



1. IDENTIFICATION OF SUBSTANCE & COMPANY

Product information

| | |
|-----------------------------|---|
| Product name | Prolaject B12 2000 Plus Selenium For Sheep & Cattle |
| Other names | Cobalife VB12 + Se, Seleject B12 |
| ACVM approval | A006903 |
| HSNO approval | HSR002389 |
| Approval description | Liquid containing 0.5 - 0.98% sodium selenate |
| UN number | NA |
| Proper Shipping Name | NA |
| Packaging group | NA |
| Hazchem code | 1T (recommended) |

Uses For the treatment and control of cobalt and selenium deficiencies in sheep and cattle.

Company Details

| | |
|------------------|---|
| Company | Bayer New Zealand Ltd |
| Address | 3 Argus Place, Hillcrest, Auckland 0627 New Zealand. |
| Telephone | 0800 652 488 |
| Facsimile | 0800 229 838 |

Emergency Telephone Number: 0800 734 607

2. HAZARD IDENTIFICATION

Approval

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002389, Liquid containing 0.5 - 0.98% sodium selenate) and is classified as follows:

| Classes | Hazard Statements |
|----------------|--|
| 6.1E (oral) | May be harmful if swallowed |
| 9.1C | Harmful to aquatic life with long lasting effects. |
| 9.2C | Harmful to the soil environment. |

SYMBOLS

None

Other Classifications

ACVM registration number: A006903

There are no other Classifications that are known to apply.

Precautionary Statements

Keep out of reach of children.
Read label before use.

Store locked up.
Avoid release to the environment.



3. COMPOSITION / INFORMATION ON INGREDIENTS

| Component | CAS/ Identification | Concentration |
|---|---------------------|----------------------|
| Hydroxocobalamin | 22465-48-1 | 2000µg/mL |
| Selenium | 13410-01-0 | 4mg/mL (as selenium) |
| Ingredient not contribution to HSNO classes | Proprietary | <10% |
| Water | 7732-18-5 | balance |

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. FIRST AID

General Information

You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service). If medical advice is needed, have product container or label at hand. IF exposed or concerned: Get medical advice.

Recommended first aid facilities Ready access to running water is recommended.

Exposure

Swallowed

IF SWALLOWED: Do NOT induce vomiting. Rinse mouth. 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. Call a POISON CENTER or doctor/physician if you feel unwell.

Eye contact

If product gets in eyes, wash material from them with running water for several minutes. If symptoms persist, seek medical advice.

Skin contact

This product is non-irritating to skin. No further measures should be required.

Inhaled

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Advice to Doctor

Treat symptomatically.

5. FIREFIGHTING MEASURES

Fire and explosion hazards:

There are no specific risks for fire/explosion for this chemical. It is non-flammable.

Suitable extinguishing substances:

Carbon dioxide, extinguishing powder, foam, fog sprays, water jets.

Unsuitable extinguishing substances:

Unknown.

Products of combustion:

Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

Protective equipment:

No special measures are required.

Hazchem code:

1T (recommended)

6. ACCIDENTAL RELEASE MEASURES

Containment

If greater than 1000L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to stormwater.

Emergency procedures

In the event of a large spillage (>100L) alert the fire brigade to location and give brief description of hazard.

Stop the source of the leak, if safe to do so.

Wear protective equipment to prevent skin, eye and respiratory exposure.

Clear area of any unprotected personnel.

Contain using sand, earth or vermiculite. Do not use sawdust on concentrate.

Prevent by whatever means possible any spillage from entering drains, sewers, or water

Safety Data Sheet
Prolaject B12 2000 Plus Selenium
For Sheep & Cattle



| | |
|------------------------|--|
| Clean-up method | courses. (If this occurs contact your regional council immediately). Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services. |
| Disposal | Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations. |
| Precautions | Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. |

7. STORAGE & HANDLING

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|-----------------|---|
| Storage | Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. |
| Handling | Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTIVE EQUIPMENT

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by the NZ Ministry of Business, Innovation & Employment (MBIE) for this product. There is a general limit of 10mg/m³ for dusts and mists when limits have not otherwise been established.

| NZ Workplace Exposure Stds (2013) | Ingredient | WES-TWA | WES-STEL |
|--|-------------------|---------------------------|------------------|
| | Sodium Selenate | 0.1mg/m ³ (Se) | data unavailable |

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety in Employment Act 1992 (HSE). Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

| | |
|--------------------|--|
| Eyes | Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if splashes are likely. |
| Skin | Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time. |
| Respiratory | Respirator is not required under normal use. Ensure adequate natural ventilation. If product is being used in confined conditions, the use of a mask or respirator may be preferred. |

WES Additional Information

Not applicable

9. PHYSICAL & CHEMICAL PROPERTIES

| | |
|-----------------------------------|------------------|
| Appearance | clear red liquid |
| Odour | odourless |
| pH | no data |
| Vapour pressure | no data |
| Viscosity | no data |
| Boiling point | no data |
| Volatile materials | no data |
| Freezing / melting point | no data |
| Solubility | no data |
| Specific gravity / density | no data |

Safety Data Sheet
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For Sheep & Cattle



| | |
|---|---------------|
| Flash point | non flammable |
| Danger of explosion | not explosive |
| Auto-ignition temperature | no data |
| Upper & lower flammable limits | no data |
| Corrosiveness | non corrosive |

10. STABILITY & REACTIVITY

| | |
|---|---|
| Stability | Stable |
| Conditions to be avoided | Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames. |
| Incompatible groups | none known |
| Substance Specific Incompatibility | none known |
| Hazardous decomposition products | none known |
| Hazardous reactions | none known |

11. TOXICOLOGICAL INFORMATION

Summary

IF SWALLOWED: Ingestion can systemically cause damage to liver and kidneys. Metallic taste in the mouth, nausea, vomiting, abdominal pain, nervous symptoms, dyspnoea and cyanosis.

IF IN EYES: direct contact may cause temporary stinging and redness.

IF ON SKIN: may cause skin irritation.

IF INHALED: May cause irritation of the upper respiratory tract. Inhalation can systemically cause damage to liver and kidneys.

Supporting Data

| | | |
|----------------|---|---|
| Acute | Oral | EPA have classed this mixture as 6.1E. Sodium selenate is considered very toxic if swallowed. Sodium Selenate 1.6mg/kg (rat), 2.25mg/kg (rabbit). |
| | Dermal Inhaled | No evidence of dermal toxicity. EPA has not classed this mixture as harmful by inhalation. Sodium selenate is classed 6.1B (inhalation). |
| Chronic | Eye | The mixture is not considered to be an eye irritant. |
| | Skin | The mixture is not considered to be a skin irritant. |
| | Sensitisation | No ingredient present at concentrations > 0.1% is considered a sensitizer. |
| | Mutagenicity | This mixture is not considered mutagenic under HSNO, Sodium selenate is considered a possible mutagenic risk, but is present <1%. |
| | Carcinogenicity | No ingredient present at concentrations > 0.1% is considered a carcinogen. |
| | Reproductive / Developmental | No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. |
| | Systemic | No ingredient present at concentrations > 1% is considered a target organ toxicant. |
| | Aggravation of existing conditions | None known. |

12. ECOLOGICAL DATA

Summary

This mixture is considered harmful to aquatic life.

Supporting Data

| | |
|----------------|---|
| Aquatic | Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is between 10 mg/L and 100 mg/L and at least one of the components is either bioaccumulative or persistent in the aquatic environment. Data considered includes: Sodium Selenate 0.083mg/L (48hr, Gammarus pseudolimnaeus Scud), 0.2mg/ (96hr, Selenastrum capricornutum green |
|----------------|---|

Safety Data Sheet
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For Sheep & Cattle



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|------------------------------------|--|
| Bioaccumulation | algae), 0.69mg/L (96hr, Pimephales promelas). |
| Degradability | No data |
| Soil | EPA has classified the mixture as ecotoxic in the soil environment, 9.2C. |
| Terrestrial vertebrate | EPA has not classified the mixture as ecotoxic to terrestrial vertebrates. See acute toxicity. |
| Terrestrial invertebrate | No evidence of toxicity towards terrestrial invertebrates. |
| Biocidal | no data |
| Environmental effect levels | No EELs are available for this mixture or ingredients |

13. DISPOSAL CONSIDERATIONS

| | |
|-------------------------------|--|
| Restrictions | There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents. |
| Disposal method | Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment. |
| Contaminated packaging | Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar. |

14. TRANSPORT INFORMATION

There are no specific restrictions for this product (not a dangerous good).

| | | | |
|---------------------|----|------------------------------|------------------|
| UN number: | NA | Proper shipping name: | NA |
| Class(es): | NA | Packing group: | NA |
| Precautions: | NA | Hazchem code: | 1T (recommended) |

15. REGULATORY INFORMATION

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002389, Liquid containing 0.5 - 0.98% sodium selenate.

Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

| | |
|---------------------------------|---|
| MSDS | To be available within 10 minutes in workplaces storing > 1L. |
| Labelling | No removal of labels and/or decanting of product into other containers can occur. |
| Emergency plan | Required if > 1000L is stored. |
| Approved handler | Not required. |
| Tracking | Not required. |
| Bunding & secondary containment | Required if > 1000L is stored. |
| Signage | Required if > 1000L is stored. |
| Location test certificate | Not required. |
| Flammable zone | Not required. |
| Fire extinguisher | Not required. |

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health, Safety in Employment Act and Regulations, local Council Rules and Regional Council Plans.

ACVM registration number: A006903



16. OTHER INFORMATION

Abbreviations

| | |
|------------------------|---|
| Approval Code | Approval HSR002389, Liquid containing 0.5 - 0.98% sodium selenate Controls, EPA. www.epa.govt.nz |
| ACVM | Agricultural Compounds and Veterinary Medicines |
| ARTG | Australian Register of Therapeutic Goods |
| CAS Number | Unique Chemical Abstracts Service Registry Number |
| Ceiling | Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time. |
| Controls Matrix | List of default controls linking regulation numbers to Matrix code (e.g. T1, I16). |
| EC₅₀ | Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species) |
| ERMA | Environmental Risk Management Authority (now EPA) |
| EPA | Environmental Protection Agency (previously known as ERMA) |
| HAZCHEM Code | Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters |
| HSNO | Hazardous Substances and New Organisms (Act and Regulations) |
| IARC | International Agency for Research on Cancer |
| LEL | Lower Explosive Limit |
| LD₅₀ | Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats). |
| LC₅₀ | Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats) |
| MBIE | Ministry of Business, Innovation & Employment (New Zealand) |
| MSDS | Material Safety Data Sheet (or Safety Data Sheet) |
| STEL | Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded |
| TWA | Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours) |
| UEL | Upper Explosive Limit |
| UN Number | United Nations Number |
| WES | Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed. |

References

| | |
|------------------------------|---|
| Data | Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID) http://www.epa.govt.nz/hs/compliance/chemicals.html for specific chemicals. |
| EPA Transfer Gazettes | Classifications and controls assigned for specific ingredients (consolidated gazette, 2004) |
| Controls Matrix | Part of the EPA New Zealand User Guide to the HSNO Control Regulations |
| WES 2013 | The NZ Workplace Exposure Standards Effective from 2013, published by MBIE and available on their web site – www.dol.govt.nz . |
| Other References: | Suppliers MSDS |

Review

| Date | Reason for review |
|--------------|--|
| April 2013 | Not applicable – new MSDS |
| October 2013 | Change of HSR number (transferred substance) and classification. |

Disclaimer

This MSDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The MSDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the MSDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications, are based on our experience, EPA Guidelines and international classifications. This MSDS is copyright Datachem and must not be edited without the permission of the copyright holder or used for other than intended purpose. To contact the MSDS author, email info@datachem.co.nz or phone: (09) 940 30 80.

