1. Identification of Substance & Company

Product	
Product name	**Agritrade No Ca**
Product code	AGRI-0215
HSNO approval	HSR002521
Approval description	Animal Nutritional and Animal Care Products Group Standard; monensin-containing veterinary/feed product
UN number	3077 (provisional - see Section 14)
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc sulphate, copper sulphate) - provisional
DG Class	9 (provisional)
Packaging group	III (provisional)
Hazchem code	2Z (provisional)
Uses	Monensin-containing cattle mineral feed additive. For authorised target species and feed use only; follow approved ACVM product label. Not for horses or other equines.

Company Details	
Company	Blue Pacific Minerals
Address	11-17 Huttloc Drive, Tokoroa 3420, New Zealand
Website	www.bpmnz.co.nz
Telephone	+64 7 885 0550
Email	info@bpmnz.co.nz
Emergency telephone	0800 678 444
National Poisons Centre	0800 764 766 (0800 POISON) - 24 hours

2. Hazard Identification

Approval and classification status

Provisional assessment using New Zealand GHS 7 mixture principles and the nominal formulation supplied on 12 October 2026. The HSNO approval, aquatic M-factors, product-specific toxicological data and ACVM authorisation have NOT been independently verified. Do not issue as a final regulatory SDS until signed off.

GHS 7 Classes and Hazard Statements

GHS 7 classification	Hazard statement	Basis
Skin irritation Category 2 (provisional)	H315 - Causes skin irritation.	BPM zeolite supplier SDS identifies Skin Irritation Cat. 2; included at 46.14%.
Serious eye damage Category 1 (provisional)	H318 - Causes serious eye damage.	Nominal zinc and copper sulphates total 3.02% (generic 3% cut-off); actual raw-material purity may bring active classified components just below 3%. Verify before final classification.
Hazardous to aquatic environment - Chronic Category 2 (provisional)	H411 - Toxic to aquatic life with long lasting effects.	Zinc, copper, cobalt and selenium salts are Chronic Cat. 1 in supplier SDSs. M-factors and finished-product test data may change this classification.

Signal word
DANGER



Other hazards and use-related warnings

- Contains monensin sodium (0.30% active). EXTREMELY HAZARDOUS TO HORSES AND OTHER EQUINES; never feed to equines and prevent contamination of their feed, equipment and storage. Dust may irritate the respiratory tract. The zeolite raw-material SDS states respirable crystalline silica is <0.1% of zeolite; preserve dust control.

Precautionary Statements

Type	Code and statement

Prevention	P103 - Read label before use. P261 - Avoid breathing dust. P264 - Wash hands and exposed skin thoroughly after handling. P270 - Do not eat, drink or smoke when using this product. P273 - Avoid release to the environment. P280 - Wear protective gloves, protective clothing and eye/face protection. P284 - Wear appropriate particulate respiratory protection when dust cannot be controlled.
Response	P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P332+P313 - If skin irritation occurs: Get medical advice/attention. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTRE/doctor after eye exposure. P301+P312 - IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell; rinse mouth. P391 - Collect spillage.
Storage	Keep in a labelled, closed, secure and dry container. Store separately from equine feed and other non-target animal feeds. Maintain documented segregation of monensin-containing materials.
Disposal	P501 - Dispose of contents and container through an authorised route in accordance with New Zealand requirements. Never discharge to drains, waterways or animal feed streams.

3. Composition / Information on Ingredients

The 0.75% of PhibroMonensin 400 Granular (nominal 40% monensin sodium) equates to 0.30% monensin sodium in the finished mixture. Hydration states of cobalt, copper and zinc salts are assumed to match the supplied ingredient SDSs. MgO is listed as 30% commercial ingredient; supplier SDS specifies approximately 87% MgO assay.

Component	CAS / identification	Nominal concentration	Ingredient hazards relevant to assessment
Zeolite powder (crystalline aluminosilicate)	1318-02-1	40-50%	Supplier: Skin Irrit. 2 / Eye Irrit. 2; respirable crystalline silica <0.1% of raw zeolite.
Magnesium oxide (commercial Tradefog grade)	1309-48-4	20-30%	Supplier identifies dust-related eye/respiratory irritation; raw grade ~87% MgO.
Sodium chloride	7647-14-5	15-20%	Dust may irritate eyes and airways; stored sodium chloride supplier SDS from BPM Library.
Cobalt sulphate heptahydrate	10026-24-1	<0.1%	Acute Oral 4; Skin/Resp. Sens. 1; Carc. 1B; Repr. 1B; STOT RE 1; Aquatic 1.
Copper sulphate pentahydrate	7758-99-8	0.70 to 1%	Acute Oral 4; Eye Damage 1; Aquatic Acute/Chronic 1.
PhibroMonensin 400 Granular (40% active)	22373-78-0 (monensin sodium)	0.75% (0.30% active)	Monensin preparation Acute Oral 3 (H301); supplier product ATE oral 72.5 mg/kg. Particularly toxic to equines.
EDDI (ethylenediammonium diiodide)	5700-49-2	<0.1%	Acute Oral 4; Skin Irrit. 2; Eye Irrit. 2.
Sodium selenate	13410-01-0	<0.1%	Acute Oral 2; Acute Inhalation 2; Skin Irrit. 2; STOT RE 2; Aquatic 1.
Zinc sulphate monohydrate	7446-19-7	1-3%	Acute Oral 4; Eye Damage 1; STOT RE 2; Aquatic Acute/Chronic 1.

4. First Aid Measures

General Information

Have the label and this SDS available. For poisoning or exposure call the National Poisons Centre, 0800 764 766 (24 hours), or 111 in an emergency. State that the product contains monensin sodium as well as copper, selenium, zinc and cobalt salts.

Recommended facilities	Ready access to running water, an eyewash station and hand-washing facilities.
Swallowed	Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Because monensin is present, promptly contact the National Poisons Centre or a doctor after any significant or suspected ingestion; provide the product formulation and label.
Eye contact	Immediately irrigate eyes with water for at least 15-20 minutes, lifting eyelids. Remove contact lenses if easy to do. Continue rinsing; seek IMMEDIATE medical/Poison Centre advice because serious eye damage is possible.
Skin contact	Remove contaminated clothing. Brush off bulk powder and wash affected skin thoroughly with soap and water. Obtain medical advice if irritation or allergic symptoms develop. Launder contaminated clothing before reuse.
Inhaled	Move to fresh air and keep comfortable for breathing. Promptly obtain medical advice after substantial dust exposure or if coughing, wheezing, dizziness or respiratory difficulty occurs.
Advice to doctor	Treat symptomatically and seek toxicology advice. Monensin is an ionophore; significant oral exposure can produce serious systemic toxicity. Medical personnel should assess possible cardiac, muscle and electrolyte disturbances as clinically indicated. Inform clinician of copper, selenium and cobalt salts.

5. Firefighting Measures

Fire and explosion hazards	The bulk mineral mixture is not expected to be readily combustible. Monensin granules and EDDI contain organic components. Do not generate airborne dust or expose bulk material to excess heat.
Suitable extinguishing media	Use extinguishing media suitable for the surrounding fire: water spray, dry chemical, foam or carbon dioxide.
Unsuitable media	Do not use high-pressure water streams that may spread spilled powder.
Hazardous combustion products	Fire may generate metal oxides, sulphur oxides, irritating smoke, hydrogen iodide and other toxic decomposition products from organic constituents.
Protective equipment	Firefighters should wear self-contained breathing apparatus and full protective clothing. Prevent contaminated firewater entering drains or waterways.
Hazchem code	2Z (provisional transport classification).

6. Accidental Release Measures

Personal precautions	Restrict access. Wear eye protection, gloves, protective clothing and a P2 particulate respirator where dust may be generated. Work upwind or improve ventilation.
Environmental precautions	Prevent release to drains, stormwater and waterways and keep spill material away from livestock access. Exclude all equines and prevent contaminating feed, bedding and pasture.
Containment and clean-up	Avoid creating dust. Recover powder with an industrial vacuum (suitable filter) or damp, controlled sweeping. Transfer to sealed labelled containers. Do not use compressed air or uncontrolled hosing.
Decontamination	Following dry collection, decontaminate tools and surfaces using a validated clean-down process; prevent wash water from entering the environment or non-target feed. Apply extra control to shared feed-mixing equipment because of monensin.
Disposal	Recover suitable material where possible. Dispose through an authorised waste facility in accordance with the Hazardous Substances (Disposal) Notice 2017 and local requirements.

7. Handling & Storage

Handling	Use in accordance with the authorised label only. Avoid inhalation of dust and eye/skin contact. Do not eat, drink or smoke when handling. Wash exposed skin. Restrict to trained workers with access to this SDS.
Cross-contamination	CRITICAL: Monensin may be fatal to horses and other equines. Do not feed to equines. Keep separate from equine feed ingredients, mixers, vehicles, conveyors and bins. Employ validated sequencing/clean-down procedures and check carryover risk before production of non-target feeds.
Storage	Store in closed, labelled packaging in a cool, dry, secure and ventilated place. Protect from moisture, heat and physical damage. Segregate from food and equine/non-target feed. Keep out of reach of children.
Incompatibilities	Keep away from strong acids, strong bases and oxidising agents. Avoid contamination with incompatible feed or medicine products.
Veterinary controls	The formulation contains a veterinary medicine active. Confirm ACVM authorisation, target species, inclusion rate, mixing directions, contraindications and withholding periods before production, supply or use. Follow the approved label where it differs from this draft.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

No product-specific NZ WES has been established. The ingredient / dust workplace exposure values below were carried forward from the supplied TSR SDS template (WorkSafe NZ WES, 15th edition, 2025) and must be checked against the current issue before final release. Monensin has no WES identified in the supplied ingredient SDS; use strict dust containment.

Substance / fraction	WES-TWA	WES-STEL	Notes
Zeolite / respirable crystalline silica	Verify current NZ WES	-	Zeolite raw SDS reports respirable crystalline silica <0.1% in raw material; verify current dust/silica standard.
Magnesium oxide fume	1 mg/m³ (respirable)	5 mg/m³ (respirable)	Supplier MgO SDS addresses dust; value shown is for magnesium oxide FUME, not necessarily the powder.
Copper and inorganic compounds, as Cu	0.01 mg/m³ (respirable)	-	Dermal sensitiser notation.
Cobalt metal dust and fume, as Co	0.02 mg/m³	-	Reference value; carcinogen Cat. 2, skin, dermal/respiratory sensitiser and other notations.

Substance / fraction	WES-TWA	WES-STEL	Notes
Selenium and compounds, as Se	0.02 mg/m³	-	Skin notation.
Inhalable dust, not otherwise classified	10 mg/m³	-	Use only where no lower ingredient limit applies.
Respirable dust, not otherwise classified	3 mg/m³	-	Use only when no constituent-specific exposure limit applies. Monensin dust should be controlled at source.

Engineering Controls

Use closed transfer and effective local exhaust at weighing, dispensing, tipping, blending and bagging operations. Maintain housekeeping without dry air-blowing. Prevent monensin dust from reaching other feed streams. Monitor relevant metal/dust exposure as necessary.

Personal Protective Equipment

General	PPE is supplementary to engineering controls. Train workers in correct selection, fit, use, maintenance and replacement.
Eyes	Wear safety glasses with side shields. Use chemical splash goggles where significant dust exposure is possible. Select in accordance with AS/NZS 1337.
Hands / skin	Wear impervious gloves, long sleeves and suitable overalls. Remove clothing contaminated with mineral or monensin dust and launder before reuse.
Respiratory	Use fitted P2 or higher particulate respiratory protection where engineering control is insufficient. Select, fit-test and maintain to applicable AS/NZS requirements; assess additional protection for dust-generating monensin handling.
Hygiene	Wash hands and exposed skin after handling. Remove contaminated clothing before eating areas. Launder work clothing separately. Do not take contaminated work clothing home.

9. Physical & Chemical Properties

Appearance	Off-white to greyish-white heterogeneous mineral powder/granular blend; unverified for this finished product.
Odour	Low / characteristic; not specified.
Odour threshold	No data available.
pH	Not measured for finished mixture. Magnesium oxide is alkaline in water (supplier saturated solution pH ~10.3).
Melting / freezing point	No data available for mixture.
Boiling point	Not applicable to solid mixture.
Flash point	Not applicable / not expected to be flammable.
Flammability	Not expected to be flammable.
Explosive limits	No data. Avoid dense airborne dust clouds.
Vapour pressure / density	Not applicable / no data.
Bulk density	Not determined.
Solubility	Partly water soluble: sodium chloride and trace-element sulphate/selenate salts are soluble; zeolite and magnesium oxide are sparingly soluble. Product solubility not tested.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available for mixture.
Particle characteristics	Mixture not tested. Avoid airborne dust and cross-contamination of animal feed.

10. Stability & Reactivity

Stability	Stable under recommended storage and handling conditions.
Conditions to avoid	Moisture, excessive heat, direct sunlight, contamination and generation of airborne dust.
Incompatible materials	Strong acids and strong oxidising agents; refer to supplier SDS restrictions. Keep separate from all unauthorised animal feeds, especially equine feed.

Hazardous decomposition products	At fire temperatures may produce sulphur oxides, metal oxides, hydrogen iodide and smoke/other products from the organic monensin preparation.
Hazardous reactions	No hazardous polymerisation expected. No hazardous reaction expected under normal conditions of use.

11. Toxicological Information

Summary

- Eyes: PRECAUTIONARY DRAFT classification Serious Eye Damage Category 1 (H318). Nominal Eye Damage Cat. 1 salts total 3.02%; supplier assay adjustments may give a value slightly below 3%, potentially changing the mixture category. Pending review, prompt irrigation and immediate medical assessment are indicated.
- Skin: PROVISIONALLY Skin Irritation Category 2 (H315), because the zeolite supplier classifies its material as Skin Irritation 2 and zeolite comprises 46.14% of this blend. Repeated dust exposure also dries skin.
- Inhalation: dust may irritate the respiratory system. The product contains a trace of sodium selenate classified acutely toxic by inhalation, monensin, and a zeolite-derived trace of crystalline silica. Apply strong dust controls.
- Swallowed: not an intended occupational exposure. Monensin preparation is H301 toxic if swallowed at ingredient strength (0.75% product inclusion; 0.30% active monensin). No finished-product acute oral classification is assigned in this preliminary screening, but oral exposure warrants urgent toxicology advice.
- Chronic: source ingredient hazards include cobalt sensitisation/carcinogenicity/reproductive toxicity, repeated-exposure toxicity of cobalt/zinc/selenium salts and monensin-related health hazards. Finished-mixture classifications must be checked against specific concentration limits and data.

Supporting Data and Mixture Calculations

Endpoint	Assessment
Acute oral toxicity	*Preliminary only: monensin 400-granule ingredient product ATE(oral) 72.5 mg/kg at 0.75% mixture concentration. Acute toxic components must be assessed together with sodium chloride, Zn/Cu salts and selenate under GHS additivity. The supplied data do not demonstrate a finished-mixture Acute Oral Cat. 1-4 classification; final quantitative review required.*
Acute dermal / inhalation	No complete mixture-specific dermal or inhalation ATE test data. Ingredient sodium selenate is Ac. Inh. 2 but present at 0.0238%. Prevent dust exposure; confirm inhalation calculations and any specific concentration limits before issue.
Eye effects	Nominal Eye Damage Cat. 1 ingredients: Zn sulphate 2.22% + Cu sulphate 0.80% = 3.02%, just above the generic 3% threshold for Eye Damage Cat. 1 (H318). Using the supplier 99% zinc and >=98% copper assays could reduce the combined hazardous-substance portion to approximately 2.982% (or higher). Confirm assays, specific limits and the appropriate H318/H319 classification before finalising; use the more protective draft classification meanwhile.
Skin irritation / sensitization	Zeolite raw material is Skin Irritation Cat. 2 (H315) and is 46.14% of formulation: generic skin irritation cut-off exceeded. Cobalt salt at 0.038% is below usual 0.1% Category 1 respiratory/skin sensitisation cut-offs but product-specific limits need confirmation.
Carcinogenicity / reproductive toxicity	Cobalt sulphate heptahydrate is Carc. 1B/Repr. 1B at 0.038% and below the generic 0.1% Category 1 finished-mixture cut-off. Confirm any specific NZ concentration limits before concluding no classification.
STOT repeated exposure	Zinc sulphate 2.22% and sodium selenate 0.0238% are STOT RE 2; cobalt sulphate 0.038% is STOT RE 1. Finished-mixture STOT classification not established at nominal levels under generic thresholds; reassess using verified SCLs.

12. Ecological Information

Summary

PROVISIONAL: Hazardous to the aquatic environment - Chronic Category 2 (H411). Zinc sulphate, copper sulphate, cobalt sulphate and sodium selenate are Chronic Cat. 1 per suppliers. Without confirmed M-factors, aquatic category could be higher or lower; obtain final mixture calculation before issuing a transport declaration.

Aquatic toxicity	Mixture not tested. Zinc, copper, cobalt and selenium salts are supplier-classified Aquatic Chronic Category 1. At nominal concentrations, generic additive rules suggest Chronic Cat. 2 if M=1; supplier M-factors could change the result. Monensin aquatic profile also needs product-specific review.
Persistence / degradability	Inorganic mineral salts do not biodegrade. Their ions may persist, bind to soil or sediment, or change chemical form.
Bioaccumulation	No mixture data available. Some metal ions may bioaccumulate or bioconcentrate depending on environmental conditions.
Mobility in soil	Variable. Soluble sulphate and selenate salts can move with water; metal ions may bind to soils and sediments.
Other adverse effects	Large releases can alter salinity, pH and trace-metal concentrations. Avoid uncontrolled land or water release.
Environmental effect levels	No mixture-specific EELs are available.

13. Disposal Considerations

Restrictions	Do not discharge to drains, sewers or waterways. Local council, trade-waste and resource-consent conditions may apply.

Product disposal	Where lawful and safe, recover unused product for intended use under the approved label. Otherwise use an authorised hazardous-waste contractor or approved disposal facility. Comply with the Hazardous Substances (Disposal) Notice 2017 and Resource Management Act requirements.
Contaminated packaging	Do not reuse for human food, horse feed or other unauthorised animal feed. Empty completely and dispose/recycle through appropriate approved route; keep monensin residues segregated.
Spill residues	Dispose of collected spill material and contaminated absorbents as hazardous waste unless assessed and approved for recovery.

14. Transport Information

PROVISIONAL TRANSPORT ENTRY
The UN3077 / Class 9 entry is inferred from the aquatic hazards of the supplier-classified mineral salts and follows the TSR format. No finished-mixture transport test, current M-factor confirmation or transport-special-provision assessment was supplied. Verify NZS 5433, IMDG and IATA classification, any exceptions and whether another entry has precedence before shipping. The monensin 40% raw ingredient SDS uses UN3249; that entry must not automatically be assigned to this diluted finished blend.

Land Transport - NZS 5433

UN number	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc sulphate, copper sulphate) - PROVISIONAL
Class	9
Packing group	III
Hazchem code	2Z
Environmental hazard	Marine pollutant / environmentally hazardous substance
Special precautions	Prevent release and cross-contamination of animal feed. Keep dry. Confirm DG marking, documentation, packaging and mode-specific provisions before transport.

IMDG

UN number	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc sulphate, copper sulphate) - PROVISIONAL
Class / packing group	9 / III
Marine pollutant	Yes
EmS	F-A, S-F

IATA

UN number	3077
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (zinc sulphate, copper sulphate) - PROVISIONAL
Class / packing group	9 / III
ERG guide	171

15. Regulatory Information

New Zealand HSNO status

UNVERIFIED FOR FINISHED PRODUCT. The TSR template lists HSR002521 (Animal Nutritional and Animal Care Products Group Standard 2020), but cautions that its scope excludes substances containing a veterinary medicine active. AGRI-0215 includes monensin sodium, so HSR002521 MUST NOT be assumed to apply. Obtain a documented EPA/HSNO approval determination for the actual product, and confirm relevant restrictions, hazard classification and labelling before supply.

ACVM status

IMPORTANT: PhibroMonensin 400 Granular is a veterinary medicine/feed active. Confirm the exact ACVM registration or legal authorisation for this formulation, species, manufacturing and supply chain; approved label, mixing inclusion rate, dose directions, contraindications, animal handling restrictions and meat/milk withholding periods. Not for equines. This SDS is not an ACVM label or approval.

Indicative workplace requirements - confirm after final approval

Requirement	Technical review position
SDS	Make an approved, up-to-date SDS accessible to workers before handling the finished hazardous mixture. This document remains a review draft.
Inventory	Include the product in the site hazardous-substance inventory and document monensin segregation and quantity on site.
Packaging and labelling	Confirm HSNO approval, GHS 7 pictograms (provisional GHS05 and GHS09), label statements, monensin veterinary warnings, packaging requirements and DG requirements against current rules.

Emergency plan / signage	Thresholds for emergency management/signage depend on verified finished-product classification and site inventory; do not rely solely on the provisional hazards here.
Certified handler	Not determined for finished mixture pending approval/classification. Concentrated raw monensin and sodium selenate require their own supplier SDS controls.
Tracking / location compliance certificate	Assess after the finished-product HSNO approval and classification are confirmed.
Secondary containment	Requirements depend on physical form, aggregate quantities and site controls. Prevent environmental discharge regardless of trigger quantities.

16. Other Information

Abbreviations

Abbreviation	Meaning
ACVM	Agricultural Compounds and Veterinary Medicines
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service Registry Number
CMR	Carcinogenic, mutagenic or reproductive-toxic substance
DG	Dangerous goods
EC50 / LC50	Concentration causing a defined effect or lethality in 50% of a test population
EPA	Environmental Protection Authority (New Zealand)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition
HSNO	Hazardous Substances and New Organisms Act 1996
IATA / IMDG	International air / maritime dangerous-goods codes
M-factor	Multiplying factor used in aquatic-mixture classification
NZIoC	New Zealand Inventory of Chemicals
P2	Particulate respirator filter class
STEL	Short-term exposure limit
STOT RE	Specific target organ toxicity - repeated exposure
TWA / WES	Time-weighted average / workplace exposure standard

References used for this technical review

- Customer-supplied nominal ingredient formula for Agritrade No Ca (AGRI-0215), 12 October 2026. No signed batch sheet, assay certificate or finished-product testing supplied.
- Supplied source SDSs: BPM Zeolite Powder (Oct 2023); Tradefog MgO (Jul 2022); Redox Cobalt Sulphate Heptahydrate (Oct 2020); Redox Copper Sulphate Pentahydrate (Jun 2021); PhibroMonensin 400 Granular (Jul 2024); Interchem EDDI (Aug 2025); Redox Sodium Selenate (Mar 2023); Ravensdown Zinc Sulphate Monohydrate (Jun 2021). Sodium chloride: Dominion Salt SDS (Sep 2020), sourced from the BPM file Library, not supplied as a new attachment.
- New Zealand GHS 7 / Hazardous Substances (Hazard Classification) Notice 2020: provisional ingredient mixture assessment based on supplier classifications, without independent regulatory verification.
- TSR Agritrade Mix (AGRI-0210) Word SDS supplied as visual/layout template, including its HSNO scope caveat. Its finished-product approval and transport entry are not evidence of approval for AGRI-0215.
- WorkSafe NZ workplace exposure figures included as carried forward from template, 15th edition (2025); confirm current WorkSafe edition before issuing.
- Manufacturer/regulatory review required: current NZ EPA approval; ACVM registration, label and withholding; monensin carryover controls; aquatic M-factors; finished-product GHS calculations; NZS 5433/IMDG/IATA transport classification. DRAFT prepared 12 October 2026.