>	A shelf-heating process with a maximum temperature of approx. 300 °C
	<u>Minimum layer ignition temperature:</u>	> 400 °C
	<u>Flame Temperature:</u>	570 °C
	<u>Temperature range of ignition in air:</u>	540 °C – 610 °C
	<u>Explosion Limits:</u>	Lower concentration limit g/m <sup>3</sup> 95 - 100 Upper concentration limit g/m <sup>3</sup> over 2000
	<u>Maximum pressure of explosion:</u>	75 – 100 MPa
	<u>Maximum energy of ignition:</u>	68 – 75 J
	<u>Vapour Pressure:</u>	non volatile
	<u>Solubility in Water:</u>	Insoluble
	<u>Melting Point:</u>	N/A
	<u>Boiling Point:</u>	N/A

## Section 10: Stability and Reactivity

<b>Stability of the Substance:</b>	Stable under normal conditions of use and storage
<b>Conditions to Avoid:</b>	No specific conditions to avoid
<b>Material to Avoid:</b>	May react with strong oxidizing agents (e.g. peroxides, permanganates, nitric acid, etc)
<b>Hazardous Decomposition Properties:</b>	May emit fumes when heated to decomposition
<b>Hazardous Polymerisation:</b>	Components are not expected to form hazardous polymers

## Section 11: Toxicological Information

**HSNO Classification:** 6.1B, 6.3B, 6.5B, 8.3A

No data is available for the formulated product. The following information relates to monensin sodium.

### Acute oral toxicity

- Mice:
  - Female: Monensin sodium: LD<sub>50</sub> = 203 mg/kg b.w.
  - Male: Monensin sodium: LD<sub>50</sub> = 400 mg/kg b.w.
- Rats:
  - Female: Monensin sodium: LD<sub>50</sub> = >>150 mg/kg b.w.
  - Male: Monensin sodium: LD<sub>50</sub> = >> 400 mg/kg b.w.
- Chickens for fattening: Monensin sodium: LD<sub>50</sub> = >>375 mg/kg b.w.
- Turkeys: Monensin sodium: LD<sub>50</sub> = >>300 mg/kg b.w.

### Acute inhalatory toxicity

Monensin sodium – albino rats for 4-hour exposure - LC<sub>50</sub> (male) = 69.0 mg.m<sup>-3</sup>;  
LC<sub>50</sub> (female) = 51.9 mg.m<sup>-3</sup>.  
Absolute lethal concentration (LC<sub>100</sub>) for both male and female – 138.3 mg.m<sup>-3</sup>.

### Acute dermal toxicity

Monensin sodium – albino rats - LD<sub>50</sub> (male) = 685.60 mg.kg<sup>-1</sup>; LD<sub>50</sub> (female) = 549.60 mg.kg<sup>-1</sup>.

### Eye irritation

Monensin sodium - rabbit – causes insignificant eye irritation with symptoms of pain and changes in the cornea and the conjunctiva of the eye.

### Skin irritation

Monensin sodium – rabbits – 500 mg/kg b.w. – no skin irritation and skin corrosive effect.

### Skin sensitisation effect

Monensin sodium – albino guinea pigs – not a contact sensitiser.

**Mutagenicity**

MONOTEC 100 MICROGRANULATE PREMIX cannot be considered as a potential mutagenic additive as the results from four mutagenicity tests performed with monensin sodium were all negative: Bacterial Reverse Mutation Test; Bone Marrow Micronucleus Test by Oral Route in Mice; In Vitro Mammalian Cell Gene Mutation Tests in Mouse Lymphoma Cells; In Vitro Mammalian Chromosome Aberration Test in Cultured Human Lymphocytes.

**Reproduction toxicity**

MONOTEC 100 MICROGRANULATE PREMIX does not induce reproduction toxicity as studies conducted with monensin sodium in rats and rabbits failed to reveal any side effects for reproduction and the offspring at doses not exceeding the maximum tolerated dose for the parents.

**Section 12: Environmental Information**

**HSNO Classification:** 9.1D, 9.2D, 9.3A

No data is available for the formulated product. The following information relates to monensin sodium.

**Ecotoxicity Data (Monensin sodium):**

- Rainbow trout 96-hour median lethal concentration: 1.88 mg/L.
- Daphnia magna 48-hour median effective concentration: 7.29 mg/L.
- Algae median effective concentration (growth rate 0-72 h): 3.41 mg/L.
- Earthworm 14-day median lethal concentration: 112.07 mg/kg.
- Phytotoxicity median effective concentration (growth) – 3 species:
  - Wheat: 29 mg/kg;
  - Mustard: 4 mg/kg;
  - Red clover: 8 mg/kg.
- Soil microflora:
  - Carbon transformation: NOEC > 5 mg/kg (< 25% deviation from controls)
  - Nitrogen transformation: NOEC > 5 mg/kg (< 25% deviation from controls)

**Environmental Fate (Monensin sodium):**

- Log Kow: > 6.2 (6.59).
- Soil adsorption coefficient (log Koc): 1.79 – 2.49
- Water solubility: 8.78 mg/L.
- Soil biodegradation half-life (days):
  - Sandy loam: 2.3.
  - Clay loam: 4.0.
  - Silt loam: 2.5.

**Environmental Summary (Monensin sodium):**

MONOTEC 100 MICROGRANULATE does not bear risk for the soil and/or aquatic compartments based on the outcome of the ecotoxicity data and environmental fate of monensin sodium, which constitutes 10% of the formulation.

<b>Environmental Risk and Safety Phrases:</b>	Harmful to aquatic organisms. Avoid contamination of any water supply with product or empty container. Harmful to the soil environment. Avoid release to the environment.
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### Section 13: Disposal Considerations

<b>Disposal Information:</b>	Preferably dispose of the product by use. Otherwise dispose of product and packaging at an approved landfill or other approved facility. Avoid contamination of any water supply with product or empty container.
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### Section 14: Transport Information

<b>Relevant Information:</b>	Not classified as dangerous goods for rail, air or sea transport.
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The maximum quantity of this substance allowed for carriage on public service vehicles is 0.5kg.

### Section 15: Regulatory Information

<b>Regulatory Status:</b>	Registered pursuant to the ACVM Act 1997, No A10036 See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration conditions
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<b>HSNO and ACVM Controls:</b>	Refer to section 2
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<b>List Exposure Limits:</b>	None set
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An SDS must be provided whenever **any quantity** of Monotec 100 microGranulate Premix is sold or supplied.

An emergency response plan is required when stored in quantities of **100kg** or greater.

Signage is required for this substance when stored in quantities of **100kg** or greater.

### Section 16: Other Information

<b>Additional Information:</b>	For product information see the AgriHealth website: <a href="http://www.agrihealth.co.nz">www.agrihealth.co.nz</a>
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Date of preparation: 14 November 2019

Due for revision within 5 years.

The SDS summarises, at the date of issue, AgriHealth's best knowledge of the health and safety hazard information. Although reasonable care has been taken in the preparation of this document, AgriHealth NZ Ltd extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. AgriHealth NZ Ltd urges the recipient of this SDS to study it carefully to become aware of, and understand, the hazards associated with the product as well as determine the suitability of the information for the intended purpose.