



## SAFETY DATA SHEET

According to  
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

### Section 1. Identification of the material and the supplier

Product: **Monotec**  
Product Use: Monensin powder for use in drinking water systems for cattle. Aids in the control of ketosis. Aids in the reduction of bloat. Increases milk protein production in pasture-fed dairy cows.

Restriction of Use: Refer to Section 15

New Zealand Supplier: **Agrihealth NZ Limited**  
Address: Level 2, 89 Grafton Road, Auckland 1010

Telephone: +64 9 215 1199  
**Emergency No: 0800 764 766 (National Poisons Centre)**

Date of SDS Preparation: 4 December 2024

### Section 2. Hazards Identification

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

**EPA Approval No: HSR101431**

#### Pictograms



Toxic      Chronic      Corrosive      Ecotoxic

Signal Word: **Danger**

GHS Category	Hazard Code	Hazard Statement
Acute oral toxicity Cat. 3	H301	Toxic if swallowed
Skin sensitisation Cat. 1	H317	May cause an allergic skin reaction
Serious eye damage Cat. 1	H318	Causes serious eye damage
Hazardous to the aquatic environment acute Cat. 1	H400	Very toxic to aquatic life
Hazardous to soil organisms		Hazardous to soil organisms
Hazardous to terrestrial vertebrates		Hazardous to terrestrial vertebrates

Prevention Code	Prevention Statement
P102	Keep out of reach of children
P103	Read label before use
P261	Avoid breathing dust, fumes, gas, mist, vapours or spray
P264	Wash hands 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 clothing as detailed in Section 8

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand
P310	Immediately call a POISON CENTER or doctor/physician
P330	Rinse mouth
P391	Collect spillage
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention
P362 + P364	Take off contaminated clothing and wash it before reuse

Storage Code	Storage Statement
P405	Store locked up

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

### Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Monensin sodium	40%	22373-78-0
Polysorbate 80	10-15%	9005-65-6
Non-hazardous	To bal	

### Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
If on Skin	Wash with plenty of soap and water. If skin irritation or rash occurs: get medical advice/attention.
If Swallowed	Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting. Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs.

If Inhaled Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Apply artificial respiration if not breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**Most important symptoms and effects, both acute and delayed**

Symptoms:

**Ingestion:** Diarrhea, nausea, vomiting

**Inhalation:** Coughing, shortness of breath, breathing difficulty

**Skin:** Rash, itchiness, redness

**Eye:** Burning, lacrimation, Vision loss

**Section 5. Fire Fighting Measures**

<b>Hazard Type</b>	Non-Flammable
<b>Hazards from combustion products</b>	When heated to decomposition toxic fumes may be emitted
<b>Suitable Extinguishing media</b>	Water spray, dry powder, carbon dioxide, or foam
<b>Precautions for firefighters and special protective clothing</b>	Wear full protective clothing and self-contained breathing apparatus (SCBA)
<b>HAZCHEM CODE</b>	<b>2X</b>

**Section 6. Accidental Release Measures**

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel.

Restrict access to contaminated area. Prevent further spillage, and prevent spilled material from flowing onto adjacent land or into waterways. Retrieve intact containers from site. Place damaged containers into containment devices. In case of spillage, contain the dry material by sweeping or vacuuming. Vacuuming may disperse dust if appropriate dust collection filter is not part of the vacuum. 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. Clean the contaminated area with new polyurethane sponge, soaked in water. Place the spillage in a container for waste disposal. Avoid contamination of water courses or sewers.

Dispose of waste according to the applicable local and national regulations.

**Section 7. Handling and Storage**

**Precautions for Handling:**

- Read label before use.
- Avoid breathing dust.
- Wear protective gloves. Avoid contact with skin and eyes.
- In case of inadequate ventilation wear respiratory protection.
- Contaminated work clothing should not be allowed out of the workplace.
- Wash hands and exposed skin before meals and after use.
- Do not eat, drink or smoke while using.

**Precautions for Storage:**

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Store below 25°C.
- Store in the original container, away from direct heat or direct sunlight and away from foodstuffs.
- Keep out of reach of children.

## Section 8 Exposure Controls / Personal Protection

### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance mg/m <sup>3</sup>	TWA		STEL
	ppm	mg/m <sup>3</sup>	ppm

No ingredient has a known exposure standard.

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices APR 2022 13TH EDITION.

### Engineering Controls

Engineering controls should be used as the primary means to control exposures. General room ventilation is adequate unless the process generates dust, mist or fumes.

### Personal Protection Equipment



<b>Eyes</b>	Safety glasses or goggles
<b>Hands</b>	Wear impervious gloves if skin contact is possible
<b>Skin</b>	Use protective clothing (uniforms, lab coats, disposable coveralls, etc.) in both production and laboratory areas
<b>Respiratory</b>	Wear suitable respiratory equipment such as anti-dust mask (respirator) or local respiratory system.
<b>General</b>	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.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Powder
<b>Colour</b>	white to almost white
<b>Odour</b>	Not available
<b>Odour Threshold</b>	Not available
<b>pH</b>	6.5 – 9.5
<b>Boiling Point</b>	Not available
<b>Melting Point</b>	From 263°C to 283°C
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	Not flammable
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Specific Gravity</b>	Not available
<b>Solubility</b>	In water: Slightly soluble (8.78 mg/L) In hydrocarbons: Soluble
<b>Partition Coefficient:</b>	6.59

<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Kinematic Viscosity</b>	Not available
<b>Particle Characteristics</b>	Not available

### Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	Hazardous polymerisation does not occur
<b>Conditions to Avoid</b>	Avoid heat, light and moisture
<b>Incompatible Materials</b>	Strong oxidisers
<b>Hazardous Decomposition Products</b>	Not available

### Section 11 Toxicological Information

#### Acute Effects:

<b>Swallowed</b>	Toxic if swallowed.
<b>Dermal</b>	Not applicable.
<b>Inhalation</b>	Not applicable.
<b>Eye</b>	Causes serious eye damage.
<b>Skin</b>	May cause an allergic skin reaction.

#### Chronic Effects:

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Not applicable.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Not applicable.

#### Individual component information:

##### Acute Toxicity:

<b>Chemical Name</b>	<b>Oral – LD50</b>	<b>Dermal – LD50</b>	<b>Inhalation – LC50</b>
Monensin sodium	150 mg/kg (rat)	549.60 mg/kg (albino rat)	51.9 mg/m <sup>3</sup> (albino rat)
Polysorbate 80	25 g/kg (Mouse)	-	-

### Section 12. Ecotoxicological Information

Very toxic to aquatic life. Hazardous to soil organisms. Hazardous to terrestrial vertebrates.

<b>Product:</b>	
<b>Persistence and degradability</b>	Log Kow: > 6.2 (6.59)
<b>Bioaccumulation</b>	No data available
<b>Mobility in Soil</b>	Soil adsorption coefficient (log Koc): 1.79 – 2.49 4.0 day half-life
<b>Other adverse effects</b>	No data available

**Individual component information (Please refer to [www.epa.govt.co.nz](http://www.epa.govt.co.nz) for full details):**

**Monensin sodium**

Route	Species	Duration	Value LC <sub>50</sub> /EC <sub>50</sub>
Acute aquatic, fish	Rainbow trout	96 hr	1.88 mg/L
Acute aquatic, Crustacean	Daphnia magna	48 hr	7.29mg/L
Acute aquatic, algae	Algae	72 h	3.41 mg/L

- 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)

Do not allow to enter waterways.

### Section 13. Disposal Considerations

**Disposal Method:**

Dispose of waste in accordance with all applicable laws and regulations. Member State specific and Community specific provisions must be considered. Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimisation be practiced.

The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater

Ensure any container holding waste product or contaminated spill media is labelled "Hazardous Waste – Toxic, Corrosive, Ecotoxic" and that the label also has the appropriate pictograms from section 2, waste type identifier, and the business name, address, and phone number.

**Precautions or methods to avoid:** Avoid release to the environment.

### Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2020**



**Road, Rail, Sea and Air Transport**

<b>UN No</b>	<b>3249</b>
<b>Class - Primary</b>	<b>6</b>
<b>Packing Group</b>	<b>III</b>

<b>Proper Shipping Name</b>	<b>MEDICINE, SOLID, TOXIC, N.O.S (Monensin sodium)</b>
<b>Marine Pollutant</b>	<b>Yes</b>
<b>Special Provisions</b>	<b>If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.</b>

### Section 15 Regulatory Information

This substance is classified hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

EPA Approval No: **HSR101431**

<b>HSW (HS) Regulations 2017</b>	<b>Trigger Quantity</b>
Certified Handler	Not required
Location Certificate	1000 kg
Tracking Trigger Quantities (Schedule 26)	Not required
Signage Trigger Quantities (Schedule 3)	100 kg
Emergency Response Plan (Schedule 5)	100 kg
Secondary Containment (Schedule 5)	100 kg
Restriction of Use	Only use for the intended purpose.
<b>ACVM Act and Regulations</b>	
See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> for registration Conditions	<b>A11770</b>

### Section 16 Other Information

#### Glossary

Cat	Category
EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

#### References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

#### Disclaimer

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