

### SECTION 1: Identification

#### 1.1 Product identifier

Product name : Multine Selenised

#### 1.2 Other means of identification

No additional information available

#### 1.3 Recommended use of the chemical and restrictions on use

Recommended use : Clostridial vaccine for sheep and goats  
Restrictions on use : Not to be used for any purpose other than the one the product was designed for

#### 1.4 Details of manufacturer or importer

Schering-Plough Animal Health Ltd  
33 Whakatiki Street  
Upper Hutt 5018  
New Zealand  
T 0800 800 543 (8 am – 5 pm, Mon – Fri)  
[www.msd-animal-health.co.nz](http://www.msd-animal-health.co.nz)  
[www.sheepvax.co.nz](http://www.sheepvax.co.nz)

#### 1.5. Emergency phone number

Emergency number : 0800 764 766 (0800 POISON) 24 hours human health  
0800 243 622 (0800 CHEMCALL) 24 hours

### SECTION 2: Hazard identification

#### 2.1. Classification of the hazardous chemical

HSNO Approval Number : HSR100757

**Classification according to the Environmental Protection Authority notices (EPA Hazardous Substances and New Organisms Act 1996)**

Hazardous to the aquatic environment – Chronic Hazard, Category 2 H411

Hazardous to soil organisms H424

#### 2.2. GHS Label elements, including precautionary statements

##### GHS NZ labelling

Hazard pictograms (GHS NZ) :



Signal word (GHS NZ) : Warning  
Contains : Sodium selenate (0.6 %)  
Hazard statements (GHS NZ) : H411 - Toxic to aquatic life with long lasting effects  
H424 - Hazardous to soil organisms  
Precautionary statements : P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read carefully and follow all instructions.  
Prevention : P273 - Avoid release to the environment.  
Response : P391 - Collect spillage.

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Disposal : P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

## SECTION 3: Composition and information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%
Sodium selenate (Active ingredient)	CAS-No.: 13410-01-0	0.6
Thiomersal	CAS-No.: 54-64-8	<1
C. perfringens Type D toxoid (inactivated)	-	Varies
C. septicum toxoids (inactivated)	-	Varies
C. tetani toxoid (inactivated)	-	Varies
C. novyi Type B toxoid (inactivated)	-	Varies
C. chauvoei whole cell culture (inactivated)	-	Varies

## SECTION 4: First-aid measures

### 4.1. Description of necessary first-aid measures

First-aid measures general : ACCIDENTAL SELF-INJECTION: Obtain medical attention - show this SDS.  
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

### 4.2. Symptoms caused by exposure

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.  
Symptoms/effects after skin contact : None under normal conditions.  
Symptoms/effects after eye contact : None under normal conditions.  
Symptoms/effects after ingestion : None under normal conditions.

### 4.3. Medical attention and special treatment

Other medical advice or treatment : Accidental self-injection: Treat symptomatically. Some risk of hypersensitivity from injection. Contains safety tested inactivated bacterial toxins. Contamination of the needle must be considered.

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### SECTION 5: Fire-fighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Specific hazards arising from the chemical

- Fire hazard : No fire hazard.  
Explosion hazard : No direct explosion hazard.  
General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.  
Absorb spillage to prevent material damage. No action shall be taken without appropriate training or involving any personal risk.  
Hazardous decomposition products in case of fire : Thermal decomposition can lead to the release of irritating gases and vapours.

#### 5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Keep upwind.  
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters.  
Absorb spillage to prevent material damage. No action shall be taken without appropriate training or involving any personal risk.

##### 6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.  
Emergency procedures : Ventilate spillage area.

##### 6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".  
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and materials for containment and cleaning up

- For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.  
Methods for cleaning up : Take up liquid spill into absorbent material.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

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Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin, eyes, and mucosa. Keep containers adequately sealed during material transfer, transport, or when not in use. See Section 8 (Exposure Controls) for additional guidance.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Keep in a cool, well-ventilated place away from heat.
Storage conditions	: Signage required where quantities greater than 1,000L are present. Emergency Plan required where quantities greater than 1,000L are present.
Storage temperature	: 2 - 8°C. DO NOT FREEZE.
Information on mixed storage	: Store away from incompatible materials and products. Refer to the detailed list of incompatible materials in section 10 Stability/Reactivity.
Storage area	: Keep out of direct sunlight.
Special rules on packaging	: Position containers so that any labelling information is visible. Keep packaging closed when not in use. Check containers and packaging regularly for leaks and damage.
Packaging materials	: Store always product in container of same material as original container.
Conditions for emergency plan	: Emergency response plan (ERP) required for quantities greater than 1000 L.
Conditions for signage	: Signage required for quantities: <ul style="list-style-type: none"><li>Greater than 1000 L indicating: Hazardous to the aquatic environment.</li></ul>

## SECTION 8: Exposure controls and personal protection

### 8.1. Control parameters - exposure standards

No additional information available

#### Exposure limit values for the other components

No additional information available

### 8.2. Monitoring methods

Monitoring methods	: Workplace exposure - General requirements for the performance of procedures for the measurement of chemical agents.
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### 8.3. Engineering controls

Appropriate engineering controls	: Ensure good ventilation of the work station.
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### 8.4. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment	: Personal protective equipment (PPE) must be suited to the nature of the work and any hazard associated with the work as identified by the risk assessment conducted. Avoid all unnecessary exposure. Wear recommended personal protective equipment.
Hand protection	: In case of repeated or prolonged contact wear gloves
Eye protection	: Even though no specific eye irritation data are available, wear eye protection appropriate to conditions of use when handling this material
Respiratory protection	: If mist is formed : Disposable half mask
Environmental exposure controls	: Avoid release to the environment.
Consumer exposure controls	: Personal protective equipment (PPE) is not required when handling individual retail pack.
Other information	: The following Australian and New Zealand Standards will provide general advice regarding safety clothing and equipment: Respiratory equipment: AS/NZS 1715, Protective Gloves: AS 2161, Industrial Clothing: AS2919, Industrial Eye Protection: AS1336 and AS/NZS 1337, Occupational Protective Footwear: AS/NZS2210. PPE compliant with the recommended standards should be selected.

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### SECTION 9: Physical and chemical properties

Physical state	: Liquid
Appearance	: No data available
Colour	: Characteristic
Odour	: Characteristic
Odour threshold	: No additional information available
pH	: No additional information available
Evaporation rate	: No additional information available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point / Freezing point	: Melting point: Not applicable
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Flammability	: Non flammable.
Vapour pressure	: No additional information available
Relative vapour density at 20°C	: No additional information available
Density	: No additional information available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Explosive limits	: No additional information available
Minimum ignition energy	: No data available

### SECTION 10: Stability and reactivity

Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Avoid high temperatures.
Incompatible materials	: Avoid food products.
Hazardous decomposition products	: Carbon oxides (CO, CO <sub>2</sub> ).

### SECTION 11: Toxicological information

#### 11.1. Toxicity

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Thiomersal (54-64-8)	
LD50 oral rat	40 mg/kg bodyweight [ERMANZ]
Sodium selenate (13410-01-0)	
LD50 oral rat	25 mg/kg bodyweight [INCLASS]
LC50 Inhalation - Rat	0.05 mg/l [INCLASS]

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

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STOT-single exposure : Not classified  
STOT-repeated exposure : Not classified

Thiomersal (54-64-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Sodium selenate (13410-01-0)	
NOAEL (oral, rat, 90 days)	0.37 mg/kg bodyweight/day Hepatotoxicity/Alimentary system (liver) [Hayes, W.J., Jr., E.R. Laws, Jr., (eds.). New York, NY: Academic Press, Inc., 1991. 558] [HSDB]
STOT-repeated exposure	Causes damage to organs (liver, kidneys) through prolonged or repeated exposure (oral).
Additional information	Rats receiving selenium compounds (generally sodium selenite) in their diets show acute, subacute, and chronic pathologic pictures entirely similar to those seen in rats fed poisonous field-grown grain. Rats that received selenium (as sodium selenate) at a dietary level of 100 ppm ate little food and all died in 8-16 days; those receiving 50 ppm all died in 10-97 days. A dietary level of 15 ppm was tolerated for 72 days or more, but food intake was about half of normal. All rats survived a dietary level of 7.5 ppm (about 0.37 mg/kg/day) for 6 months, and their growth was normal. [EPA NZ]

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Ecotoxicity

Ecology - general : Toxic to aquatic life with long lasting effects.  
Hazardous to the aquatic environment, short-term (acute) : Not classified.  
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.  
Soil toxicity : Hazardous to soil organisms.  
Terrestrial vertebrate toxicity : Not classified  
Terrestrial invertebrate toxicity : Not classified

Thiomersal (54-64-8)	
LC50 - Fish [1]	2.13 mg/l (Lake trout) 48 hr [ECOTOX]
LC50 - Fish [2]	> 0.01 – 0.1 mg/l Poecilia reticulata (Guppy) 96 hr [EPA NZ]
EC50 - Crustacea [1]	> 0.01 – 0.1 mg/l Daphnia magna (Water flea) [EPA NZ]
EC50 72h - Algae [1]	> 0.01 – 0.1 mg/l Pseudokirchneriella subcapitata (Green algae) [EPA NZ]
LD50 oral rat	40 mg/kg bodyweight [ERMANZ]
Sodium selenate (13410-01-0)	
LC50 - Fish [1]	690 µg/l Pimephales promelas (Fathead minnow) [EPA NZ]
EC50 - Crustacea [1]	83 µg/l Gammarus pseudolimnaeus (Scud) [EPA NZ]
ErC50 algae	0.2 mg/l Selenastrum capricornutum (Green algae) [EPA NZ]
NOEC chronic fish	390 µg/l 32 days [EPA NZ]
BCF - Other aquatic organisms [1]	3650 Daphnia magna (Water flea) [EPA NZ]
LD50 oral rat	25 mg/kg bodyweight [INCLASS]

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### 12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
C. perfringens Type D toxoid (inactivated)	
Persistence and degradability	Not rapidly degradable
C. septicum toxoids (inactivated)	
Persistence and degradability	Not rapidly degradable
C. tetani toxoid (inactivated)	
Persistence and degradability	Not rapidly degradable
C. novyi Type B toxoid (inactivated)	
Persistence and degradability	Not rapidly degradable
C. chauvoei whole cell culture (inactivated)	
Persistence and degradability	Not rapidly degradable
Thiomersal (54-64-8)	
Persistence and degradability	Not rapidly degradable
Sodium selenate (13410-01-0)	
Persistence and degradability	Not rapidly degradable

### 12.3. Bioaccumulative potential

Multine Selenised	
Bioaccumulative potential	No additional information available
Sodium selenate (13410-01-0)	
BCF - Other aquatic organisms [1]	3650 Daphnia magna (Water flea) [EPA NZ]

### 12.4. Mobility in soil

Multine Selenised	
Mobility in soil	No additional information available
Sodium selenate (13410-01-0)	
Effect of Selenic acid, Disodium salt on Medicago sativa Growth Endpoint	22 day(s) EC20 of 0.1 mg/kg soil (NR: NR) on Measurement: Number of nodules/nodulated plant roots; Response Site: NR Whole Organism

### 12.5. Other adverse effects

Ozone	: Not classified
Other adverse effects	: No additional information available

## SECTION 13: Disposal considerations

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.

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Product/Packaging disposal recommendations	: Dispose of unused contents in a suitable landfill. Dispose of empty Vaxipak by puncturing and burying in a suitable landfill. Where possible, recycle through AgRecovery. Do NOT burn. Avoid contamination of any water source or environment with product or empty container.
Additional information	: Do not re-use empty containers.

### SECTION 14: Transport information

In accordance with IMDG / IATA / UN RTDG

IMDG	IATA	UNRTDG
<b>14.1. UN number</b>		
3082	3082	3082
<b>14.2. UN Proper Shipping Name</b>		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium selenate)	Environmentally hazardous substance, liquid, n.o.s. (Sodium selenate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium selenate)
<b>Transport document description</b>		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium selenate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Sodium selenate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium selenate), 9, III
<b>14.3. Transport hazard class(es)</b>		
9	9	9
		
<b>14.4. Packing group</b>		
III	III	III
<b>14.5. Environmental hazards</b>		
Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available		

### 14.6. Special precautions for user

#### Transport by road and rail

Special provisions (UN RTDG)	: 274, 331, 335, 375
Limited quantities (UN RTDG)	: 5L
Excepted quantities (UN RTDG)	: E1
Packing instruction (UN RTDG)	: P001, IBC03, LP01
Special packing provisions (UN RTDG)	: PP1
Portable tank and bulk container special instructions (UN RTDG)	: T4
Portable tank and bulk container special provisions (UN RTDG)	: TP1, TP29

#### Transport by sea

Special provisions (IMDG)	: 274, 335, 969
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Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A

### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197, A215
ERG code (IATA)	: 9L

### 14.7. Transport in bulk according to IMO instruments

Not applicable

### 14.8. Hazchem or Emergency Action Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations specific for the product in question

#### Hazardous Substances and New Organisms Act

HSNO Approval Number	: HSR100757
Group standard	: Veterinary Medicines (Limited Pack Size, Finished Dose) Group Standard 2020

#### Agricultural Compounds and Veterinary Medicines (ACVM) Act 1997

ACVM Registration Number	: A000935
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### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

Issue date	: 13/02/2025
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#### Indication of changes:

Update of the SDS from former GHS version to the 7th edition of the GHS (GHS 7).

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### Data sources

: Safe Work Australia - Code of Practice - Preparation of Safety Data Sheets for Hazardous Chemicals  
Safe Work Australia - Code of Practice - Labelling of Workplace Hazardous Chemicals  
Safe Work Australia - Workplace Exposure Standards for Airborne Contaminants  
Safe Work Australia - Hazardous Chemical Information System (HCIS)  
Australian Inventory of Industrial Chemicals (AICIS Inventory)  
Environmental Protection Authority - Hazardous Substances (Hazard Classification) Notice 2020  
Environmental Protection Authority - Hazardous Substances (Safety Data Sheets) Notice 2017  
Environmental Protection Authority - Hazardous Substances (Labelling) Notice 2017  
New Zealand - Chemical Classification and Information Database (CCID)  
New Zealand - Inventory of Chemicals (NZIoC)  
European Chemicals Agency (ECHA) - Annex VI (C&L Inventory)  
European Chemicals Agency (ECHA) - REACH Study Results  
European Chemicals Agency (ECHA) - REACH Registration Dossiers  
United Nations - Globally Harmonised System of Classification and Labelling of Chemicals (GHS)  
Uniform Scheduling of Medicines and Poisons (SUSMP)  
United Nations Recommendations on the Transport of Dangerous Goods (UNRTDG Model Regulation)  
Australian Dangerous Goods Code (ADG Code)  
International Air Transport Association Dangerous Goods Regulations (IATA DGR)  
International Maritime Dangerous Goods (IMDG Code).

Full text of H-statements	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 1
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 2 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 2
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Hazardous to soil organisms	Hazardous to soil organisms
Hazardous to terrestrial vertebrates	Hazardous to terrestrial vertebrates
Muta. 2	Germ cell mutagenicity, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H300	Fatal if swallowed
H310	Fatal in contact with skin
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

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Full text of H-statements	
H330	Fatal if inhaled.
H341	Suspected of causing genetic defects
H372	Causes damage to organs through prolonged or repeated exposure
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects
H411	Toxic to aquatic life with long lasting effects
H424	Hazardous to soil organisms
H434	Hazardous to terrestrial vertebrates

Safety Data Sheet (SDS), New Zealand - MSD

Schering-Plough Animal Health Ltd known as MSD Animal Health, is a subsidiary of Merck & Co., Inc., Rahway, NJ, USA.

Schering-Plough urges each user or recipient of this SDS to read the entire safety data sheet to become aware of the potential hazards associated with this material. This SDS summarises, at the date of issue, our best knowledge of the health and safety hazard information. Although reasonable care has been taken in the preparation of this document, Schering-Plough Animal Health 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. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

